



HM TREASURY

Employing the capability approach to compare pensioners' well-being across UK countries

Treasury Economic Working Paper No.7

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Employing the capability approach to compare pensioners' well-being across UK countries

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Abstract

The goal of this paper is to compare different measures of pensioner well-being across England, Scotland, Wales and Northern Ireland. Having appraised various approaches to conceptualising and measuring the well-being of pensioners, Sen's (1992) capability approach stands out as a novel and theoretically appealing way to obtain additional insights into the well-being of pensioners living across the United Kingdom. Pensioners' well-being is therefore compared across these countries in terms of various attained outcomes and proxies for capabilities. The results highlight that wider measures of pensioners' welfare provide a more comprehensive picture. For example, although pensioners in England are found to have the highest average income, their wider well-being is not consistently above that of their peers in Scotland, Wales or Northern Ireland. This research suggests that studies using income as the only proxy for pensioners' well-being provide a partial picture and should be complemented with non-monetary measures for a more comprehensive evidence base.

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Keywords: pensioner, well-being, capabilities, functionings.

The opinions expressed in this paper are those of the authors and do not necessarily reflect those of HM Treasury.

Contents

		Page
Chapter 1	Introduction	3
Chapter 2	Theoretical approaches to conceptualising well-being	5
Chapter 3	Analytical framework and data description	11
Chapter 4	Pensioner well-being in England, Scotland, Wales and Northern Ireland	13
Chapter 5	Conclusion	25
Annex A	Statistical tables	27
Annex B	Bibliography	29

1

Introduction

1.1 The 2008 HM Government report *Opportunity Age Indicators* examines the well-being of pensioners using twenty indicators. It highlights that a significant progress has been made on a range of indicators since the base year (which is 2005 for most indicators), with twelve out of twenty indicators moving in the right direction. However, not all these indicators are measured consistently across the four UK countries, with 10 indicators covering England only. Moreover, additional indicators highlighting outcomes that pensioners value and have the financial ability to achieve (e.g. paying for a week's annual holiday away from home) are not included.

1.2 This paper offers new evidence for pensioners' well-being in the United Kingdom by analysing data from the British Household Panel Survey (BHPS). The BHPS wave employed was carried out in 2008 and data were released in 2009. The paper offers the first instance in which Amartya Sen's capability approach has been employed to investigate pensioners' well-being across the four countries in the United Kingdom. The novelty of this paper is that it complements existing evidence by estimating both pensioners' outcomes as well as achievable outcomes. Moreover, considering wider measures of well-being contributes to the evidence base and can inform our understanding of the strengths and weaknesses of existing policies. Along the same lines, the Department for Work and Pensions has also analysed indicators that recognise the broader factors affecting pensioner well-being, under the objective "to tackle poverty and promote greater independence and well-being in later life". This exercise is undertaken using additional non-income indicators such as the proportion of people aged over 65 who are satisfied with their home and their neighbourhood, and to the extent to which people over 65 receive the support they need to live independently at home.

1.3 It is useful to mention at the outset that the capability approach is integral to Sen's contribution to welfare economics, for which he was awarded a Nobel Memorial Prize in Economics in 1998 (Atkinson, 1999, Arrow, 1999). The capability approach has been influential in many respects. For example, the Human Development Index, published by the United Nations Development Program, has been greatly influenced by Sen's concept (Anand and Ravallion, 1993). In the United Kingdom, Sen's approach has been employed in several empirical studies (some of these are reviewed in Kuklys, 2005). Additionally, an independent enquiry commissioned by the Prime Minister adopted it as a basis for the conceptualisation and measurement of inequality in Britain (Cabinet Office, 2006).

1.4 The rest of this paper is laid out as follows. Chapter 2 appraises various theoretical approaches used for the conceptualisation of well-being and provides a thorough explanation of the capability approach. Chapter 3 explains the framework and the method employed to select the various attained outcomes and proxies for capabilities. Chapter 3 also considers the data used in the study. Chapter 4 examines measures of pensioners' income in England, Scotland, Wales and Northern Ireland and looks at differences across these countries. Chapter 4 also analyses pensioners' well-being across these countries using Sen's capability approach. Conclusions are drawn in chapter 5.

2

Theoretical approaches to conceptualising well-being

2.1 One of the foremost demands of individuals is to have a command over resources, whether cash, in commodities, privately attained, or state-provided. This command over resources forms the basis of the income entitlement approach – the most common approach adopted in measuring well-being.

2.2 Next, there is the standard-of-living approach, which takes income entitlement as its point of departure and introduces the idea that individuals, families and households differ in their conversion of resources to attain a given living standard. Thus this approach accounts for not only the command over resources but also how those resources are used up in attaining a standard of living.

2.3 The third, comparatively novel, approach brings a new perspective into the picture: the alternative levels of standard of living from which an agent had the freedom to choose. This idea of agency freedom forms the basis of the capability approach of Amartya Sen.

2.4 The comparative strengths of each of these approaches for the purpose of measuring the well-being of pensioners are set out below. Only the key features are outlined in the discussion of the first two approaches so as to facilitate a discussion leading to the adoption of the capability approach in drawing insights for the well-being of pensioners living across the United Kingdom.

The income entitlement approach

2.5 This approach is concerned with the level of resources a person is endowed with. Although the objective of achieving an outcome in terms of a minimum standard of living remains important, the advocates of this approach are not concerned with whether that minimum standard of living is actually attained: the approach is all about the level of entitlement to income, which can be disposed of by the individual in question as he or she wishes.

2.6 This income entitlement approach has a particular ethical appeal: in a fair and just society each individual should be entitled to a minimum income entitlement which is implicitly linked to the minimal standard of living. It can be argued that economic vulnerability in retirement, due mainly to restrictions in the supply of labour, makes it ever more essential that individuals are entitled to a minimum level of income, one that does not affect the basis of self-respect due to any social stigma linked with the receipt of income.

Standard-of-living approach

2.7 A widely-used direct measure of well-being is a person's standard-of-living. This measure is commonly based on the total individual consumption during a certain period (normally a year). As an indicator of standard of living, it is crucial to measure consumption as broadly as possible, including the value of non-cash benefits that are not taken into account in the record of monetary consumption in a given period.

2.8 Since individuals differ in their conversion of income into a certain standard-of-living, the standard-of-living approach emphasises what ends are achieved by the command over resources and not just by a mere indication of what resources one had. Moreover, given its emphasis on the standard of living and given the multiplicity of resources at one's disposal, deprivation can

be taken to mean not just income deprivation but also deprivation in other dimensions which may not be directly related to income (such as disability and its associated costs).

2.9 It is only through a meaningful ‘manipulation’ of information on total household income, that income can be used as an indicator of standard of living (cf. Ringen 1991, 1996). For instance, equivalent income can be interpreted as the value to each person of the equitable share of potential consumption generated by total household income. This is the route that income has to take to be used as a measure of standard of living.

The capability approach

2.10 Sen’s many writings develop a strong critique on the conventional views about the perception of well-being. He emphasises the fact that command over resources (or income) should not be the sole basis of personal well-being, no matter how comprehensive and inclusive the definition of resources is. Sen’s response to the limitations in question is given in his formulation of the capability approach¹. In this approach, he argues that an individual’s *opportunities* to achieve well-being are more important than the actual outcome, and they are determined by their ‘capability set’. By capability set, he means the ability and freedom of individuals to perform a certain set of functionings. To understand this better, it is critical to appreciate the difference between the main concepts underlying this approach: functionings and capabilities. They can be described as:

- Functionings are the outcomes that a person has achieved with the resources available. In this paper we will refer to functionings as ‘attained outcomes’. Examples of attained outcomes are: ‘being in good health’, ‘being well educated’, ‘being adequately nourished’, ‘being happy’ (Sen, 1992). Examples of metrics of attained outcome are: the percentage of pensioners having good health or the percentage who are disabled.
- Capabilities are the outcomes that one has the *opportunity* to achieve, irrespective of whether these outcomes have actually been achieved or not. For example, a person might have the capability to be well educated, although he/she might choose not to. This person’s personal welfare is deemed to be higher than the personal welfare of those who cannot afford to educate themselves. Thus, ‘capability’ involves the full set of attainable alternative functionings a person has the power or ability to achieve; it is equivalent to the microeconomic concept of an opportunity set, but instead defined in the space of attained outcomes (Gasper, 2007).

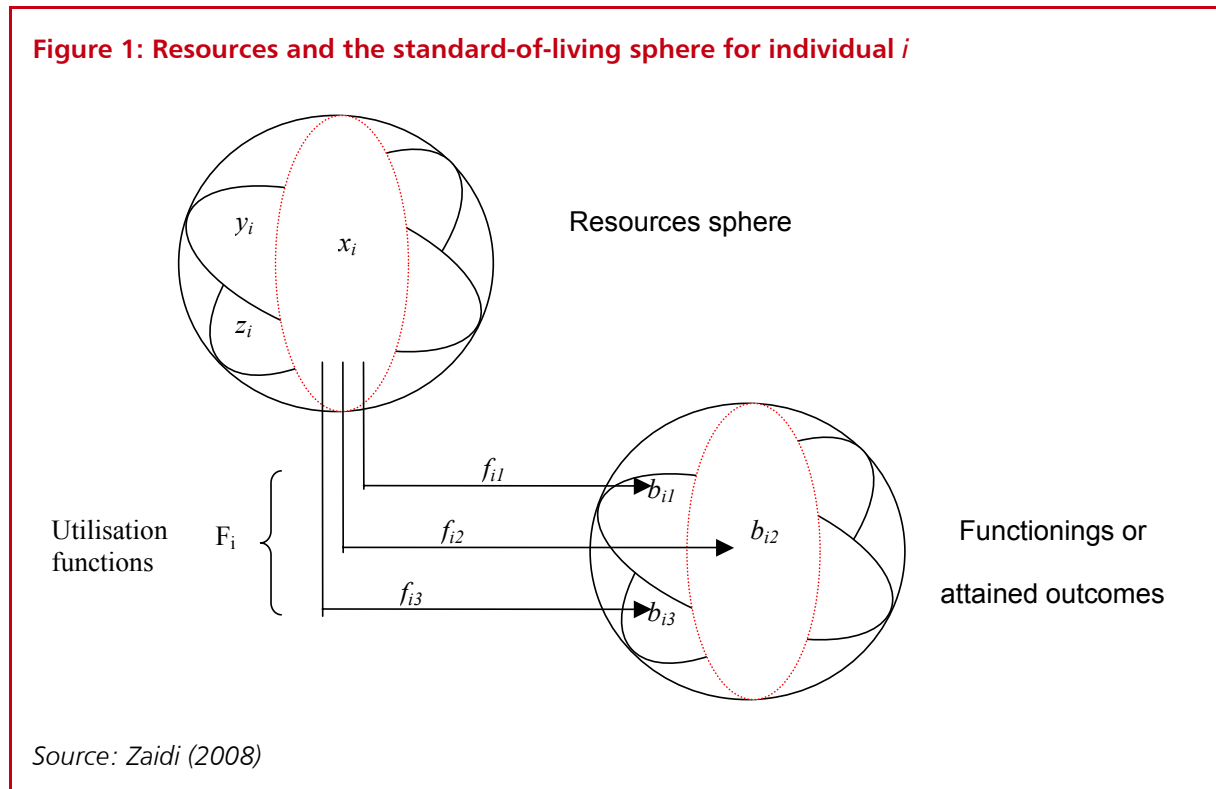
2.11 It should be noted here that Rawls’ theory of justice also points to the fact that the command over resources may include not only income but also other non-economic resources that the person in question could use to promote his or her ends. Rawls identified these as ‘primary social goods’ which are ‘things that every rational man is presumed to want’ (Rawls, 1971) for a successful execution of a long-term plan of life given reasonably favourable circumstances. These social primary goods include liberty and opportunity and the bases of self-respect.

2.12 However, Sen (2009) notes that the concept of capability goes well beyond income and Rawls’ primary social goods since the identification of these goods is still guided, in Rawlsian analysis, by the search for all-purpose-means, of which income and wealth are particularly

¹ Sen first outlined the capability approach in his Tanner Lecture at Stanford University in 1979 (Sen 1980), and provided its formal description in several subsequent pieces of his later work (see, inter alia, Sen 1985 and 1999).

significant examples. In contrast, the capability method of analysing well-being means poverty is not just about insufficient goods, but also being about the inability to live a valuable life.

2.13 Let us now turn to a formal description of Sen's framework, drawn from Zaidi (2008). Figure 1 below shows that an individual i can employ more than one utilisation function, as shown by f_{i1} , f_{i2} and f_{i3} , so that a bundle of commodities x_i can be converted into a vector of attained outcomes, b_{i1} , b_{i2} or b_{i3} . This set of three ellipses in the alternative attained outcomes sphere corresponds to the capability set of individual i since he has the capability or freedom to pick any of the three combinations of attained outcomes or alternative levels of standards of living.



Sen argues that it is this freedom of choice that should be used as an indicator of personal well-being (i.e. the whole set of b_{i1} , b_{i2} and b_{i3}).

2.14 The achieved attained outcomes b_{ik} of individual i , corresponding to the k^{th} value utilization function, will be given by

$$\mathbf{b}_{ik} = f_{ik}(c(\mathbf{x}_i))^2$$

Since vector b_{ik} represents the functioning status achieved by a person, the well-being of this person can also be estimated by an evaluation of this vector alone (Sen 1985). Thus, the evaluation of well-being can also be restricted to the attained standard of living vector alone. Sen himself has identified the theoretical relevance of this method:

'According to well-established tradition in economics, the real value of a set of options lies in the best use that can be made of them, and – given the maximising behaviour and the absence of uncertainty – the use that is actually made. The use value of the opportunity, then, lies derivatively on the value of one element of it (to wit, the best option or the actually chosen option). In this case, the focusing on a chosen functioning

² The function $c(\cdot)$ represents the conversion of commodities to its characteristics, and the absence of the subscript for this function implies the homogeneity of a good across people of differing attributes, i.e. the transformation of commodities into characteristics does not differ across people.

vector coincides with concentration on the capability set, since the latter is judged, ultimately, by the former.’ (Sen 1999)

Nonetheless, the capability approach explains how value is attached to having freedom or opportunities that are not taken up.

2.15 Defining the valuation function by $g_{ei}(\cdot)$, where e refers to the ‘evaluator’ and i to the person in question (where it may also be possible to have $e = i$), the well-being function can be given by:

$$v_{ei} = g_{ei}(\mathbf{b}_{ik}) = g_{ei}(f_{ik}(c(\mathbf{x}_i)))$$

According to Sen, one should not consider this valuation function $g_{ei}(\cdot)$ to be the same as a utility function since ‘valuing a life and measuring happiness generated in that life are two different exercises’ (Sen, 1985). The utility that person will enjoy from these attained outcomes is:

$$u_i = h_i(f_{ik}(c(\mathbf{x}_i)))$$

Thus, for a given commodity vector \mathbf{x}_i , the set of attained outcomes $P_i(x_i)$ is determined by the set of converting functions F_i :

$$P_i(x_i) = \{ \mathbf{b}_i \mid \mathbf{b}_i = f_i(c(\mathbf{x}_i)), \text{ for any } f_i(\cdot) \in F_i \}$$

If a person’s budget set is denoted X_i , then the person’s feasible set of attained outcomes vector is given by:

$$Q_i(x_i) = \{ \mathbf{b}_i \mid \mathbf{b}_i = f_i(c(\mathbf{x}_i)), \text{ for any } f_i(\cdot) \in F_i \text{ and for any } \mathbf{x}_i \in X_i \}$$

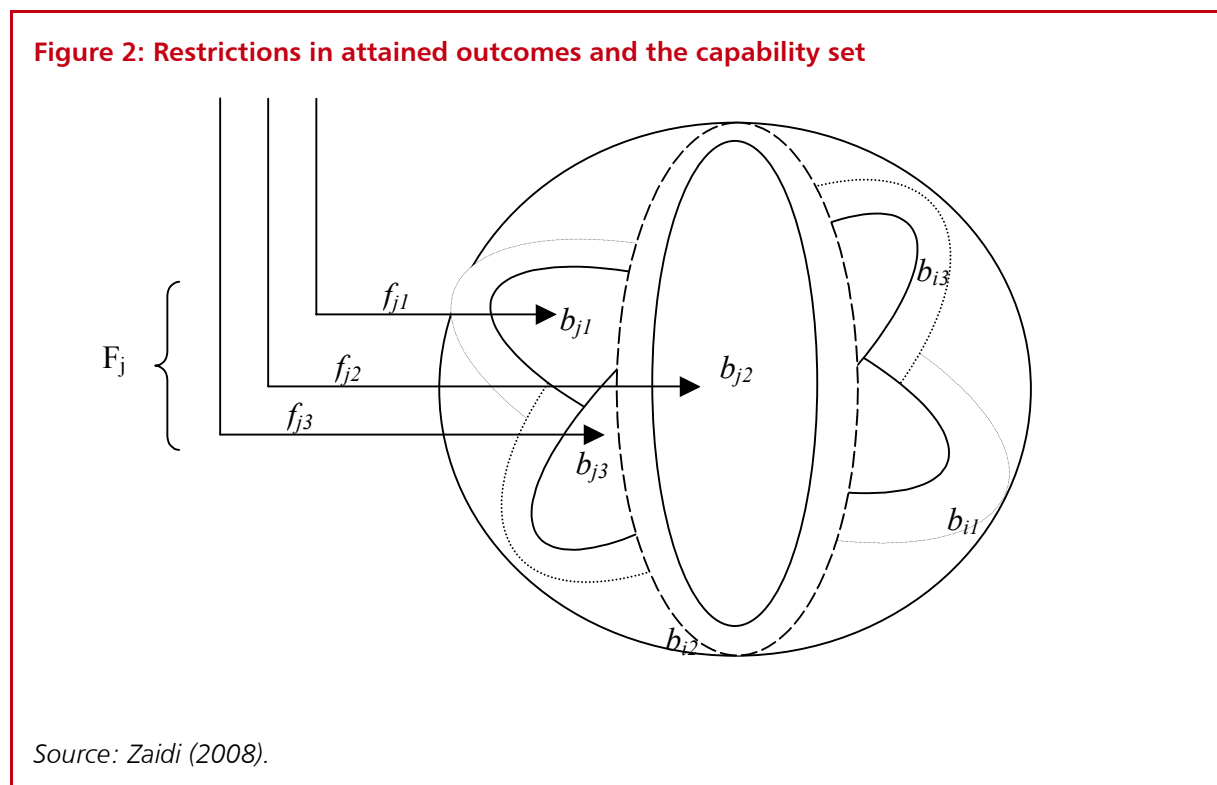
The set $Q_i(x_i)$ gives the freedom that a person has in the choice of the vectors of attained outcomes (given budget constraint), and it represents the capabilities of the i th person.

2.16 This simple framework described in Figure 1, and by the function $Q_i(x_i)$, exhibits different spheres in which one may evaluate the well-being of an individual. For instance, the analyses in terms of command over resources alone (the income entitlement approach) will be restricted to the adequacy of a person’s budget set (the set X_i). In contrast, the attained functioning approach will place emphasis on how resources have actually been used (for example, the b_{i2} vector in Figure 1; the standard-of-living approach). The capability approach extends this idea further on the grounds that the same income (or the same combination of commodities) may generate quite diverse levels of well-being and people may or may not take up the highest level of well-being (they may voluntarily choose to attain a lower level of well-being). Thus, it is the opportunity or freedom that matters, and not what is revealed in person’s actual preferences.

2.17 Another example will highlight further how the utilisation functions of individuals with different attributes will produce different vectors of attained outcomes. Consider a comparison of two persons, Irene and Jack, who have equal level of resources, that are (say) identical to the commodity bundle \mathbf{x}_i . Consider also that Irene is the same person as the individual i of Figure 1, and Jack is more restricted than Irene in his conversion of command over resources to attained outcomes because (say) he suffers from limiting physical health. Figure 2 shows us how these resources and standard-of-living spheres framework will present differences in attained outcomes and the capability set of two individuals of differing attributes.

Jack's capability set is given by $[b_{j1}, b_{j2}, b_{j3}]$ which will be more restricted than the capability set of Irene $[b_{i1}, b_{i2}, b_{i3}]$, provided all other attributes (except physical health) of Irene and Jack are the same. This limitation in Jack can be seen from two factors in Figure 2:

- Jack's *achieved* (attained) outcomes are lower since he has a restricted capacity to generate welfare from his income (say) due to additional needs. In Figure 2, the inner ellipse of b_{j2} for Jack is shown to fall inside the bigger ellipse b_{i2} of Irene.
- Jack is limited in every single set of attained outcomes that he may have attained from the commodity bundle x_j , thus his opportunity set is also restricted. This is shown by smaller ellipses for Jack in Figure 2 that lies within the bigger ellipses of Irene.



2.18 There are other scenarios, not exhibited in Figure 2, which will highlight the difference:

- Jack may have been more restricted than Irene but only in his *opportunity set*, and not in terms of achieved attained outcomes. In such a scenario, the analysis of well-being that makes use of the achieved attained outcomes only (following the standard-of-living approach) will miss this intrinsic difference between Irene and Jack.
- Another example of a restriction in Jack's opportunity set is that he may not be able at all to achieve a certain combination of attained outcomes which Irene had been able to achieve. For example, Jack's physical limitations may rule him out from long travel or from visiting places that have limited access for people with disabilities.

2.19 In summary, the review of the capability approach has provided us some further insights about the issues involved in measuring well-being of pensioners. The advantages offered by this approach can be two-fold:

- It provides additional, and compelling, arguments to augment our analysis of the well-being of pensioners beyond what can be measured simply by command over resources (or income); and
- It introduces the element of freedom that people may exercise in choosing a life they have reasons to value; thus it is the opportunity or freedom aspect that determines well-being, and not what is revealed in person's actual preferences.

These aspects are introduced further in the empirical work undertaken in this paper.

3

Analytical framework and data description

Proxies for Capabilities

3.1 Sen has distinguished between the “direct approach” - taking the form of directly examining and comparing attained outcomes and capabilities - and the “supplementary approach” - involving the “use of traditional procedures of interpersonal comparisons in income spaces but supplements them with capability considerations” (Sen, 1999).

3.2 This paper has employed the supplementary approach to analyse pensioners’ capabilities using proxies that measure pensioners’ financial ability to achieve certain outcomes. For example, use is made of the question: ‘would you like to be able to pay for a week’s annual holiday away from home but must do without because you cannot afford it?’ The information derived from such question goes beyond merely asking whether this activity occurred; instead, it enquires if the reason for the non-occurrence is lack of resources. The structure of such questions follows the influential critique by David Piachaud (1981) of Peter Townsend’s (1979) deprivation index, where he noted that voluntary non-consumption should be removed from the calculus.

3.3 However, these questions fall short of focussing on all the constraints that might prevent individuals from achieving certain outcomes (e.g. a pensioner might have the financial resources to go on holiday but might not do it because he is restricted in his mobility due to a physical disability). Thus, the proxies selected to measure capabilities do not account for pensioners’ capabilities in the full sense of Sen’s concept. However, they can be seen as ‘quasi capabilities’ (Hick, 2009) or proxies for capabilities since they give a sense of the freedom to achieve certain outcomes in contrast with questions that just ask them, for example, if they went on holiday.

Selection method

3.4 The capability approach does not specify particular attained outcomes and capabilities that should be included in the list of important achievements (Sen, 1999). The method used in this paper selected the attained outcomes and the proxies for capabilities employing the first selection method identified by Alkire (2007). This method entails drawing on the available data to select the relevant dimensions. We also chose both the attained outcomes and the proxies for capabilities from various other sources: the list of capabilities used in the Equalities Review (2007); Nussbaum’s (1999) list of central human capabilities and the study investigating the capabilities that matter to pensioners by Grewal et al (2006). This last study used in-depth interviews with 315 English pensioners to find out what mattered to them in terms of quality of life.

Data description

3.5 The British Household Panel Survey (BHPS) is a longitudinal survey of households in Great Britain (for more information, see Taylor et al., 1998). The first wave data was collected in 1991 and repeated each year with the same households such that to date there are 17 waves of data available (1991–2008). Initially, a nationally representative sample of some 10,000 individuals, in over 5,000 households, was interviewed. In subsequent years these same individuals were re-interviewed, as were any new members of their household (and members of newly formed

households). Information is collected at both the individual and household level, and this includes questions on income, health and well-being, demographics and neighbourhood.

3.6 This study focuses on the seventeenth wave of the BHPS, which consists of some 8,346 households and 14,910 individuals. This sample involved 3,528 pensioners. Pensioners are defined as women of 60 years and older and men of 65 years or older. From our sample, the largest group of pensioners were from England (1,622), followed by Wales (702), Scotland (611) and Northern Ireland (586).

3.7 There are 79 questions relating to well-being in the BHPS, and the responses to 15 questions are examined in this study. More precisely, these answers are used to construct pensioners' well-being measures indicating:

Attained outcomes

- 1 The proportion of pensioners who are disabled;
- 2 The proportion of pensioners who enjoyed excellent, good, fair, poor and very poor health over the last 12 months;
- 3 The proportion of pensioners who have health problems;
- 4 The proportion of pensioners whose health limits their daily activities;
- 5 The proportion of pensioners who have had an accident since 1st September 2006;
- 6 The proportion of pensioners who meet people less often than once a month;
- 7 The proportion of pensioners living in an accommodation that has problems with shortage of space;
- 8 The proportion of pensioners living in an accommodation that has problems with damp walls;
- 9 The proportion of pensioners living in an accommodation that has problems with pollution caused by traffic or industry;
- 10 The proportion of pensioners who fear being a victim of crime.

Proxies for capabilities

- 11 The proportion of pensioners who would like to be able to but cannot afford to keep their accommodation adequately warm;
- 12 The proportion of pensioners who would like to be able to but cannot afford to eat meat/fish every second day;
- 13 The proportion of pensioners who would like to be able to but cannot afford to pay for new clothes;
- 14 The proportion of pensioners who would like to be able to but cannot afford to keep their home in a decent state of decoration;
- 15 The proportion of pensioners who would like to be able to but cannot afford to pay for an annual week's holiday away from home.

4 Pensioner well-being in England, Scotland, Wales and Northern Ireland

Comparison using pensioner income

4.1 As a context to the analysis of the attained outcomes and proxies for capabilities, it is useful to compare average income levels across England, Scotland, Wales and Northern Ireland. The rationale for employing income is that income entitlement is an important indicator of pensioners' well-being: low levels of income are likely to negatively affect welfare outcomes (Banks, 2008; Benzeval, 2001). Furthermore, economists often use income as a proxy for well-being, theoretically linking higher income with higher, but marginally diminishing, levels of well-being through the concept of utility.

4.2 Table 4.A shows the average income for all pensioners in the United Kingdom. England has the highest level of average income, higher than Scotland and Wales. Northern Ireland had the lowest level of income in the first four quintiles and also on average (shaded cells).

Table 4.A: Absolute income comparisons for pensioners

	England	Scotland	Wales	Northern Ireland
All Pensioners				
Mean	£24,910	£23,253	£22,618	£22,524
Bottom Quintile				
Mean	£10,916	£10,388	£10,895	£10,136
2nd Quintile				
Mean	£16,031	£15,927	£15,771	£15,111
3rd Quintile				
Mean	£20,591	£20,061	£19,732	£19,169
4th Quintile				
Mean	£26,604	£26,360	£25,142	£24,793
5th Quintile				
Mean	£50,405	£43,527	£41,550	£43,412

Source: BHPS 2008

Note: this shows annual income after housing costs, adjusted using the McClements equivalence scale.

4.3 Given the expected correlation between income and pensioners' well-being, table 4.A suggests that pensioners in Northern Ireland are most at risk of being 'poor' and have the lowest level of well-being, compared to the other countries. Similarly, pensioners in England are expected to enjoy the highest levels of well-being.

Comparison using wider measures of pensioners' well-being

4.4 Although income is an important input into pensioners' well-being, there are various arguments that suggest that income does not capture other dimensions that are crucial for pensioners' well-being. These arguments are as follows:

- Income alone can be a misleading concept, as it does not provide any measure of the extent to which pensioners rely on public services: (e.g. medical care, nursing care, cheaper/free public transport). This consideration is especially relevant given the difference in total expenditure per head (McLean and McMillan, 2003), NHS expenditure per head (Alvarez-Rosete et al, 2005) and social housing and social provision per head (ERINI and IFS, 2007) across these countries;
- There is the possibility that income within a household is not distributed according to need (Thomas 1990, 1991);
- House 'production activities' (e.g. cooking a healthy dinner, keeping a clean living space or undertaking maintenance activities) are crucial for pensioners' well-being and yet they are not included in a simple income proxy;
- As Sen (1992) points out, the ability to convert income into well-being varies according to personal characteristics and circumstances. For example, a pensioner enjoying a higher level of income may be worse off in terms of well-being because of things such as having to endure a long-standing illness (e.g. asthma).

4.5 Sen (2009) makes two further arguments:

- How far a given income will go depends on environmental conditions, including climatic circumstances, such as temperature ranges and flooding;
- The conversion into attained outcomes is influenced also by social conditions, including the prevalence or absence of crime and violence.

4.6 In light of the above considerations, the premise of this paper is that, in order to study pensioners' well-being, the income analysis needs to be complemented by Sen's (1992) capability approach. Our 10 attained outcomes have been split into four main groups:

- Physical well-being (includes five attained outcomes: disability, health over past year, health problems, health limiting daily life and accidents);
- Meeting relatives or friends;
- Housing problems (includes three attained outcomes: problems with shortage of space, problems with damp walls and problems with pollution); and
- Crime problems.

For each of these 10 attained outcomes, we report average incidence rates for each country in the UK, as well as statistical significance tests on the differences between each pair of countries.

Attained outcomes

Physical Well-being

4.7 The first group of attained outcomes concerns physical well-being. It includes five attained outcomes: disability; health over the past year; health limiting daily life; health problems and accidents.

4.8 Table 4.B reports the percentages of pensioners who consider themselves to be disabled. Wales has the highest disability prevalence rate (30%), which is statistically significantly higher than that in England (25.2%) and Northern Ireland (24.3%).

Table 4.B: Disability

Survey Question asked: Do you consider yourself to be disabled?	Percentage (all pensioners)
England	25.2%
Scotland	24.1%
Wales	30%
Northern Ireland	24.3%

Source: BHPS 2008

Note: Statistical significance tests undertaken show significant differences between England and Wales and between Wales and Northern Ireland only (see table A.1, Annex A).

4.9 Table 4.C shows the self-reported health status of pensioners over the previous 12 months compared to people of their own age. The only statistically significant differences are between Northern Ireland and the other countries in the UK. These differences show that proportionally more pensioners report “good” or “poor” health in England, Wales and Scotland than in Northern Ireland. Against this, Northern Ireland has the highest percentage of pensioners reporting “fair” health (34.9%), and the lowest percentage reporting “very poor” health (1.8%).

Table 4.C: Health over 12 months

Survey Question asked: Please think back over the last 12 months about how your health has been. Compared to people of your own age, how would you say health has been on a whole?	Percentage (all pensioners)
England	
Excellent	12.6%
Good	46.3%
Fair	28.5%
Poor	9.5%
Very Poor	3.2%
Scotland	
Excellent	16%
Good	45.6%
Fair	24.5%
Poor	10.1%

Very Poor	3.9%
Wales	
Excellent	14.7%
Good	42.1%
Fair	28.2%
Poor	11.1%
Very Poor	4%
Northern Ireland	
Excellent	13.1%
Good	37.1%
Fair	34.9%
Poor	13.1%
Very Poor	1.8%

Source: BHPS 2008

Note: Statistical significance tests undertaken show significant differences between Northern Ireland and all other countries (see table A.1, Annex A).

4.10 Table 4.D looks at the incidence rates of health problems or disabilities. The figures are very similar in Wales, Scotland and England, and the difference between them is not statistically significant. However, pensioners in Northern Ireland are statistically significantly less likely to have experienced health problems or disability as compared to all other countries (82% as compared to 88.8% in Wales, 87.7% in Scotland and 87.5% in England).

Table 4.D: Health problems

Survey Question asked: Do you have any health problems or disabilities?	Percentage (all pensioners)
England	87.5%
Scotland	87.7%
Wales	88.8%
Northern Ireland	82%

Source: BHPS 2008

Note: Statistical significance tests undertaken show significant differences between Northern Ireland and all other countries (see table A.1, Annex A).

4.11 Table 4.E shows the proportion of pensioners whose health limits their daily activities compared to most people of their own age. In Northern Ireland 39.9% of pensioners report that their health limits their daily activities, while in Wales, Scotland and England the equivalent figures are statistically significantly lower (at 34.5%, 30.3% and 29.7%, respectively).

Table 4.E: Health limits daily activities

Survey Question asked: Does your health in any way limit your daily activities compared to most people of your age?	Percentage (all pensioners)
England	29.7%
Scotland	30.3%
Wales	34.5%
Northern Ireland	39.9%

Source: BHPS 2008

Note: Statistical significance tests undertaken show significant differences between Northern Ireland and all other countries (see table A.1, Annex A).

4.12 Table 4.F reports the percentage of pensioners who have had an accident that meant they needed to see a doctor or go to the hospital since September 1st 2006. The differences across countries are small and not statistically significant.

Table 4.F: Accidents

Survey Question asked: Since September 1st 2006, have you had any kind of accident as a result of which you saw a doctor or went to hospital?	Percentage (all pensioners)
England	7.3%
Scotland	8.7%
Wales	7.7%
Northern Ireland	8%

Source: BHPS 2008

Note: Statistical significance tests undertaken show no significant differences across countries (see table A.1, Annex A).

Meeting relatives or friends

4.13 In the second set of attained outcomes considered by this study we examine the incidence of meeting relatives or friends. Table 4.G shows the percentage of pensioners who meet friends or relatives less than once a month. The question refers to those friends and relatives who do not live with them in the same household. England has the highest percentage of pensioners who report meeting friends or relatives less than once a month (3.6%), statistically significantly higher than Wales. Northern Ireland has the lowest: only 1.8% of pensioners met friends or relatives less than once a month.

Table 4.G: Frequency of meeting people

Survey Question asked: How often do you meet friends or relatives who are not living with you?	Percentage of pensioners who answered 'Less often than once a month'
England	3.6%
Scotland	3.17%
Wales	2.5%
Northern Ireland	1.8%

Source: BHPS 2008

Note: Statistical significance tests undertaken show significant differences between Northern Ireland and all other countries as well as between England and Wales (see Table A.1, Annex A).

Housing problems

4.14 The third set of attained outcomes used in this paper is related to housing issues. These are problems with shortage of space, damp walls and pollution. From table 4.H it can be seen that Northern Ireland has the lowest percentage of pensioners who report having a shortage of space in their accommodation (6.9%).

Table 4.H: Accommodation has problems with space

Survey Question asked: Does your accommodation have any problems with shortage of space?	Percentage (all pensioners)
England	12.7%
Scotland	10.8%
Wales	11.3%
Northern Ireland	6.9%

Source: BHPS 2008

Note: Statistically significant differences between Northern Ireland and all other countries only (see table A.1, Annex A).

4.15 Table 4.I shows the percentage of pensioners whose accommodation has problems with damp walls. The incidence ranges from 4.8% of pensioners in Wales to 3.1% of pensioners in Scotland. The differences between the countries are small and not statistically significant.

Table 4.I: Accommodation has problems with damp walls

Survey Question asked: Does your accommodation have any problems with damp walls?	Percentage (all pensioners)
England	4.5%
Scotland	3.1%
Wales	4.8%
Northern Ireland	3.7%

Source: BHPS 2008

Note: Statistical significance tests undertaken show no significant differences across countries (see table A.1, Annex A).

4.16 Table 4.J shows that England (6.4%) and Wales (5.4%) have a statistically significant higher percentage of pensioners who report that their accommodation has environmental problems caused by traffic or industry than Scotland and Northern Ireland.

Table 4.J: Accommodation has problems with pollution

Survey Question asked: Does your accommodation have any problems with pollution, grime or other environmental problems caused by traffic or industry?	Percentage (all pensioners)
England	6.4%
Scotland	3.2%
Wales	5.4%
Northern Ireland	2.4%

Source: BHPS 2008

Note: Statistically significance tests undertaken show England significantly higher than Scotland and Northern Ireland, as well as Wales significantly higher than Scotland and Northern Ireland. (see table A.1, Annex A).

Crime Problems

4.17 Here, in the set of attained outcomes, the focus is on the incidence of being worried about crime. Table 4.K shows that in Northern Ireland 47.4% of pensioners worry that they may become a victim of crime. This is statistically significantly higher than in other countries in the UK, where the equivalent percentages are all below 43%.

Table 4.K: Worried about crime

Survey Question asked: Do you ever worry about the possibility that you, or anyone else who lives with you, might be the victim of crime?	Percentage (all pensioners)
England	41.1%
Scotland	38.3%
Wales	42.5%
Northern Ireland	47.4%

Source: BHPS 2008

Note: Statistically significant differences between Northern Ireland and all other countries only (see table A.1, Annex A).

Analysis of all measures of attained outcomes

4.18 Table 4.L brings together in one place all ten attained outcomes for pensioners, across all four countries. To illustrate the informational richness obtained by employing the capability approach, these attained outcomes can be compared to the results obtained using the rudimentary income entitlement approach. Average pensioner incomes were set out in table 4.A, and showed that pensioners in England enjoyed the highest average incomes while pensioners in Northern Ireland had the lowest. For ease of reference, the shaded cells in table 4.L show where there is a discrepancy between these two alternative measures of well-being (based on average income and based on attained outcomes) and where differences between a pair of countries are statistically significant.

4.19 Let us start by looking only at statistically significant differences between countries. For the five attained outcomes regarding physical well-being, the results show that the percentage of

Northern Irish pensioners who consider themselves to be disabled is lower than that in Wales. Similarly, the incidence of excellent health over the previous 12 months is lower in England than in Northern Ireland, while the incidence of fair health is higher in Northern Ireland than in any other country. Very poor health, conversely, is also less prevalent in Northern Ireland than elsewhere. Equally, the incidence of health problems is higher in England, Wales and Scotland than it is in Northern Ireland.

4.20 Looking at the attained outcome regarding the frequency of meeting people, there is a statistically significant higher percentage of pensioners in England, Scotland and Wales who meet friends or relatives less than once a month than in Northern Ireland.

4.21 For the three attained outcomes regarding housing issues, we can see that a greater share of pensioners in England, Wales and Scotland have problems with limited living space than in Northern Ireland. Problems with pollution and other environmental problems are less prevalent among pensioners in Northern Ireland than among their peers in Wales and England.

4.22 It is worth pointing out a number of statistically significant results which are in line (rather than at odds) with the income entitlement approach. For example, in England there is a lower percentage of pensioners who consider themselves disabled than in Wales, while bad health limits the activities of a greater share of pensioners in Northern Ireland than elsewhere. Similarly, the percentage of pensioners who fear crime is lower in England, Wales and Scotland than in Northern Ireland.

4.23 There is an alternative way to compare the income and capabilities approaches: looking at those attained outcomes where there are no statistically significant differences between countries, despite differences in average income levels. This is most obvious in the case of pensioners who have suffered accidents or have problem with damp walls: there is no statistical evidence that pensioner outcomes differ between all four countries, despite differences in average incomes.

4.24 In summary, even though average incomes are highest for pensioners in England, their attained outcomes are not always better than those of their peers elsewhere. In fact, for five out of the ten attained outcomes considered here, there are statistically significant better outcomes in at least one other country than in England (see table A.1 for details).

4.25 Conversely, even though average income is lowest for pensioners in Northern Ireland, their attained outcomes are not always worse than those of their peers elsewhere. In fact, for six out of the ten attained outcomes considered here, there are statistically significant better outcomes for Northern Ireland than in at least one other country (see table A.1 for details).

Table 4.L: All attained outcomes

	England	Scotland	Wales	Northern Ireland
Considers self to be disabled	25.2%	24.1%	30%	24.3%
Health over last 12 months:				
Excellent	12.6%	16%	14.7%	13.1%
Good	46.3%	45.6%	42.1%	37.1%
Fair	28.5%	24.5%	28.2%	34.9%
Poor	9.5%	10.1%	11.1%	13.1%
Very Poor	3.2%	3.9%	4%	1.8%
Health problems	87.5%	87.7%	88.8%	82%
Health limits activities	29.7%	30.3%	34.5%	39.9%
Accident since 1.9.2006	7.3%	8.7%	7.7%	8%
	England	Scotland	Wales	Northern Ireland
Meets relatives/friends less than once a month	3.6%	3.17%	2.5%	1.8%
	England	Scotland	Wales	Northern Ireland
Problems with space	12.7%	10.8%	11.3%	6.9%
Damp walls	4.5%	3.1%	4.8%	3.7%
Pollution, grime or other environmental problems caused by traffic or industry	6.4%	3.2%	5.4%	2.4%
	England	Scotland	Wales	Northern Ireland
Fear being a victim of crime	41.1%	38.3%	42.5%	47.4%

Source: BHPs 2008

Proxies for Capabilities

4.26 We now turn to the five proxies for capabilities that relate to: being able to keep accommodation adequately warm; being able to eat meat/fish every other day; being able to buy new clothes; being able to keep house decorated and being able to take an annual holiday. For each capability proxy, we report average incidence rates in each country in the UK, as well as statistical significance tests on the differences between each pair of countries.

4.27 Table 4.M shows the percentage of pensioners in each country who are not able to keep their home adequately warm. The differences between countries are small: Northern Ireland has the highest share of pensioners not able to keep their house warm at 1.6%, compared with 1.4% in Wales, 1.2 % in Scotland and 0.7% in England. The differences across countries are not statistically significant.

Table 4.M: Not able to keep the home adequately warm

Survey Question asked: Would you like to be able to keep your home adequately warm but must do without because you cannot afford it?	Percentage (all pensioners)
England	0.7%
Scotland	1.2%
Wales	1.4%
Northern Ireland	1.6%

Source: BHPS 2008

Note: Statistical significance tests undertaken show no significant differences across countries (see table A.1, Annex A).

4.28 Table 4.N shows the proportion of pensioners who are not able to eat meat, chicken or fish every second day because they cannot afford it. Again, the differences between countries are small and not statistically significant.

Table 4.N: Not able to buy meat/fish every second day

Survey Question asked: Would you like to be able to eat meat, chicken or fish at least every second day but must do without because you cannot afford it?	Percentage (all pensioners)
England	4.8%
Scotland	3.8%
Wales	3.3%
Northern Ireland	3.7%

Source: BHPS 2008

Note: Statistical significance tests undertaken show no significant differences across countries (see table A.1, Annex A).

4.29 Table 4.O shows the percentage of pensioners who could not afford to buy new clothes in each country. The proportion of pensioners unable to buy new clothes is statistically significantly higher in England (5.6%) and Wales (5.8%) than in Northern Ireland (2.7%).

Table 4.O: Not able to buy new clothes

Survey Question asked: Would you like to be able to buy new, rather than second hand, clothes but must do without because you cannot afford it?	Percentage (all pensioners)
England	5.6%
Scotland	4.5%
Wales	5.8%
Northern Ireland	2.7%

Source: BHPS 2008

Note: Statistical significance tests undertaken show significant differences between Northern Ireland and Wales and Northern Ireland and England (see table A.1, Annex A).

4.30 Table 4.P shows the percentage of pensioners in each country unable to keep their homes decently decorated . The figures range between 2.6% for England and Scotland and 1.8% for Northern Ireland. The differences between countries are small and not statistically significant.

Table 4.P: Not able to keep home decently decorated

Survey Question asked: Would you like to be able to keep your home in a decent state of decoration but must do without because you cannot afford it?	Percentage (all pensioners)
England	2.6%
Scotland	2.6%
Wales	2.2%
Northern Ireland	1.8%

Source: BHPS 2008

Note: Statistical significance tests undertaken show no significant differences across countries (see table A.1, Annex A).

4.31 Table 4.Q shows that in Northern Ireland, 34.3% of pensioners are unable to afford a week long annual holiday away from home, while in Wales the equivalent figure is 31.7%. In comparison, the figures for England and Scotland are statistically significantly lower at 23.3% and 22% respectively.

Table 4.Q: Not able afford a weekly annual holiday

Survey Question asked: Would you like to be able to pay for a week's annual holiday away from home but must do without because you cannot afford it?	Percentage (all pensioners)
England	23.3%
Scotland	22%
Wales	31.7%
Northern Ireland	34.3%

Source: BHPS 2008

Note: Statistical significance tests undertaken show Scotland significantly lower than Wales and Northern Ireland and England significantly lower than Wales and Northern Ireland (see table A.1, Annex A).

Analysis of all proxies for capabilities

4.32 Table 4.R below brings together, in one place, all five proxies for capabilities across all four countries. Again, it is useful to compare these measures of well-being with the simpler, income-only approach as set out in table 4.A. That showed how pensioners in England enjoyed the highest average incomes while pensioners in Northern Ireland had the lowest. Despite these differences in average income, our results show that for three out of the five proxies for capabilities (being able to keep one’s home warm, being able to eat meat or fish regularly and being able to keep one’s home decorated) there are no statistically significant differences between the four countries. For the capability proxy relating to pensioners’ ability to buy new clothes, we find that pensioners in Northern Ireland are better able to achieve this capability than those in Wales and England. These differences are statistically significant. Lastly, for the capability relating to being able to afford a holiday, we find statistical evidence that pensioners in England and Scotland do fare better than their peers in Wales and Northern Ireland.

4.33 In summary, even though average pensioner incomes are highest in England, we find that they only statistically outperform their peers in other countries in one out of the five proxies for

capabilities. Conversely, even though average income is lowest for pensioners in Northern Ireland, their capabilities are only statistically below those of their peers elsewhere in one out of the five proxies for capabilities.

Table 4.R: Proxies for capabilities

Not able to:	England	Scotland	Wales	Northern Ireland
keep the home adequately warm	0.7%	1.2%	1.4%	1.6%
eat meat/fish every second day	4.8%	3.8%	3.3%	3.7%
Buy new clothes	5.6%	4.5%	5.8%	2.7%
keep home decently decorated	2.6%	2.6%	2.2%	1.8%
afford a holiday	23.3%	22.0%	31.7%	34.3%

Source: BHPS 2008

5

Conclusion

5.1 Sen's (1992) capability approach goes well beyond both the income entitlement and the standard of living approach in that it allows us to use the concept of capability, which focuses on the ability people have to achieve the outcomes they value. In other words, Sen believes command over resources cannot be the only measure of well-being – it must be complemented by measures of potential and achieved outcomes, which relate to the ability of individuals to translate any set of resources or income into valuable outcomes.

5.2 In this study, the findings that emerge from using the capability approach differ from those emerging from the analysis based only on income. Pensioners enjoy a lower level of average income in Northern Ireland and a higher level of average income in England. However, looking at a wider set of attained outcomes and proxies for capabilities shows that pensioner well-being in both England and Northern Ireland is not consistently better or worse than elsewhere.

5.3 For example, for six out of the ten attained outcomes considered in this paper, there are statistically significant better outcomes for Northern Ireland than in at least one other country. And, even though average pensioner incomes are highest in England, we find that they only statistically outperform their peers in other countries in one out of the five proxies for capabilities. On the other hand, we also find statistical evidence that pensioners in Northern Ireland fare better than their peers elsewhere under one proxy for capability. In addition, despite differences in income between countries, on several measures of attained outcomes and proxies for capabilities there are no significant differences across countries.

5.4 These results suggest that conclusions from studies using income as the only proxy for pensioners' well-being provide only a partial picture and should be complemented with non-monetary measures for a more representative evidence base. Such wider measures can be based on additional insights arising from the capability approach framework.

5.5 Finally, the BHPS questions used as proxies for capabilities in this paper (those questions that ask pensioners about their financial ability to achieve certain outcomes) can be improved in two ways. First, pensioners could be asked about their ability in general, not just their financial ability, to achieve these outcomes. This would enable the estimation of the number of pensioners that have the financial resource to achieve these outcomes but not the capability to achieve them in other dimensions (e.g. not the necessary level of physical well-being). Second, further questions related to other key capabilities dimensions (e.g. health) could be added to the current set of questions.

A

Statistical tables

Table A.1 Results for tests of statistical significance, using Pearson's chi-squared statistic for all variables

Income/ Functioning/ proxy for capability	England vs. Wales	England vs. Scotland	England vs. Northern Ireland	Wales vs. Scotland	Wales vs. Northern Ireland	Scotland vs. Northern Ireland.
Considers self to be disabled	*				*	
Health over last 12 months:			*		*	*
Health problems			*		*	*
Health limits activities			*		*	*
Accident since 1.9.2006						
Meets relatives/friends less than once a month	*		*		*	*
Problems with space			*		*	*
Damp walls						
Pollution, grime or other environmental problems caused by traffic or industry		*	*	*	*	
Fear being a victim of crime			*		*	*
keep the home adequately warm						
eat meat/fish every second day						
Buy new clothes			*		*	
keep home decently decorated						
afford a holiday	*		*	*		*

* = Statistically significant difference at 95% confidence level.

B

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