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ESPON

TOWN

Small and medium sized towns in their functional territorial context

Applied Research 2013/1/23

Scientific Report

Version 15 September 2014

This report presents the scientific results of an Applied Research Project conducted within the framework of the ESPON 2013 Programme, partly financed by the European Regional Development Fund.

The partnership behind the ESPON Programme consists of the EU Commission and the Member States of the EU27, plus Iceland, Liechtenstein, Norway and Switzerland. Each partner is represented in the ESPON Monitoring Committee.

This report does not necessarily reflect the opinion of the members of the Monitoring Committee.

Information on the ESPON Programme and projects can be found on www.espon.eu

The web site provides the possibility to download and examine the most recent documents produced by finalised and ongoing ESPON projects.

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Chapter 1 – Research Framework

Loris Servillo

1. Aim of the chapter

The TOWN project addresses the research questions posed by the ESPON call for tenders "**ESPON Applied Research Project 2013/1/23"**, which asked for a specific focus on small and medium sized towns and their functional role in Europe.

In particular, the terms of reference of the project asked for supporting knowledge and evidence for the following three policy questions:

> "What kind of roles and functions do small and medium sized towns perform in the European territorial structure, e.g. as providers of employment, growth and services of general interest, that contribute to the Europe 2020 Strategy for smart, sustainable and inclusive growth?
>
> What are the potentials and barriers for development of small and medium sized towns in different territorial contexts, and how can policy at different levels unleash the potentials and diminish the barriers in ways that strengthen their functional character?
>
> What types of governance and cooperation arrangements exist at various levels aiming to support the development of small and medium-sized towns and their territorial context, and how can policy further support these types of arrangements in order to strengthen their contribution to a more balanced territorial development of the European regions?"
>
> (ESPON, 2011)

The overall hypothesis developed by the TOWN project to address the questions contained in the call for tenders (or terms of reference of the project) is that: towns in their territorial context have an important role, and can be key factors in supporting EU strategic policies for the achievement of policy aims such as EU 2020 and territorial cohesion. In this sense, the project aims to fill the gap left by more traditional approaches and foci in which the bigger metropolitan areas were situated at the centre of the research (and political) agenda.

There is a growing awareness (McCann, 2004; Bell and Jayne, 2009) about the fact that the role of towns in territorial development and spatial dynamics in the globalised context has been both under researched and underestimated. In recent decades, on the one hand research has focussed on urban hierarchies from the late 1990s onward in which the objective was to define a hierarchy of world cities, based on the presence of corporate headquarters of financial services, legal and accounting firms (Beaverstock, Taylor and Smith, 1999) or on air connections (IGEAT et al., 2006); on the other hand, several projects focused on metropolitan areas, urban regions and their functional regions (IGEAT et al., 2007; Adam, 2006; OECD, 2002; 2012) considered smaller settlements as embedded and functionally dependent on larger spatial aggregations.

The assumption underlying the TOWN project seeks to remedy the "invisibility" of the territorial role of small and medium-sized towns in their regions. It assumes that such towns have their own specific 'urban' capital and related territorial potentials that are embedded in wider global dynamics, albeit in specific spatial contexts in which the economic dynamics are "largely underpinned by a complex interplay of internal and external forces" (Courtney

and Moseley, 2008, p. 315). Therefore, it hypothesises that such towns could exhibit different spatial performances compared to their context and specific territorial identity, if a specific combination of local development and territorial governance is in place.

The project shares the perception that a large part of the research on large cities to date does not help in conceptualising the contemporary functions of towns and smaller urban settlements. (Robinson, 2002; Demazière, 2014). Towns may be 'relatively autonomous' actors capable of developing and realising their own potentials either individually or collectively (i.e. through cooperation with other urban areas). If this is the case, towns could offer opportunities to increase the resilience of territories dealing with the impacts of global economic trends, due to the fact that they are rooted in local specificities and have their own territorial capital which they can mobilise to achieve local development strategies.

At the same time, however, there is the clear awareness of the need to avoid an ever bigger conceptual mistake when addressing the role of small and medium-sized towns in the wider territory: the idea that they are 'free agents' with their own autonomous territorial trajectory, unaffected by any wider 'scale-dependency'. Hence, the project has faced the dual challenge of identifying the specificities of towns while at the same time paying due attention to, and acknowledging, the regional embeddedness of these territorial features.

Nevertheless, even before discussing the role of towns in their wider urban and regional context, the project had the complicated task of defining its approach to the concept of 'town'. The object of the research project is far from clear in either the academic or policy literature, and despite being a category that belongs to our common sense (everybody tends to understand what the term refers to), and a growing series of analyses of the topic (Adam, 2006; Van Leeuwen & Rietveld, 2011), it is difficult to identify a clear and shared definition of such 'towns'. The term refers to something small and smaller than a city, but a clear-cut definition and distinguishing characteristics do not exist. This is why we sympathise with Brunet's opinion (1997) about medium-sized town as 'unidentified real object', and we can extend it to the wider term of 'town'. It is unidentified because not there is no widely shared and clear concept, nevertheless it is a 'real' object because of its specific (common-sense) shared cultural meaning that evokes images and an understanding of what it is that characterised such places territorial features.

In a sense we think that it is 'impossible' to define in a clear-cut manner the concept of 'small and medium-sized town', because it refers to a complex social-spatial phenomenon strongly embedded in its context and thus cannot be identified in a simple and easy manner across Europe. To a certain extent, we sympathise with the radical critique of the concept of urbanity developed by political-economy scholars, such as Brenner and Schmid (2013) to refer to just one of the more recent publications on the issue (further elaborations on this issue in the next section).

However, the framework of the project defined by the ESPON applied-research agenda, which is inspired by the aim of producing knowledge to support policy recommendations, leaves limited margins for epistemological reflections on the nature of urban areas and the concept of city and towns. Within this perspective, we have adopted a pragmatic approach and have elaborated our definition of town based on the objectives contained in the tender and accordingly developed our analysis and aims in a manner that is consistent with this approach and the need to analyse and investigate its empirical consequences in a rigorous and systematic fashion. This was done taking into consideration on the one hand the wider debate on towns and urban areas, and on the other hand the specific project aim, the data availability and the feasibility of a plausible method that would integrate different perspectives.

Based on this approach, we have answered the general research tasks of the project, which can be summarised in the following three points:

- The identification and categorisation of SMSTs in Europe;
- The analysis of their territorial performances and problems in terms of socio-economic characteristics and spatial dynamics, taking in consideration their specific contexts and profiles;
- The elaboration of possible policy recommendations in relation to typologies and spatial contexts, having territorial cohesion and EU 2020 strategy as policy framework and final scope of policy actions.

All the work done within the TOWN project is contained in this TOWN Scientific report. Each chapter represents a specific part of the analysis, and it indicates the theoretical approach, the research assumptions, the related method of investigation and the specific findings. An unavoidable dimension of this is that the more we have sought to approach the theme from different perspectives and utilised different data, the greater is the risk of producing contradictory findings. Taking this into account we have therefore shown both convergences and contradictions, in the belief that they both present instructive methodological and analytical – insights.

Within this framework, the present chapter has a two-fold aim. First, it provides our interpretation of 'town' locating it within the wider epistemological debate. Second, and consequently, it illustrates the methodological consequences of this interpretation and the overall construction of the TOWN approach.

Thus, the following section reflects on the epistemology of 'town' and its methodological consequences (section 2). Then, section 3 articulates the research questions that the project has been able to answer and the related analytical challenges. Following on from this it explains how the general structure of the project has led to the structure of this report.

2. Conceptualising small and medium-sized towns in their functional and territorial contexts

2.1. A territorialist approach

The project aims to draw on the analyses and insights of different approaches and definitions, whilst developing specific strands of analysis which were consequences of different conceptual definitions. Nevertheless, TOWN has predominately adopted a specific definition that is based on a geomatic-morphological interpretation, to which a set of thresholds have been applied (as explained further in section 2.4 and more in detail in ch.2).

We can locate the overall approach in the traditional interpretation of the urban phenomena that Brenner and Schmid (2013) address – not without strong critics – as an empirical and territorialist approach (ibid, p.14). It is a relatively traditional interpretation that has characterised most of the twentieth-century social sciences rooted in the concept that the urban phenomena can be interpreted as bounded, coherent and discrete spatial units, albeit a complex one. The association of statistical data with these entities then allows for further analysis and considerations.

The territorialist approach we have adopted is therefore based on two main fundamental empirical and theoretical problems: first, how to determine the appropriate spatial boundaries of the areas whose populations were to be measured; second, the specification of a set of criteria for urban interpretation and type definition. While the first one lies at the core of the geomatic method (Guerois et al., 2012), the latter has been for decades mainly characterised by a demographic approach, based on which the identification of appropriate thresholds of population within a predefined jurisdictional unit would allow for the classification of 'urban' types. Brenner and Schmid (2013) argue that the origin of such a demographic-approach can be found in the 1930s that it has continued to be developed until today (Schnore, 1964; Bloom et al., 2010; Montgomery, 2010).

Critiques of this approach are by no means new. For instance Brenner and Schmid point to Wirth (1969 [1937]) as one of the first critical voices of such an arbitrary population-based definition of the urban condition. His theory of urbanism paid attention to the role of urbanisation in intensifying interspatial interdependencies and reorganising territorial organisation. However, Brenner and Schmid argue that Wirth's theory was still based on the conception of social life taking place in bounded human settlements that can be typologized through more elaborated characteristics, such as population, density, and heterogeneity (Brenner & Schmid, 2013).

Another important critique of this approach identified by Brenner and Schmid (ibid) refers to the univocal distinction between urban and rural areas. The banalization of the territorial complexity in an urban-rural dichotomy tends to leave the rural area as a sort of residual area (or category) without any genuine distinction or connotation. But, as the EDORA project argued, "Urban areas and rural hinterlands are not two discrete spaces, they overlap and interlink in a complex system of economic and social interactions, (commuting, service provision patterns, leisure and recreation linkages etc). In the current, increasingly globalised, context, many rural areas have as many links to distant regions across Europe or the rest of the world as they do to adjacent urban areas." (Copus et al., 2011: 11). This implies that the complex relationships between activities and socio-spatial organisation, the labour structure and economic bonds should be part of the interpretative process so as to contribute to the understanding of territorial complexity.

Nevertheless, the territorialist approach remains the standard way of interpreting the 'urban phenomena' that allows cross-country comparison. The adoption of this method is a pragmatic choice determined by the need to have a first important step in the project a quantitative overview of our object of analysis across Europe, as as required in the tender. At the same time, however, the project does not ignore the political economy critique of the territorialist approach and its attempted definition of urban areas. It uses its arguments as critical contributions to an understanding of the limitations of certain results produced using the territorialist approach. Moreover, it offers important insights that can be used in relation to our qualitative analysis at case study level.

Finally, two issues need to be mentioned concerning the territorialist approach adopted by the TOWN project. First, the project has had the chance to apply a method that has overcome the limitation of data inaccuracy due to different national and regional statistical units and procedures. This draws on the methods elaborated by the joint initiative of OECD and DG Regio, who developed a geomatic interpretation that allows for the morphological articulation of the urban-rural distinction based on the geo-mapping of the territory (DG Regio, 2011; OECD, 2012).

Second, the project has experimented with more sophisticated approaches for the characterisation of urban settlements. On the one hand, in line with Wirth's theory of urbanism, the introduction of criteria as such density, and socio-economic composition; on the other hand the investigation of the functional roles of urban areas interpreted as centres of functions and jobs (see chapter 5), which makes it possible to determine the different positions of cities and towns in urban hierarchies and complex polycentric territorial structures.

2.2. Terminology

The territorialist method, based on criteria and thresholds for the differentiation of urban types can be considered the basis of mainstream approaches to urban interpretation and analyses. It is important to note that the mainstream terminology also derives from this conceptual interpretation. Therefore, the unavoidable arbitrary nature of the method, as pointed out by several critics, is reflected in the use of the terminology, in particular because of the semantic richness of the terms in use.

One of the most problematic is the differentiation between town and city. The term 'town' has clear cultural connotations of smaller-ness, but it has a blurred conceptual demarcation line with the term 'city'. The dictionary refers to the term town as "a built-up area with a name, defined boundaries, and local government that is larger than a village and generally smaller than a city" (Oxford Dictionaries: "town").

However, the distinction in the English language cannot be found in other national and linguistic contexts. If in French language we can find 'cité' and 'ville', the former tends to be used to designate a district of the latter ('cité d'Arles', 'cité ouvrière'…). And in many other European countries, the urban entity has only one general term (stadt, citta', ciudad, πόλη, město, etc).

To make it more complicated from a terminological point of view, in academic and policy documents the term 'town' is often associated with a dimensional connotation (small and medium sized) in a rather un-problematic way. In general, the notion of small-and-medium-size-ness is very commonly associated with cities, enterprises, companies and the like, and it indicates the exclusion of the upper part of the range of a category, i.e. the big size features. 'Small and medium sized town' is a relatively common expression that indicates those urban

areas or settlements that are not in the higher part of the ranking table. However, there is a conceptual overlap between the remaining 'big-size' of small-and-medium and the upper category of 'cities'.

The call for tenders of the project "Small and medium sized towns in their functional territorial context" is a clear example of this ambiguity. Small and medium sized towns in Europe are identified as the subject of the analysis, and are specified as those towns having between 5.000 and 50.000 inhabitants. The tender explicitly mentions that these thresholds are compatible with the classification adopted by DG Regio and OECD of cities in Europe, which are interpreted as having 50.000 inhabitants upwards. The tender indicates as small and medium sized towns those settlements with less than 50.000 inhabitants, while it refers to interpretations according to which settlements above that threshold are considered to be urban areas and cities.

Therefore, the term 'small-and-medium-sized' appears to be more a reinforcement of the smallness characteristics than a real specification. Semantically, it seems to lead to a redundancy of the term 'town' that refers to a smaller size. Although the distinction becomes clearer if density is used as an additional criterion for type distinctions (as the project has experimented with in ch.2), nevertheless the ambiguity remains.

Therefore, for the sake of clarification, the project will address the subject of its investigation alternatively with generic terms as small urban areas and/or settlements, or (smaller) towns. However, we will use the acronym SMST that stands for Small and Medium Sized Town – as specified by the tender - when we refer to the core of our analysis based on a specific conceptual and methodological approach - with a consequent experimentation utilising population and density thresholds - adopted in TOWN project[1]. Moreover, the project will use specific terms to indicate the interpretation of towns as functional centres of micro regions (see ch.5).

2.3. Combining three different urban definitions

In order to clarify the ambiguity that surrounds the definition of SMSTs a brief overview of the different conceptualisations and the ways of interpreting the urban dimensions within the territorialist approach (Brenner & Schmid, 2013) is necessary. Drawn on a first overview done by the ESPON 1.4.1 project (ÖIR et al., 2006), three key perspectives and discourses related to the definition and conceptualisation of urban places can be highlighted (summarised in Table 1):

1) Morphological perspective: town is defined as a compact built up area with a certain minimum concentration of population (Urban settlement);

2) Administrative perspective: town is defined as a territorial unit of a local government that contains urban settlement(s) (Urban municipality);

3) Functional perspective: town is defined as an urban settlement (or urban municipality) containing a concentration of jobs, services and other functions that serve other settlements in its hinterland (urban centre); the urban centre acts as an urban core of the urban (functional) region, which is a larger area that contains the

[1] Seemingly, other projects have previously used different acronyms, such as SMESTO used in the ESPON project 1.4.1 (2006a).

urban centre and its hinterland which together form a socio-spatial system integrated by functional inter-relations.

Table 1. Comparison of different conceptualisations and related criteria.

	Term	Definition	Distinctive characteristics	Criteria
Morphological approach	Urban settlement	Built up area (area with urban physical characteristics) of a minimum population size	Concentration of buildings (distinction from open spaces) and population (above minimal threshold)	• Compact build-up area • Distance between settlements and buildings • Population • Density of urbanised area
Administrative approach	Urban municipality	Settlement with urban administrative status	Local government with urban administrative duties and responsibilities and territory / boundary containing urban settlements	• Local government • administrative functions • Historical attribution
Functional approach	Urban centre / urban core	Urban settlement (municipality) with concentration of jobs, services and other urban functions	Role of centre for region due to concentration of jobs and other urban functions attracting commuters and visitors	• Population • Jobs • Other urban functions • Commuting • Centrality
	Urban functional region	Larger area with functional relationship with one or more urban cores	Gravitational area of jobs, services and other functions located in urban core(s)	• Access to jobs and services • Home-work commuting • Home-service commuting

2.3.1. The urban settlement

The first fundamental step in the definition of urban settlement from a physical, **morphological** point of view has is the conceptualisation of the distinction between the built-up and open-space areas. In general, an *urban settlement* is considered to be an area in which buildings are not too sparse and contain a concentration of population that creates the sense of an urban agglomeration. From this perspective, two parameters are most commonly used: first, the distance between buildings must be below a given threshold; second, the total population of the built-up area must exceed a certain minimum level.

While the use of these parameters is commonly accepted in official definitions, there are significant differences between thresholds applied in each country. The United Nations recommends that for the definition of urban areas 200m be used as the maximum distance between houses (Le Gléau et al., 1997), although in some European countries it may range from 50 m (UK and Norway) to 250 m in Belgium (ÖIR et al., 2006: 45). In addition, there may be some different interpretations for areas used for public, commercial and industrial purposes, with the consequence of 'creating' more or less fragmented and extensive areas among countries (Le Gléau et al., 1997).

For the second parameter, the continuous built-up area can only be considered as "urban" if its aggregated population exceeds a certain threshold that also varies among different countries (e.g. 200 inhabitants in Belgium and the Nordic Countries), but can also have forms

of approximation (e.g. 50 occupied dwellings as threshold adopted in Ireland). At the same time, if the built up area is approximated to administrative or statistical boundaries, the criterion adopted for the identification of the urban settlement is the population density (as for instance in the Netherlands with a threshold of 1.000 inhabitants per sq. km).

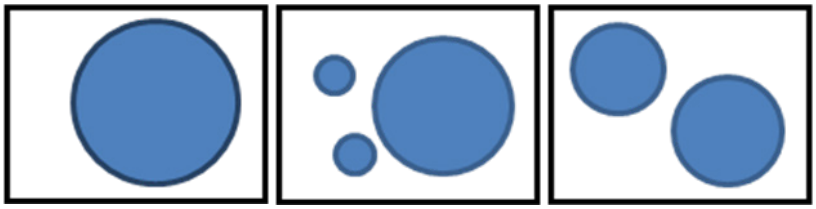
2.3.2. The urban municipality and the relationship with urban settlements

The definition of the urban settlement through its built-up area, and thus using morphological criteria, is different from the **administrative** definition of an *urban municipality* as an administrative entity with (different) functions, rights and duties that can be called town (UK), ville (Fr), stadt (D), město (Czech R.), etc.

Some countries have a specific population threshold for defining urban municipalities. Concerning population thresholds in Europe, ESPON 1.4.1 (ÖIR et al., 2006a) has shown the differences across Europe: the Czech Republic and Luxemburg use 2.000 inhabitants as a bottom line, Slovakia 5.000 inhabitants, Switzerland and Spain 10.000. Moreover, in some countries, the status of an urban municipality, town or other administrative terminology is granted by an upper administrative level (e.g. the State in the Czech Republic, Poland and Ireland, the Länder in Germany) and the designation may be based on an ad hoc decision. For example, in the UK city status has been conferred by the Monarch since 16th century, while in Poland and Germany historical events and political decisions determined the attribution of town rights/status. They all show the rather arbitrary, nationally specific, nature of thresholds based on population size in Europe.

The complexity of territorial arrangement increases when investigating the relationship between the built-up area and urban municipality. Three main empirical categories could be identified (fig. 1.):

Fig.1. Three types of relationships between urban administrative units (the black squares) and urban settlements (blue circles)



The first category indicates those countries that have an administrative unit per each settlement (which may match a defined population threshold). Traditionally, these are the countries that experienced the Napoleonic reform of territorial administration (France, Spain, Italy, Belgium, etc.) and others that were inspired by it.

The second category indicates those countries in which the administrative boundary can contain more settlements, and the administrative function is allocated to the main settlement. Also in this case thresholds for the definition of the minimum size of the area can be attributed. At the same time, though, the status of municipality can be given through a political act (e.g. Poland, Czech Republic, etc).

A third category indicates countries with relatively large administrative units, in which several settlements of a certain dimension are included. This is the case in the UK and Sweden, for instance, in which sub-administrative units exist but do not have important

official roles. Also in this case, the attribution of urban administrative functions (and the possibility to elect a mayor, for instance, as in UK) comes through political decision.

Moreover, in terms of spatial matching between urban municipalities and urban settlements several complications may occur in the context of suburbanisation which has taken place in many countries over several decades. At risk of being too schematic, three types of phenomenon may be characterized as indicated in fig. 2.

The settlement expansion (represented in grey) could have crossed the administrative unit boundary (figure on the top), in some cases transforming two discrete settlements belonging to a different administrative unit into a built up continuum (figure at the centre). In other cases, the settlement may have been agglomerated by the expansion of a larger urban/metropolitan area (figure at the bottom).

Fig.2. Settlements dynamics (blue core and grey expansion) and relationship with administrative units / municipalities (black box)

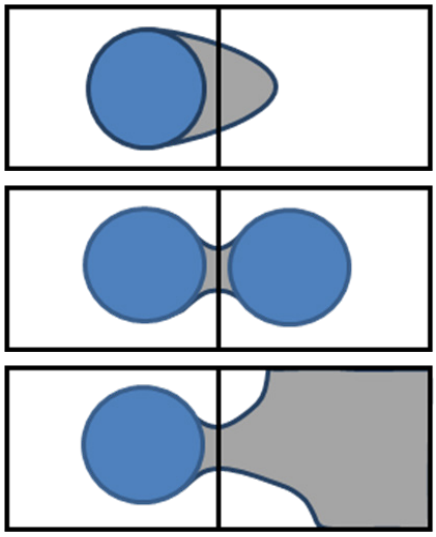


Table 4 in Chapter 3 illustrates the point of morphological settlements coming to extend beyond the original municipal boundaries. Whereas for many small towns (defined by their morphological boundaries) remain contained within a single municipal area, it is also clear that morphological settlements might extend across as many at 17 municipalities (in the case of Belgium). This process of urban expansion lies at the root of reforming processes of administrative units, as in the case of Flanders in Belgium, and of France with the current efforts to merge supra-municipal cooperation bodies (as further discussed in Chapter 4).

2.3.3. The urban centre and its functional region

The **functional** approach aims at understanding the role and function of (*urban) centres* in the wider territory. Many countries indeed complement the identification of urban municipalities (towns and cities) with functional criteria rooted in the theoretical assumptions of Christaller's "Central Place Theory" (1933), in order to provide a better grasp of the complex structure of urbanised areas. Despite the profound transformations in urban systems towards networks forms (Andersen et al. 2011) this concept remains relevant, especially for understanding the role of towns.

The functional urban region refers to a territorial unit that is spatially integrated by the repetitive daily relations between homes and jobs through commuting to work (Hall and

Hay, 1980; Bourne, 1975; van der Laan 1998; OECD, 2002; Antikainen 2005; Karlsson and Olsson, 2006; Sýkora and Mulíček 2009). It is assumed that if the economically active population of one municipality is substantially travelling to another municipality or other municipalities, those entities belong to the same functional area. Functional urban regions consist of two basic functional parts: urban cores and hinterland areas. Usually, municipalities in urban hinterlands, from which a certain percentage of the economically active population travels to the core municipality, are considered to be part of the functional region. The inter-relations of all these municipalities shape an *urban functional region*. Related to this understanding are concepts such as *travel-to-work area* (Coombes et al. 1982; Robson et al. 2006) and the *local labour market area* (van der Laan and Schalke, 2001), both being based on the commuting patterns of the economically active population travelling daily from one municipality to another.

The functional approach generally divides the territory into areas with specific functional characteristics, usually urban cores and related hinterland (van den Berg at al., 1982; Pumain; 2004) that together form functional regions. While the concept of functional (urban) region on general level refers to the socio-economic region tightly organized around urban cores, there are important differences between the various ways the term is used.

As mentioned in Chapter 5, two essential variants can be distinguished. The first variant refers to functional urban regions/areas (e.g. FUA in IGEAT et al., 2006). It represents highly urbanized regions characterized by a high degree of spatial intensity. It leaves less urbanized areas outside functional urban regions (van der Laan, 1998; Pumain, 2004). The second variant refers to urban regions at the micro level. These urban micro-regions cover the whole territory linking each settlement to one of the urban regions even if it is linked to urban cores by weak ties (Hall & Hay, 1980; Sýkora and Mulíček 2009).

In some countries, such as France, Belgium and the Netherlands (Eurostat, 1992), the urban regions have an official definition for functional regions (e.g. *aire urbaine* in France, *région urbaine/Stadsgewest* in Belgium, *agglomération* in Switzerland). While in other countries, the concept of “urban regions” has been developed and applied empirically by research institutes or national agencies without official recognition (for instance Austria, Czech Republic, Germany, Hungary, Ireland, Slovenia, Spain and the United Kingdom).

Moreover, in some cases and research analyses (e.g. in France: Region Centre, 2011; in Wales: Welsh Government, 2008), the functional approach has been enriched with the investigation of the gravitational areas of important services. In particular for smaller units, the presence and the access to services of general interests (e.g. health care, cultural centres, etc.) is important in the definition of specific hierarchies in the territory. Here, the regional or national context matters. Thus, a city of 20,000 inhabitants in Norway or Portugal may have functions that correspond to those typically found in cities of more than 100,000 inhabitants in Germany or France (Carrière 2008). Four decades ago, J. Lajugie pointed out that: "such a small town (...) should be considered as a medium-sized town in a sparsely populated and sparsely urbanized region, while a medium-sized town with two or three times more population, but embedded in an urban system where the population density is higher, does not necessarily play this role of services provider"(Lajugie 1974, p. 18).

Overall, the concept of functional urban region, albeit in most cases limited to the working commuting patterns of population (due to the lack of data on other commuting patterns, e.g. for education or for shopping), is relevant for the division of the territory into entities that have a meaning for the daily life of inhabitants. The exchanges and relations that take place between the different parts of the urban region delimit the zone of influence of one or more central cores and specify the types of towns. The ESPON 141 project (ÖIR et al., 2006)

distinguished networked, agglomerated, and autonomous towns, and we will refine and test empirically this typology presented in Chapter 5.

2.4. Harmonised definition of SMST in the TOWN project

Several steps toward a shared morphological identification of urban settlements and the harmonisation of the different interpretations have been made in order to enable comparative studies across Europe. So far these attempts have focussed on the upper part of the list ranking the dimension of the urban settlements, i.e. bigger urban centres. In particular, in 2011 the European Commission (DG Regio) and OECD adopted a new definition of urban settlements based on population size and density ('high-density population grid cells') (DG Regio, 2011; Dijkstra & Poelman, 2012). TOWN project has decided to use the morphological definition of urban settlements as main approach for a pan-European analysis of the smaller category.

According to this method, the EU territory is subdivided into grid cells of 1 km^2, and each of these is associated with the population living in that portion of territory. In this way, the density of population has been used for the basic distinction urban – rural (threshold of 300 inhabitants per km^2). The remaining urban cells have been clustered for the identification of continuous urban settlements. In a second step, the clusters of grid cells with a density of more than 1,500 inhabitants per km^2 and with a minimum population of 50.000 inhabitants are identified as 'urban centres' (then specifically validated as such in relation to the administrative units).

This morphological approach has been able to provide a relatively uniform interpretation of urban settlements for the full EU territory, and to overcome different national interpretative criteria. The new EC-OECD definition (Dijkstra & Poelman, 2012) has identified 828 (greater) cities with an urban centre of at least 50.000 inhabitants in the EU, Switzerland, Croatia, Iceland and Norway, which contain about 40% of the European population. Each city is part of its own commuting zone or of a polycentric commuting zone covering multiple cities. Cities and the commuting zones together (LUZs) account for 60% of the European population, in which several smaller urban centres (below 50.000 inhabitants) are included.

The TOWN project has followed the same analytical and interpretative line of thought (except the approximation of the LUZ) and, as specified in the terms of reference, it has focused on settlements below the threshold of 50.000 inhabitants, including the blurred issue of areas above the threshold but with similar density characteristics.

In this approach, as the first morphological step, TOWN defines Small and Medium Sized Town (SMST) as an urban settlement if it has the following characteristics (tab.2):

- Polygons with a total density (average density of all cells included) between 300 and 1500 inh./kmq and a population between 5.000 and 50.000 inhabitants;
- Polygons with a total density of more than 1,500 inh./kmq but a total population of less than 50.000
- Polygons with a total population of more than 50.000 but a total density of less than 1,500 inh./kmq.

By elimination, also non-SMST urban areas have been defined:

- those settlements that are characterised by a population density superior to 300 inh. per square km but a populating lower than 5.000 and therefore insufficient to be considered SMST, hence classified as "Very Small Towns" (VST);

- those settlements that are too large and dense to be considered SMST and are therefore named, following the EU-OECD methodology (Dijkstra & Poelman, 2012), "High Density Urban Clusters" (HDUC).

Table 2. Basic urban settlements typology

		DENSITY (inh. / kmq)		
		< 300	> 300 and < 1500	> 1500
POPULATION (inh.)	< 5000	OTHER SETTLEMENTS	**VST** (very small town)	**VST** (very small town)
	> 5000 and < 50000	OTHER SETTLEMENTS	SMST	SMST
	> 50000	OTHER SETTLEMENTS	SMST	**HDUC** (high-density urban clusters)

The rest of the territory is defined, by exclusion, as "other settlement types" and includes unpopulated areas, sprawling urbanisations, or settlements that are too sparsely populated to even be considered as Very Small Towns.

The findings of this research activity and the diversification of the different types are presented in chapter 2.

The identification of the morphological units that can be associated with SMST has opened up the possibility of going further in the analysis. As presented in ch.3, the project has succeeded in transforming the traditional statistical administrative-based data-set in a morphological-based data-set (through a complex methodological process and only for a limited portion of the EU territory) which allows comparison of the socio-economic characteristics of settlement forms.

At the same time, mainly through the case study analysis, the project has also investigated to what extent the analysis of these morphological settlements (defined mainly by a population threshold and density) can be enriched through the exploration of functional roles of towns in their wider regional context (ch.5). The identification of micro-regions and urban centres interprets the territory in a different and less simplified way than the approach aiming at defining LUZ around bigger urban areas, though.

Therefore, the project contributes to the DG Regio and OECD morphological harmonisation of the urban areas interpretation, and it uses this interpretation to investigate further the role of SMSTs in the EU territory, while bearing in mind the arbitrary nature of the thresholds and the simplification of some conceptual, spatial and methodological complexities.

3. Research and scientific-report structure

3.1. Answer to the call for tenders

The call for tenders of the project "Small and medium sized towns in their functional territorial context" asked three general policy questions, as already mentioned in the introduction to this chapter. Moreover, the project was requested to answer to the following key themes and research questions, as specified by the terms of reference:

"1. Small and medium-sized towns in the territorial structures of Europe

- How can small and medium sized towns which have an urban centre between 5 000 and 50 000 inhabitants be identified using a methodology that is compatible with the new classification of cities and towns at European scale developed by the European Commission and the OECD?
- How are the small and medium-sized towns distributed throughout the territory of the ESPON space?
- How are small and medium-sized towns distributed in different territorial contexts and the ESPON Territorial Typologies?
- How have small and medium-sized towns performed over time with regards to demographic and economic development? How has their development been comparative to the European and the national situation?

2. The roles and functions of small and medium-sized towns

- What roles and functions do small and medium-sized towns perform in their different territorial contexts? For example, what are the specific functions that can be identified for small and medium-sized towns in rural areas, metropolitan areas or in cross- border areas?
- In which type of territorial contexts do small and medium-sized towns play a particularly important function?

3. Governance and co-operation for development of small-and medium-sized towns

- What type of governance and cooperation arrangements exist at various levels aimed at improving public policies and service delivers in small and medium-sized towns and their surrounding?
- What kind of good practices exist with regard to governance and cooperation arrangements aimed at increasing critical mass through cooperation arrangements or the merging of small local authorities? What practices have not worked well for small and medium-sized towns?"

(ESPON, 2011)

The TOWN project has responded to these research questions through an articulated combination of approaches and analytical phases, as illustrated in Figure 3 (originally presented in TOWN Inception report - Servillo et al., 2012: 4). In the scheme, there are two broad methodological frames: a geomatic and quantitative component complemented with a policy-analysis methodology. They both are integrated in the Case study phase.

As the figure 1 above illustrates, the project has been articulated through a multi-methodological approach: it started with a morphological identification of SMSTs, and it continued triangulating multiple methods of research combining both a quantitative and qualitative investigations.

At the same time, the TOWN project has also adopted a multi-level approach, which has allowed an exploration of the town subject across several scales. Although it should be noted that this latter aspect was 'restricted' by the availability of appropriate data and the logical feasibility of engaging in such research activities.

Fig. 3. Structure of WP2 in Research Activities

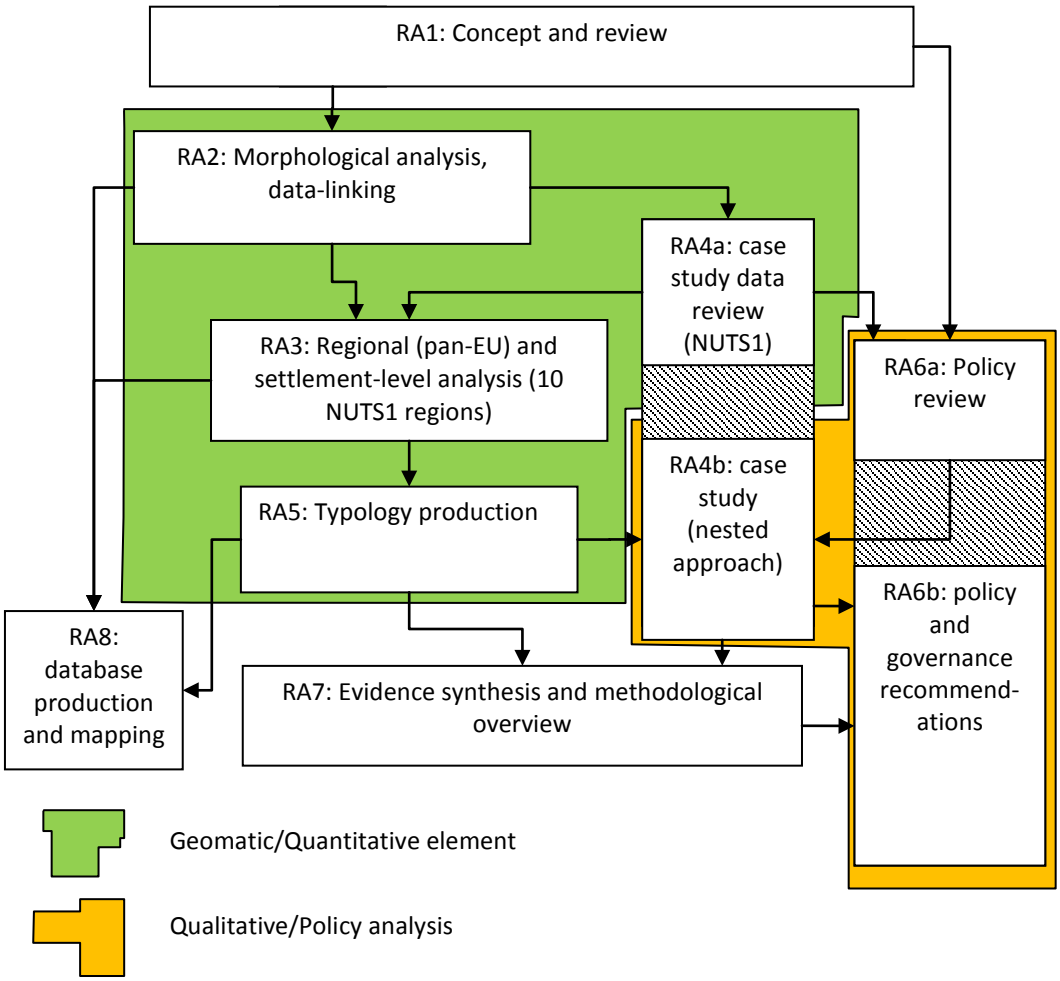


Table 3 (originally included in the TOWN Interim report - Servillo et al., 2013: 19) outlines seven principal analytical activities/data availability against the spatial extent of the work. It shows how the two main levels of analysis (EU and case study) have been further articulated according to specific research tasks included in the various Research activities (RAs). At the crossing of the various lines, the table indicates also in which chapter of the present Scientific Report is presented.

Table 3. Spatial scale and extent of research activities

Research activity	Territorial extent of research activity				
			Case study work		
	EU-wide	Multi-national (all case study regions)	Macro-regional (NUTS1)	Meso-regional	Settlement/ functional region level
Geomatic identification of morphological towns (RA2)	Ch2		Case study annex		
Cross-tabulation NUTS analysis (RA3)	Ch8				
European policy review (RA6)	Ch7				
Functional analysis (RA4)				Ch5	
SMST audit (RA3/4)				Ch6	Ch6
Policy analysis/ qualitative assessment (RA4)		Ch4	Ch7	Ch7	Ch7
SMST typology and regression work (RA3/5)		Ch3-9		Ch3-9	

3.2. The research questions

This section presents the way the three research questions presented in the terms of reference (ESPON, 2011) and mentioned in section 3.1 have been further developed and made operational.

3.2.1. Methodological definition of town

Section 2 has shown how there are few common understandings of what a town is (over and beyond the sense of a small town not being a city), and there is equally little consensus in either the policy or the academic community. The lack of consensus has not prevented researchers researching smaller settlements, most of the time within a given regional or national context. A pan-EU overview on towns has so far been absent. Therefore, the main methodological aim of the project, in line with the terms of reference, has been to define and organise what is "urban" in the ESPON space – and what, in this context, is a small and medium sized town – using a morphological interpretative approach. It has produced an "objective" geography which has then been used as analytic base from which to address the more relevant questions posed by the TOWN project, that is, the role of such SMSTs in their territorial and functional context. As explained in section 2, the 'objective' geography is composed of polygons based on aggregation of 1kmsq-grid cells as unit of the analysis, in line with OECD-DG Regio approach for larger urban areas.

However, the applied exploration of the meaning of 'town' has relied on two complementary approaches at case study level: a functional interpretation of urban areas, and an analysis of the socio-economic profiles of urban municipalities.

The functional interpretative approach has dealt with the identification of urban areas in terms of functional size and territorial role, based on job location and home-to-work movement flows. First, it investigated the hierarchical organisation of urban areas in their territorial systems based on the distinction between small and medium sized and large centres, each of which supported by a functional micro-region. Second, it classified the types of relationships between centres (agglomerated, networked, autonomous), in order to understand their role in terms of a specific development trajectory and socio-economic performance.

The outcome represents an interpretation of the territory based on centres and related micro-region. The identified centres, which have been determined through data sets based on administrative units, have been confronted with the morphological interpretation of towns for detecting differences and providing further insights on their socio-economic performances.

Finally, in the case study analysis, 31 urban municipalities (with groups of 3 in selected NUTS2 regions of Belgium, Cyprus, Czech Republic, France, Italy, Poland, Slovenia, Spain, United Kingdom, and 4 in Sweden) have been investigated in terms of their socio economic profiles, combining their statistical data and qualitative analysis. The typological attributions given by the functional analysis has been part of the variables for the socio-economic analysis.

3.2.2. Spatial and socio-economic analysis of towns in their territorial context

The morphological interpretation of urban areas contributes to the generation of a geo-database at the finest spatial scale beyond the limitations of unevenness in scale, nomenclature, and political status, which affects spatial analysis carried out at the "traditional" administrative levels of NUTS2/3 or even LAU2. It has enabled to produce a

general overview of the morphological distribution of SMST in the EU territory. Furthermore, it has provided the basis for multi-scalar analysis of socio-economic characteristics.

Concerning the former, the morphological outcome provided a first impression of different territorial structures of urbanisation throughout Europe, at different scales: the pan-European – how different is the European space in terms of the prevailing settlement types and their territorial distribution; the regional, especially in relation to urban and metropolitan systems, their compactness and nuclear form; and the local, revealing the inner structure of small and medium sized towns.

Concerning the latter, the core part of the TOWN contribution concerns the multi-scalar analysis of spatial dynamics.

Pan-EU scale analysis

At pan-EU scale, the analysis was possible due to the characterisation of NUTS3 administrative units based on prevalent settlements. Despite the fact that the identification of regions that are predominantly characterised by smaller settlements cannot reveal the precise role of an individual SMST, it has been possible to investigate the general performance (measured in the time-span of the first decade of 2000s) of regional contexts characterised by smaller urban settlements areas as the predominating type (as opposed to regions that are characterised for instance by a higher degree of urbanisation).

This analysis has been able to address the following research questions:

- How are NUTS3 regions characterized according to the dominating type of population settlements? What is their general distribution over the ESPON space?
- What are the main territorial trends related to regions characterised by SMSTs as prevailing settlements?
- What are the main performances in relation to NUTS3 ESPON typologies?

(Multi-national) case-study-regions analysis

In terms of the wider case-study area, the construction of a polygon-based data set has provided the possibility of carrying out a socio-economic analysis of SMSTs among them, compared to their territorial context, and compared to HUDC.

The research questions have been the following:

- Are SMSTs (small to medium-sized towns as defined within the TOWN database) different from HDUCs (high density urban clusters)? If so, how are they different?
- Are differences between types of settlement (such as SMSTs and HDUCs) more important than the differences between SMSTs in different countries?
- What is the range of characteristics exhibited by SMSTs?
- Finally, to what degree are changes in SMSTs over the first decade of the 21st century explicable in terms of the characteristics of those SMSTs or are they mainly explicable in terms of the regional contexts in which those SMSTs are located?

Case study analysis

The Case study analysis of urban municipalities has been characterised by a three-fold structure:

a. Institutional analysis

b. Spatial-Functional types of towns (agglomerated, networked and autonomous)

c. Socio-economic profiles and characteristics

First, the analysis of institutional characteristics has focused on the question about whether local government has competences and resources to address the challenges faced by towns.

Local government is the level of territorial governance and public service delivery that is 'closest' to being able to take in the territory of a single town. This refers not only to direct policy steered by the local government, but also to voluntary supra-municipal institutions and inter-municipal cooperation that constitute increasingly important elements of governance processes. Also their extent (accessibility to services of general interest, urban/rural cooperation, transport, tourism or territorial marketing purposes) has more or less chance of being developed according to the general context in which territories try to activate multi-level and horizontal governance dynamics.

The aim of the cross-national analysis has been to consider the degree of political and fiscal decentralization of each country and to analyse how this works in practice. The objective has been to make explicit the link between the current state of development of 'towns' and broader issues of decentralisation through the following questions:

- Where have decentralisation processes been developed, and what is the scope of them? What are the institutional frameworks presents in Europe, and how can governance dynamics be better tailored according to the EU institutional differences?
- Wherever bottom-up approaches to integrated territorial development exist, can they be sustained, or are they hindered by the exercise of power of other layers of government?
- How do regions and provinces consider the role of semi-dense territories such as SMSTs in their own planning and development strategy?

Second, the analysis of spatial-functional types of towns has had the key objectives of identifying those SMSTs which play the role of urban micro-regional centres and to identify the territorial arrangements of these SMSTs/micro-regional centres, i.e. whether they are autonomous, networked, or agglomerated. While the identification of SMSTs that play the role of micro-regional centres contributed to the more nuanced definition of the object of analysis, i.e. SMSTs, the identified functional settlement context of SMSTs served as one of the key sources of information in the explanation and interpretation of differences in town's development dynamics and performance.

Third, the socio-economic analysis focused on the composition of the economic profiles of SMSTs, arguing that their size and their morphology do not necessarily determine town performance within the territory. The assumption is that socio-economic development is rather related to innovative and network strategies and building on local comparative advantages, resources and distinctiveness (Knox and Mayer, 2009).

In that respect, the question concerned the differentiation of SMSTs local economy capacity, and the capacity of SMSTs to function as resilient socio-economic spaces that resist the negative effects of global changes and new competitive pressures.

In order to reflect on these issues, the analysis adopted three economic profiles (i.e. residential, productive, creative-knowledge based) and investigated to what extent the local

economy in SMSTs are different from those of large cities or from wider regions in which SMSTs are located, and to what degree such socio-economic profiles change over time and under which conditions. Moreover, this analysis has investigated whether specific profiles of local economy lead to higher performances, and if activity-diversified profiles are performing better than more activity-specialized ones.

3.2.3. Policy & governance recommendations

The policy reflections and recommendations are expressed through three general questions, which correspond to highly problematic answers:

- the understanding of SMST role and limits in supporting territorial cohesion
- The potentiality and the limits of SMSTs in helping achieve the EU2020 strategy
- The institutional constrains and the governance opportunities to steer territorial dynamics toward the two above mentioned policy aims.

The policy considerations have been built upon the outputs of the multi-level analysis of SMST in their territorial context and on the results of the case studies, bringing together the various reflections and policy messages to provide a more general overview of the policy implications for SMSTs across Europe. Therefore, the aim of the policy approach has focused on the following items:

- Identification of any appropriate EU, national and regional policies/approaches that support SMSTs
- Identification of the extent to which SMSTs have developed appropriate policy responses independently and/or by cooperating with other SMSTs (territorial governance) and other levels of governance (the vertical dimension)
- Analysis of how, if at all, SMSTs can mobilise and enhance their existing assets and/or develop new ones as part of a development strategy
- Possibility to identify particular 'policy bundles' appropriate for use in relation to SMSTs with similar socio-economic profiles and regional contexts
- Identification of the spatial planning approaches (if any) that can be developed to support policy development

These policy investigations offer more general insights into the possible types of policy approach that can be developed and are potentially generalised to other similar SMSTs. However, these considerations need to take into consideration the different contexts and the institutional and socio-economic (macro) regional profile, although without assuming that these factors inevitably pre-determine the fate of SMSTs.

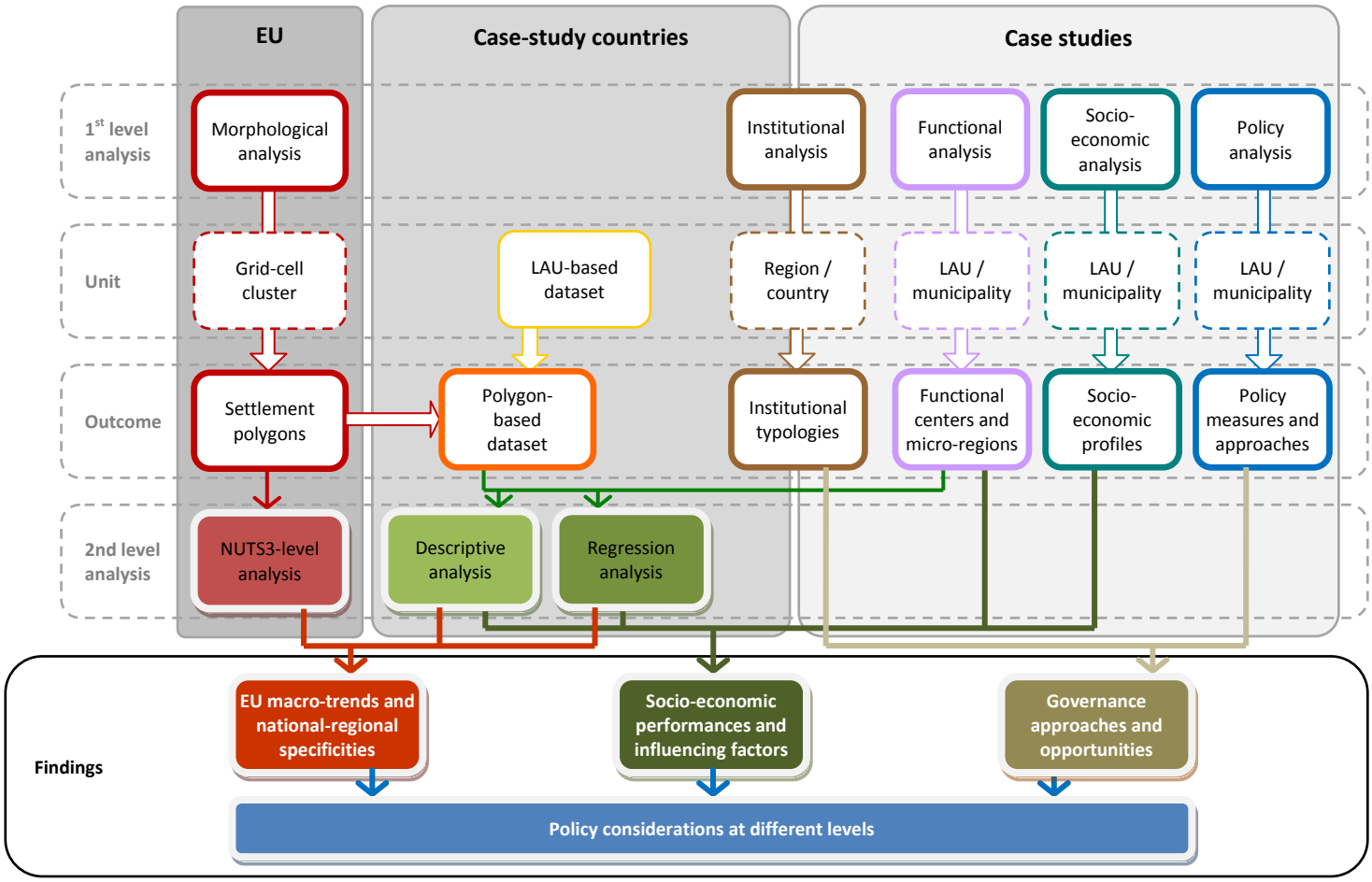
3.3. The structure of the project

The TOWN project has been implemented according to the fig. 4, which combines different scales of analysis with the various analytical phases and the unit of data sets.

As the figure shows, three main levels have been addressed: the pan-EU level, the case study and an intermediate geography which represents the extended case-study territory for which it has been possible to associate the administrative-based data set to morphological polygons (further details on the adopted method in Ch3).

The main difference is that on the one hand the analysis conducted at EU level is based on the morphological interpretation of the urban settlements and the definition of SMST polygons, and on the other hand the case study analysis has been based on dataset gathered at LAU level. In the latter case, the functional, socio-economic and policy analyses have had the urban municipalities as reference for their investigations.

Fig. 4. Structure of the TOWN project



The first phase of the project followed two main lines of research: the morphological interpretation of urban settlement and the definition of SMSTs polygons; and the framing of the case study analysis, which combined institutional, functional socio-economic and policy analyses, as largely presented in the Interim report (Servillo et al., 2013).

Once the polygons had been revised in the 10 case study regions, it was possible to associate the administrative-based dataset to the polygons. This allowed a second round of analysis focused on two tasks: at EU level, the definition of regional typologies according to the

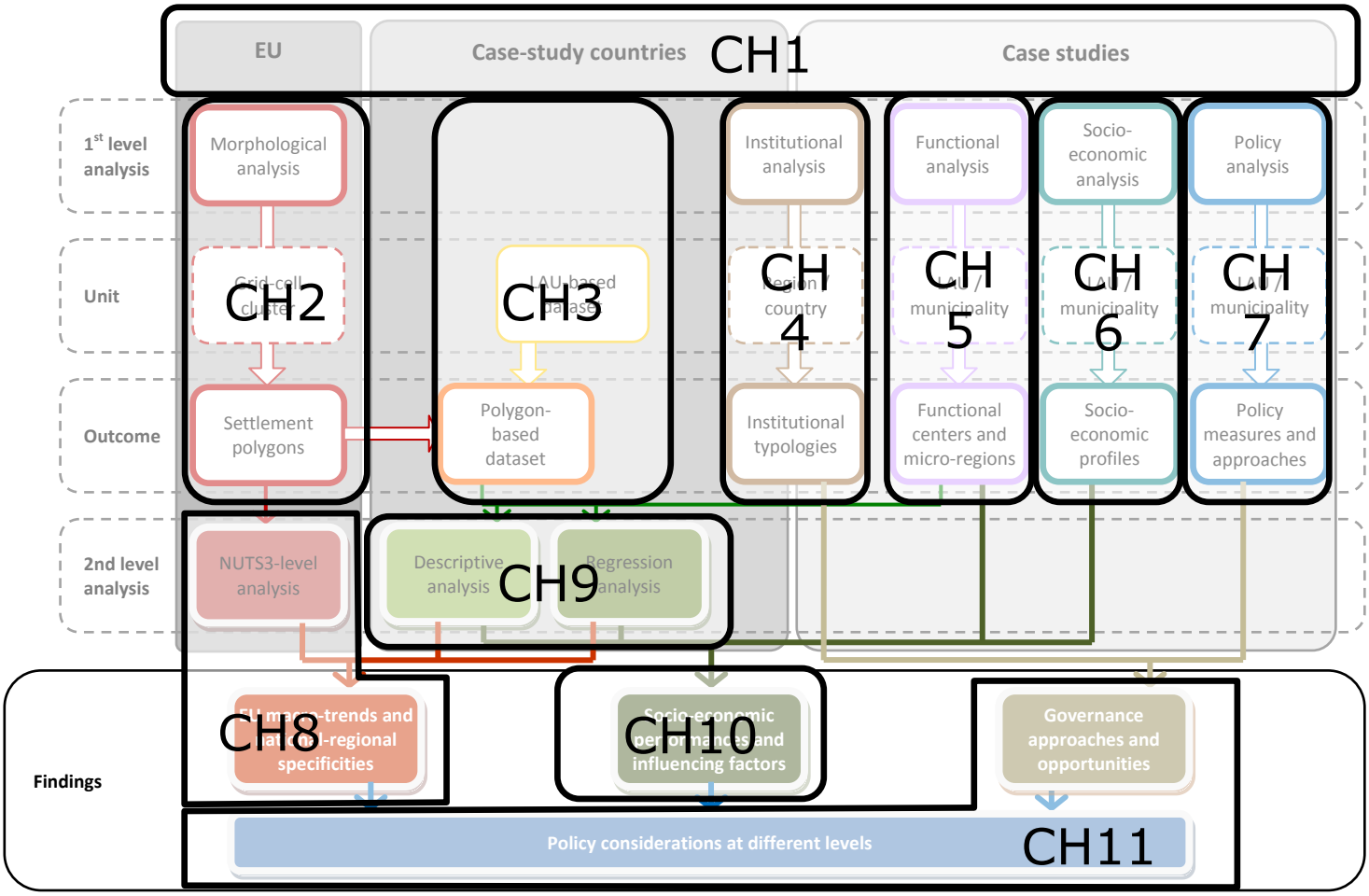
prevalent type of settlements and the cross-analysis with ESPON regional typologies; at case-study country level, the descriptive and regression analysis of socio-spatial characteristics of SMSTs in their regional context and their evolution in the last decade (approximately within the period 2000-2010).

Finally, the project has summarised the different findings in three main blocs: the main EU trends, the socio-economic characteristics and performances of SMSTs, and the policy considerations based on Case study findings and institutional differences. As a conclusion, all these three streams have been used for the elaboration of policy thoughts and recommendations for different audiences and at different scales.

3.4. The structure of TOWN scientific report

The scheme below (fig.5) presents the match between research activities and chapters of the scientific report.

Fig. 5. Structure of the TOWN Scientific report



Therefore, Chapter 2 provides scientific and methodological details on the development of the basic "throughput" of the TOWN project, the identification of urban settlements in the ESPON space according to a "morphological" approach and the delimitation and classification, among them, of those that have been defined "small and medium-sized towns" (SMST). It then sets on to explore several dimensions of the geo-base so obtained,

and organises this information according to a spatial database structure in three dimensions (grid-based, polygon-based, NUTS3-based).

The Chapter 3 outlines the process by which the research team linked areal (small area) data derived from various census and administrative sources to the morphological settlements identified in Chapter 2.

Chapter 4 explores the institutional framework of each of the case study context, and it argues that the institutional situation can form an important explanation of why and how urban territories – and specifically SMSTs – are debated and promoted, or ignored and consequently challenged by demographic, social and economic dynamics. It accounts for the decentralization process, the distribution of power and of resources between the State and several layers of sub-national authorities in the ten case study countries and their role in delineating the 'degrees of freedom' of individual townsand their capacity to conduct a sound development strategy.

Chapter 5 reflects on towns as micro-regional employment centres in their functional micro-region. Of the employment centres it explores the territorial arrangements, i.e. whether they are autonomous, networked, or agglomerated. The identification of towns that play the role of micro-regional centres and their functional-territorial arrangement contribute to enhance territorial understanding and provide key information in the explanation and interpretation of differences in town's development dynamics and performance.

Chapter 6 identifies three major socio-economic profiles of local economy of SMSTs and investigate their combination in the 31 case study towns. In particular, it reflects on the shifting between predominant profiles, their socio-economic dynamics and possible categorization of SMST performances. Moreover, it cross-references the outcomes of the analysis with the functional typologies identified in the previous chapter.

Chapter 7 builds upon the outputs of the earlier chapters and more specifically consider the results of the case studies in terms of their more general policy implications for SMSTs across Europe. It investigates the extent to which SMSTs have developed appropriate policy responses independently and/or by cooperating with other SMSTs (territorial governance) and other levels of governance (the vertical dimension), and how, if at all, SMSTs have sought to mobilise and enhance their existing assets and/or develop new ones as part of a development strategy .

Chapter 8 analyses how the grid-based geography of polygons of urban settlements maps over the established NUTS3 geography and how they performed in time. First, it characterises the different NUTS3 according to their typology of settlements, using different factors and thresholds, highlighting their inner distribution of population between different urban settlement types as defined in Chapter 2 of this Scientific Report. Second, it cross-tabulates the regions characterised by smaller settlements with other ESPON typologies. In this way, it captures general territorial trends in Europe and within national contexts, and highlights the role of macro regional and/or national-context factors.

Chapter 9 poses the question of to what degree are towns alike or dissimilar across national boundaries and to what degree are small towns different from cities (either at the scale of Europe or within national settlement systems), capturing general territorial trends for an extensive part of Europe (national case-study areas).

Chapter 10 brings together the findings from the four different evidence streams: the insights from the functional analysis of Chapter 5, the narrative insights from the case studies of towns in Chapter 6; the analysis of regional performance taking the structure of SMSTs into consideration from Chapter 8; and the statistical analysis of the SMST database

set out in Chapter 9. Each chapter has offered a different insight into the state of health of European towns but chapter 10 brings these findings together.

Ch.11 provides final policy thoughts and remarks based on the different findings and overall reflections about SMST role in EU territory, and their potential role (and existing barriers) in supporting EU policy aims such as territorial cohesion and EU 2020 strategy.

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