Enhanced Economic Typology for Spatial Economic Policy

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1 ABSTRACT

This paper tries to actively contribute to the discussion concerning spatial planning and related policies being frequently criticised for their poor ability to accommodate economic dynamics, resulting in tension between spatial and economic development and inefficient planning decisions or instruments. Considering the importance of the economy and its fundamental role in our society, in addition to the lack of knowledge about what the word economy really means and how it is organised in a territory, we strongly believe that it should also be deeply studied and understood by planners and policy makers.

In our previous papers we defined some instruments to use to fill this existing gap in knowledge. The first was economic activities mapping, consisting of an attempt of auditing and classifying economic activities in a given area (Giaretta & Zaman, 2017). Although this led to some interesting results, its use as a tool for the definition of the spatial distribution of economic activities or for the comparison of different economic areas,proved to be complicated. Therefore, in a later stage, two new versions of the typology of areas with economic activities were elaborated, in which we tried to divide a real territory into different types of existing economic fabrics. The first version, was based on more subjective criteria, using generally known planning concepts, such as city centres, core shopping centres, access roads, industrial areas and so on, to delimit several economic areas (Gruijthuijsen et al., 2018). The second version was based on more objective criteria, such as the combinations of the mapping data and the proximity between economic activities (Giaretta, Pennincx, De Mulder, Zaman, 2018). The second version turned out to be more interesting, as it really showed economic structures and patterns from an economic perspective, to which other layers, such as housing, could be added. Indeed, the existing economic fabric is not only about shopping streets and industrial areas.It follows residential patterns, creating areas in which economy, intended not only as services or facilities but also as industry and production, is mixed with housing. This creates a set of area types that are rarely defined or even considered by planners and politicians. Therefore, this second version was further elaborated, and we will explain the results in this paper (section 3 to 5). Finally, this last version gave us the possibility to translate it into possible market segments (section 6 and conclusion).

First, this article will explain the concept of market segmentation, and make the link with types and policy questions. Secondly,we will presentan enhanced version of the economic typology based on what has been presented in our previous papers. The typology consistsof a set of defined economic areas. This term refers to areas with a specific economic fabric proximity, the predominant presence of an economic use (or a combination of uses) and similar environmental characteristics, such as for example accessibility and visibility. This can be used to define how economy is structured, spread and organised in an area, while subdividing the built up space that accommodates economic activities intoeconomic structures or clusters. We use the types to describe and compare different areas throughout Flanders and Brussels. The work is based on data about economic activities collected in the field and not coming from existing databases. These databases are mostly conceived for uses that are not related to planning or policy preparations (Gruijthuijsen et al., 2018)and for that reason their use can give a misleading view on the economy. In this paper we present a revised and a tested method that is used to define the economic area types and their classification.At last, we will present our first attempt to translate the types into market segments. This illustrates the possible role the types can have in a policy making process, and it gives an idea on how it could be implemented in the future. We focus on both the potential for spatial transformation and future economic development and intensitification within each of these types.

Keywords: GIS, market segments, typology, economy, policy making

2 MARKET SEGMENTATION OF ECONOMIC AREAS

The idea of developing an economic area market segmentation for regional economic policy preparation started with the "Segmentation I" project (2015) of the Flemish governement. 'Market segmentation is the subdividing of space consumers into homogeneous groups that have similar demand functions within clusters and different demand functions among clusters' (DeLisle, 2019, p.242). The "Segmentation I" project tried to investigate how the demand for commercial property (eg retail, offices, industrial sheds) could be devided into several consistent market segments based on the spatial qualities of the property location. Next to the traditional property types (office, retail, industrial, apartment,…), nontraditional types were as well taken into account (hotel, mixed-use, agricultural and timber,..). The efforts in "Segmentation I" can be seen as a non-traditional method to segment the demand for commercial property, in a behavioural approach to real estate (DeLisle, 2019, p242). These market segments imply a corresponding product stratification: stratified products (on a supply side) can be matched to segments (on a demand side). As DeLisle describes, the analysis of a specific market segmentation and product stratification allows a 'goodness-of-fit' evaluation: 'By segmenting and stratifying real estate, emphasis can shift to an exploration of the "Goodness-of-Fit" criterion; how closely real estate offerings created by space producers match needs of space consumers which is both more socially responsible and sustainable.' (DeLisle, 2019 p.241).We propose a product stratification (and related demand segmentation) that is based on the characteristics of the area, where the real estate product is located. Our hypothesis is that this spatial segmentation will lead to reliable demand forecasts in spatial planning, and can help us understand the drivers of value in various types of economic areas. As this paper will explain further, most economic types host a wide range of (economic) activities and can include housing. An in depth analysis of the primary and ancillary demand for specific types can be part of future research. There is indeed a primary demand for a specific type, as well as a secondary demand that supports those operations (DeLisle, 2019, 318). To state an example, manufacturing activities might have a high demand for office space, that is ancillary to the primary activities. And so, there might be as well a link between primary demand for economic activities and ancillary demand for housing (or vice versa). When applied to an area the primary activities are those that correspond to the main use in that area (or the intended use in the land use plan), ancillary activities support the primary activities (eg a lunch bar in an office area), secondary activities are those who coexist with the other functions, but do not have a specific relation with the other activities in the area.

In our research, the demand segmentation starts from an observed location choice of economic activities in a specific area. We assume that companies are located in the most appropriate, affordable site to accommodate their activity and reflect their corporate values, because a business tends to eliminate unnecessary cost that come with a bad location choice. From a regional economic point of view we are above all interested in the shared spatial quality of an area, and less in the specific (architectural) characteristics of each building or site (=the real estate product).

The aim of a segment is to define a stratified real estate product based on the location in a specific type of area with a specific set of qualities, the assumption being that this delivers a certain level of spatial quality to buyers and renters. Quality is considered uniform for each segment, even for different spatial locations, price variations and mobility conditions. These areas are identified by a set of similar spatial characteristics

Segments and types can be used by government bodies in their policies and decision making processes in two different ways:

- to assist companies directly to find a built or unbuilt economic space they are looking for. This could involve showing them where space is available and in which segment, depending on the spatial quality required by the company. The research for a location can be limited to some targeted areas, such as in and around cities without necessarily considering an entire region.

- to promote areas to attract specific companies. In this approach the government thinks from the position of a company that is looking for space in order, for instance, to promote some areas characterised by the presence of empty economic spaces or spaces that could be used for economic activities and target specific companies or economic uses. An example of this is represented by a retail street with a high vacancy rate. After an evaluation of the causes behind such a situation (i.e.: high real estate prices, lack of investments on spatial quality, etc.) the governement can apply specific policies in order to revitalize the economic environment and to that effect attract companies into this specific area. Targeted spatial economic policies or transformations policies, framed on the basis of segments and types, represent an

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instrument able to steer the future of an area. Some examples are policies focused on transforming the type into a different one while attracting companies active in other economic sectors, investing in the spatial quality of the area, designating a range of possible products (economic spaces) with specific characteristics, highlighting differences between segments.

- to analyse the 'goodness-for-fit', in other words to assess whether companies are actually located in areas that suit their needs to undertake demand forecasts, based on other economic data (e.g. employment evolution) in specific types of areas.

As a first preliminary step to market segmentations, based on an observed location choice of economic activities in a specific area, we developed a typology of economic areas. This typology is presented in this paper.

3 PROGRESS IN TYPOLOGY DEFINITION AND USES

In our last paper we presented how we tried to divide a real territory into different types of existing economic fabric (Giaretta, Pennincx, De Mulder, Zaman, 2018). In that paper we elaborated 38 different types, that were divided into three groups: "continous activities", "discontinous activies" and "disperse activities". We then decided to use the types in an ongoing planning project, with the intention of testing this approach and receiving feedback and comments from the involved stakeholders. We finally reworked the types and this resulted into 16 different types, devided into four groups: "continuous activities", "close activities", "discontinuous activities" and "solitary activities" (see also Figure 1).

The method was tested in the ongoing planning researchproject "Segmentation IV", initiated by the Flemish Government, where the typology was used. The aim of the study "Segmentation IV" was to investigate the interactions between some selected companies located in different urban contexts in Flanders and their residential environments, trying to understand and support the work and living mixed use (Huybrechts et al, 2019). A consortium of researchers, intermunicipal organisations and spatial agencies were involved in the project. To help this complex process, a steering committee with various urban and economic experts was formed. They provided many useful comments in structured feedback workshops.

The role of the types, together with economic activities mapping, was to give a description of the spatial reality from an economic point of view and to define the economic environments in which these companies are positioned. The selected activities are located in three different areas in Flanders, each with different characteristics. For this reason the types were used also to provide a comparison between these sites. The use of the types in presentations and workshops pointed to some difficulties of this approach. For this reason some changes resulted to be necessary and are presented here.

First, an orthophoto layer was added to the economic activities mapping in order to provide some more detailed information for use of the types definition. The main reason behind this was the intention to check the real extent of an economic activity on its specific land parcel, because the mapping representation is based on cadastral parcels which in some cases does not correspond to the the spatial extent of an economic activity. Small companies, such as in-house offices (i.e: doctors, lawyers, ect.), located on large parcels but using only a portion of them were then wrongly considered in the interpretaton of the proximity tool and its results. An agglomeration of parcels having these characteristics, or only few of them located next to parcels used completely by economic activities, resulted to be incorrectly allocated during the type definition. In addition, the use of an orthopohoto in the visual interpretation allows the identification of differences in terms of accessibility, which represents another important aspect to be considered in types definition. Companies located inside the same type but in different parts of it, for example on two different streets or infrastructures, presents a different set of characteristics in terms of accessibility and visibility. This means that these are located in a similar but not equal economic environment and for this reason the type they belong to should be divided into two different ones.

Secondly, the types of "disperse activities" and "concentrations of disperse activities" were redefined, both in terms of name and spatial extension. In the first case the term 'disperse' proved not to be representative of the companies' nature.They are indeed located within a considerable distance from the others but not in inaccessible or remote locations. Also the term 'concentration' resulted in being ambiguous. It proved to be difficult for stakeholders to associate concentration to dispersed activities. For this reason the categories were renamed as"solitary activities" and "cluster of solitary activities". In the original 'disperse activities' category

definition a buffer around companies was considered as part of the type. Portions of territory not related to the activity itself were thus included in the types, regardless of their nature and use. In the latest version the type is limited to the extent of the economic activity parcel, without considering its immediate surroundings as in the previous version. A similar approach was adopted for the clusters of solitary activities. These are now limited to activities located within a specific distance from each other and in environments with similar characteristics.

Finally, during the mapping data about the presence of housing on economic parcels were collected in the field and stored in the activities database. Even though these data were available, in the first types definition the combination between economic and residential uses was not considered. The use of these data represented an opportunity to investigate more in detail where economic activities and housing are combined or not. For this reason we decided to include this data in the type definition, combining them with data about build up space. A new layer was created, showing at a cadastral parcels level the three possible spatial combinations between economy and housing: parcels with only economic uses, parcels in which the two are combined and ones with buildings without economic uses (predominantly housing) (Fig. 5).
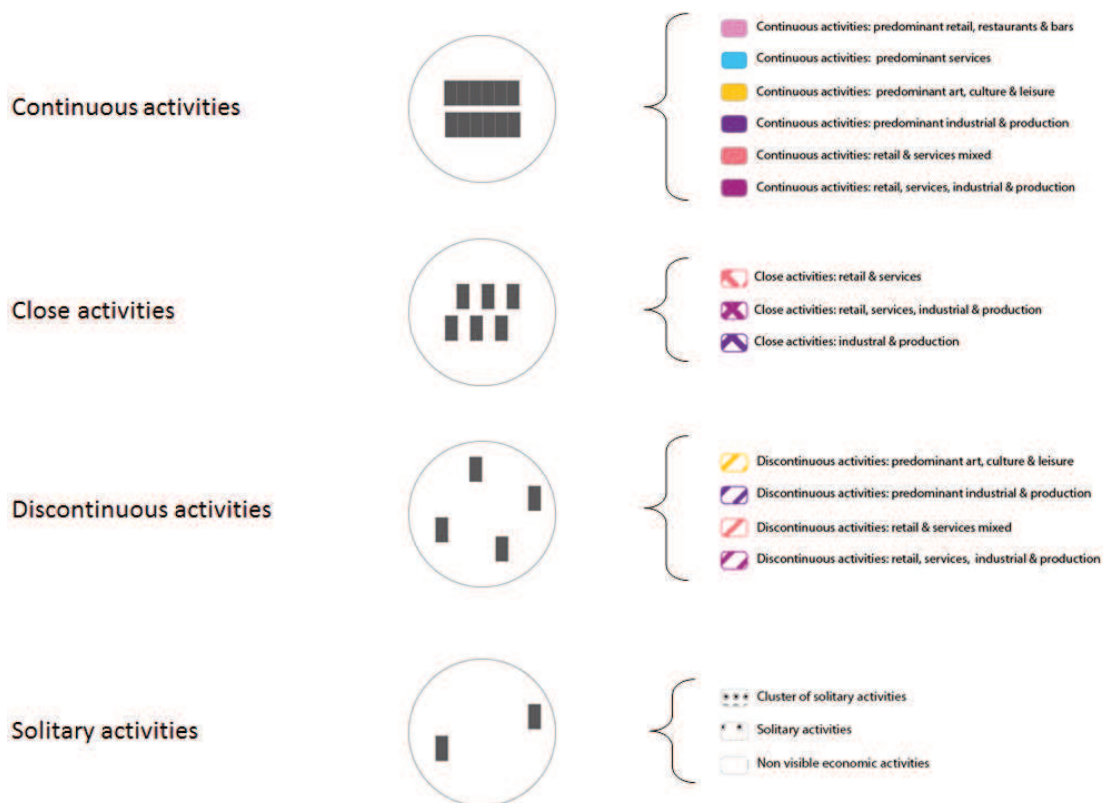

Figure 1. Types classification

4 THE LAST VERSION OF THE TYPES OF ECONOMIC AREAS

The adjustments presented in the previous chapter, based on the feedbacks received while using the types in a planning research project, led us to the definition of the last version of the types. This last version was used in the abovementioned project, resulting in being more stable than the previous ones and widely accepted by the involved stakeholders.

The types represent an approach based on the interpretation of different data, describing the physical reality of an area, in the attempt to define it from an economic point of view. A type is a delimited area defined by the following set of characteristics:

- Proximity
- Economic use (or mix of economic uses)
- Accessibility, visibility and shared infrastructure
- Housing

Each one of these characteristics and the data used during the interpretation are explained more in detail in the following sections.

A total of 16 types are defined, grouped in four main categories based as the first ones on the distance between economic activities. These are: continuous activities, close activities, discontinuous activities and solitary activities. Each main category contains a variable number of types, depending on the combination of economic uses present in them. It is important to point out that the types presented here are based on the elaboration and interpretation of the data available for the mapped areas, which are spread throughout different parts of Flanders and the Brussels regions. These areas represent some but not all the economic environments that are present in the regions and for this reason the number of types is not fixed. New combinations of uses in different economic environments could lead to the definition of new types.

4.1 Proximity

Proximity is defined as the distance between two economic parcels. This represents a factor that is considered by companies in their location choice which can help explain how these are organised in the field. Companies can be located next to each other for some reasons, such as: the presence of a shared infrastructure used by all the companies, an agglomeration effect in which the activities share the same clients or spaces, spatial policies or regulations that justify the presence of multiple companies on the same site and lastly a spatial monopoly, in which a company with its presence attracts other activities in its surroundings.

In this study proximity is determined using the NEAR tool in ArcGIS, which calculates the distance from one parcel to the nearest. This distance, integrated with the knowledge collected in the field and an orthophoto, is then used as an indicator to interpret and manually subdivide the visible economic fabric into different ares. These areas are defined by the presence of (Fig. 2a):

- A continuous economic fabric: (near distance = 0m, green)

- A close economic fabric: (near distance between 0 to 20m, light green)

- A discontinuous economic fabric: (near distance between 20 to 50 m, yellow)

- Clusters of solitary activities: (near distance between 50 and 90 m, orange)

- Solitary activities: (near distance >90m, red)

- Novisible economic activites

Figure 2a NEAR tool calculation. 2b. NEAR tool interpretation (dark green hatch: continuous economic activities; light green hatch: close economic activities; yellow hatch: discontinuous economic activities; orange hatch: cluster of solitary activities; red: solitary activity).

4.2 Economic use

Types are subdivided into different categories, based on the predominant economic use (or mix of economic uses) of the parcels present in it. Despite the possible presence of different economic uses in a parcel, for each one of them only the dominant economic use is considered in this phase. The dominant economic use is chosen among the others economic uses on the basis of the information collected in the field, integrated if

necessary with some desktop research and the use of an orthophoto. This is usually represented by the economic use that exists on the larger part of the parcel.

In our work the economic uses are organised in a total of 40 categories. The aim is not to create a detailed list of all the possible economic uses but to group activities in categories according to the main economic sectors, such as: retail, services, manufacture, wholesale, and vehicle related activities (Giaretta & Zaman, 2017). Every sector is then divided into more specific categories, describing the different varieties of economic activities (Fig. 3). Due to the high number of categories, this categorisation resulted in being difficult to apply during the types definition and analysis. The presence of 40 different colours, one for each categorybecame visually too complex to interpret.In addition, it proved to be difficult to represent and highlight differences between types using this classification. For this reason, the 40 categories were regrouped into a total of 9. The reclassification is based on the assumption that some activities that are normally located in a similar economic environment, or have similar building characteristics can highlight their presence when they happen to be found in a different economic context. This grouping of activities is significantly different from the originally intended grouping by traditional economic sector (this was already possible from the start of the economic mapping project).
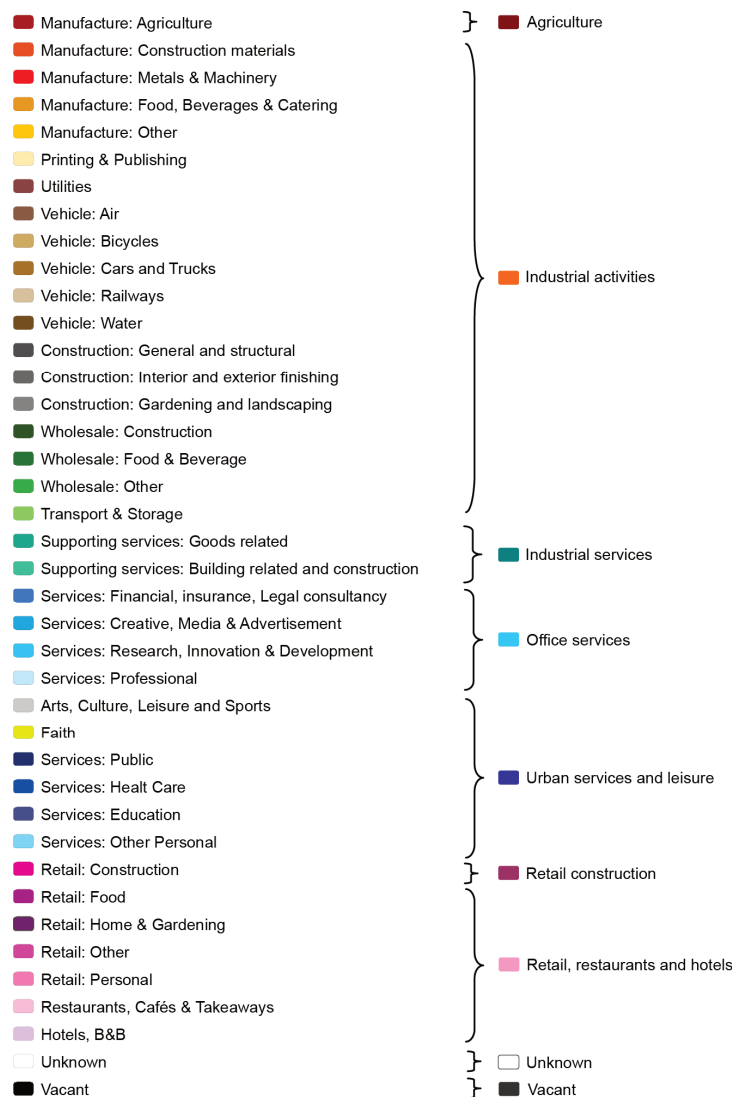

Figure 3. Economic activities categories

4.3 Accessibility, visibility and shared infrastructure

As already mentioned, accessibility represents an important factor in the location choice of companies. Because of this we decided to include it as one of the main drivers in the types definition, while defining them also on the basis of different accessibility conditions of the companies present in the case study areas. Activities positioned one next to the other spatially can present different accessibility characteristics,

depending on the infrastructure they are located on, the means of transport necessary to reach them (i.e: companies inside or outside pedestrian areas), and the type of economic environment they are part of.

Figure 4 shows an example of adjacent companies located in similar but different economic environments, depending on differences regarding accessibility. This specific case is located in the centre of Roeselare, one of the three case study areas analysed in the "Segmentation IV" project. From the economic mapping map an almost homogeneous presence of economic parcels is visible over the territory, equally distributed between the services and retail sectors. This could lead to the definition of a unique economic environment where these two functions are mixed. While looking more in detail into a combination of mapping and orthophoto, the presence of differences between some economic activities becomes clearer, in particular between the ones located on the main shopping street and the ones at the backside of it. From an economic point of view these are not located in the same environment, the first are part of one of the main shopping streets of the city (1) whereas the others are positioned in some more quiet streets at the backside of it (2). For this reason two types are created which belong to the same category but present different characteristics.
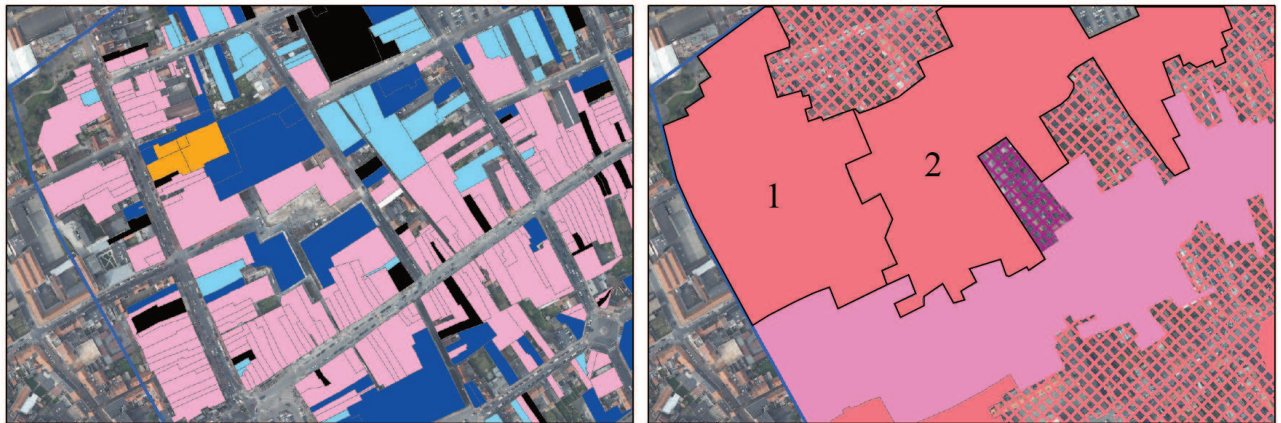

Figure 4. Accessibility example

4.4 Housing

The study of the relationship between economy and housing was the aim of the "Segmentation IV" project, which tried to investigate more in depth a 'supermix' (We Made That, 2017) of activities, that is not adequately explored in planning. This resulted to be an opportunity to enrich the types with additional information. Data about the presence of housing on economic parcels, always collected in the field during the mapping exercise and stored in the related database, were considered for the first time in the types definition. In order to visualise where housing parcels not combined with economic activities are displaced, and due to a lack of specific data regarding this aspect, a hypothesis was made. Starting from the cadastral map, all the parcels with buildings but without an economic use were selected and considered as parcels with a residential use. This was because all the parcels that are used or meant to be used by economic activities are normally mapped with a good level of precision during the mapping exercise. This assumption presents some limits, such as the possibility that parcels with an economic use that are not mapped (because not visible in the field or due to an error) are then classified as parcels with only a residential use. Despite this, it is possible to subdivide the built up space in four categories, fundamental to understand the relationship between the economic and residential uses. These are:

- Parcels with only economic uses,
- Parcels in which economy and housing are combined,
- Parcels with buildings without economic uses (predominantly housing),
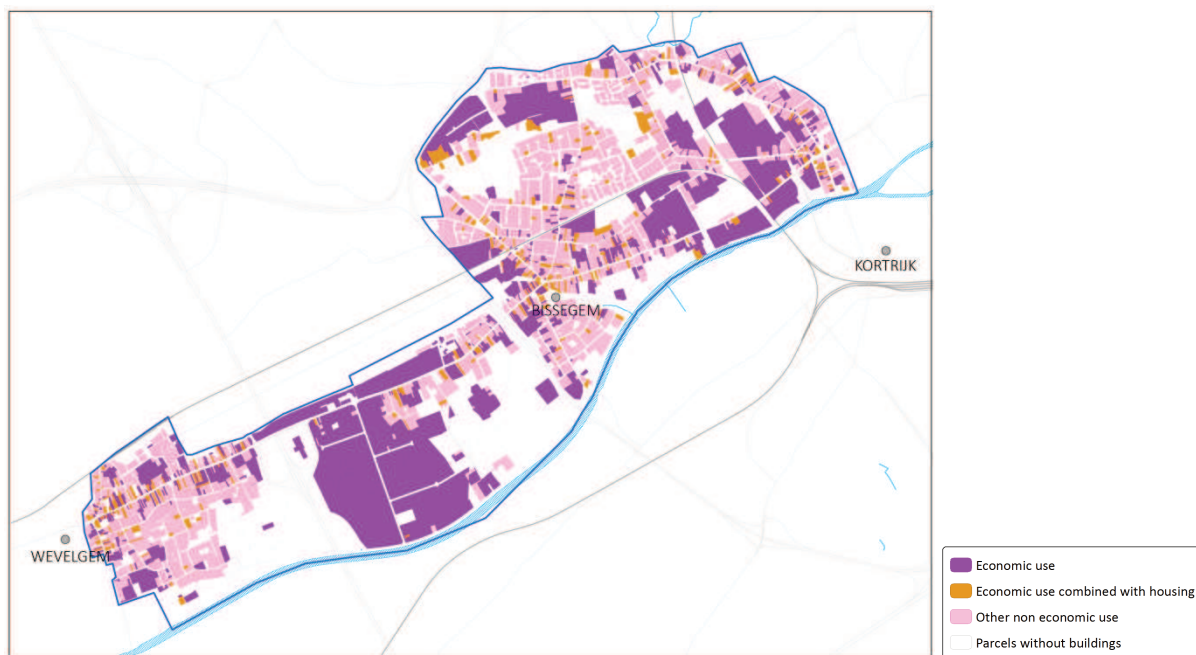- Parcels without buildings.

Figure 5. Housing and economy

5 TYPES ANALYSIS

In this chapter we present the role the types had in the "Segmentation IV" project, how they were used and analysed. Types were firstly used to describe the economic structure of the case study areas, in order to explain how the economy is spread over a territory. In a second stage these have been analysed singularly and more in detail, in order to check if a type was correctly classified, compare types inside a case study area, compare types in different case study areas, undertake a type content analysis.

For every type an automated GIS analysis has been carried out, using the economic activities data available in our database combined with data about parcels area obtained from the cadastral map. The analysis was not limited only to the dominant economic use of the parcels, but it has included all the data about the other economic units located on them, allowing us to give a complete overview of the activities present in every type and their sectors. Four parameters have beenanalytically analysedin GIS for every type. The fourGIS analysed parameters, subdivided per economic category in the first three cases and subdivided per type of parcels use in the last one are:

- number of units,
- number of parcels,
- area of parcels,
- area of parcels according to housing and/or economic uses.

5.1 General area description

A general description of the economy in an area is derived from a visual interpretation of the types map. This highlights the different structures that are present in it and their economic uses. Figure 6 shows an example of the types map for the study case of Kortrijk in Flanders.

From a visual interpretation it is possible to state that economy is homogeneously spread all over the territory. Almost the entire built up space accommodates economic activities with different patterns and concentrations. There are only a few zones with almost no visible economic activities, such as the more recent housing development or the last patches of green space and agriculture fields next to the river in the south. In these areas only a few isolated or solitary activities are visible.

Strong but sometimes fragmented is the presence of economic activities along the main historic roads (in red). These streets represent an ideal location for a good number of companies, offering them both a good visibility and a variety of spaces. This difference has enabled in some sections a very close coexistence of a mix of different activities (continuous retail, services, industrial & production) both in terms of use and

dimension, going from small shops and offices to car dealers, wholesalers, suppliers or more industrial companies. Some other regular and continuous patterns can be found in what is normally recognised as the centre of old villages, in which a more homogeneous and continuous mix between retail, restaurants, bars and services all characterised by similar dimensions is existing and seems to be common for this type of environment. In between these two types of areas, some more fragmented zones are visible. Areas with close or discontinuous activities, differentiated by the distance from one company to the other, are always connecting more continuous types, permitting the creation of these economic structures. Also multiple zones with a mix of industry and manufacture as main character are present in the area. In some cases these are located next to residential environments.
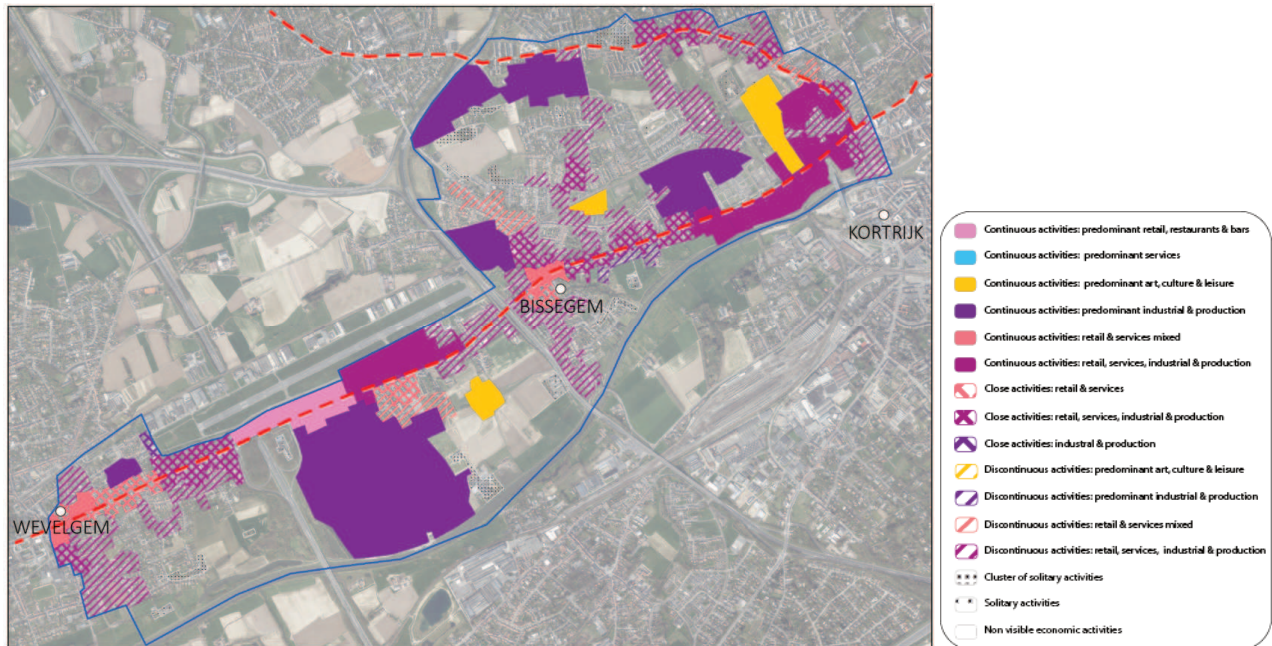

Figure 6. Kortrijk case study types map

5.2 Type description

Here an analysis of one type in one area is presented. The aim is to show how a type can be analysed in detail and the different outcomes that are obtained, depending on the parameters that are taken into consideration. These parameters are: number of economic units, number of economic parcels and their area. The economic activities categorisation used is the one presented in section 3.2, in which the forty economic mapping categories are grouped into a total of nine.

The selected type is also located in the Kortrijk case study area, along one of the historical streets connecting the city to some of the main villages around it. Figure 7a shows the types map, Figure 7b represent the dominant economic use of the parcels in and around the type and figure 7c gives an overview about the mix with housing. This is part of the "close activities: retail, services, industrial and production" category and it presents the following characteristics:

- distance between economic parcels between 0 and 20 meters,
- economic parcels facing the same infrastucture (street),
- a mix of retail, services and industrial uses,
- a homogeneity both in parcels dimension and size.

Figures 8a and 8b show an example of the type detailed analysis both on units and parcels level. The first graph (Fig.8a) considers the number of units, here a mix between different economic units active invarious sectors (retail, restaurants, office and urban services, industry) is clearly visible. The "industrial activities" category represents 37% of the total economic units, whereas the rest is equally distributed between the other economic sectors present in the area. The second graph (Fig.8b) shows the total amount of area occupied by every sector, based on the parcels dominant economic use. The "industrial activities" category accounts for 58% of the total, showing how consistent its presence is in area. The share of this category increases

considerably when their area is taken into consideration. Because of their needs and dynamics, the activities insist on large and multiple parcels, as a consequence they occupy a large portion of the available economic space.

Notable is also the low number of vacant economic units and areas in the type. This corresponds to a low vacancy rate of economic spaces which indicates how this environment represents a suitable location for a good diversity of economic functions.
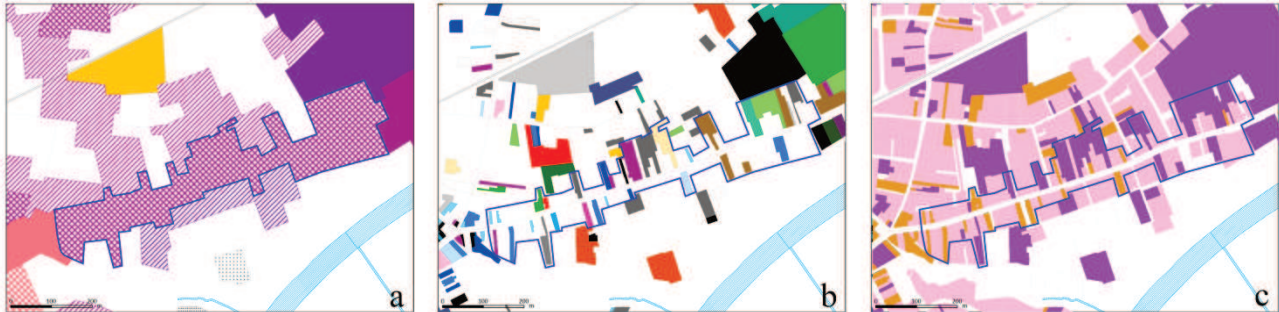

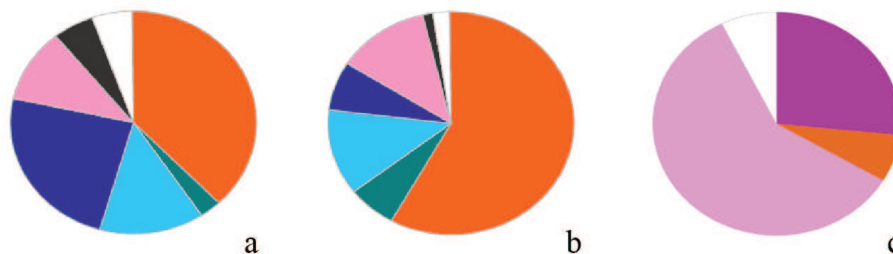Figure 7a Type – Figure 7b Dominant economic use – Figure 7c Housing and economy

Figure 8a. Number of eco. units – Figure 8b. Total area of eco. parcels – Figure 8c. Area of parcels according to housing/eco. use

Figure 8c shows the area of the parcels present in the type, subdivided according to the categorisation presented in section 3.4 (Fig.5). Parcels characterised by uses not related to economy (predominantly housing) are the most present, counting for 59% of the total area. These consists of houses and are located along the main street, onlyin a few casesare residential and economic uses combined together in the same parcel (7%). Parcels with only economic uses represents 27% of the total, whereas the rest of the area (7%) belongs to area parcels without buildings and economic uses. From this analysis it is possible to state that the economic activities in this type are located in an urban environment with a strong presence of housing. This confirms the existence of an interesting relationship between these two sectors.

6 FROM ECONOMIC AREA TYPES TO MARKET SEGMENTATION

The types presented in this paper are not a real product market combination, as they are mostly based on proximity and (mix of) economic activities. The types, as they exist now, do not seem to correspond to a market segment. They are not categorized 'into homogeneous groups that have similar demand functions within clusters and different demand functions among clusters', such as DeLisle defines the concept of segmentation (DeLisle, 2019, p.242).But that does not mean that the types are not valuable: theycan be considered as an analytical product able to describe economic areas.And moreover, they include already three paramaters able to describe part of the economic zones' spatial quality. These are: the economic quality of the activities located in them, the presence of a shared infrastructure and the presence of residential uses.From an informed and well-considered interpretation of the types, we regroup them into a number of potential market segments. This work is also based on our own experience in fieldwork, advising companies and municipalities on spatial policy, and territorial knowledge. Here some examples presenting differences in the three paramenters are given.

- The first example considers the "continuous activities: predominant retail, restaurants & bars" type. This contains different economic environments, such as shopping streets and shopping malls which represent areas characterised by a similar spatial quality, as well as car based shopping areas. These two kinds of areas should belong to different economic types, because of different dynamics and spatial quality. In

this case the presence of housing does not represent a difference in these environments, as shown especially for shopping streets in our previous paper (Giaretta & Zaman, 2017).

- The "continuous activities: predominant services" type contains different economic environments based on the economic quality of the activities present in them. For this reason, it can be divided into two more homogeneoustypes, depending on the variety of services. The first one refers to all the office services (i.e.: office parks) whereas the second one contains all the other urban services (i.e: schools, hospitals, sport centres, etc.). The second category of activities derives from a governmental decision, and because of their nature behave differently from the other services, defining as a consequence a different economic environment.

- An example where the presence of housing can make a difference is in the "continuous activities: predominant industrial and production" type. Residential uses in or around industrial areas, due to environmental regulations and lawsand neighbourhood quality expectations of neighbours, can limit the choice of a company looking for an economic spaceor can make the co-existence more difficult, especially in the case of noisy, hazardous or smelly activities. When housing is not an ancillary demand, it typically implies retraints for companies (Huybrechts et al, 2019).

- From a company's point of view, between the "close activities: industrial and production" and the "discontinuous activities: predominantly industrial and production" types, the proximity between economic activities does not represent an indicator of two different economic locations. In this case the difference consists in the environment in which these are located, such as agriculture or more open-space areas, or build up zones identified by the presence of housing.

As a first attempt the segments could be subdivided as follows, each responding to a different level of investment in spatial quality. This has to be seen as a first hypothesis, where it is clear that the 'spatial quality' mentioned in the columns will need further elaboration and specification. Probably, we will end up referring to specific qualities or services that are present in the segment, and not a general level of 'investment'.

	Nice landscape	Low investment in quality	Basic build up space quality (heavy goods vehicle access)	Average investment in build up space quality	High investment in build up space quality	Exceptional investment in quality, directly related to demand segment
Continuous Retail: shopping street					▓	
Continuous Car based retail		▓	▓			
Industrial areas with housing			▓	▓		
Industrial areas without housing				▓		
Continuous Office services					▓	▓
Urban services				▓	▓	▓
Continuous retail and services			▓			
Continuous mixed economy		▓	▓			
Non-continuous retail and services			▓			
Non-continuous mixed economy			▓			
Build up space with solitary economic activities		▓	▓	▓		
Build up space without visible economic activities		▓	▓	▓	▓	
Open space with non-agricultural economic activities	▓	▓	▓			
Agricultural activities	▓	▓				

7 CONCLUSION

This paper shows the latests results of the typology of economic areas, that have been improved and tested in a real planning research project. The types help to give insight into the economic fabric and economic patterns of a real territory. The relation between ecomony and housing has been elaborated, which sheds a new and interesting light on this theme. In a next fase of our research, we used these types to define market segments. It is clear that this work is not finished yet, as we end up with a lot of segments and there still

might be some convergences between the proposed segments. There is some fuzziness about the several segments, especially the ones in the open-space, that needs to be clarified.

Next, the concepts of "economic quality" or more generally "spatial quality" from different perspectives (economic, housing, open space,…) shoud be clarified and defined. An in depth analysis of the primary and ancillary demand for certain types of spaces might be a first starting point for the definition of these "quality" concepts. A primary demand for a certain type of economic space might have an ancillary demand for housing or certain supporting services, or excludes it. The "quality" then for this type of economic space, might be linked to spatial possibilities for or to the spatial presence of the ancillary demands. In addition, these several primary and ancillary demands are probably looking for certain elements in "quality" that are the same.

In this sense, we will need to develop a basic understanding of the link between (1) the services and spatial qualities provided by an area or type, and (2) the reduction of costs (or the higher price paid for the product or service) for the business.

At last, an important point concerning critical mass and development of certain areas should be made. And so we end with a link to planning and policy questions. It is clear that the certain (supporting) activities can only flourish when there is a certain critical mass present to use them. For example, if a big office company is located in a low density area, it will be very difficult to sustain a big range of supporting services such as restaurants and bars. These economic activities usually need a certain critical mass. This means that, when planning for certain activities, special attention should go to the density levels of the area. The spatial quality of low density areas will be different than that of a high density area.

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