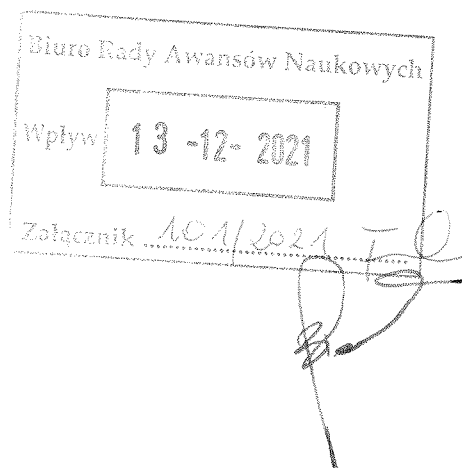


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Review

PhD thesis of Avi Perez, M.Sc.

The influence of Property Tax on Housing Prices in Israel between 1997 and 2017

written under the guidance of

Professor Piotr Lis Ph.D.

1. The basis for writing the review

The legal basis for writing the review is the decision of the UEP Academic Advancement Board dated September 23. The decision was communicated in a letter dated 26 October this year.

2. Substantive assessment

2.1. Relevance of the undertaken research issues and its originality

The problem of housing prices, their changes and the reasons for these changes has been considered in the literature for many years and from different points of view. There is a dominant discussion about the importance of a dwelling for the proper life of a household, about the need to own a dwelling and the advantages of such a solution. There is also an opposing current, proving the importance of rented housing for the mobility of young people and the freedom of their life choices and decisions.

In Poland, the discussion on whether homeownership is better than renting is relatively short-lived and it grows along with the growing number of apartments bought for investment purposes and intended for renting. In the conditions of growing inflation, the number of apartments bought for storage purposes is also growing.

From these phenomena and trends, further considerations of state housing policy arise. Should the state influence the housing segment of the real estate market and if so, how? What should it strive for? What form of habitation should it support? Which of the available tools should be used to achieve the goal that is not only social, but also economic in nature? How to act in conditions of shrinking resources of building plots - the lack of which prevents growth of supply and drives up housing prices?

These and a number of similar questions bother us every day, and we try to answer them by conducting research in this field. We also know that all real estates, including apartments, are taxed and this tax in most countries of the world is used to support the budgets of local authorities. In Poland, the property tax is calculated on various bases (e.g. the size and purpose of use) multiplied by the rates set as maximum by the Minister of Finance. As a result, the property tax is not as burdensome for apartment owners as taxes in countries where it is calculated on the basis of property value.

Probably for this reason, the issue of the tax's impact on housing prices has not yet been considered in Poland. The topic of the tax impact on the price seems to be new. Rather, we look at housing prices and taxes conversely. How does the value or size of the dwelling shape the dimension of the tax? The author's point of view, that the tax influences the price of housing is original and fascinating.

From the Polish researcher's point of view the thesis contained in the title of this paper seems surprising, even risky. It can be presumed that the influence of the tax on the price of housing depends primarily on the system of shaping and collecting this tax. However, one may have serious doubts whether the property tax can cause an increase in the price of apartments.

Avi Perez has decided to explore an undoubtedly controversial, and therefore extremely interesting, issue and made it the main theme of his dissertation. Although I was somewhat surprised by this thesis, I have to acknowledge that the topic is original and important for

theory and practice. Therefore, I consider the choice of this unusual topic to be correct. Adopting four major cities to study this phenomenon in Israel is also not objectionable.

2.2. Correct formulation of problems and hypotheses (research assumptions)

Based on the presented research problem and the literature synthesis, the main objective of the dissertation was to evaluate the influence of property tax on housing prices in Israel in the years 1997-2017.

Research tasks, which were to enable the achievement of the objective were formulated as follows [page 9]:

- 1) explanation of the principles of the functioning of housing markets and factors determining housing prices;
- 2) examination of the differences in the construction of two types of the property tax, i.e. based on the property value and based on the area, using a comparative analysis;
- 3) examination of the four methods used in the property tax based on the area in four cities in Israel, together with a numerical analysis of tax income and housing prices;
- 4) analysis of the relationship between property tax income and housing prices.

The examination uses a case study of four cities in Israel, a comparative analysis for selected countries using different property tax types, and quantitative methods such as ANOVA, Pearson correlation, regression models as well as cointegration analyses for housing prices and income.

These tasks and the main objective have led the author to the formulation of two important hypotheses:

[H1]. Although property tax in Israel is based on the area, it is strongly related to housing prices.

[H2]. Despite the four methods of calculating floor space in Israel between 1997 and 2017, the property tax rate in cities with a lower socioeconomic status was higher than in cities with a higher socioeconomic status.

I make no comments on the above theses. They have been formulated correctly and have served to achieve the basic objective of the dissertation.

2.3. Obtained results and their significance for learning and practice

The author examined the factors that explain the sharp rise in housing prices in Israel over a long period. He conducted his research on the basis of data from four Israeli cities. They were: Tel Aviv, Jerusalem, Haifa, Beersheba.

Avi Perez showed in his dissertation a positive relationship between property tax and housing prices. His research based on statistical methods proved the first hypothesis that there is a strong relation between property tax and housing prices in Israel.

This relationship is shown by the author beginning in 1997 when important changes occurred in the tax system and local governments began to use the tax to reduce local budget deficits. Equally important, despite the changes in property tax calculations, the author also proved his second hypothesis to be true stating that in Israel between 1997 and 2017, the property tax rate in cities with a lower socioeconomic status was higher than in cities with a higher socioeconomic status.

The author also draws an important conclusion that the property tax should not have an impact on the acceleration of price growth, but on the contrary, it should play an important role in slowing this growth down. Avi Perez also showed that the 4 methods of calculating the area for determining the amount of property tax has caused distortions in the functioning of the residential market. Consequently, dwellings in Jerusalem, the city relatively less developed in terms of socio-economic status than Tel Aviv, were more heavily taxed than dwellings in Tel Aviv.

In his dissertation, the author also pointed out the need to develop a joint action program of central and local authorities in Israel for the development of housing. This is what I call, with reference to Poland, the coherence of housing policy (the central government's responsibility) and urban policy (the local government's responsibility). Therefore, I fully agree with the author that only a clear definition of the goals of both policies and consistency between the actions taken by them can ensure the achievement of these goals.

2.4. Controversial issues to be clarified by the author

Although my assessment of the doctoral dissertation submitted for review is positive, I would like the author to address several issues that are not entirely clear to me. I hope that the author's answers will dispel the ambiguities.

1. On page 7, the author states:

The relationship between the municipality and residents is complicated. From the municipality's perspective, there is a permanent and systematic desire to deepen the collection process by changing the classifications of assets or property valuations. The residents wish to pay as little tax as possible and express this desire during elections.

I think that the final statement here is too strong. Citizens vote based on many considerations. Property tax may be just one of many considerations and not the most important to everyone. Thus it is only theoretically accepted. Especially since the author himself wrote on page 66: *the more people understand the tax policy at the municipal level, the less they resist paying the taxes.*

So, it is not reluctance to pay taxes, but understanding the reasons for paying and the purpose of doing so that is important.

2. On the page 93 the author writes:

These differences indicate a municipal tax system that requires amendment. Because of these inequalities and unfairness, it is appropriate to make comprehensive municipal property tax rates.

Is this really the most important issue? Does the tax have to be uniform? Or should it be left as an option for local authorities to tailor the tax to the needs of their budgets that fund the different services for residents? What evidence is there that a uniform tax would perform these functions better?

3. On the page 144 the author writes:

The variable of the residential property tax revenue (in thousand NIS) has a significant positive contribution to the model. It means that as the residential property tax revenue increases, so does the annual average housing price, as described in this work.

I can agree that there is a correlation between the residential property tax revenue and the annual average housing price. However, I am not convinced that the change in property tax rates is the trigger for the increase in housing prices. The reasons for changes in housing prices can be quite different and numerous. Thus, tax increases may have little or

no effect on housing price increases. There is a correlation, but is there a cause-and-effect relationship between the tax increase and the price increase? Perhaps a low supply and therefore unavailability of housing in the local market is more important? How I see it, the correlation proved by the author, can only suggest a similar, occurring independently but in parallel, growth of these two discussed categories.

3. Work methodology and its evaluation

3.1. Selection of literature and the ability to use sources

As far as the selection of literature and the ability to use sources is concerned, I have no objections. The literature was selected appropriately to the subject of particular chapters, enriching and justifying the author's way of thinking. It refers both to the general chapter, the content of which concerns the essence of the housing market functioning, as well as to the following chapters concerning the real estate tax, its significance for the local budget and its diversification.

In addition the selection of data that made it possible to create models and to calculate correlations for four different cities deserves a positive evaluation. It is so because it made it possible to calculate and compare the 4 cases of Israeli cities to each other and generalize with respect to local and central housing policy.

3.2. The accuracy of the selection of research methods and tools and the ability to apply them

I consider the choice of methods for the conducted research, especially modelling, to be accurate. In spite of my doubts as to the existence of a causal connection between an increase in residential real estate taxes and an increase in the prices of these properties, I find that the author correctly operates the methods and models he uses.

The starting point for the research was the method of critical analysis of the literature on the residential real estate market, especially on tax systems and housing prices. The author also analysed econometric models, and then selected 4 Israeli cities as case studies for which he collected data to enable his modelling. For this purpose he used: regression

models, ANOVA analysis of variance, Pearson correlation and cointegration analysis which should be deemed correct.

3.3. Correctness of the work layout and content division structure

The structure of the work used by the author does not raise any objections either.

The author proceeded from the most general topics concerning the housing market and its various aspects, through the issues of property taxation both in theory and in practice in selected countries. Then, in the third chapter, he discussed the specifics of the residential market and the real estate tax system in Israel.

This led him to a detailed analysis of four Israeli cities (Tel Aviv, Jerusalem, Haifa, Beersheba) from the point of view of the relationship between the residential real estate prices and the taxation of housing.

Such structure of the work enabled him to formulate conclusions with regard to both individual cities, the situation among them and the housing policy of the central government.

The structure of the paper is therefore correct.

4. Conclusion

In light of the above presented evaluation of the reviewed doctoral dissertation of Avi Perez, regardless of the questions posed to the author in this review, I consider it reasonable to conclude that the dissertation submitted for review meets the requirements for doctoral dissertations in the applicable regulations, and may be admitted for public defence.



Warsaw, 3 December 2021