

## **Newsletter Issue 39, October 2019**

The topics addressed in this issue of Economic Research are the following: (i) *Aspects of the social protection system in Cyprus: A process evaluation*, (ii) *Optimal Timing of Greenhouse Gas Emissions Abatement in Europe*, (iii) *Residential property price indices using asking prices: the case of Cyprus*, (v) *Empirical examination of the determinants of Cyprus tourist arrivals*.

### ***Aspects of the social protection system in Cyprus: A process evaluation***

This paper reviews the Social Protection System (SPS) in Cyprus, as well as the amounts spent per annum, in total and for each of the various functions it supports. We delve further into the functions and policies that most immediately relate to the labour market, paying particular attention to the support of the unemployed, those in financial need, and those who are sick, and temporarily or permanently incapacitated. Important recent reforms are examined in depth, especially the Guaranteed Minimum Income programme and its connection with the pre-existing system of unemployment insurance. Lacking access to publicly available micro data on the use of various facets of the SPS, we raise questions about aspects of the system which may be modified to help ensure its sustainability, effectiveness and fairness.

### ***Optimal Timing of Greenhouse Gas Emissions Abatement in Europe***

Decarbonization by the mid-21st century requires strong commitment to greenhouse emission abatement measures, but national emission reduction pledges are made for the medium term. Achieving medium term targets without taking into account the long term can lead to a lock-in effect, binding countries in pathways that cannot lead to strong decarbonization. This paper sheds light in this issue by combining a theoretical approach with real-world engineering and cost data. We develop a constrained optimization model to examine least-cost greenhouse gas emission abatement pathways, taking into account a) emission reduction objectives for two years: 2030 and 2050; and b) the potential speed of implementation of each measure, which expresses technical and behavioural inertia in the deployment of a measure. We focus on European countries and economic sectors that are not subject to the EU Emissions Trading System. We derive relationships between 2030 abatement targets of varying ambition and the possibility for a country to achieve a strong 2050 target. We find that more ambitious EU-wide targets have to be set by 2030 so that Europe delivers deep decarbonization by 2050. Moreover, if air pollution costs are taken into account, strong decarbonization by 2050 has lower social costs than less ambitious policies.

### ***Residential property price indices using asking prices: the case of Cyprus***

This paper uses micro data on property advertisements published in widely circulated newspapers and online to construct residential price indices for Cyprus. The sample covers the period from 2000Q1 to 2018Q2 and contains information on various property characteristics (e.g. property type, size, location). A regression model is estimated using rolling samples of 12, 20 and 40 quarters. We obtain six sub-aggregate price indices, i.e. for houses and flats located in the districts of Nicosia, Limassol, and in the remaining districts. Using the six sub-aggregate indices, we construct five aggregate price indices, i.e. for (i) houses, (ii) flats, (iii) Nicosia district, (iv) Limassol district, and (v) other districts, as well as an overall property price index for Cyprus. The estimated price indices are juxtaposed with other available property price indices in Cyprus, namely the indices published by the Central Bank, Eurostat, and the Royal Institution of Chartered Surveyors, as well as with a number of macroeconomic indicators relating to the property market. The indices constructed in this paper tend to be associated with slightly larger quarterly percentage changes (higher growth and smaller contraction) compared to similar indices over common periods. The resulting

indices are significantly correlated with the corresponding property price indices published by other organisations, and their agreement in the direction of quarterly changes is high. The estimated indices are found to contain leading information vis-à-vis other property price indices, particularly in the case of flats and the district of Limassol. Also, the estimated indices are highly correlated with many key macroeconomic variables, with the results suggesting that the former may lead developments in some macroeconomic series. The properties of the proposed indices together with their timely nature in terms of data availability could make them a useful tool for monitoring the evolution of property prices as well as macroeconomic developments in Cyprus. The estimation of sub-aggregate indices provides information on the key drivers (types, districts) of fluctuations in the domestic property market. As the proposed indices are model-based, the statistical significance of quarterly changes can be computed and confidence intervals can be constructed around these changes to provide an informed depiction of property price fluctuations.

### *Empirical examination of the determinants of Cyprus tourist arrivals*

Tourism is defined as the commercial organization and operation of holidays to locations of interest. This paper analyses the economic, social and political factors which influence the demand for tourism in Cyprus. The empirical analysis is based on a dynamic panel model which examines seven forms of gravity models. The results of all seven estimations have proven that lagged tourist arrivals and GDP per capita are the main determinants of tourist arrivals, whereas for trade the results are ambiguous. The outcome of this research is mostly in line with the theoretical literature, elucidating a general explanation for the patterns of foreign tourist flows. Data includes a sample of 37 countries from 2008 to 2014, except the third estimation that includes a sample of 55 countries from 1996 to 2014.

### *Digital Competitiveness Ranking: Cyprus*

The ©IMD World Competitiveness Center ([www.imd.org/wcc](http://www.imd.org/wcc)) has published for the third year the IMD World Digital Competitiveness Ranking. The Economics Research Centre acts as a Partner Institute of the IMD World Competitiveness Center by contributing to the collection of the necessary data for Cyprus as well as by disseminating the results for Cyprus. In the 2019 Digital Competitiveness Ranking, Cyprus ranked 54th among 63 countries, remaining in the same position as in the 2018 ranking.