Modelling Demand Driven Provision of Aged Care to Baby Boomers in Australia

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A thesis submitted in fulfilment of the requirements for the degree of Doctor of Philosophy

February 2015
Abstract

Population ageing has become a critical issue in Australia. As Baby Boomers move into old age, this trend is set to gather greater momentum over the next three decades. Baby Boomers are a sizeable cohort, accounting for nearly 5.6 million Australians. Baby Boomers expect to have an extended period of healthy, active retirement and are approaching the age that requires aged care. This eventually results in a high demand for aged care.

The existing literature suggests that demand for aged care services is highly variable with diverse provision of care to aged Australians. Despite the policy focus on ageing and aged care over recent times, few studies have specifically examined the factors driving the demand for aged care. In addition, only limited modelling has been undertaken to quantify the future need for aged care of Baby Boomers. The review of the literature reveals a significant need to conduct research in Australia, in particular, on modelling demand driven provision of aged care to Baby Boomers. To date, very limited research on the potential need for aged care by the Baby Boomer generation in a global context has been conducted.

This research attempts to better understand and model the likely future demand for aged care by Baby Boomers in order to better inform decision and policy-making on the supply of aged care services in Australia in the future. The study identifies who the Baby Boomers are and projects their demographic and disability profiles over the next 40 years and examines the likely future demand for aged care by the Baby Boomer generation. The needs of Baby Boomers for aged care are explored at the level of the individual and family. The study specifically focuses on major aspects of life course disability transitions and the consequent demand for informal and formal aged care provided at home, in the community and through residential aged care facilities.

This involved extending and improving the Aged Care Module (ACM) in the dynamic microsimulation model ‘Australian Population and Policy Simulation Model’ (APPSIM) to make it more responsive and realistic to the changing disability profile of the Baby Boomer population. The modelling platform of APPSIM was used to provide the basefile and other general socioeconomic input parameters to the ACM. In enhancing the ACM, a Multi-State Disability Model (MSDM) was developed in this study to add a dynamic element and
longitudinal continuity to the disability state assigned to individuals over the simulation run which had been missing in the previous version of the ACM.

The development of the MSDM involved three major contributions. First, mortality was linked to disability status through the development of an age-sex-disability specific mortality transition function. There is very little data and few studies in Australia on the level of excess mortality in persons with disability. Second, a disability deterioration transition matrix was constructed to estimate the age-sex specific probabilities of a (simulated) Baby Boomer deteriorating from any disability state to any worse state over a 12 month time interval. Third, a disability improvement transition matrix was also developed to estimate the age-sex specific probabilities of a Baby Boomer recovering to a less disabled state by one level over a 12 month time interval. There is a significant lack of longitudinal studies in Australia that document changes in people’s health and disability statuses over their life course. The estimation of these transition probabilities allowed the years of life that the Baby Boomer population are expected to live in different disability states as they age to be estimated. The traditional Sullivan method was also employed in this study so that the outcomes from the microsimulation modelling could be compared with more traditional methods for estimating the years lived with or without disability.

In conclusion, implementing a Multi-State Disability Model into the Aged Care Module of APPSIM has improved the modelling and projection of disability status and as a consequence the estimation of the likely aged care demands of Australia’s Baby Boomers over coming decades.
Acknowledgments

First and foremost, I am appreciated for the support and encouragement of my PhD supervisors, Professor Laurie Brown and Dr. Linc Thurecht for taking me through this long academic journey. The guidance and wisdom they have provided, coupled with their patience and trust, have made the journey not just intellectually challenging but incredibly enjoyable.

I gratefully acknowledge the contribution made by Dr. Binod Nepal, Dr. Tesfaye Gebremedhin, Dr. Jinjing Li, and Prof. Yohannes Kinfu. These professionals are willingly and enthusiastically give me their time and expertise. Their experiences in the area of economics and microsimulation modelling have been invaluable and their insights priceless.

Furthermore, I would express my gratitude to Dr. Judith Ascione, Dr. Alice Richardson and Mr. Peter Robinson at the Faculty of Education, Science, Technology & Maths; and Dr. Suneeta Sathye, Dr. Jean-Paul Gagnon, Ms. Haiwei Fan, Dr. Michael Walsh, Assistant Prof. Diane Phillips at the Faculty of Business, Government & Law. Mr. Glenn Large, Mr. Tim Grace and Mr. Shane Nuessler at the Teaching and Learning Centre. These excellent educators make my teaching full of confidence, love and rewarding at the University of Canberra.

The completion of this PhD thesis has been well supported by friends and family. The friends help make the life more enjoyable and less solitary than it would have been. I am also appreciative of the support from my parents for their aspiration and persistence. My parents inspire me in the way that both of them have enjoyed their PhD degrees with lived experience. These assist me to grow into a person who is ready to have more highs than lows. The evidences are shown through my publications of two books and six papers during my PhD candidature. Two books are entitled *After WTO Accession: Utilisation of FDI in China’s Automotive Industry* and *An Exploration of Career Experiences of Women University Presidents in China’s Higher Education*. Six papers are listed: 1) Where do Australian Baby Boomers go for their aged care in the future? 2) Review of Literature Concerning Aged Care to Baby Boomers in Australia; 3) Modelling Demand Driven Provision of Formal Aged Care to Baby Boomers in Australia (2014); 4) Supported Accommodation Options for People with Disability: Investigating Responses to the Urban Village; 5) Modelling Demand Driven
Provision of Formal Aged Care for Baby Boomers in Australia (2011); and 6) Identifying drivers of demand for aged care in Australia.

Last but not least, I am thankful to Andrew Barr MLA, Joy Burch MLA and the Baby Boomer generation for their unique contributions to society. The contributions by Baby Boomers made it possible for me to get this thesis off the ground. They have gracefully shared with me parts of their life expectations and stories. It is my hope that the findings of this research would in turn contribute to help Baby Boomers who are going to age well in Australia.
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