Chapter 18
Statistical Analysis of Housing Situation in EU Member States

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ABSTRACT

This chapter attempts to analyze the housing market. In particular, it attempts to modelling through a statistical analysis the housing market in member states of the European Union.

INTRODUCTION

The housing needs have undoubtedly an overriding importance and are placed at the top of the hierarchy of human needs. Being satisfied with the conditions of living has a huge impact on life satisfaction in general[1]. Unfortunately a few per cent of citizens living in the EU Member States are currently suffering from, so called, housing deprivation[2], and therefore it means they are dissatisfied with their living conditions[3]. There can be a lot of reasons of this discontent, however, in the authors' opinions all of them can be divided into two categories: internal (interior) and external (surrounding). The first category concerns the problems connected with the floor area/living space, technical conditions and furnishing, whereas the other one encompasses problems stemming from the location of the dwelling, thus is connected with the residential area.

The reflections on the topic of this elaboration are mostly focused on achieving one goal which is to depict the differences between particular EU Member States, namely, to what extent the people of certain countries dealt with the selected housing problems in 2012[4]. Those problems were presented taking into consideration the classification by causes (direct reasons – internal dissatisfaction with the living conditions and indirect ones – external reasons of discontent with regard to the living conditions). Moreover, in the elaboration the relation between the escalation/intensity of the considered problems in particular countries and the level of economic development in these states was described and suggestions what actions might be taken in order to limit housing problems.

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THE SCOPE OF THE ANALYSIS, DATA SOURCES AND STATISTICAL TOOLS

In the research, which embraced 28 EU Member States, the used data comes from the website of Eurostat, the office providing statistics at European level (Population and social conditions – Income, Social Inclusion and Living conditions and social protection)[5].

The severity (degree of intensity) of the direct, namely interior housing problems in particular EU Member States, was determined through calculating the mean value of four selected variables:

- $\mathbf{X_1}$: Share of total population whose dwelling is in poor condition (leaking roof, damp walls, floors or foundations, damaged window frames and crumbling floors),
- $\mathbf{X_2}$: Share of total population whose dwelling is not equipped with a bathtub or a shower,
- $\mathbf{X_3}$: Share of total population whose dwelling is not equipped with an indoor flushing toilet for the sole use of their household,
- $\mathbf{X_4}$: Share of total population considering their dwelling as too dark, making use of the following formula:

$$\overline{X}_i = \frac{1}{m}\sum_{j=1}^{m} X_{ij} \tag{1}$$

for i = 1, 2,..., nwhere:

X_{ij} – the value of the j-variable in the i-country,

m – number of the variables,

n – number of countries.

The severity (degree of intensity) of the indirect housing problems, namely connected with the residential area in particular EU Member States, was determined through calculating the mean value of three selected variables:

- $\mathbf{Y_1}$: Share of total population whose dwelling is situated in a noisy neighborhood (the noise is made by neighbors or caused by traffic - comes from the street),
- $\mathbf{Y_2}$: Share of total population whose dwelling is located in a polluted area (messy and filthy surrounding, environmental problems),
- $\mathbf{Y_3}$: Share of total population whose dwelling is situated in a dangerous area (crime, violence, vandalism), making use of the following formula:

$$\overline{Y}_i = \frac{1}{m}\sum_{j=1}^{m} Y_{ij} \tag{2}$$

for i = 1, 2,..., nwhere: