



TILDA: The contribution of longitudinal studies to evidence-based policy making in the EU

Draft Version 2

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INTRODUCTION

Europe's population is ageing. By 2060, people aged 65 years or over will account for 29.5 % of the EU-27's population and the share of those aged 80 years or above in the population is projected to almost triple¹. This brings with it the prospect of an enormous increase in the prevalence of chronic disease such as Alzheimer's disease, dementia and heart disease. Healthcare systems have no sustainable solutions in place to cope with these challenges and few if any countries have a strategy for how to finance healthcare under these expected developments. This means that Europe's ageing society is not only a healthcare challenge – it is an enormous economic and financial challenge. A recent Standard and Poor's report² argued that the creditworthiness of industrialised countries will be called into serious doubt unless the rising cost of public health is addressed, not least the cost of addressing chronic age-related disease. If Europe does not rise to this challenge, the public finances of EU Member States may be sunk by the cost of funding public health care. Research has a vital role to play in preventing this.

The role of research in responding to the challenges of an ageing society is not only to address specific diseases but also to provide factual evidence so that policy makers are able to make informed decisions. This presents enormous challenges in terms of gathering and analysing data on the population. In particular, it requires gathering necessary data involving repeated observations over long periods of time, sometimes even decades – such a practice is generally known as conducting “longitudinal studies”. Through observations of the same items over long periods of time, longitudinal studies can be used to study developmental trends across the life span of citizens within and across different societies, thereby providing invaluable information which can inform the practice of healthcare and the policymaking process and the effectiveness of interventions and policy changes.

The Irish Longitudinal Study on Ageing – TILDA – was designed to provide an evidence base for addressing current and emerging concerns associated with population ageing in Ireland. It aims to generate novel research, better understand the ageing process and the determinants of successful ageing, and inform national and international policy decisions on ageing. It is one of a family of longitudinal studies on ageing that includes, among others³:

¹ Eurostat, 2012

² Standard and Poor's, 2012

³ Kenny, R., 2013, S263

- π the Health and Retirement Survey (HRS; United States)
- π the Survey of Health, Ageing and Retirement in Europe (SHARE)
- π the English Longitudinal Study of Ageing (ELSA)
- π the Longitudinal Ageing Study in India
- π the China Health and Retirement Longitudinal Study
- π the Japanese Study of Ageing and Retirement.

In common with the HRS family of studies, TILDA data are archived and available to all researchers⁴.

The following document provides an overview of longitudinal studies and highlights some key implications for policymakers of the project's early findings.

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⁴ Kenny, R., 2013, S263

1. THE IRISH LONGITUDINAL STUDY ON AGEING (TILDA) - OVERVIEW

The health and well-being of older people is shaped by a combination of factors that are specific to each individual and other external influences arising from their sociocultural context and physical surroundings. Understanding the interactions between these different influences is crucial for the development of policies aimed at improving the lives of older people. Longitudinal studies make a decisive contribution to this by employing a correlation research study that involves observations of the same items over long periods of time – this enables researchers to study such factors across the life span of citizens within and across different societies.

The Irish Longitudinal Study on Ageing (TILDA) is a large-scale, nationally representative study of over 8,500 people aged 50 and over in Ireland. It is the most ambitious study of ageing ever carried out in Ireland and represents a step-change in terms of data, knowledge and understanding of ageing with which to inform policy, novel research and innovation. Its aim is to characterise the older citizen and explore factors which determine successful ageing, thereby supporting the development of an environment for ageing well. This can only be done with the help of a representative survey of older populations that will act as the foundation on which to plan appropriate health, medical, social and economic policies. TILDA delivers quality cutting-edge research consistent with the development of a "knowledge society" built on innovations in science and technology. Furthermore, the study provides a comprehensive and accurate picture of the characteristics, needs and contributions of older persons in Ireland to inform a variety of users and stakeholders including:

- π policy-makers and public sector service planners
- π voluntary sector actors that seek to enhance the social integration of older citizens
- π private sector companies in the insurance, services and technology industries
- π researchers in ageing both in Ireland and internationally

TILDA data is collected through a face-to-face interview conducted in the participant's home, private questionnaire completed by the participant for more personal information and through a intensive health assessment where objective measures of physical, mental and cognitive health are collected. TILDA is unique among longitudinal studies in the breadth of these measures collected making it one of the most comprehensive longitudinal datasets internationally.

The first results from TILDA were presented on May 9, 2011. Between 2009- 2011, over 8,504 people aged 50 and over were randomly selected across the country and interviewed about many aspects of their lives including issues such as health, financial circumstances and quality of life. Almost 85 per cent of the participants also underwent a rigorous health assessment. The same group will be interviewed every two years until 2016. Further health assessments will be undertaken on the participants in 2014 and 2016.

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2. CONTEXTUALISING TILDA - OVERVIEW OF LONGITUDINAL STUDIES

The health status of the older population varies significantly around the world and studies of ageing set within a single country are limited in their ability to measure the effects of factors that do not vary or cannot be identified within that country⁵. A number of studies are currently being conducted in order to gather the necessary wide sample of data on ageing and health, including:

- π ELSA - English Longitudinal Study of Ageing
- π HRS - Health and Retirement Study, USA
- π SHARE – Survey of Health, Ageing and Retirement in Europe
- π CHARLS - Chinese Health and Retirement Survey
- π ELSA-Brasil - Estudo Longitudinal de Saúde do Adulto
- π JSTAR - The Japanese Study of Ageing and Retirement
- π KLoSA - The Korean Longitudinal Study of Ageing
- π LASI - The Longitudinal Ageing Study in India
- π MHAS - Mexican Health and Ageing Study

Given the importance of collaboration in this field, international comparability was an important consideration in the design of TILDA⁶. It has in particular been developed as part of a set of studies which takes the US Health and Retirement Study (HRS) as a template for their design and which are designed with the twofold purpose of meeting the needs of the populations they represent and facilitating international comparisons. Moreover, an international scientific advisory board guided its design and many of the assessments included in TILDA are directly comparable not only with HRS family studies but also with the Longitudinal Ageing Study Amsterdam (LASA) and the Medical research Council Cognitive function and Ageing Study (MRC CFAS), among others⁷.

Taken together, these offer the potential to study the effects of factors such as national culture, institutional regime, ethnicity, pension system, and health and social care provision on

⁵ Savva et al, 2013, S292

⁶ Savva et al, S292

⁷ Savva et al, S292

population health⁸. A series of working papers currently under development by the RAND Corporation describes the comparability of each of the HRS family studies with respect to the important domains of ageing, including chronic disease, employment and retirement, income, wealth, and cognitive function⁹.

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⁸ Savva et al, S292

⁹ Savva et al, S292

3. EVIDENCE-BASED POLICYMAKING: WHY TILDA MATTERS FOR EUROPE

Europe's ageing demographics are a key challenge for European society as identified by the European Commission. In rising to this challenge, Europe needs evidence based scientific research that is excellent in quality, that is innovative and novel in terms of knowledge generation, that can be applied by relevant stakeholders to accelerate the benefits of global and local innovation, and that is compatible with wider international comparisons. TILDA was designed to meet these needs and play a valuable role in supporting EU policymaking.

3.1. Ageing – A key EU challenge

Europe's population is ageing. By 2060, people aged 65 years or over will account for 29.5 % of the EU-27's population and the share of those aged 80 years or above in the population is projected to almost triple¹⁰. This brings with it the prospect of an enormous increase in the prevalence of chronic disease such as Alzheimer's disease, dementia and heart disease. The European Commission has therefore identified **active and healthy ageing** as a **major societal challenge** common to all European countries, and as an area that presents considerable potential for Europe to lead the world in providing innovative responses. The importance of these challenges is reflected in a number of steps the EU has taken in recent years, such as the launch of the European Innovation Partnership on Active and Healthy Ageing and declaration of 2012 as European Year for Active Ageing and Solidarity between Generations.

3.1.1. *European Innovation Partnership on Active and Healthy Ageing*

The pilot **European Innovation Partnership on Active and Healthy Ageing**¹¹ (EIP-AHA) aims to pursue three goals with a view to leading the response to ageing societies:

1. Enabling EU citizens to lead healthy, active and independent lives while ageing;
2. Improving the sustainability and efficiency of social and health care systems;
3. Boosting and improving the competitiveness of the markets for innovative products and services, responding to the ageing challenge at both EU and global level, thus creating new opportunities for businesses.

¹⁰ Eurostat, 2012

¹¹ European Commission, 2012

This is to be realised in the three areas of prevention and health promotion, care and cure, and active and independent living of elderly people. The overarching target of this pilot partnership is to increase the average healthy lifespan by two years by 2020.

3.1.2. European Year for Active Ageing and Solidarity between Generations

2012 was declared **European Year for Active Ageing and Solidarity between Generations** to raise awareness of the contribution that older people make to society. A Council Declaration in December 2012 stated that the European Year 2012 “has contributed to creating political momentum. It has shown that policy-makers at all levels, from the EU to local administrations, and a wide range of stakeholders including social partners and many civil society organisations representing all generations, are ready to join forces and take a step forward in tackling the challenges and seizing the various opportunities of ageing populations¹².”

3.1.3. EU Summit on Active and Healthy Ageing

In June of 2013, the **EU Summit on Active and Healthy Ageing** was held in association with the Irish Council Presidency, jointly organised by the Ageing Well Network and the Global Coalition on Ageing. 2013 also saw the signing of the **Dublin Declaration on Age-Friendly Cities and Communities in Europe 2013**, the aim of which is to solicit support for a range of sustained actions that can contribute to building an age-friendly Europe by 2020. Building on its predecessor¹³, the ‘Dublin Declaration 2013’ sets out underpinning values and principles of action, recognising challenges and opportunities that must be accommodated within the European context, including the work of the EIP-AHA, and the specific action promoting innovations in age-friendly buildings, cities and environments.

3.1.4. Horizon 2020 and Healthy Ageing

Horizon 2020, the EU’s next framework programme for research and innovation, launches on January 1st, 2014. Horizon will comprise three key pillars, of which one is “societal challenges”, which is due to receive 38% of all funding. Healthy ageing, demographics and well-being constitutes one of seven key societal challenges identified in the framework programme.

3.2. Embedding TILDA’s Strengths in a European Context

Meeting the policy challenge of an ageing society requires collaborative research at European and global levels, dissemination of research outputs, translation of research findings into policy

¹² Council of the European Union, 2012

¹³ The Dublin Declaration, 2011

and practice, and evaluation of effectiveness and impact¹⁴. TILDA is designed to maximise comparability with other international longitudinal studies while offering unique strengths in key areas of research. The unique strength of TILDA with respect to other studies is the comprehensive health assessment offered to each participant¹⁵.

Novel aspects of TILDA include:

- π A comprehensive analysis of gait
- π An extensive cognitive battery
- π Tests of vision, a retinal photograph, and quantification of macular pigment optical density
- π Grip strength tests
- π A measure of heel bone density
- π A comprehensive cardiovascular investigation including a measure of pulse wave velocity
- π Continuous blood pressure monitoring during active stand, as well as conventional measures of seated and standing blood pressure.

These tests will allow comparison of certain biological mechanisms between TILDA and other HRS family studies, as well as tests of the validity of self-reported or subjective measures. The broad range of measures included in the TILDA health assessment will contribute to the ongoing development of the HRS family, as results from the diverse measures of physical and cognitive function in TILDA will inform selection of constructs and measures in future waves of TILDA and other HRS family studies.

3.3. Implications of early TILDA findings for EU Policy

Early findings of TILDA have a number of policy implications¹⁶. Key findings include:

Simple health monitoring can improve health outcomes: TILDA findings show that risk factors for chronic diseases, heart attacks and stroke such as high blood pressure and irregular heart beat are undiagnosed in the older population. Simple and consistent health monitoring is therefore essential for early identification and prevention of chronic conditions. (reference TILDA unpublished)

¹⁴ See WHO, 2012

¹⁵ Savva et al, 2013, S293

Working lives and pension planning: Longer working lives can be facilitated by removing barriers such as a defined age of retirement, and creating a step-down process in a work environment of peers. Raising awareness and pension knowledge in the work force will facilitate proper retirement planning and adequate income in later life.

Reference: Supplementary Pensions and the Income of Ireland's Retirees
<http://www.tcd.ie/tilda/publications/reports/>

Healthcare utilisation: Age in itself is not a driver of the use of healthcare services; however it is a major driver of the use of community and social care services. Adequate resources in community and social care services are essential for health and wellbeing.

Reference: Patterns and Determinants of Health Care Utilisation in Ireland
<http://www.tcd.ie/tilda/publications/reports/>

Early life events play a crucial role in health and quality of life: Adverse events in childhood contribute to mental and physical health and quality of life later in life. Policies that foster human capital development throughout life and provide an acceptable basic income in older age will therefore have a positive influence on quality of life.

Reference: TILDA unpublished

Medications cost savings: Regular medication review and substitution for generic medications where possible can lead to significant cost savings. TILDA estimated a cost saving to Ireland of up to €152.4 million per year.

Reference: Polypharmacy in Adults Over 50 in Ireland: Opportunities for Cost Saving and Improved Healthcare

CONCLUSIONS

Europe's population is ageing and this presents enormous healthcare and economic challenges for the European Union. Research is central to meeting these challenges, providing the evidence based research that allows policymakers and relevant stakeholders to make informed decisions and monitor impact.. To do this effectively requires gathering necessary data involving repeated observations over long periods of time, sometimes even decades. Longitudinal studies can be used to study developmental trends across the life span of citizens within and across different societies, thereby providing invaluable information which can inform both the practice of healthcare and the policymaking process.

TILDA is the most ambitious study of ageing ever carried out in Ireland of people aged 50 and over. It is designed to maximise comparability with other well-established international longitudinal studies while offering unique strengths in key areas of research. Early findings of TILDA have highlighted undiagnosed health issues that are easily treatable through simple monitoring, how events in childhood impact on health in later life, longer working lives can be facilitated by removing barriers and future health care planning must ensure adequate community and social care..

This paper demonstrates that evidence based research is essential for policy decisions. The EU must take steps to support national comparable longitudinal research in ageing within each country in Europe for the health and wellbeing of the EU.

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