

A MARKET ANALYSIS IN DEVELOPMENT ACTIVITY. THE PROBLEM OF THE AVAILABILITY OF STATISTICAL DATA IN EUROPEAN COUNTRIES

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Abstract

Development activity is primarily characterized by high capital intensity. Developers implementing a venture in the residential market make use of not only their own funds but also capital from potential buyers. Therefore, developers should carefully analyze the markets in which they intend to conduct their business activity. This particularly applies to developers operating on an international scale. Local developers often understand the market situation in a given area enough to be able to successfully assess whether their products will find buyers. Foreign developers, however, deciding in which country and subsequently, in which region, to start their business activity, should base their analysis on reliable statistical data concerning demand, supply, prices, and the absorption rate.

The aim of the article is therefore to assess the availability of statistical data necessary for conducting a market analysis for the needs of development activity in individual countries of the European Union and the United Kingdom.

Keywords: *residential market, development activity, market analysis.*

JEL Classification: *R31, R39.*

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1. Introduction

Development activity, understood as an economic activity consisting in transforming the property so that its value rises (ŚMIETANA, ZAGÓRSKA 2009, pp. 149-166), is extremely capital-intensive. This applies to both the commercial and residential real estate market. The implementation of a development activity venture requires significant financial resources. These may be developers' own funds as well as financing derived from external entities, i.e. bank loans, bond issue, or in the case of residential real estate – prepayments. In order for these funds to be properly used and secured, developers should undertake a feasibility study before making a final decision on the implementation of a given venture. As part of the process of its preparation, the problems and opportunities related to a given venture are identified, its objectives are determined, the existing situation is described, an estimate of the costs related to its implementation is made, and the potential profits that can be achieved are determined with the assumption of alternative scenarios (THOMPSON 2005, p. 185). It is therefore a document containing a number of various analyses aimed at demonstrating the validity and profitability of the planned venture. These analyses include, in particular: a market analysis, analyses of location as well as legal and administrative regulations, and financing (HAMILTON, PEISER 2012, p. 151), along with analyses of costs, competition, user preferences and risk (KIREJCZYK, DĄBROWSKI 2001, p. 29), the architectural concept, the organizational structure and the investment schedule (DZIWORSKA, TROJANOWSKI 2006, pp. 41 - 53). Many such analyses require a variety of different information the availability and quality of which varies between European countries. This, in

turn, makes it difficult to perform comparative analyses, especially by foreign developers who make decisions which country and, subsequently, which region, it is worth implementing a venture in. In addition, during the implementation of the venture, this information should be updated. The more advanced the progress of work on the project, the more information developers should analyze. It is also important that, if the results of the analyses conducted are not satisfactory, developers should not be reluctant to modify the originally made decisions. Although all of the above-mentioned analyses may be useful from the developers' point of view, literature sources, without exception, point to the necessity of including a market analysis in the feasibility study (cf. KIREJCZYK, DĄBROWSKI 2001, pp. 28 - 39; PEISER, HAMILTON 2012, p. 151; DZIWORSKA, TROJANOWSKI 2006, p. 43; HAVARD 2014, pp. 41-43; NOVAK 1996, p. 7; HALIL ET AL. 2015, pp. 58- 59; BOYD 2014, pp. 1 - 2).

Therefore, the aim of the article is to assess the availability of data, published on the websites of national statistical offices and other government websites, necessary for conducting a market analysis concerning development activity in individual countries of the European Union and the UK.

2. The importance of market analysis in development activity – literature review

J. LIPiŃSKI defines a market analysis as a tool for making investment decisions. It allows one to determine not only the market situation at a given moment but also to forecast future phenomena (LIPiŃSKI 2000). The first publications on the importance of market analysis in real estate development activity began to appear in the mid-20th century. Today, these analyses are more complicated – they are often based on quantitative methods or qualitative methods with the use of, for example, behavioral studies (BOYD 2014, pp. 1 - 2). There is a quite a bit of information in book literature on the importance of market analysis in development activity (cf. PEISER, HAMILTON 2012; HAVARD 2014; RASLANAS et al. 2015; MILLINGTON 2000; REED, SIMS 2016), but somewhat less in scientific papers (cf. HENNEBERRY 1987; NOVAK 1996; BURTON, RICKARD, THORESON 2016).

Regardless of the method used to carry out the research, the results of market analysis are important for development activity for several fundamental reasons. Firstly, the literature indicates that no matter how well a given developer knows the local market, a current market analysis is necessary for proper financing (how much prepayment should be expected), the verification of the expected level of rents or prices of real estate which there is demand for (PEISER, HAMILTON 2012, p. 151). This is the basis for obtaining external financing. Banks need to be sure that they will recover the funds involved in development projects; they therefore thoroughly examine the assumptions adopted in such analyses and the information obtained (HAVARD 2014, pp. 12 - 13). Secondly, it is indicated that a market analysis should be prepared both prior to choosing the right location and after its selection. A market analysis prepared before a location is selected allows developers to identify market segments where demand is insufficient. This is especially useful if a given developer has not yet decided what to build – dwellings, offices, warehouses, etc. However, if the decision on the choice of a given segment, e.g.: a residential one, has been made, then a market analysis should help determine if the demand will be higher for small and cheap dwellings or for luxury apartments and houses (RASLANAS et al. 2015, p. 136). Thus, the analysis allows developers to identify market niches. The better developers examine the market situation, the better they will be able to select not only the location for a given project but also the architectural concept. If developers identify potential buyers, their preferences, income level and family situation, then they are able to better adapt their offer to buyers' needs. For example, if developers want to build luxury apartments for more affluent people, they should look for a centrally situated location with all amenities. After choosing a given location, the market should be re-analyzed (PEISER, HAMILTON 2012, p. 154) but from a narrower perspective. Features that characterize a given location, combined with an investment climate, will help determine the price at which properties should be sold or rented. If the market is saturated, the developer will be aware of the need to lower prices. If market demand and demographic conditions are favorable, then the developer will be able to raise prices (RASLANAS et al. 2015, pp. 145 - 147). Thus, a market analysis along with a location analysis, determine the product that a given developer intends to create, as well as the prices at which the product will be introduced into the market.

A. Millington emphasizes that, in the past, developers successfully implemented their projects without a market analysis. However, nowadays, in highly competitive markets, this analysis is essential, especially for modern projects (MILLINGTON 2000, pp. 14 - 15). It is difficult to determine why many developers do not carry out such analyses. Reed and Sims see the reason for this phenomenon in the lack of adequate knowledge in this area and the market situation of previous

years, when the lack of such analyses was not so noticeable due to high demand and prices. The consequences of the lack of market analyses are particularly felt by developers in the recession phases of the real estate market cycle (REED, SIMS 2016, p. 222).

To sum up, a market analysis has two basic functions: it facilitates and rationalizes the decision-making process and provides the documentation necessary for the institutions financing the projects. It is worth emphasizing, however, that banks often approach the analyses presented by developers with certain caution (PEISER, HAMILTON 2012, p. 158).

3. Elements of market analysis – delimitation of the research field

A market analysis should be prepared for both commercial and residential projects. However, due to the scope of this paper, limited to statistics published on the websites of national statistical offices and government websites, only elements of market analysis specific to the residential market will be the subject of the further study. In European statistics, one can rarely find information about commercial buildings. Most often, information relevant to this type of development is published by various private entities.

At the same time, it should be noted that every developer, both local and international, ought to prepare a market analysis, for example, for the purpose of obtaining external financing. Even if these analyses are outsourced, they are also partly based on data available from statistical offices and supplemented with own research. Therefore, the first task of any developer preparing a residential market analysis should be to define the geographical area of research. Analyses should be started at the national level (especially if it is an international entity) and should then be gradually narrowed down – in the case of residential real estate ending with towns or, in the case of large cities, even with districts. However, the question of what information should be included in such a market analysis arises.

The available literature in this field allows one to distinguish the following elements of market analysis:

- 1) demand factors,
- 2) supply factors,
- 3) absorption ratio.

The above-mentioned elements of market analysis are mainly of a local nature – they should be analyzed at the level of cities or even districts. At the same time, KIREJCZYK and DĄBROWSKI point out that an analysis of the existing situation is not enough – demand and supply forecasts should be prepared so that the developer can learn what market conditions will prevail when the dwellings are put to use. In addition, the same authors distinguish one more important element in a market analysis, namely nation-wide factors (see: KIREJCZYK, DĄBROWSKI 2001, p. 38).

A proposal for the classification of market analysis elements is presented in Table 1.

Table 1

The basic elements of market analysis and their quantifiers

Elements of analysis	Quantifiers
Demand	<ul style="list-style-type: none"> – employment in industry and services, – expected employment growth, – migration level, – number, age and education level of the population, – number, size, structure and income of households (PEISER, HAMILTON 2012, p. 156), – real estate prices, – buyers' future expectations, – financing options (KIREJCZYK, DĄBROWSKI 2001, pp. 38 - 39).
Supply	<ul style="list-style-type: none"> – existing housing stock, – number and size of dwellings under construction, – number of planned dwellings, – vacancy level (PEISER, HAMILTON 2012, pp. 156 - 157), – number of building permits,

	<ul style="list-style-type: none"> – number of persons per dwelling, – value of property, – percentage of owned and rental dwellings (PISANI, PISANI 2000, pp. 169 - 176), – availability of suitable land, – availability of financing, – availability of materials and workforce along with their costs (BOUCHER 1993).
Absorption rate	
Nation-wide determinants	<ul style="list-style-type: none"> – general economic determinants, including interest rates, development trends in selected industries, economic growth (KIREJCZYK, DĄBROWSKI 2001, p. 38), – political and legal determinants, including planning regulations, the building code, environmental conditions, and other legal acts that affect the costs and duration of the implementation of development investments (BOUCHER 1993, p. 6), – socio-cultural determinants, i.e. changes in types of behavior during work time and leisure time, – technical and technological determinants (KIREJCZYK, DĄBROWSKI 2001, p. 38).

Source: own study based on the literature review.

The majority of information concerning demand factors can be found on the websites of statistical offices or other government websites. However, some of the data can be obtained only on the basis of interviews with property managers, housing cooperatives, property administrators, local authorities, banks, etc.

In this article, the absorption rate has been omitted, as it is the resultant of two basic elements of analysis, i.e. demand and supply. The number of quantifiers reflecting these two elements can be significant, which is why only some of them were selected for further analyses. Their list, along with their availability, is presented in Appendix 1. The territorial scope of the analysis presented in the next section covers all the countries of the European Union and the UK. The time range covers the period from the early 1990s to the most recent data. In some of the countries, a part of the analyzed data has ceased to be published.

To determine, in a transparent manner, which of the countries in question are characterized by the highest availability of statistics related to the market analysis for the purposes of development activity, their ranking was created. The information contained in Appendix 1 was encoded in dummy variables and then summed.

The study used two approaches:

- 1) liberal, where 1 means easy access to a given variable on the website of the statistical office or that, on this Internet site, there is a link to another website where the data are available, and it is also possible to calculate some variables based on other data available on the website; 0 means no access to the analyzed data on the said websites or no possibility to calculate these variables;
- 2) rigorous, where 1 means easy access to a given variable on the website of the statistical office or that, on this Internet site, there is a link to another website where the data are available, and 0 means no access on these websites to this information or the need to calculate a variable significant for the study based on other available data (in Appendix 1 they are marked as P).

C– the costs or the index of costs was given a value of 0, as the availability of information on prices or the price index was assessed.

4. Assessment of the availability of statistical information as a basis for the analysis of the development market

Tim Havard points out that, in the UK, a great deal of relevant data necessary to conduct a market analysis are available online. This applies, among others, to real estate prices, their trends or the length of time it takes to sell real estate (HAVARD 2014, p. 42). However, there are also countries in which access to a large amount of information is significantly impeded.

The summaries presented in Appendix 1 indicate a significant diversification of the availability of statistical data, in particular with regard to factors characterizing real estate supply and prices. The information that can be found on the websites of national statistical offices or government websites in all the analyzed countries, according to the research carried out by the author, consists only of population, income/remuneration and the level of migration. The last two variables are particularly important in this case. The level of migration along with the rate of natural increase inform developers about demographic trends in a given country, region or city. The level of income, contrasted with the level of property prices, allows developers to determine the purchasing power of members of a given community in relation to dwellings. Unfortunately, access to this information is limited in many countries. Average purchase prices for residential real estate on the above-mentioned websites have only been found in Austria, Belgium, Bulgaria, the Czech Republic, Denmark, Finland, France, Ireland, Luxembourg, Portugal, Sweden and Hungary. One can also find this kind of information in Poland, though it is published not in the databases but in annual "Real Estate Trade" ("Obrót Nieruchomościami") reports (at the national and voivodeship level) issued by the Central Statistical Office. The level of transaction prices, broken down into the primary and secondary market, is also published by the National Bank of Poland, but only for the voivodeship capital cities. Private reports usually focus on the seven largest cities. Therefore, if developers wanted to obtain information on prices in smaller towns, they would have to either commission the carrying out of an appropriate study or analyze the offer prices, keeping in mind that these prices may differ significantly from the prices actually paid on the market. Information on price indices is available in many countries. The indices, however, inform developers only about trends in a given market. It is worth noting that in some countries, instead of prices, statistical offices publish construction costs or their indices. Other information characterizing demand, indicated in Appendix 1, is available in most European countries, which allows developers to use it for comparative analyses.

Much greater diversity can be seen in the availability of information related to the analysis of supply. The most common data necessary to analyze the market are the number of permits issued for the construction of residential buildings and the number of completed or commissioned dwellings. The first variable was not encountered only in Greece (data available for construction in total), in Malta and Slovakia, while the later variable was not encountered in Belgium, Italy and Malta. Usually, if there is no information available on the number of completed dwellings, then the number of dwellings under construction can be found in the databases. This was also the case in Belgium. Unfortunately, residential real estate statistics in Malta are limited only to the housing stock, which is due to the size of the whole market and the small population of this country. Both the number of completed dwellings and dwellings under construction is significant from the point of view of real estate development. The first value considered in a historical perspective shows the activity of the housing market at the moment when the developer makes a decision about the investment. The number of dwellings under construction is also important, as investments started at a time close to our investment will be competitive, assuming that they are completed in a similar period of time. Quite often, information is also published concerning the average usable floor space of dwellings or output data on the basis of which it can be estimated. This shows the preferences of a given society regarding the size of dwellings. Other information is only available in some countries, which makes comparative analyses difficult. The structure of owner-occupied dwellings and dwellings for rent may be quite significant from the point of view of real estate development, as in some countries ownership is more preferred than renting, while in others the situation is reversed. The exploration of this structure would allow developers to better adapt their offer to the needs of a given market. In many EU countries, there is a lack of information about commissioned dwellings broken down into their various features, such as the investor structure or the number of rooms. Meanwhile, the data can be useful for determining the level of competition from other developers, as well as the basis for determining what dwellings are the most popular in a given place.

It should be noted that the availability of data was investigated independently by the author. There is, therefore, the possibility of unintentional omission of some variables. Table 2 presents the ranking of countries based on the availability of the statistical data in question.

Table 2

Accessibility of European statistics related to a market analysis in development activity

	Liberal approach		Rigorous approach
Poland	1	Austria	1
Austria	2	Denmark	2
Sweden	2	Estonia	2
Denmark	3	Sweden	2
Estonia	3	France	3
France	3	Poland	3
Germany	4	UK	3
Portugal	4	Ireland	4
UK	4	Germany	4
Belgium	5	Portugal	4
the Czech Republic	5	Belgium	5
Finland	5	the Czech Republic	5
Ireland	5	Finland	5
Hungary	5	Spain	5
Spain	6	Netherlands	5
Netherlands	6	Luxembourg	5
Luxembourg	6	Romania	5
Romania	6	Slovakia	5
Slovakia	6	Hungary	5
Bulgaria	7	Slovenia	6
Latvia	7	Bulgaria	7
Slovenia	7	Lithuania	7
Italy	7	Latvia	7
Lithuania	8	Italy	7
Croatia	9	Cyprus	8
Cyprus	9	Croatia	9
Greece	10	Malta	9
Malta	10	Greece	10

Source: own elaboration.

According to the presented ranking, the best access to the analyzed statistical data, facilitating a market analysis in development activity, can be seen in Poland in the liberal variant, and in the rigorous variant in Austria. However, it should be noted that the reason for such a high position of Poland in the liberal approach is the fact that the choice of variables was made mainly on the basis of data available in this country. In the rigorous approach, Poland takes the third position, which results from the need to calculate some variables. In some of the countries, the adopted methodology does not matter much - they occupy the same position based on both approaches. These countries include Sweden (2nd position), France (3), Germany, Portugal (4), Belgium, the Czech Republic, Finland (5), Bulgaria, Latvia, Italy (7), and Croatia (9). The worst access to the discussed statistical information is found in Greece and Malta. The reasons for such poor data availability in Malta have already been explained earlier. What is surprising, however, is the low position of Greece in this ranking. It is worth noting, nevertheless, that higher positions in this ranking are usually occupied by countries located in the northern or central part of Europe.

In addition, it is worth taking into account the fact that, when preparing analyses of residential markets for development purposes, not only the availability of data but also their temporal and spatial coverage seems to be a problem, also in the countries occupying the first places in Table 2. In the countries with a well-developed real estate market, time series are much longer than in developing countries. Usually, longer time series enable better forecasts, and, moreover, they do a better job of showing the trends that characterize the market. In most European countries, data on the number of completed dwellings have been published for several decades - mostly from the beginning or the mid-1990s. In countries with a more developed real estate market, these date back to as far as the 1960s (e.g.: UK) or 1970s (Sweden). However, there are also countries in which such statistics have only recently been published. Croatia is an example of such (2002). It is worth mentioning that, over the years, the sources of gathering information about the data analyzed in this paper have changed in some countries.

As mentioned earlier, developers operating in the residential real estate market should prepare analyses primarily at the local level. Therefore, the availability of selected elements of market analysis in terms of their spatial coverage was also examined.

Table 3

The level of spatial aggregation of statistical information necessary for the analysis of the development market in European countries

Country	Dwellings ready for use	Prices/Price indices	Income	Country	Dwellings ready for use	Prices/price indices	Income
A	region	region	region	LT	country	country	country
B	ND	country	region	L	country	country	country
BG	district	district	district	LV	cities*	ND	cities*
			NUTS4				
HR	region	ND	country	M	ND	ND	country
CY	country	ND	country	D	land	land*	land
CZ	municipal ity	region	region	PL	municipal ity	voivodeship	poviat
DK	region	province	region	P	municipal ity	cities (only 6)	country
EST	country	country	municipal ity	RO	county	ND	makroregio n
F	country	country /region	municipal ity	SK	district	country	region
FIN	country	region	country	SLO	municipal ity	country	municipalit y
GR	province	ND	country	S	municipal ity	municipality	municipalit y
ES	country	region	region	H	country	region	county
NL	region	country	country	I	nd	country	region
IRL	county	region	country	UK	country*	municipality	country

* LV: only cities under state jurisdiction; * D: not for all Länder prices are estimated

* UK: in this case, the main administrative units, i.e. England, Scotland, Wales and Northern Ireland

Source: own elaboration based on: National statistical institutes; *Compte du logement 2015 – Premiers résultats 2016; House building: new build dwellings statistics*, Ministry of Housing, Communities & Local Government; Ministerio de fomento, Gobierno de Espana.

On the basis of analyses of websites of statistical offices and government websites concerning the spatial extent of the examined variables, two basic conclusions can be formulated. Firstly, it is difficult to make reliable market analyses based on data published at various levels. The problem does not concern only transnational analyses. Also in the statistics of individual countries, various variables are published at various levels of spatial aggregation. For example, in Poland, information on dwellings

commissioned for use is published at the municipal level, while income data are available only for poviats. Meanwhile, a powiat sometimes includes several towns with different conditions and there may be significant differences between them in the level of remuneration. Hence, if developers were to take into consideration the powiat average, intending to build in a place where the actual level of earnings is lower than the average, they may later have a problem with the sale of such dwellings. These three variables have been identified at the same levels of spatial aggregation only in a few countries, i.e. in Lithuania, Luxembourg (unfortunately only at the country level), Austria, Germany (only at the regional level), Bulgaria and Sweden. Secondly, some websites and databases are not very transparent, which makes it difficult to search for specific information. Perhaps, the data for some countries are available at lower levels, but the author has failed to confirm this. Table 3 presents the levels of territorial units where the analyzed variables were identified.

It is also worth noting that European institutions publish reports on various topics for all the Member States from time to time. For example, the *Housing Statistics Report in the European Union 2010* presents some of the information analyzed in this article. This report also shows that not all necessary information is collected by individual countries.

5. Conclusions

A market analysis should be seen as a prerequisite for the success of a development venture, as it provides important documentation in relations with financing institutions and facilitates the selection of the best location for a given investment. Unfortunately, there are many undesirable phenomena associated with such analyses. In Poland, many local developers do not prepare market analyses at all. This may result in problems with the sale of dwellings. With regard to international developers, who make decisions on the selection of locations on many levels (country, region, city, district), the best data availability at the country level can be found in such countries as Austria and Sweden. In many countries, however, analyses at lower levels will constitute a problem. A significant amount of necessary source information will be difficult to obtain due to too high level of a level of data aggregation in temporal and spatial terms. Inconsistent information about demand, supply and prices concerning the residential real estate market results in an increased risk of mismatch of the concept to the needs of a given market, and thus failure to achieve the expected profits.

It is therefore important not to rely only on the available statistics, and necessary to collect information about individual projects on one's own. Public statistics are sufficient in the early stages of an investment to decide which country or region we want to implement a given venture in, but the choice of a specific location (a city or even a district) should be based on more detailed research. The literature emphasizes that it is good to employ specialized companies to carry out such analyses. Cooperation with universities can also be a good solution for developers. Independent inference will be helpful in negotiations with financing institutions. Outsourcing the execution of the discussed market analysis to external entities may be the best investment that a developer can make taking into account the fact that many enterprises fail only due to the fact that the investment was carelessly planned. It is difficult to make good decisions without knowing market conditions. If developers plan small ventures, they may attempt to carry out such analyses based on the available data as well as by doing their own research.

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National statistical institutes:

- A: Statistics Austria
- B: Statistics Belgium
- BG: National Statistical Institute of the Republic of Bulgaria
- CY: Department of Statistics and Research
- CZ: Czech Statistical Office
- D: Statistisches Bundesamt Deutschland
- DK: Statistics Denmark
- E: Instituto Nacional de Estadística, España
- EST: Statistical Office of Estonia
- F: The National Institute of Statistics and Economic Studies (INSEE)
- FIN: Statistics Finland
- GR: National Statistical Service of Greece
- H: Hungarian Central Statistical Office
- HR: Croatian Bureau of Statistics
- I: National Institute of Statistics
- IRL: Central Statistical Office
- L: Statec
- LT: Statistics Lithuania
- LV: Central Statistical Bureau
- MT: National Statistics Office
- NL: Statistics Netherlands
- P: Instituto Nacional de Estadística
- PL: Główny Urząd Statystyczny
- RO: National Institute of Statistics
- S: Statistics Sweden
- SK: Statistical Office of the Slovak Republic
- SLO: Statistical Office of the Republic of Slovenia
- UK: Office for National Statistics

Appendix 1

Availability of selected statistical information for the analysis of the development market in European countries

SUPPLY																												
Newly built buildings	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Dwellings ready for use	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Ownership/tenancy structure	+								+	+								+	+	+	P				+	+	+	+
Average usable floor area of dwellings	+	P		P	+	P	+	+	+	+	P	+	+	+	+	+	P		P	P	+	+	+	P	+	P	+	P
Dwellings started	+	+							+	+											+				+		+	+
Housing stock	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Building permits	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Dwelling structure based on number of rooms	+	+	+	+				+			+										+	+	+	+	+	+	+	+
Investor structure	+								P	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
DEMAND																												
Prices	+	+	+						+	+	C										+	+			+	+	+	+
Price indices	+	+	P					+	P	+	+	+	+	+	+	+	C		+	P	P	+	+	+	P	+	+	+
Population	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Population features:																												
- age	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
- education level	+	+	+					+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
- income	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
- number of households	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
- size of households	+	+						+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
- number of divorces	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
- migration rate	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

Legend Key: + available data; P-possibility of calculation based on the available data; C – the costs or the index of costs of construction

Source: own elaboration based on: National statistical institutes; Compte du logement 2015 – Premiers résultats 2016; House building: new build dwellings statistics, Ministry of Housing, Communities & Local Government; Ministerio de fomento, Gobierno de Espana.