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# LATER-LIFE EMPLOYMENT AND RETIREMENT: INDIVIDUAL PERSPECTIVES AND EMPLOYER MEDIATIONS

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CLUSTER PROJECT 10: 60+ AS A NATIONAL ASSET: ABILITY TO CONTRIBUTE TO THE ECONOMY: LABOUR MARKET POLICY AND FLEXIBILITY FOR OLDER WORKERS

### ABSTRACT

Public policymakers, advocacy groups and commentators point to a gradual withdrawal from working life as having benefits for both employers and workers. This may lead to a number of later-life transitions, including reductions in working hours or changes in occupation. These raise questions about the experiences of workers when they make such transitions and how these fit in with other areas of their lives, including informal family caring, volunteering and leisure. It is important to understand these experiences in terms of their impacts on economic resilience and wellbeing.

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## ABSTRACT

### LATER-LIFE EMPLOYMENT AND RETIREMENT: INDIVIDUAL PERSPECTIVES AND EMPLOYER MEDIATIONS

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New patterns of later-life employment and retirement have been evolving in many countries but changes have not been as dramatic as might be portrayed in policy-related discussions. This is because the latter tend to be driven by a pre-occupation with the apparent imperatives facing pension and superannuation funds rather than the underlying evidence of shifting individual socio-economic behaviour; *desirable* changes in later-life employment and retirement practice as seen from the fund point of view can then colour unduly the interpretations of actual developments taking place. This paper begins by considering major issues emerging from changes in underlying demographic situations, labour markets and policy environments, drawing on international, especially European, evidence. Initially, it adopts a conventional labour supply/demand perspective rooted in mainstream economics but then seeks insights from other theoretical and empirical frameworks. It is evident that there are key intersections between labour market and financial decision-making and these are considered further. The role of employers is re-examined through a rather different lens from that used in conventional HR analysis. Moreover, the inter-section of labour market and financial decisions both for the individual and the employer have considerable implications for the design of data-gathering and analysis in so-called 'big-data' contexts. Several general scenarios have been advanced in the policy literature depending on the assumptions made about network infrastructures, the distribution of market power and relative access to information. Yet the capacities of different groups of potential users (individuals, employers, the financial industry, government) to engage with these systems varies hugely. The balance of effort devoted to developing different types of interface to help individuals and organisations to function effectively will be critical to producing better decision-making in relation to employment, retirement and financial planning. The paper concludes with some proposals for how policy might be framed in order to achieve such outcomes.

## 1. INTRODUCTION

The hyperbolic demographic metaphors – such as *demographic time bomb and age quake* – that vied with each other since about the late 1990s were turbo-charged by the western financial crisis of 2007/08 which further gave rise to yet more metaphors, most notably, *intergenerational conflict*.<sup>1</sup> The overall confidence of writers in projecting such spectres is in contrast, however, to the fragmented evidence base on which they draw, often very selectively. To some degree, this is understandable; there is high degree of balkanisation among the fields of research which are relevant to the implications of population ageing, evolution of later-life activity, income and well-being. The lack of connection between research on behaviours in the operation of financial markets and on those found in labour markets is of particular significance. Furthermore, research on the links between these behaviours and those relating to health, social care and gerontology more generally open up a huge and critical field of enquiry and policy development with macro-economic implications beyond the sectors of socio-economic activity directly concerned.

There are many national and international studies of developments in later-life employment and retirement. As regards western industrialised countries, international compendia produced by the OECD and the European Commission are especially important. These publications provide many internationally-comparable statistics and reflections on key stylised facts derived from them.<sup>2</sup> It is not intended to summarise them here.

Nonetheless, in some countries, there is the possibility of deepening our understanding and contributing to strengthening the basis for advice to policy-makers, practitioners *and individuals*. This is by exploiting the development of micro-data sources at both national level - based on survey or administrative data - and organisational level - derived from the operations of employers who sponsor superannuation funds and the financial services industry that support them. Essentially, these developments offer some scope for better integration of both data collection and analysis. Indeed, the CSIRO-Monash Superannuation Research Cluster has sought to contribute to improvements in such integration.<sup>3</sup>

New patterns of retirement and later-life employment have been evolving in many countries but changes have not been as dramatic as might be portrayed in policy-related discussions. This is because the latter tend to be driven by a pre-occupation with financial imperatives rather than any underlying evidence of shifting socio-economic behaviour at the individual level.

Apparent imperatives facing pension and superannuation funds to reduce projected deficits often turn hypothetical later-retirement practices into presumed changes in behaviour. But individuals may have other ideas. The proliferation of early retirement schemes and relaxation of government welfare rules on disability-related exit from the labour force during the period of sectoral re-structuring and high unemployment in the 1980s did eventually come to an end. In subsequent decades, though, this did not itself induce a much greater willingness to *delay* retirement beyond state or scheme conventional retirement ages. It rather underlined warnings about underestimating the difficulties of finding remunerative employment after taking apparently large lump sum payments from redundancy/early retirement.

Population ageing had long been recognised but it took the so-called global financial crisis to shock the policy system into a re-assessment of the sustainability of financial institutions and practices.<sup>4</sup> Even then, however, the narrative of low growth in output, incomes and productivity and disputes over whether or not austerity policies will make things worse or lead to better times produces mixed messages for the individual.

The rest of this paper is structured as follows. Section 2 reviews certain European developments in policy relating to later-life employment and retirement; it considers key issues emerging from changes in underlying demographic situations, labour markets and policy environments. The patterns of later-life employment may be captured in various ways, depending on the levels of data being exploited. Section 3 begins by adopting a conventional labour supply perspective rooted in mainstream economics but then seeks insights from other theoretical and empirical frameworks. It is evident that there are key intersections between labour market and financial decision-making and these are considered further in Section 4. The role of employers can then be re-examined through a rather different lens from that used in conventional HR analysis and this is done in Section 5. Moreover, the inter-section

of labour market and financial decisions both for the individual and the employer have considerable implications for the design of data gathering and analysis in so-called 'big-data' contexts. The latter scenarios have been driven by technological advances in network infrastructure, hardware and software combined with the evolving capacities of individual users to engage with them. These design implications are explored in Section 6. The main conclusions of the paper are given in Section 7.

## 2. LATER-LIFE EMPLOYMENT AND RETIREMENT

The dominant stylised facts relating to later-life employment and retirement in western industrialised countries in their demographic context are:

- Falling fertility rates
- Falling mortality rates – rising life-expectancy at older ages
- Resulting in population ageing and rising dependency ratios
- Falling morbidity rates – rising healthy life-expectancy.
- The decline in older male labour force participation in the second half of the 20<sup>th</sup> century and its partial recovery during the late 20<sup>th</sup> and early 21<sup>st</sup> century.
- The continuing rise in female labour force participation especially via increasing part-time work but not without breaks in employment
- The decline in youth labour force participation due to the rise in extended full-time secondary and tertiary education.

Such developments have certain implications though the degrees to which they apply depend on the specific configuration of demographic and labour market features for the country/region concerned combined with public welfare policies and the extent of the markets for privately-funded welfare-related insurance and service provision.

- Retirement income needs may be stretched over longer periods than expected.
- Health and social care costs during retirement may be higher than expected.

These implications are undoubtedly more likely to be recognised by the policy and practitioner communities than by individuals and the former have increasingly sought

to make the latter aware of them, engaging their concern about the adequacy of their retirement income arrangements and their ability to cope with health and care costs. However, attempts to influence people's thinking about probable retirement income and expenditures face the problem that there is a generally poor level of awareness of the implications of their likely financial situation as *currently* provided for, never mind the desirability of making additional provision in the light of their health and life-expectancy and potential risks relating to the availability of public services in older age.

Public policymakers, advocacy groups and many commentators variously point to a more gradual and later leaving from working life as having benefits for workers, employers, and society at large. However, whereas they are now often combined in discussions of both labour market/retirement policy and financial product design, these two aspects derive from somewhat different perspectives.

Patterns of later-life employment and retirement are changing in most western-style societies. The determinants of these changes and their implications for the future are quite difficult to disentangle and the motives for wanting to do so are somewhat mixed. The very positive phenomenon of people living longer has surely no downside, for both the individual and society, especially where it is accompanied by a rise in healthy life-expectancy, which is generally the case. We should anticipate that this would lead to an interest in a more active ageing; for some, this might translate into wanting to continue working for longer, at least to some extent, than they might have expected when initially considering retirement but, for others, it might apply more to activity *post-retirement*. Of course, for those continuing to work, there are possibilities of volunteering for unpaid work in support of charitable causes or more informal activity in support of family or community members, just as is the case for those retiring fully.<sup>5</sup>

The attention of gradual retirement advocates have tended to focus initially on two broad objectives: first, to achieve higher wellbeing among those in later life who are willing and able to continue working in the formal labour market and, second, to foster greater and more effective use of the potential of older people by employers. Pursuing these two objectives has been seen as likely to be mutually reinforcing in

ways that are explored below. On the face of it, they should lead to later final exit from the labour market. However, it should be noted that such dual action need not lead to an increase in the overall volume and quality of labour supply – outcomes depend on the occupational-sectoral-geographical labour markets concerned.

Later-working-life advocates have generally been driven by pension/superannuation affordability considerations arising from population ageing since about the mid-1990s (though experienced and recognised to different degrees in different countries); these concerns were then reinforced by the impact of the so-called ‘global’ financial crisis, triggered in 2007/08 by dramatic failures in the western financial system, and resulting in markedly lower returns on pension fund investments and feeding through to lower valuations and worrying increases in funding deficits.

Underlying both perspectives are the implications of falling numbers of people of conventional ‘working age’: rising dependency ratios of the economically inactive to the economically active alongside increasing demands placed on public services and the ability to fund them and growing shortages of skilled labour (including those required by the expanding public services). Of course, there may be off-setting reductions in demand associated with the lower populations of pre-labour-force age-groups. But some countries have sought improvements in the quality of services such as education and health which intensify both volume and quality demands on these activities (to a degree, throughout the age spectrum).

Whilst the perspectives on later/gradual retirement from the labour force thus differ, the forms of analysis required to explore their various merits overlap considerably. They have a common need to represent the natures of their respective benefits, the mechanisms through which they might arise and the potential costs associated with obtaining them. They must also capture the fact that the ‘benefits, mechanisms and costs’ are not as obvious to some individuals and groups as they appear from much of the analysis that underpins broad policy conclusions. The notion that policy design based on ‘averages’ (average employers and average workers) can deliver a kind of socially-acceptable rough justice may be contrasted with the notion that its outcomes can actually turn out to be more rough than just for a large proportion of citizens. Problems arise not simply for a minority of unusual cases who sadly do not fit any of the templates used in developing policy. Rather, there is just too much ‘variation

about the mean' for some designs to work fairly and effectively enough, whether from individual, social partner or government points of view.

At the same time, whilst the rationales for gradual retirement and later retirement may overlap, there is a major difference between them in their logics of implementation. They may begin by sharing a particular feature of the policy debate relating to promoting extended working life, namely, the push to legislate against age discrimination. But they diverge by virtue of the case for gradual retirement being underpinned primarily by voluntary agreements between employers and individual employees and/or their representatives, whereas that for later retirement is underpinned by a degree of compulsion.

Where state pension reform is being implemented, the degree of compulsion is virtually absolute since there is usually no explicit contract over which negotiation can take place directly as opposed to the operation of a political and legislative process. Where reforms in superannuation funds are being sought, normally by employer sponsors and trustees, compulsion is moderated somewhat by contractual obligations to consult and reach negotiated agreements. The reform process for public sector superannuation arrangements may fall between that for state pensions and those for private sector superannuation funds.

Alongside the above considerations there are two others that should be mentioned. First, there is a caveat to assuming continuing healthy life-expectancy: future reductions in morbidity with yet higher healthy life-expectancy may be compromised by increased mental illness and obesity.

Second, more opportunities for older workers to continuing in employment ought to be fostered by openness (on the parts of both employees and social partners) to increasing workforce flexibility, the availability of redeployment options, and places on suitable training and development schemes for older workers. This should increase their productivity and raise their earnings above what they might have been and extend their working lives but only if reasonable quality jobs are available. In other words, the labour supply available from older workers across a lengthening period of later-life transition during which partial or complete retirement might take place may actually turn out to be a supply constraint on economic growth at a time

when their withdrawal from the labour force implies greater pressure on public and private resources and related funding instruments.

### 3. LABOUR SUPPLY

Economics has many insights to offer on the determinants of labour supply of older people. Yet to apply conventional treatments of labour supply to older age cohorts might seem to be as inappropriate as doing the same for younger cohorts. *Health* plays an especially important part in the labour force participation of older people, *family formation* in that of young-to-middle-aged women, and *education* in that of young people. Changes in social norms, institutions, policy and practice hugely condition the socio-economic environments in which the respective individuals make their decisions on how and to what extent they engage with the labour market.

As people age, the dominant factor in their perception of wellbeing is eventually their health as they cease to take it for granted.<sup>6</sup> In those countries with very market-orientated healthcare systems where the individual is expected to pay for healthcare at the point of use, as with many other services, attitudes to the risks of not being able to do so are tied to the resources that the person has already acquired, their expectations of future income, their views on the likely costs of their healthcare and the extent to which they are insured.

However, increasing attention is also being paid to the effects of greater longevity on the need for long-term social care at older ages, all the more so because planning for its public and private provision has hitherto lagged behind that for healthcare. This has, in turn, created inefficiencies in the health care system because of the role of social care in dealing with the fragile elderly who do not need to be in hospital but linger there.

In addition to the above long-run considerations relating to health and social care, other factors that influence retirement expectations and decisions through more immediate feelings of being under financial pressure are:

1. declining earnings replacement rates of welfare benefits;

2. greater uncertainty about retirement income as a result of shifting the risk from employers to employees through the demise of DB schemes in favour of DC schemes;
3. low levels of savings and relatively high household indebtedness;
4. widening inequality with more people on low wages and/or in precarious jobs.

At the same time, other factors reinforce the tendency to delay retirement:

5. an awareness of longer life expectancy may induce anxiety about maintaining an acceptable living standard for longer but people are actually reporting better health and lower age-specific disability rates;
6. higher educational attainment tends to be associated with later retirement;
7. jobs are becoming less physically demanding.

Essentially, national population, labour market and pensions/superannuation agencies are faced with a number of key empirical research questions relating to later-life employment and retirement. Public and private superannuation funds relating to particular groups of employees and employers may nest their own analyses within the more aggregate insights available but, except for those that encompass individuals for all or large parts of their working lives, there is a perpetual problem of capturing a sufficiently long period of the individual's life via the administrative data generated by a particular scheme to underpin modelling both workforce and financial decision-making across schemes and segments of working life.

Surveys of the aspirations of people that might provide a framework within which they take employment and retirement decisions can show how aspirations both differ between cohorts at the same point in time and, providing they are carried out in successive years with well-constructed statistically-representative samples, change over time for the same age cohort. In longitudinal studies of the same people over time, there is even better scope for analysing aspirations and their relationships with other personal, social and environmental characteristics, as well as the employment and retirement decisions they have taken but such surveys are rare and usually have very high degrees of sample attrition.

### 3.1 Basic modelling approaches

#### **'Conventional' labour supply models**

Representations of both processes and outcomes relating to individual decision-making have long been the subject of debate among social scientists. So-called mainstream economists have been attacked, especially by sociologists, for too much reliance on portraying processes in terms of neo-classical models of supply, demand and price setting in the labour market and too naïve an interpretation of outcomes as 'unconstrained choices'; choices attributed to individuals, employers, or the extensive range of intermediaries operating in labour and training markets which arguably lead to 'equilibria' that cannot be improved upon very much by policy intervention.

But the old debate has become somewhat hackneyed and the development of the sub-disciplines of 'social economics' and 'economic sociology' have provided more useful intellectual nuances. Nonetheless, applications of approaches rooted in mainstream, albeit basic, economic theory continue to dominate efforts to model the supply of (and demand for) labour. This is partly because other social science disciplines do not really see their roles as providing competing alternatives when faced by policy-makers wanting quantitative projections.

Unfortunately for decision-makers, the enthusiasm shown by academic economists for specifying and testing *ad hoc* models neither extends to making them suitable for projection purposes nor embraces the build-up of experience in using them routinely in that context. In that respect the promise once seemingly offered by the development of microdata sources has proved to be a false dawn. Forecasts do not usually lead to journal publication; the same seems to apply to operational model developments in the labour market field.

However, some model estimations are suggestive even if they are not operationally active. Even here, clearly two minimal specifications for disaggregation for this to be the case are gender and age. Yet to incorporate an endogenous treatment of labour supply into a macroeconomic model analysis of, say, the effects of pension changes or employment subsidies, it is necessary to have an appropriate set of independent variables in the labour supply function that are generated elsewhere in the model. Typically, this set of variables is very limited.

A further technocratic element stems partly from the structural simplifications needed to make the policy analysis tractable and partly because, in an uncertain world and given the chosen structural representations, only a very limited set of scenarios can be considered in any feasible macroeconomic assessment exercise.

It is here where the link between labour market and macroeconomic research bear upon the operation of a macroeconomic model assessment of different demographic/retirement and financial policy scenarios. <sup>7</sup>

### 3.2 Representing individual decision-making

A micro-economic theory of labour supply in the context of household income, expenditure and the allocation of time was first elaborated by Becker (1965). Yet its operationalisation seems to be more suggestive than substantive (Toossi, 2011).

The major debates about policies relating to retirement, especially those which have an impact on pensions, health care and long-term social care, have been concerned particularly with the quality of policy-makers' decision-making. Much less attention has been paid to the quality of individual decision-making: people's capacities to make good decisions, the availability of judicious advice to assist in the individual decision-making process, and the effectiveness of the resulting 'power to choose' when confronted by financial products generated by a combination of public administrative systems and financial market organisations. Arguably, the recognition of diverse individual and familial situations should be the foundation on which public policy is designed whereas it is often seen as the subject of supplementary policy-making, once a particular government strategy has been selected. The same is, more or less, true of the decision-making circumstances and quality of judgments associated with employers.

Initially, during the transition from compulsory schooling eventually to, for the vast majority, 'regular' employment', there is much ground for the individual to negotiate dealing with a variety of choices, notably relating to (though not necessarily in this order) residential, study and work location, partner, education, training, occupation and sector; hours of work and nature of employment contract also feature in the actual or limited opportunities with the individual is faced.

So working lives evolve in very different ways not just according to job search effort, the specific labour market opportunities arising and employment choices made. Moreover, they adapt to other preferences and demands on people's time and the resources they have at their disposal.

In the latter stages of working life, arguably, some of these choices are at their most diverse whereas others have seemingly shut down almost entirely; notably those relating to vocational education and training.

The intellectual dynamics of debates about process-choice representations have changed with the intervention of psychologists. So have the dynamics of policy design and experimentation in certain areas. How much of this has been due to 'push' from psychologists and how much to 'pull' from economists is not entirely clear. Nor are the attitudes of sociologists which can border on suspicions that the new behavioural economics/finance is a just a blend of technocratic neoclassical economics with simplistic psychology.

Arguably, the basic insights underlying these interventions have been around for quite some time, long enough for their application to seem to be wise analysis among academic specialists and the subject of common-sense courses on consumer marketing analysis (Ehrenberg, 1975). But the accumulation of research evidence has emboldened psychologists to be more forthright in pointing to the significance of their collective findings in the business and economic policy arenas. This has been encouraged by the ever-present desire for make-overs by mainstream economists nervous about the relevance and applicability of their discipline.

### 3.3 Other activities: caring, volunteering, leisure

Caring responsibilities tend to be imposed on people according to the circumstances of those, usually, relatives who need their support. Volunteering arises from rather different motivations. Moreover, the latter can include a more instrumental approach; this may be interpreted as a desire to *learn new skills*, not necessarily as a primary objective but as part of the overall attractiveness of the activity, or continue to use elements of existing skill.

Leaving aside quasi-occupational motivations on the 'employer side' (the charitable volunteer organisation), however, some such non-profit bodies have evolved more

formal recruitment and assessment procedures. The downside of this is that stronger performance-related HR approaches to making volunteer organisations more effective could discourage volunteering in favour of working longer.

Yet these also may yield more time available for informal family caring and leisure commitments to volunteer should not be taken for granted merely because there are many such people in the post-second–world–war generation and they are relatively well-off. At root, there are uncomfortable issues relating to the interaction of the extent of commitment from older volunteer retirees and productivity from volunteering organisation.

However, two conclusions from the research literature are particularly relevant. First, retirees are becoming more discerning in their choice of volunteering activities and have a clearer purpose in mind than seems to have been the case hitherto. This may temper the effects of ‘volunteering instincts’ upon labour supply if increasing opportunities for extending working life materialise. Second, one might speculate that volunteering may be squeezed somewhat between more accessible work opportunities and a growing need for family caring, especially in an era of longer life-expectancy.

### 3.4 Quality of individual decisions

Whilst mainstream economists have continued to provide the dominant analytical paradigm of labour supply, there has been a potentially significant and relatively recent make-over via theories and evidence from psychology. Before considering this material, we might look at one particular contribution, namely, that concerned with ‘intelligence’.

#### **A basic point: crystallised and fluid intelligence**

There are dangers in inter-disciplinarity and perhaps they are well-illustrated in the present context. Take the concepts of ‘crystallised and fluid intelligence’. The latter is supposed to decline after about the age of 50. As retirement approaches, people are faced with major decisions requiring the processing of new information against the background of great uncertainty about the future; the implications of psychological research are that they will not be as well prepared cognitively as they might be. The cognitive ability they can best draw upon is *crystallised* intelligence

which they are still accumulating but derives from experience which does not include the kinds of situation they now face. Population ageing means that there are already many more older people around than before and increasing numbers still coming through the process of retirement so that the effort required to support them presents a potential problem.

Another scenario relates to younger people. With considerable *fluid intelligence* they may be in relatively good positions to make decisions under novel and uncertain situations, though the challenge of facing novelty is exacerbated by a lack of crystallised intelligence with which to contextualise it. However, population ageing puts them in the minority so errors on their part in reading and acting in their own interests could well be less important at the societal level. So a simple (naïve) implication is that population ageing creates a situation of a potential accumulation of flawed decision-making if the wider environment is changing substantially, wrong-footing older people in particular.

### **Public policy perspectives**

People and organisations do not always act in their own interests. Some public policy-makers assume that they do so and believe that it is patronising to think otherwise. They recognise that some market actors, however, pursue their own interests at the expense of others by a variety of strategies which, essentially, cover up inefficiency, discriminating against customers/suppliers and collectively manipulating markets. Public policy then focuses particularly on ensuring choice is available to the individual yet still leaves to one side disparities in the way that choice can be and is exercised by different people as if the availability of choice is a sufficient policy aim on its own.

### **Unduly limited 'framing'**

One capacity which may be embedded in the individual (or be supported by an adviser) is that of making good decisions in their own interests. This refers to the range of considerations that are encompassed in the deliberations of the individual. In the present context, we might include: length of working life and its potential determinants, social care requirements, potential for occupational transitions in later life, retirement strategies and health issues. The basic insight is that making

separate decisions on a series of matters that affect an individual's or family's wellbeing, i.e. adopting a narrow frame of reference for each, independent of the others, may not produce the best outcomes overall for wellbeing.<sup>8</sup> The obvious example of this is the way social care provision and insurance in many countries is separated from retirement income provision both in terms of public policy and private sector strategies. The current outcomes that trouble policy makers and the need to produce strategies that seek to offer solutions tend to concentrate around, first, lack of personal investment anticipating plausible risks relating to different retirement, health and care scenarios and, second, ways of encouraging individuals to acknowledge the dangers of under-investment to deal with them. As regards the latter, one 'way' has emerged that deserves some attention, namely, the notion of conditioning individual choice by drawing on the insights of so-called behavioural science and 'nudge theory'.

### **Nudge theory**

Harnessing the results of relatively recent psychological research has presented public and organisational decision-makers with a framework that may help to structure the design of policy and practice. But there are dangers. The first is that of proceeding as if the social science is strong enough on which to base a re-orientation of policy design. The second is that political decision-makers may get more than they and the business community bargained for. How should they respond?

Stepping back from, in terms of public policy, reflections on information access, capabilities for processing information and capabilities for decision-making lead to consideration of cognitive 'nudge' decision-making practices, and 'choice architecture'. 'Nudge practice' has provoked rather different reactions in the social science, political and organisational communities. First, it may be seen as raising ethical issues, manipulation of the individual, which is not necessarily in their and their families' own interests, even if *system* cost-benefit benefits are positive; second, the analytical strictures may be applied more to individuals rather than organisations (and governments); third, it may take an uncritical approach to the structural framework of decision-making choices. The last of these goes somewhat beyond the notion of 'choice architecture'. There seems to be something missing in the

resourcing of individual capacities to make decisions within existing choice architectures both in terms of the individual and society at large.

### **Capability: taking stock – taking charge – taking outcomes**

The scope of the present paper cannot encompass fully the work on capabilities inspired by Amartya Sen. Driven by the context of economic development in third world countries, Sen's work has, nonetheless, been increasingly relevant and influential in a western context. It can to some very crudely degree be summed up in terms of replacing the direct objectives of pursuing poverty-reduction and equal opportunity with promoting 'capability'. Keeping to the present focus, namely, pre- and post-retirement situations in so-called developed economies, there is then much to deliberate upon. Yet an application of the 'capability approach' does not quite resonate without at least one dimension of major disadvantage. How 'major' is a moot point but there is another issue: the existence of *collective* capability.

So there are two especially relevant reflections from the growing capability analytical literature: promoting 'capability' rather than 'opportunity' and allowing for collective as opposed simply to individual capability.

Taking these two perspectives together seems to combine the capability with collective considerations. The former and the latter leading to the heart of the societal insurance principle.

### **Decision-making infrastructures and institutional design for capability**

Here we introduce ideas which are taken up more substantively in section 5. The volume of research is very limited, relating to where (primarily organisationally) people decide, what data they consider, how people decide and what they decide has been increasing in the last two decades or so.

## **4. INTERSECTIONS OF LABOUR MARKET AND FINANCIAL DECISIONS<sup>9</sup>**

Such broad considerations seem to offer quite plausible insights but with uncertain practical implications. Nonetheless, they offer an important caveat to analysis that relies on more conventional perspectives. The latter broadly conclude that the main groups of potential determinants of labour force participation at older ages relate to

(1) prior work history, (2) health, (3) earnings, (4) psychosocial conditions of work, (5) income in retirement and (6) psychosocial conditions of post-retirement activity.

Whilst Siegrist et al. (2006) examine the relationship between retirement intentions and the first three factors (along with age, gender, household income and education). The measure of intended retirement was simply derived from a yes-no response to the question: 'Thinking about your present job, would you like to retire as early as possible?' The authors conclude that results suggest that there is a 'consistent association of a poor psychosocial quality of work with intended early retirement among older employees across all European countries under study' and calls for 'improved investments into better quality of work, in particular increased control and an appropriate balance between efforts spent and rewards received at work.'

Unfortunately, surveys focusing on intentions and actual outcomes relating to personal activity, including financial investments, are rare. Most surveys that track intentions and the extent to which they are turned into decisions and produce different outcomes relate to business output and investments.

Moreover, individual intentions relating to forms of activity and financial investment may depend not only on variables that reflect current socio-economic situation and sense of wellbeing when surveyed or on these factors closer to the time of serious consideration of retirement, but also on the cognitive capacities of individuals with which they approach the decisions and their access to information and advice. These capacities and resources will vary amongst people and over time as the contexts in which they consider retirement evolve up to the point(s) at which retirement decisions are ultimately taken.

The role of cognitive capacity in relation to retirement has been explored in a number of studies, though none of these has sought to allow for access to information or advice. Banks *et al.* (2011) examine the impact of numeracy and financial literacy on pre- and post-retirement wealth trajectories. They use data from the English Longitudinal Study of Ageing 2002.

## 5. EMPLOYER MEDIATIONS

Employers may be seen simply as using labour to facilitate business objectives. The financialisation thesis points to a further reinforcement of this notion both rationalising its practice and approving its extension, essentially asserting the primacy of some variant of short-term shareholder value. Yet employers may choose to regard this as crass, not in keeping with their organisational culture but, most of all, not in tune with the need for long-term business viability. Nonetheless, they may still regret their sponsorship of superannuation funds which so symbolise the broader employment relationship – deferred pay.

New patterns of retirement are emerging in Europe but the conjunction of underlying population ageing with the impact of a financial system shock and its prolonged consequences for economies and families makes it difficult to extract from the available data insights which are relevant to present and forthcoming choices facing individuals and institutions.

### 5.1 Extending Working Life

#### **Job quality and the older worker**

At one level, there is an obvious potential relationship between job quality and the situation of the older worker. The more attractive are a job's characteristics the more likely is the employee to want to remain in their current role. Some jobs lend themselves to compatibility with the preferences and capacities of older workers than do others. But this is not quite the point. The question is how far can job qualities (characteristics) be adjusted or reconfigured to foster continuing employment in later life.<sup>10</sup>

#### **Design of training and development opportunities**

Associated with remaining in a job, albeit potentially subject to re-design, also leads to the issue of providing complementary training and development which build effectively on the skills and experience of existing older employees and, indeed, possible recruits.

#### **'Repositioning' and internal mobility**

The compatibility of a given job to internal flexible adjustment, the inherent scope for adapting a job to the needs of older workers, or the relative ease of providing training

and development suited for this group may be exploited by the employer in the interests of retaining skill and organisational knowledge. Ultimately, though, more action may be required. Thus, a further strategy to extend working life is to enable employees to re-position themselves in the company context before potential problems of continuation and redeployment arise. This draws on the opportunities for internal mobility within the functional and occupational structures of the organisation.

### **Workability rather than employability-led solutions**

The above strategies work within a conceptual framework of workforce adjustment to reconcile changing business, technological and organisational conditions with changing worker characteristics (notably, growing obsolescence of skills, ageing of employees). At its most constructive, this may be driven by the notion of 'workability' in which the issue is *mutual* adaptation between the evolving technological-organisational context and design of the job and the capacities of the individual: both sides of the 'internal labour market' then adjust in the pursuit of gains in productivity from the business perspective and quality and continuity of employment from the individual perspective. In order to achieve these joint ends, however, the worker needs to remain attached to the employer in order for the process to be able to draw upon the social capital associated with the job, notably that of the organisation and where substantial, that of any employer-union social partnership.

### **The external market: the dominance of the employability agenda in policy design**

There are three primary situations in which employability trumps workability in developing policy: redundant workers seeking a new job, people wishing to return to the labour force after a period outside it, and new entrants. In the first two cases, assessing the scope for maintaining/extending working life moves outside the organisation and into the (labour) market place. The currency of labour market measures (support for job search, training and employment in intermediate forms) tends to shift from 'workability' to 'employability', i.e. the capacity of the individual to match the requirements of jobs as defined by employers in their recruitment processes. Beyond that, some people becoming involved in a supplementary

process relating to potential designation as having work-limiting disability; this can ultimately lead to classification as being unable to work and point to premature retirement i.e. prior to state retirement age.

In the third case, the so-called 'job readiness' of new entrants to the labour market is similarly a matter of their employability, though certain training schemes can create a close association of the individual with an organisation (albeit falling short of full 'employment status'), giving the workability approach more of a chance to operate.

## 5.2 Funding Retirement

Whilst the economic rationale for the existence of employer-related pensions is well-known, its persistence in the face of decreasing employment tenure and increasing labour mobility seems to be something of an anachronism. One explanation is that there is much more permanent or, at least, regular employment than might be assumed and this still leads to quite long tenures. Certain efficiencies in superannuation administration are generated by exploiting this and these are buttressed further by corporate financial considerations. The danger is that the benefits to both employer and employees/retirees of exploiting this association tend to collapse jointly when the company faces a combination of challenging business and financial market conditions.

In the modern context, the case for fostering superannuation contributions from both employer and employee is strong on both grounds of lower administrative cost (compared with private personal pensions) and tax advantages. The former would seem to have undoubted societal benefits whereas the latter may be more questionable, given the other uses to which tax-subsidies could be devoted. However, more fundamentally, it is one thing to encourage additional pension contributions but quite another that the contributions should be made into superannuation funds underpinned by the success or otherwise of a specific employer's business strategy or the fortunes of a collective of employers in a particular consortium or sector.

Gradually, faced with the vagaries of corporate re-structuring and/or viability, the case for employer-*specific* superannuation schemes erodes while that for employer-*funded* schemes via contributions is sustainable. But the extent of legacy sponsor

commitments in the context of scheme deficits generates an impetus towards the progressive abandonment of the DB principle.

### 5.3 The HR Context - Employers as 'social policy actors' / 'delivery agents'

It is evident that several motives may underpin a given employer strategy towards older workers.<sup>11</sup> When we consider the specific scope for extending working life, it is clear that this depends partly on the strength of management intent and partly on the size of the organisational internal labour market. The larger and more diverse is the organisation the more scope the employer has to offer opportunities for training, development, employment and redeployment, i.e. to foster forms of mobility that suit both demand and supply interests. In contrast, employers with small internal labour markets have much less scope for doing this but there are possible collective employer approaches and public policy options that may help smaller organisations, in effect, to 'widen their *internal* labour markets' through judicious *externalisation*.

However, as already noted, an essential stepping-stone to achieving wider internal labour markets that foster opportunities for older workers to continue in employment is to ensure the continuing 'attachment' of the employee to the employer so as to access the organisation's 'social capital'. Such attachment can be crafted in different ways, depending on regulatory frameworks and employer cultures.<sup>12</sup>

Age management cases show how this can happen but the cost-benefit calculus becomes problematical the more the focus shifts towards individual wellbeing and away from skill retention and the promotion of flexibility and productivity.<sup>13</sup>

Yet a number of employer practices are linked to social policy (Lindley, 2012):

- awareness raising, changing attitudes and promoting diversity (all employees are in target groups!)
- careers, training and development
- health promotion, health insurance
- 'financial health and safety' - financial advice provision
- personal counselling, general well-being, preparation for retirement
- sponsoring superannuation schemes
- cooperation with public social policy agencies to promote continuing 'employability'.

Concern about rising health and social care costs accompanying population ageing scenarios are the more acute the more belated is the recognition by public and private actors of their implications. Perhaps a foretaste of the dilemmas facing the much more public sector involvement found in Europe may be seen in the importance of the relationship between health and retirement policy in the United States as astutely encapsulated by Rix (2016):

‘Reducing the access to health care, which until age 65, is largely employer-provided in the United States. Yet, employers complain about the costs of insuring older workers. It would be ironic if health care reform in the United States provides greater access to health insurance at less cost to employers and ends up making older workers more employable on the one hand but less likely to need to work on the other.’

In Europe, employer mediation to reconcile the financial imperatives governing a sponsored superannuation fund with extending opportunities for continued employment of older employees may not be confronted with the additional burden presented by the US health insurance factor. But sectoral conditions can still produce difficult choices.

## 6. RESEARCH-BASED DESIGNS IN A ‘BIG-DATA’ CONTEXT

There are some tendencies in the policy and practitioner communities that limit the scope of engagement with the decision-making situations of individuals. The first is to allow collective producer interests to limit/confuse assessments of market features that would align with the preferences and capacities of individuals. The second is the lack of effort devoted to providing individuals with consolidated statements and modes of monitoring their various employment and social benefit rights, including superannuation and state pension fund assets. The third is to fail to address adequately the provision of dis-interested financial advice and reform of its own related market structures. Finally, there is a general problem deriving from the pace of change of regulation and of both public and private sector product innovation; this undermines the control individuals, families, and small (and, to a much lesser extent, large organisations) can assert over their financial and rights environments.

The prospects for so-called 'big-data' developments suggest possible improvements from the point of the individual in relation to the current and potential negative consequences of all four of the tendencies identified above.

What we see from previous sections is that the mantra of extending choice through promoting and regulating competition seems to be highly qualified in practice by not wanting to go too far in challenging current corporate financial sector interests. The undoubted fragmentation of relevant financial markets and the extent and complexity of the, albeit regulated, product offerings within them may be regretted in public policy debate. But insufficient attention is being paid to address the problems they create and to the role of the public sector itself in nurturing change situations.

Thus every time governments and national tax authorities make changes, they offer, in effect, new business opportunities for financial services to supply advice and plans to the better-resourced organisations and individuals so as to minimise taxes/maximise subsidies; potentially illusory public benefits then vie with unintended consequences of tax-subsidy policy innovations, in particular their regressive distributional effects. Furthermore, the financial market supervisory agencies struggle to keep up with the regulatory burdens placed upon them.

The above relates to the relationship between the citizen and structures of financial choice. In a somewhat similar vein, labour market considerations point to the need to simplify the relationship between the employer and individual.<sup>14</sup> These derive partly from the increased diversity of employment contracts, the rise in job changing involving mobility between employers and sectors (for some, involving international transitions). This creates a difficulty for the individual in maintaining an understanding of their current and accumulated employment benefits and assessing the adequacy of their asset ownership and income prospects for their life after retirement.

### **Corporate efficiency versus individual empowerment**

The nature of the policy debate on big data in Europe is well illustrated in the content of and responses to the discussion paper produced by the European Securities and Market Authority, ESMA (2015).<sup>15</sup> These indicate that Big Data tends to be understood in terms of the potential for public administrations and businesses to

exploit the data they already hold and the scope for extending these opportunities further. Yet in the intersection of labour and financial market arenas there is also potential for individuals (and institutions that represent their interests) to control the storing, access and ownership of data relating to their activities and require organisations to comply with a variety of information standards.

This suggests a possible switch of primary policy focus from the perspectives of regulators, market makers and commercial operators to those of the individual consumer/worker. The increasing extent of job changing during a working life, the existence of multiple job-holding, occupational mobility across sectors and changes of corporate ownership can present many individuals with major problems; at the most basic level, they increase the difficulties of record keeping and validation with the superannuation and pension funds they have contributed to. In those countries that make saving for retirement compulsory for both individuals, their employers and the self-employed (and quasi-self-employed) will further expand the number of workers who in future will have quite complex accumulations of contributions. Overall, we would expect women to be more affected by this than men. They have more fragmented work histories which, when combined with lower earnings, means they are more likely not to join workplace pension schemes; moreover, in an environment of auto-enrolment they are more likely to be below the earnings threshold that would otherwise require them to exercise an opt-out in any given employment. Moreover, the operation of personal income tax policies that relate to tax reliefs and rates for total contributions and retirement incomes demand much better systems of data exchange between state and funding organisations.

Whilst it may be premature to envisage a strong version of common record systems designed from the individual's point and requiring industry compliance, successful advocacy from particular government ministers, certain professional adviser communities and consumer organisations has belied earlier scepticism about the technical and political feasibility of making progress. For example, the UK initiative to create a form of 'dashboard', backed by the Treasury and being developed by the ABI, is raising the prospect of the individual gaining access eventually to integrated information on the contributions and entitlements relating to their whole life-time.

Again, auto-enrolment has been a major force behind the need for this and a potential proving ground for systems innovation.

Perhaps it is also worth mentioning here a link which appears to have attracted little research – the benefits that individual access to and engagement with their own records can confer on the maintenance of accuracy and completeness of data bases. The quality of such data even at the most basic level (e.g. tracking of deferred and deceased members and the identification of duplicate records) can actually have a bearing on broad de-risking strategies which involve bulk annuity buy outs, buy-ins and longevity swaps; similar care with more complex records can improve enhanced transfer value (ETV) exercises by better identifying members whose transfer values can be enhanced sufficiently for it to be attractive to the individual to accept whilst also being of value to the scheme.

An ETV exercise may, of course, be beneficial as a modest de-risking exercise in itself whether or not it is conducted as part of the process of simplifying a buyout/buy-in operation where its effect is to reduce the number of liabilities covered by the overall transaction. Here the *modelling of likely morbidity and employment trajectories in later life* offers potential for achieving greater scheme effectiveness (see below).

The role of better information in the underpinning of ETV strategies has implications for the potential benefits of incorporating a wider range of individual variables in superannuation fund databases. The benefits and who gains from their inclusion depend partly on the quality of data collection design and the quality of analysis.

Let us begin with objectives. It is already well-established that longevity risk is a critical factor in the management of pension and superannuation funds. Few such funds, however, collect sufficient data to enable them to monitor factors that are associated with individual mortality in anything other than an extremely broad-brush way. Aggregate models are convenient to use but generally ignore the great variation in members' histories and current situations that occur in practice. This potential source of 'experimental variation' is not exploited. How far the analysis and predictions based on aggregate models can be improved by a more micro or meta-level approach to modelling is an empirical question which cannot easily be

answered, given the data currently available. However, for example, pre-retirement sickness records that impinge on superannuation fund liabilities can, in principle, be used for analysis of longevity risk (in addition to the estimation of sickness pay liabilities pre-retirement).

Official modelling and forecasts of mortality by national statistical offices tend to adopt a purely, albeit sophisticated, statistical approach with little attempt to introduce behavioural content where variables other than gender and age play a part.

Sometimes, modelling strategies pool historical age-gender data across certain countries on the grounds that the stochastic properties in the data are similar among those countries.<sup>16</sup> Analyses based on these models can be used as inputs to more specific longevity modelling exercises for a particular superannuation fund.

### **Commercialisation of dashboard initiatives**

The UK offers yet another example of how collaboration on standard-setting and system simplification can potentially be undermined by privileging the creation of competitive opportunities justified by reference to the virtues of choice, if not for its own sake, but because of a potentially systematic over-estimation of the risks of promoting only one collective project. In a sense, conversations between financial industry actors seem to substitute for research evidence based on conversations between individuals and their providers. On the face of it, evidence that individuals find coping with the processes and products offered by the state and the financial services sector unduly complex, challenging both their information recording and cognitive capacities, seems to be continually played down. This is something which, it is said, should be handled by providing better access to better advice.

### **Financial advice**

At the same time, there is a key related practical policy dilemma, namely that relating to the provisions and regulation of financial advice. The division of responsibility between the state, employing organisation, and super funds needs to be clarified. However, a key technical underpinning to the provision of advice relates to the position of Big Data available directly to the individual. This then feeds through to the effectiveness of the financial advisor, should the individual consult such a professional.

This places the much discussed notion of ‘robo-advice’ in a rather different context. Debates about its reliability efficacy

### **Re-introducing the employer to the financial adviser arena**

Large employing organisations could contribute much more than they are allowed to do in many countries by way of advice on superannuation (and other financial matters) to individuals. Chinese walls can be constructed to ensure confidentiality, independence and quality of advice with the operation of occupational health functions offering a partial template for the notion of confidential ‘financial health advice’. The build-up of experience in advising (or, in current legal practice, not advising but informing) employees facing key financial decisions could be used more pro-actively as a confidential service to employees.<sup>17</sup>

### **The role of trade unions/staff associations**

The role of trade unions in the governance and administration of work-related superannuation varies hugely across and within countries. Even where the notion of *social partnership* is an important element of national, sectoral and/or organisational industrial relations, we do not always find a strong regular engagement between unions/staff associations and the super fund itself. The most common examples of engagement arise increasingly in crisis-driven collective bargaining situations where corporate re-structuring or sales initiatives include attempts to reduce the liabilities a company, as sponsor, has to the fund. The caveat is that trade unions would need to be fully involved in designing and monitoring the financial health advisory function.

## **7. CONCLUSIONS**

This paper has covered quite a lot of ground and there are inherent potential pitfalls in doing so. Any attempt to deploy theoretical ideas and empirical evidence in an inter-disciplinary and international comparative manner is bound to risk making unduly sweeping statements under both perspectives. Yet in approaching the objectives addressed by the CSIRO-Monash Superannuation Research Cluster, the main thing to avoid seemed to be that of adding to the balkanisation of research efforts, however, skilfully done in itself, rather than helping to build bridges between

the core of superannuation research, dealing with experience and innovation in financial process and product development, and other relevant fields.

In the present context, there are three particular research areas that could overlap more than they do with finance research relating to superannuation: the macro-economy, health and the labour market. This paper deals mainly with the last of these, though there is some exploration along the boundaries with the other two, not just finance.

### **Key findings from research**

- (1) Patterns of retirement and later-life employment are changing in most developed economies. These changes result from a combination of effects deriving particularly from six factors: educational attainment, labour market developments, population ageing, health trends, the evolution of financial services and public policy. Overall, these sources of change are inter-related; none is really a primary driver and all operate at more than one level – macro, meta and micro – but in different ways.
- (2) However, these sources of change have highly stratified effects on different groups of the population. By far the most important distinction in how such changes affect people relates to the relative positions of women and men. Gender provides the dominant lens through which individual situations and behaviour, organisational practice and public policy need to be analysed. Social class, through its role in educational opportunity and health outcomes is also important. Geographical location is not far behind because the state of the specific socio-economic environment conditions the interaction between the various forces for change, for example, tending to exacerbate negative outcomes through cumulative disadvantage. There can be huge differences in life expectancy between some nearby locations.
- (3) State pension design can be a glaring example of the rough justice of the average being more rough than just with confused notions of fairness and efficiency underpinning it. In some countries, notably the UK, this has led to policy debate focusing on potential *inter*-generational unfairness when tackling actual *intra*-generational unfairness would seem to be a more important task.

- (4) More training and development for older workers is likely to increase their productivity and this should raise their earnings and extend their working lives but only if reasonable quality jobs are available.
- (5) One aspect of quality is the flexibility which individuals have to vary their work commitment at the retirement stage.
- (6) However, more flexible (partial) retirement practices are unlikely to increase greatly the volume of pensionable life-cycle employment or the value of contributions because they are likely to change the hours of work profile of pre- as well as post-conventional retirement for the state pension or super fund concerned.
- (7) The pre-occupation with fostering a diversity of competitive market offerings is in striking contrast to the routine representation of individual situations as 'average' cases in the design of those products. There is a highly selective approach to paying attention to group perceptions both in public policy consultations and subsequent design. Sponsoring employers, fund providers and the financial advice sector have disproportionate influence in comparison with individuals, their representatives and civil society organisations advocating for reform.
- (8) As a thought experiment, albeit one that is unlikely to be put into practice, we might consider the most effective way of increasing individual choices in favour of extending working life to be to stratify the markets for health and social care provision and for insurance relating to them so that access to care is highly differentiated according to the levels of individual and family resources. At the lowest level, the uninsured would have access only to the lowest quality provision funded by the state as a welfare benefit, ostensibly as a 'basic right' but continually under the threat of financial stringency. Some would manage to insure but their ability to do so sufficiently to match their notions of adequate provision (which tend to increase with income and wealth) would give further impetus to remaining in the labour market, especially if coping with the impact of pre-existing conditions on access to insurance.
- (9) Thus, people over a substantial range of the income distribution could then be susceptible to working longer through fear rather than absolute necessity.

- (10) There are strong grounds for believing that the cognitive capacity for making good decisions in the financial as well other fields is very unevenly spread across the population. How decisions are framed by suitable choice architectures can significantly affect outcomes.
- (11) However, there is also a case for recognising the notion of *decision-making infrastructure* in seeking to enhance decision-making quality by providing much more effective access to comprehensive data for the individual and any financial advisor they may have.
- (12) In the retail market for superannuation-related choices much attention is paid to characterising the client's appetite for risk and desire for retirement income. However, the review of likely *expenditure* post-retirement tends to be very perfunctory.

### **Implications for policy and practice in the pension and superannuation fields**

- (1) The fragile competence of individuals in negotiating their way through the forests of financial products at a time when they are also approaching the major and unfamiliar transition of 'retirement' needs to be taken much more seriously by governments, employers and the financial services industry.
- (2) Designs of a decision-making infrastructure commissioned and overseen by government are an essential underpinning to achieving better decision-making by individuals and better opportunities for, in essence, 'delegation of decisions' to well-qualified advisors for those who still cannot cope with the albeit reduced complexity in the system.
- (3) The big-data scenarios dominating government-industry consultations are too focused on delivering more sophisticated marketing opportunities than empowering the individual citizen through addressing problems of unduly complex 'choice architecture'.
- (4) Policy strategies that seek to foster competition in complex financial product markets buttressed by competition in financial advisory services may fail to meet the needs of the individual or the economy. The overriding imperative for both public and private institutions should be **to simplify**.
- (5) A further imperative is to *consolidate* all the information relating to the individual in one place with considerable ***ease of personal access***.

- (6) Moreover, the **ownership of data relating to an individual should reside with the individual** not the employer, superannuation fund or financial advisor.
- (7) Alongside that, conventional retail practice in advising on retirement-related investment strategies need to pay much more attention to helping the individual to build up a time profile of future expenditure which draws on data available for groups of individuals with similar socio-economic characteristics.
- (8) De-risking strategies for super funds could be better designed if they were able to draw on a wider range of individual variables for fund members.
- (9) Economies with weak productivity growth perhaps need to give that problem much more priority rather than constructing complex regulatory frameworks for highly diversified superannuation products and associated services.
- (10) Citizens may be better off settling for quite small improvements in returns to super funds based on modest gains in (compound) productivity growth rates rather than invitations to participate in opportunities claiming systematically enhanced returns from among the bewildering choice on offer.

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## ENDNOTES

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<sup>1</sup> See Pearce (2011)

<sup>2</sup> OECD , European Union

<sup>3</sup> Superresearchcluster.com

<sup>4</sup> GFC

<sup>5</sup> Principi et al. (eds) (2014), Lindley and Principi (2014).

<sup>6</sup> Perceptions of wellbeing re health.

<sup>7</sup> See the work of Bianchi (2017) under the CSIRO-Monash Superannuation Research Cluster.

<sup>8</sup> The insights generated by the application of psychological research perspectives through the work of such authors as Kahneman, Tversky and Thaler go well beyond those drawn upon here – no reference, for example, is made to the implications of Prospect Theory and endowment effects. But the ideas of framing structures and choice architecture have a strong practical resonance (Thaler and Sunstein, 2009) in the present context.

<sup>9</sup> Simply drawing on a cross-section of European and North American experience seems hardly to help to resolve this. It is concluded that the countries with the most relevant range of experience of individual behaviour, organisational practice and public policy are: France, Germany, the Netherlands, Sweden, the UK and the USA. These countries, however, present very different constraints on individual and organisational decision-making relating to employment and retirement. However, there are aspects of the employment environment that bear directly on the super role that can be clarified.

<sup>10</sup> See Warhurst (2015).

<sup>11</sup> See the valuable compendium on contributions to research edited by Philip Taylor (2016), covering more or less the whole waterfront of ageing and the labour market.

<sup>12</sup> Rix (2016) reviews the evidence for the US and certain other countries.

<sup>13</sup> Frerichs *et al.* (2012), Lindley (2012).

<sup>14</sup> See Lindley (2012), Principi *et al.* (2014).

<sup>15</sup> As is apparent from the reactions of business (OPSG, 2017), professional analytical bodies (Institute and Faculty of Actuaries, 2017; EFPA, 2017) and community organisations (COFACE, 2017).

<sup>16</sup> See Ndigwako Njenga and Sherris (2009) for such an exercise applied to data for Australia, England, Japan, Norway and the USA.

<sup>17</sup> Another analogy would be the application of similar practices to those adopted in the provision of careers and development advice by the employer.