Problems of Real Estates' Valuation for Taxing Purposes*

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SUMMARY

The various problems concerning real estates' valuation and fiscal cadastre implementation in Poland were presented in the paper. Polish real estates' tax system is rather complicated. Possible changes in tax base (rate) may be very difficult to realize. Not only the strong political willingness, but the mass support is necessary to carry out tax reforms. Other difficulties come from real estates' data incompleteness.

There are various problems concerning mass appraisal in Poland. We can divide them into two groups. They are legal problems and technical problems. It is supposed that new legal regulations should be decided before the new fiscal system is implemented. It will enable verification and adoption of information systems for new needs. The methods of real estates' valuation are being improved all the time, so the mass appraisal performed at quite long period is not supposed to cause serious problems.

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1. INTRODUCTION

There are various taxes concerning real estates in Poland. They are agrarian tax, forest tax, household tax and commercial enterprises tax. The polish real estate tax is calculated proportionally to estates' area. The tax rate is decided by the commune council and is the commune income. However, it is restricted by central government orders. Nowadays, the real estate tax reforms seem to be necessary in Poland. Changing real estates tax based on estate's area into one based on its value is suggested in the disputed real estates' tax reform. This reform seems to be very difficult enterprise and implies necessity of implementing other changes concerning real estates' systems and tax payers' identification. The significant problem is the obligation of real estates' value calculation for all estates being subjects of taxation.

2. PROBLEMS CONCERNING ESTATES' DATA COLLECTION

There are two systems for estates data collecting in Poland. They are the Land Register and the Ground and Building Cadastre. The polish Land Register captures, keeps and reveals information concerning legal objects. This information generally concerns description and designation, rights, rights established for somebody else's thing and receivables (including mortgage). The Land Register's objects in Poland are mainly real estates. The Land Register is managed by the courts of law. Nowadays, the Land Register's data are migrated into electronic system, but they are often incomplete and out of date. The real estates' market development and increasing number of transactions will certainly result in the Land Register data verification and expansion of its range. The chief problems with the proper Land Register's functioning have come from the past. They are mostly some data incompleteness (lack of Land Register's perpetual books) or not updated information concerning real estates' owners (mostly about persons inheriting estates).

Another system collecting terrain information in Poland is the Ground and Building Cadastre. The Ground and Building Cadastre consists of cadastral objects that are land parcels, buildings and flats, if they are independent estates. The Ground and Building Cadastre data are mainly objects' spatial description, cadastral objects' attributes, values and corresponding official documents. The most common cadastral objects are land parcels. Apart from spatial description, there are data concerning land use type and soil class, for parcels. There are data concerning functions, technical parameters and references to parcels on which the building is situated (for buildings). There are also specifications of rooms belonging, area and references to building the flat is situated in (for flats). One of principal polish cadastre modernization

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targets is cadastral data transfer into digital form. However, like the Land Register, the Ground and Building Cadastre does not include complete information about all estates in Poland. The prices' and values' register for real estates that is part of cadastre will contain all needed data, but some time is necessary for that to take place. The prices' and values' register will be very important estates' database including estates' attributes (especially these influencing its value), transaction prices and estates' values calculated by real estates' experts.

Apart from problems described above, there are other technical difficulties concerning cadastral value estimation. They affect two elements important in real estates' market – estates' transaction price and estates' value, calculated by the real estates' expert during real estates' valuation. The real estates' experts are obliged to send extracts from valuation records to county offices managing cadastre, but it does not always take place. So this information does not come into prices' and values' register or it does not happen on time. The similar difficulties concern prices derived from transaction authenticated deeds. This price is not always transferred to prices' and values' register, either. Some public notaries have implemented an additional value. It is the market value declared by the transaction parties. This value is not defined by law and it is not clear how to interpret it.

3. THE MARKET DATA ANALYSIS

The real estates' experts carrying estates' valuations in Poland notice some additional difficulty. It is the problem of estate's price dividing into the prices of particular estate's components. The complete estate's price without specifying the price of land parcel and the price of building (buildings) is not very useful for mass appraisal or similar estates' valuation.

It is possible to separate components' prices. However, this process depends on real estates' market characteristics. For developed estates' markets with numerous transactions (broad markets), we may use parametrical statistic models. As a broad market we understand market with transaction number exceeding the number of all deliberated real estates' elements (land parcel and other components).

For such an analysis, real estates should be separated into groups. The criteria are their destination in local spatial plan and type of buildings, erected on the ground. To divide transaction price into separate estates' parts prices it is necessary to set equations for each estates group. Generally, the equation has the following formula

$$C_{Tj} = S_1 \cdot c_1 + S_2 \cdot c_2 + ... + S_i \cdot c_i \,. \qquad (1)$$

The symbols are explained below:
C_{Tj} – transaction price for whole j-estate,
S_i – the area of every i-element (parcel, parcel parts having defined soil classes, flat or building usable areas or whole building),
c_i – i-element unit price.

For poorly developed real estates' markets with small transaction numbers, the parameters' estimation conditional models are possible for application. The number of transactions is often smaller than the number of deliberated estates' elements, so the estates' prices conditional model should be used for estimation process.

To separate complete transaction price into estate's parts prices we may write conditional equations as follows

$$S_1 \cdot (\tilde{c}_1 + \delta_1) + S_2 \cdot (\tilde{c}_2 + \delta_2) + ... + S_i \cdot (\tilde{c}_i + \delta_i) = C_T \,. \qquad (2)$$

$\{C_T\}$ - transaction prices for the whole estate,

S_i - parcel's area or arable land area with qualified soil class or complete building area as estate's i-element,

$\tilde{c}_i$ - i-element approximated unit price,

δ_i - i-element approximated unit price's random remainder.

If we multiply and group the similar objects in formula (2), we will receive the conditional model for estate's unit prices as follows

$$S_1 \cdot \delta_1 + S_2 \cdot \delta_2 + ... + S_i \cdot \delta_i = C_T - S_1 \cdot \tilde{c}_1 - S_2 \cdot \tilde{c}_2 + ... - S_i \cdot \tilde{c}_i \,. \qquad (3)$$

This equation constant term is the difference between transaction price (C_T) and model price (C_M) of deliberated real estate. The model estate's price is calculated from areas' multiplication products and approximated unit prices' particular estate's values. So the formula has the following form

$$C_M = S_1 \cdot \tilde{c}_1 + S_2 \cdot \tilde{c}_2 + ... + S_i \cdot \tilde{c}_i \,. \qquad (4)$$

The estates' prices conditional model application is going to give proper results only if the appropriate estate's components prices approximations $(\tilde{c}_i)$ have been calculated earlier. The estate's components prices depend on real estates' market localization.

4. CADASTRAL TAX PROBLEMS PUBLIC MISUNDERSTANDING

The next question concerning cadastral value introduction into legal regulations is negative public opinion on real estates' tax reforms. It comes from the taxation problems insufficient understanding and anxiety concerning possible tax increases. So it is suggested to carry on estates' tax reforms gradually. First, it would be welcome to introduce an obligation of cadastral value calculation. In the beginning, the cadastral value is not supposed to be used as the base for the due real estates' tax. During that time, the legal status for all real estates in

Poland should be cleared. The all real estates should be explicitly related with tax payers and the necessary changes in taxation system should be performed. Afterwards, the real estates' cadastral values' actualization should be completed to eliminate possible mistakes. Then the real estates' tax reform should be conducted.

5. DISCUSSION AND CONCLUSIONS

Tax reforms are very complicated and often unpopular decisions, so the political determination is necessary to change regulations concerning real estates. Promotion of tax reforms can help gaining wider support to carry out them. Some legal regulations are needed to perform the real estates' cadastral value calculation for all estates. The Ground and Building Cadastre and the Land Register data completing and updating may be very helpful during this legal process.

The real estates' valuation methods are continually updated and modernized and the real estates' estimation present solutions are adequate for the mass determination of cadastral value.

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