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SHARE, the Survey of Health, Ageing and Retirement in Europe, is a research infrastructure for studying the effects of health, social, economic and environmental policies over the life-course of European citizens and beyond. From 2004 until today, 380,000 in-depth interviews with 140,000 people aged 50 or older from 28 European countries and Israel have been conducted. Thus, SHARE is the largest pan-European social science panel study providing internationally comparable longitudinal micro data which allows insights in the fields of public health and socio-economic living conditions of European individuals, both for scientists and policy makers. SHARE has global impact since it not only covers all EU member countries in a strictly harmonized way but additionally is embedded in a network of sister studies all over the world, from the Americas to Eastern Asia. Considering its focus on people aged 50 and older, international orientation, and thematic coverage, SHARE is perfectly suited to provide data on respondents' health, economic, and living situation all across Europe and Israel before and during the ongoing COVID-19 crisis.

Therefore, the aim of this project is to analyse and evaluate the non-intended consequences of the epidemic control decisions to contain the COVID-19 pandemic in 27 European countries using data from SHARE, and to devise improved health, economic and social policies with a transdisciplinary and international team of SHARE researchers from different European research institutions. To reach these aims, several objectives will be pursued: identify healthcare inequalities before, during and after the pandemic; understand the lockdown effects on health and health behaviours; analyse labour market implications of the lockdown; assess the impacts of pandemic and lockdown on income and wealth inequality; mitigate the effects of epidemic control decisions on social relationships; optimise future epidemic control measures by taking the geographical patterns of the disease and their relationship with social patterns into account; better manage housing and living arrangements choices between independence, co-residence or institutionalisation.

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I. Executive Summary

In this deliverable, WP7 focuses on how older Europeans have reduced their daily activities during the pandemic. Projects that are in the early stages concern the optimal allocation of vaccines; a measure for financial risk preference and an index for cognitive abilities and how risk attitude profiles are associated with precautionary behavior; and applying the notion of resilience to the pandemic.

1. Summary of projects and research aims

In WP7, several working papers have been published and are in progress. Due to unavailability of geographic data until recently, Tasks 2-4 (SEIR models: epidemiological models for the geographic spread of the virus) could not be finished yet. Access policies compatible with the GDPR have now been agreed upon and are in the process of being implemented. The models will be estimated as soon as this process is completed and geographic data are available to researchers. Task 5 will be re-designed as part of tasks 2-4. MEA will embed SEIR-type mechanisms into an economic model to assess optimal lockdown policies. For Tasks 2-4, the Economics Institute completed a procurement process and selected an expert software developer to program the Agent Based Model for SHARE Epidemiological Model for future use when SHARE geographic data will become available. In Tasks 1 and 6, research papers have been published.

2. Overview of all finished and/or started papers by all major WP participants

a. Finished

Task 1:

Connolly, F. F., Olofsson, J., Malmberg, G., and Stattin, M. (2021). Adjustment of daily activities to restrictions and reported spread of the COVID-19 pandemic across Europe. SHARE Working Paper Series. 62-2021: doi:10.17617/2.3292885.

b. Started/in progress

Task 1:

Olofsson, J., Connolly, F. F., Malmberg, G., and Stattin, M. How Europeans adjusted their daily activities to restrictions and spread of COVID-19.

Lestari, S.K., Eriksson, M., de Luna, X., Malmberg, G., and Ng, N. Changes in providing support, receiving support, and volunteering work after pandemic.

Connolly, F. F., Olofsson, J., Malmberg, G., and Stattin, M. Daily activities, mental health and restrictions during the Covid-19 pandemic across European countries.

Task 6:

N.R. Rachaniotis, T.K. Dasaklis, F. Fotopoulos, M. Chouzouris, T. Georgiadis, A. Lyberaki, P. Tinios. Assessing the framework of COVID-19 vaccines' allocation in E.U.

M. Chouzouris, A. Lyberaki and P. Tinios. The effect of risk attitude on Covid-19 precautional measures: A European study in ageing societies.

A. Lyberaki, P. Tinios, T. Georgiadis, M. Chouzouris. The notion of resilience in adversity: Pandemic applications.

3. Description of results

Research papers show that older Europeans across the continent have reduced their daily activities during the pandemic, with both restrictions and infections predicting a reduction in mobility. Restrictions predict activity reduction across most activities and that macro-level effects are relatively independent of factors at the individual level (old age, poor health and female) and restrictions primarily reduce daily activities for younger age groups compared to older age groups. Researchers in WP7 further investigate the optimal allocation of vaccines with respect to optimal health outcomes, refusal and delayed acceptance rates. Researchers also derive a measure for financial risk preference and an index for cognitive abilities. Risk attitude profiles are associated with precautionary behavior.

4. Future research aims and next steps

Researchers at the Economic Institute and the Faculty of Biomedical Engineering at the Czech Technical University in Prague, together with researchers at the University of Piraeus, have started to build the Agent-Based Model (ABM) that will serve as the foundation of the SHARE Epidemiological model. The model will be based on open-code CovSim model extended to spatial geographic analysis. The model will be able to input SHARE data, SHARE geographic locations, and official Eurostat and other administrative data at regional levels. The latter will serve as structural data and parameters for the epidemiological analysis while SHARE data will serve as behavioral parameters. The model will allow for policy analysis and preventive measures related to COVID-19 and similar events. The model will be designed as a standalone application available to SHARE users at the SHARE-ERIC restricted access enclave.

II. Papers and drafts of Work Package 7 based on the second SHARE Corona Survey

At this point, there are no finished papers based on the second SHARE Corona Survey. All existing papers and drafts had already been included in D7.2.