



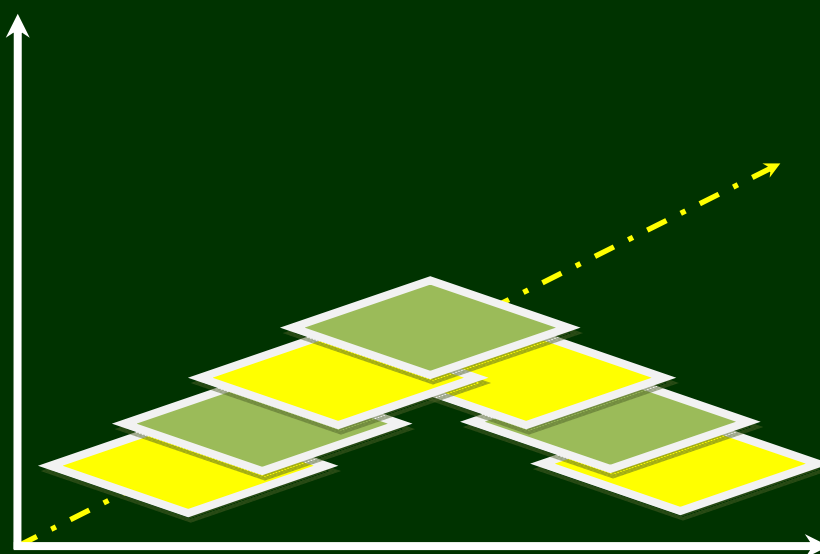
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# METHODS FOR DETERMINING THE IMPACT OF TEMPORAL TREND IN THE VALUATION OF LAND PROPERTY

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## **Abstract**

The case of study is to provide various methods of determining the impact of time trend on a change of transaction prices of undeveloped land properties. The basis of each property valuation is an analysis of the local market where the valued property is located. The analysis is based on the execution of activities related to trend changes in real estate prices and to update them on the date of valuation and also the determination of the impact of the various attributes of the property on the formation of a unit transaction price. The valuer making a valuation of the property is required to take into account changes in prices as a result of the passage of time. The price adjustments is made properly if all the changes in prices during a certain period of time are taken into consideration. In order to determine the time trend of transaction prices you can also use:

- method of comparing property prices by similar pairs,
- linear and non-linear additive models
- nonlinear multiplicative models (e.g. in the form of a multiplicative exponential function, power, logarithmic).

The choice of a right method of updating transaction prices depend on a sample size adopted for the analysis of a real estate market. It is also crucial to select the right real estate representative database that best reflect the tested reality.

A practical and theoretical research over time trend method was made on the ground of the undeveloped land property price data. The analysis of determining the impact of time on real estate prices are presented on the mentioned mathematical models.

The object of the study was the local market of undeveloped land properties, including the sale and purchase transactions conducted in Stoczek Łukowski. The merit analysis of methods and also a comparison of obtained results were presented.

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**Keywords:** time trend, property data base, math models

**JEL Classification:** R15

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# PROSPECTS FOR DEVELOPMENT OF EQUITY RELEASE PRODUCTS IN POLAND – REVERSE MORTGAGE FROM CULTURAL PERSPECTIVE

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## **Abstract**

The members of the European Union, at the time of crisis which involves state funded benefits as well as an increase in public debt, are forced to consolidate their budgetary expenses. The social cost, however, is extremely high, as the general public is unwilling to accept it. The demographic experts predict a decrease in the amount of people in an economically productive age not to mention the still growing life expectancy. This fact will have serious economic consequences in Poland. That is why the pension system reform was initiated. The inevitable cuts in welfare benefits spending might cause a situation, in which one of the possibilities of increasing the retirement benefits will lead to the usage of the most valuable and long-lasting assets that can be noticed in households - real estates. The financial instrument, which is called reverse mortgage, enables gradual liberalization of the worth of real estates and thereby can be used as an additional source of retirement income.

In Poland, the lack of verification by the Polish Financial Supervision Authority and legislative regulations as far as contractors and consumers are concerned, may pose a potential risk. There are two main problems, namely, the legal status of companies that offer reverse mortgage (in the case of possible bankruptcy and debt vindication) as well as issues concerning cyclic value changes on real estate markets. Because of the lack of a reverse mortgage bill there is no institution which can control the financial situation of contractors, and thereby guaranteeing the safety of potential customers.

The goal of this article is to determine the prospects of development of reverse mortgage in Poland from a cultural perspective in terms of potential clients preferences, by carrying out a survey on people aged 18 to 30 (mostly students from different cities) and over 60 years old. The other aim is to assess the influence of cultural determinants on perception of equity release products. The author poses a question: In what way does ownership and inheritance attitude influence the volume of reverse mortgage sales?

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**Keywords:** equity release, reverse mortgage, cultural factor

**JEL Classification:** R 20, R 38

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# DEVELOPER ACTIVITIES IN SELECTED CITIES OF POLAND - COMPARATIVE ANALYSIS

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## **Abstract**

Developer activities on Polish residential market increased in significance throughout the last twenty years. Currently, developers (except for people who build for their own needs) have the greatest impact on creating housing supply. This activity seems to be greatly varied in terms of territory, both because of its business and descriptive structure. While writing about business structure, the author particularly refers to the number of entities operating on given markets and their legal form, whereas while talking about descriptive structure – the number of realized investments and their characteristic features. Among those should be listed mostly types of residential buildings, mean number of dwellings in an investment, mean size of dwelling measured in m<sup>2</sup> and the number of rooms, average price, number of tiers, etc. Results of analysis of developer activities on local markets may become an objective basis on which the reasons for their variety should be determined and – as a result – it may lead to determine the factors that may constitute about its development in individual areas of the country.

This article aims at characterizing developer activities in five selected cities of Poland and evaluating the differences considering particular features, using quantitative methods and the author's previous results of researches.

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**Key words:** developer activities, statistical analysis, residential properties

**JEL Classification:** L22, L74, L85

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# REAL ESTATE MARKET SYSTEM THEORY APPROACH PHASE SPACE

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## **Abstract**

The real estate market is the object of research in theoretical frame but also becomes an impulse to look for new methods/tools/platforms which would help to understand, manage and undertake all activities (decisions) in this market as itself. Globalization process, need of constant gathering of information (creation of extensive files), data management, implementation of complicated (just seemingly looking as a solution) computable procedures, as well as awareness and knowledge of markets subjects- leads us to the „bourn of getting to know” the structures of real estate market. Most of the time decisions which are being undertaken in market area are not rational.

Not always market's subjects head according to market's (economical) presumptions and many of behaviors can easily be recognized as chaotic and impulsive. Owing to that fact, it appears justified to invoke to mathematical and physical concepts but also application of these to the real estate market's ground.

This article describes conception of market's perception as a theory of a phase spaces. This phase space is understood as a multidimensional space of markets occurrences where transfer of the rights to the real estate is being followed and also decision processes are being held. Emanation of these decisions processes is transaction's prices which indicate market's growth.

The goal of this article is to give a proof for the hypothesis, that real estate market is a system existing in multidimensional space. Complexity of this space affects the price of the real estate.

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**Keywords:** the real estate system, decision processes, theory of phase space.

**JEL Classification:** Mathematical and Quantitative Methods - Econometrics (C01)

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# SETTING GEOGRAPHICAL SPACE IN ORDER AFTER OWNERSHIP CHANGES DUE TO LINEAR INVESTMENTS

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## **Abstract**

Line investments serve public aims. Owners who are deprived their property for public purposes have to be able to deal with all changes which are connected with that process. These changes are concern both legal and spatial aspect.

Described subject has always caused difficult discussions. Existing procedures do not fulfill completely needs of property's users. In the field of line investments there is one more aspect of setting legal and surveying space in order, both urbanized and rural space.

Question that have to be answered is possibility of implementing GIS tools when improving space arrangement, that surrounds line investments after property changes.

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**Keywords:** ownership changes, GIS tools, line investments.

**JEL Classification:** (dostępna na stronie: [http://www.aeaweb.org/journal/jel\\_class\\_system.php](http://www.aeaweb.org/journal/jel_class_system.php))

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