CLUB VITA

RESEARCH NOTE 20-04

Public vs Private: Is there a sector effect in post-retirement mortality?

PUBLIC VS PRIVATE

IS THERE A SECTOR EFFECT IN POST-RETIREMENT MORTALITY?

EXECUTIVE SUMMARY

In this paper we show there is significant diversity of longevity experience for pension plans within both the public and private sectors in both the UK and Canada.

By interrogating large datasets of pension plan mortality data, we can identify data fields which predict very different longevity outcomes for individuals within pension plans. It is better to use these predictors to set a tailored assumption for a plan than to assume the same experience as the sector average.

We find there is little argument for using separate datasets to model public and private sector post-retirement longevity. Further, once we have included other more descriptive predictors, such as place of residence, occupation and affluence measures, we also find there is little to no benefit of including a public/private sector identifier to capture longevity diversity in either the UK or Canada. We expect similar results to hold in the US and will test this in our next generation US model.

The public and private sectors are distinct parts of a country's economy. The public sector is funded by taxation; public sector employers are owned by the government, usually provide services to the general population and are not operated to earn profit. In contrast, private sector employers are primarily operated to earn profits for their owners. The difference in outlook between public and private sector employers can result in different work cultures and conditions and possibly even different kinds of employees, but do these differences drive fundamentally different longevity characteristics?

Historically, actuaries have relied upon standard tables to set longevity assumptions for pension plans, with larger plans' assumptions sometimes being adjusted to reflect deviations from the expected experience under the selected standard table. In the US and Canada specific tables have been developed to reflect the average mortality in each sector[1]. These may be used as the reference tables in such investigations, or the "default" for plans too small to derive adjustments. In the UK the Continuous Mortality Investigation (CMI) has published separate public and private datasets and is also considering producing separate average post-retirement mortality tables for each sector[2].

However, individual plans rarely conform to the average, so over the last decade or so more advanced statistical techniques have been introduced to control for differences in plan demographics. One such approach is to use Generalised Linear Modelling (GLM) to identify the effects of certain characteristics (such as lifestyle, affluence or occupation) on longevity[3].

In this paper, we show how the evidence for a (post-retirement) longevity bonus (or penalty) for public sector employees varies between studies. Consistently across the UK and Canada we find that differences between plans within both the public sector and the private sector are more significant than differences between the sectors themselves. Using the GLM framework applied to Club Vita's UK and Canadian data sets we find that, once you control for other commonly available data fields, whether someone was formerly employed in the public or private sector appears to have little to no impact on their post-retirement life expectancy.

Whilst this paper focuses on results for the UK and Canada driven by Club Vita data, we believe that we will see similar results in the US. We are currently in the process of building up our US data set and will test the effect of a public sector / single-employer private sector / multi-employer private sector covariate along with other potential differentiating factors when we calibrate our second-generation US model[4].

OUR ANALYSIS

This analysis is based upon data collected by Club Vita in respect of annuitants within occupational pension plans in the UK and Canada. Club Vita currently tracks around 1 in 4 of the Defined Benefit pensioners in both the UK and Canada, reflecting the members of around 300 different occupational pension plans. More information on Club Vita is included in Appendix A. The analysis in this paper relates to the data processed by Club Vita by 31 December 2019.

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[1] For more details see the Society of Actuaries (SOA) Pub2010 and Pri2012 publications and the and the Canadian Institute of Actuaries (CIA) CPM2014 publication.

[2] CMI Working Paper 113 describes the CMI's deliberations on this issue.

[3] For a brief introduction to these techniques see for example here.

[4] For information on our first-generation model see our Zooming in on ZIP codes white paper.

1 DIFFERENCES BETWEEN PUBLIC AND PRIVATE SECTORS

There is contrasting evidence about the difference between longevity experience for public and private sector pension plan participants. When reviewing studies across the UK, Canada and the US, some studies show heavier mortality in the public sector than the private sector and some studies show the opposite. It is apparent that there is a wide diversity of membership within both the public and private sectors, and the relative strength of mortality seen in these studies really depends on the specific plans that make up the respective data sets. In summary, there does not seem to be a consistent public / private sector effect. In this section we set out some of the competing evidence along with some details of the diversity of public and private sector plans.

1.1 EVIDENCE FROM THE CLUB VITA DATA SET

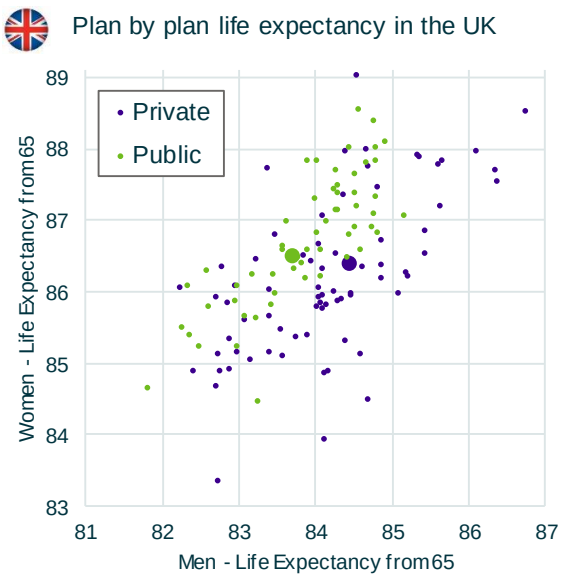
Club Vita's UK and Canadian data sets are made up of a diverse collection of pension plans. Private sector plans come from the entire range of industry types from raw materials and manufacturing through to retail and services. In the UK the public sector plans underlying Club Vita's data are generally Local Government Pension Schemes (LGPS) consisting of employees of local authorities (i.e., local government organisations that are responsible for public services and facilities) across the country. In Canada the public sector plans within Club Vita's data set cover municipal governments, provincial governments, safety services (e.g., police officers and fire fighters), healthcare and education.

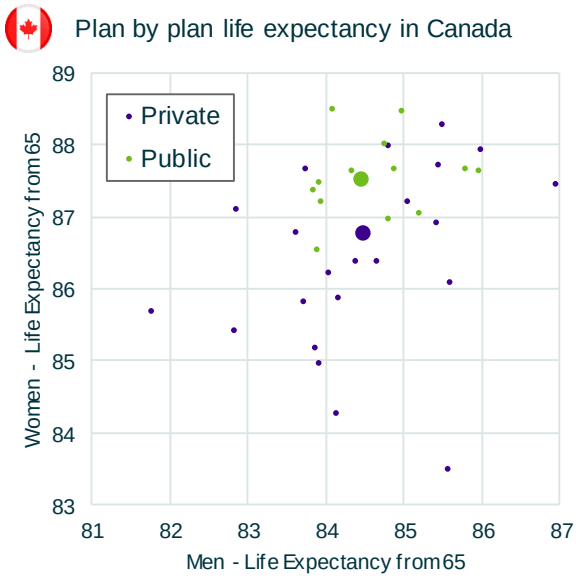
In the charts below, we compare life expectancy from age 65 of men and women in individual public and private sector plans in the UK and Canada. The larger dots show the overall average life expectancy.

In the UK, the average life expectancy for men is around nine months higher in private sector plans and comparable for women. In Canada, the average life expectancy for women is around nine months higher in public sector plans and comparable for men.

However, both sectors show a wide diversity of observations. For example, looking at UK men, around 30% of plans in the public sector have a higher life expectancy than the private sector average and around 30% of plans in the private sector have a lower life expectancy than the public sector average.

Life expectancies for public and private sector pension plans – UK and Canada





Source: Crude life expectancy from age 65 during 2014 to 2018 (UK) and 2012 to 2016 (Canada) based on analysis of Club Vita data held for large plans as at February 2020. See Appendix B for more details of calculation.

Using average post-retirement mortality tables for public and private sector pensioners will fail to capture the diversity within both sectors and will often provide a worse match to the plan's experience than the table for the alternate sector.

1.2 EVIDENCE FROM OTHER DATA SETS

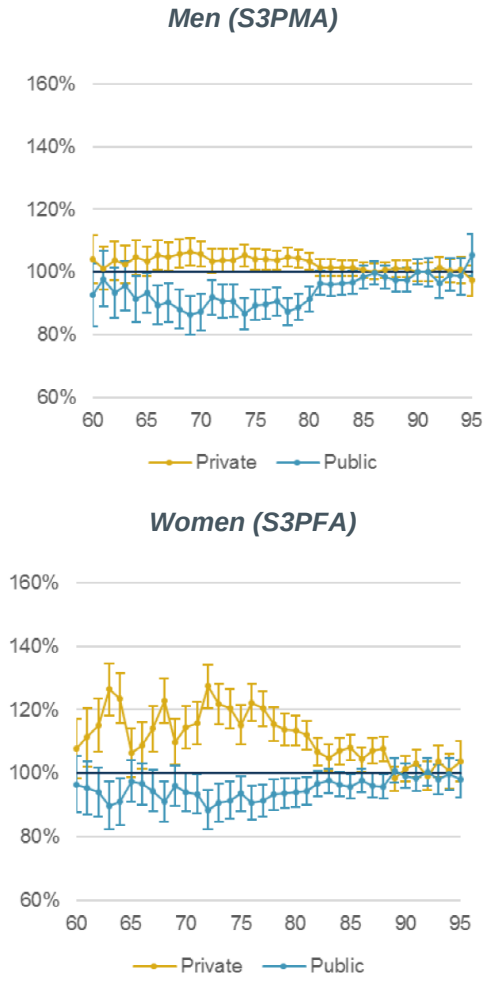
Continuous Mortality Investigation (CMI) analysis in the UK

In the UK, the Continuous Mortality Investigation (CMI) showed that the public sector data used in the creation of their SAPS S3 series of post-retirement mortality tables exhibited lighter mortality (higher life expectancy) than the private sector data. The charts to the right show ratios of public and private sector crude mortality rates to the combined crude rates together with 95% confidence intervals for the SAPS S3 pensioner datasets.

This is initially surprising, given the UK Club Vita data shows that on average male private sector pensioners have higher life expectancy (and lower mortality) and that women have similar average life expectancy. However, in their working paper on possible industry effects, the CMI further splits their public sector data into two smaller distinct groups. One of these groups is made up of local authority plans (the plans referred to as LGPS earlier). These are the same sort of plans that make up the UK Club Vita public sector data. The CMI found that these plans exhibit heavier mortality than the average for men and typical levels of mortality for women – in line with the Club Vita analysis. The CMI's group labelled "Other Public Sector" plans exhibit much lighter mortality than the average for both men and women (see chart top of next page). It is this group which drives down the overall public sector mortality, leading to the previous picture.

With distinctly different experience from two groups in the public sector, it is apparent that any 'public sector' effect in the UK will really depend on the specific plans making up the data set. This strengthens further the need to capture the diversity of experience at the plan or even the individual level.

Ratio of sector level crude mortality rates from the UK CMI's SAPS S3 dataset

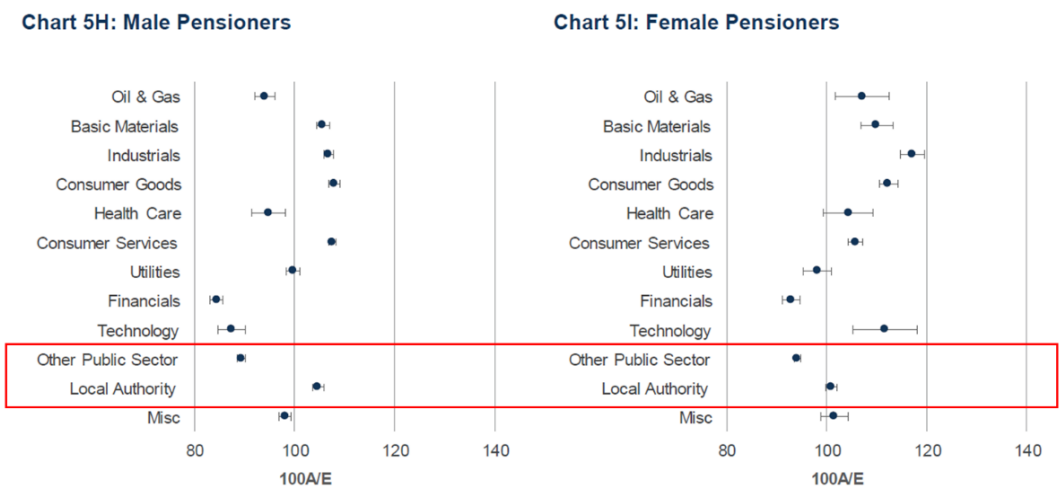


Source: Charts 7C and &D from CMI working paper 107, © Continuous Mortality Investigation Limited (see CMI's disclaimer at end of this paper).

Reference tables in the US and Canada

In the US and Canada, the Society of Actuaries (SOA) and the Canadian Institute of Actuaries (CIA) respectively have created separate mortality tables for public sector and private sector plans. The charts at the bottom of the next page show public sector mortality rates as a percentage of private sector mortality rates for different ages. The ratio is generally lower than 100%, showing that public sector mortality was on average lighter (higher life expectancy) than private sector mortality for both these studies.

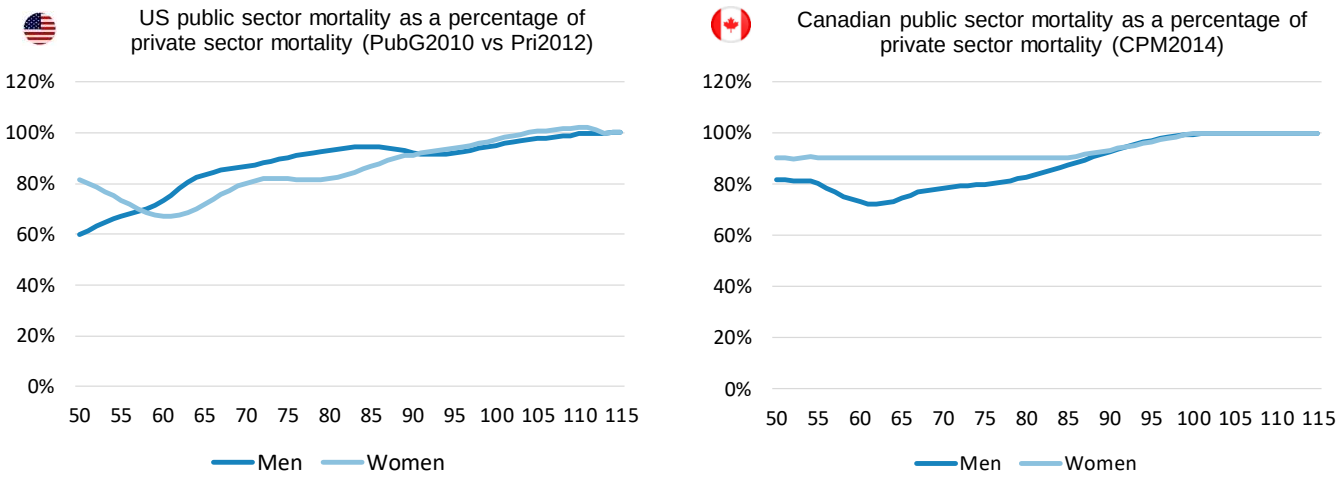
CMI analysis of relative average mortality rates by sector (UK)



Source: CMI working paper 113 © Continuous Mortality Investigation Limited (see CMI's disclaimer at the end). The chart shows the relative weight of mortality rates for different industries in the CMI data set compared with rates expected from their S3 SAPS tables.

We note that the results for the Canadian reference tables are in line with the Club Vita data for women, (where we saw a higher life expectancy in the public sector), but not for men (where we saw a similar life expectancy). This could be due to the large exposure in the CPM2014Publ data set to the education industry, which exhibited relatively light average mortality within the public sector. We also draw attention to the fact that the CIA needed to make some large adjustments to the data underpinning its tables to try to avoid over exposure to different industries with significantly different average mortality experience. We also note the SOA split their public sector tables further, to capture

Public sector mortality as a percentage of private sector mortality (US and Canada)



Source: Club Vita analysis

US: Mortality ratios relate to the SOA "General" public sector (PubG2010) mortality table rolled up from its 1 July 2010 effective date to 1 January 2012 to be consistent with the Pri2012 mortality table. In both cases amounts based tables for healthy retirees have been used. We note that the SOA "General" public sector data excludes teachers and public safety pensioners. Separate mortality tables are created for these groups which also show lighter mortality than the combined private sector data.

Canada: Mortality ratios relate to the CIA's public sector (CPM2014Publ) and private sector (CPM2014Priv) amounts based tables.

differences between teachers, public safety workers and general workers. This highlights further that any comparison between average mortality rates from the public and private sectors will be heavily influenced by the composition of the underlying data sets.[5]

The average mortality measured by the reference tables in the US and Canada show there to be lighter mortality for pensioners in the public sector for both men and women. However, as we see for Canada (and the UK), a focus on the average mortality rate disguises the level of diversity amongst the plans making up each sector. We would expect the same observation to apply in the US. A key question is whether the sector in which someone was employed is a genuine driver of longevity differentials, or simply represents a proxy for socioeconomic, affluence and/or occupation differentials within the two datasets. We explore this question in subsequent sections.

US National Longitudinal Mortality Study

The Center of Retirement Research at Boston College used the US National Longitudinal Mortality Study to compare public and private sector mortality. They concluded that public sector pensioners experienced slightly lighter mortality than those from the private sector. However, controlling for socioeconomic factors (such as education) resulted in comparable mortality rates[6].

2 SHOULD WE SEPARATE PUBLIC AND PRIVATE SECTOR DATA?

We have seen that the use of an aggregate public or private sector mortality table can significantly misestimate the average life expectancy for an individual plan. The use of a binary public or private choice to set longevity assumptions is overly simplistic and more tailored approaches should be encouraged. However, there could be some benefit in using a public/private sector variable to capture diversity within a combined modelling approach. We will focus here on the Generalised Linear Model (GLM) approach used in the creation of Club Vita's baseline mortality model, VitaCurves[7].

In general, there are two possible ways we could incorporate a public/private variable into a GLM:

- We could **stratify** the data by sector – splitting the data to fit separate curves across public and private sector data.
- Alternatively, we could treat public/private sector as a rating factor (also referred to as a **covariate**). This allows for potential effects on mortality rates and also enables us to fit curves simultaneously across both public and private sectors while also controlling for the effects of other factors such as salary, place of residence[8], or occupation.

In general, we would prefer to use the covariate approach as it makes maximum use of the data and so provides the greatest insights into differences in longevity for both sectors. However, this approach is not appropriate if:

1 There are *fundamental* differences in the **shape** of mortality with age; or

2 The covariates themselves have a *fundamental* difference in **meaning** for different values of the variable in question. For example, pension amounts for pensioners and dependants are not directly comparable – dependant pensions tend to be consistently lower than the first life pension.

[5] For more details see section 2.1.5 and Appendix 2 in the CIA's 2014 Canadian Pensioners' Mortality report.

[6] Munnell, Aubrey and Sanzenbacher Does Mortality Differ Between Public and Private Sector workers, Center for Retirement Research at Boston College, State and Local Pension Plans 44, June 2015

[7] More detailed exposition of how these techniques are used by Club Vita to identify detailed longevity assumptions can be found in What longevity predictors should be allowed for when valuing pension scheme liabilities? (UK), Key factors for explaining differences in Canadian pensioner baseline mortality (Canada) and Calibrating ZIP+4 VitaCurves (US).

[8] Measured using postcode (UK), postal code (Canada) or ZIP+4 code (US).

2.1 IS THERE A DIFFERENCE IN SHAPE?

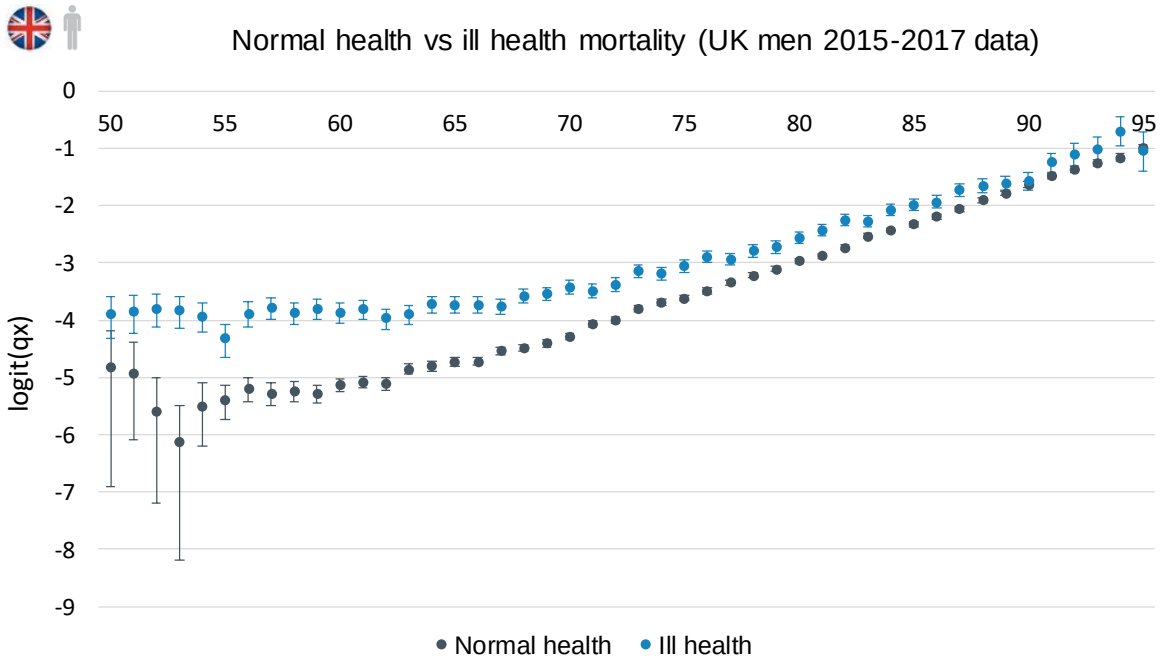
Under a GLM for mortality rates, we transform the mortality rates so that they can be represented as a linear function of covariates. To capture the features of the "shape of mortality with age" these terms can include "polynomial" terms in age. We then use our covariates to vary the properties of this shape (for example shifting it up or down or making it steeper or less steep). If public and private sector pensioners have a fundamentally different shape by age, then the curves generated using a combined dataset will blend these different shapes into an average which cannot be readily adjusted to match the shape of either the public or private subset.

An example of this difference in shape can be seen in the plots for pensioners retiring in ill health (i.e., disabled retirements) and normal health from Club Vita's UK data set. The chart below shows crude mortality rates for the different groups (plotted on a logit scale[9]).

Because of the fundamental difference in shape at younger ages (specifically below age 75), we build separate models for these different groups.

In contrast, the charts at the top of the following page show comparable analysis for Club Vita's UK and Canadian public and private sector pensioner data.

As we can see, the shapes of the mortality curves for the Club Vita public and private sector data are very similar across the entire age range. Therefore, to the extent that public or private sector does influence mortality rates, we should be able to capture this influence as a covariate rather than a stratification by public and private sector pensioners (i.e., there is no need to "lose information" by segmenting the data).

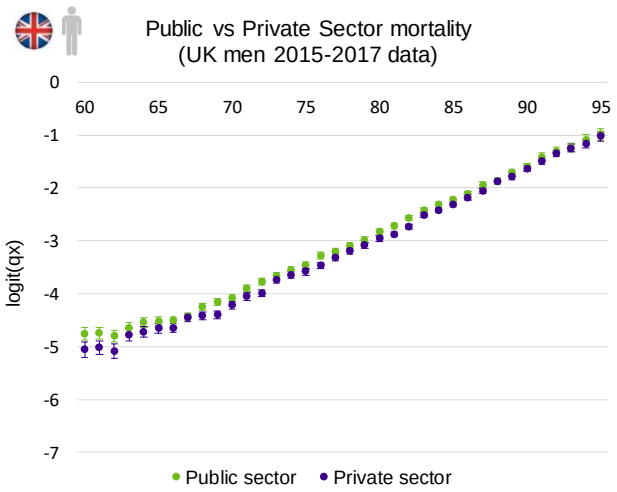


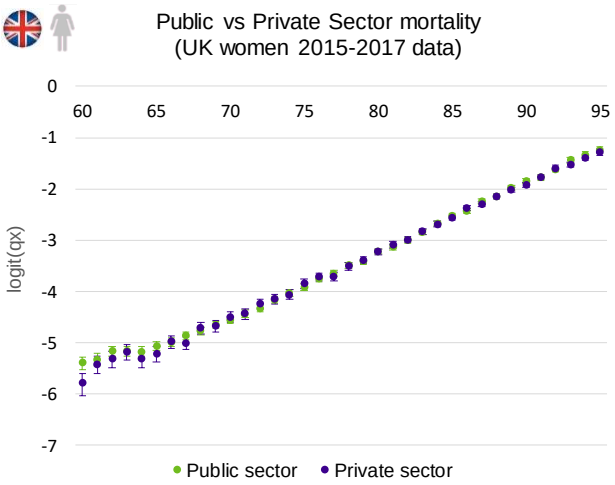
Source: Crude mortality rates with 95% confidence intervals, 2015-2017 Club Vita data

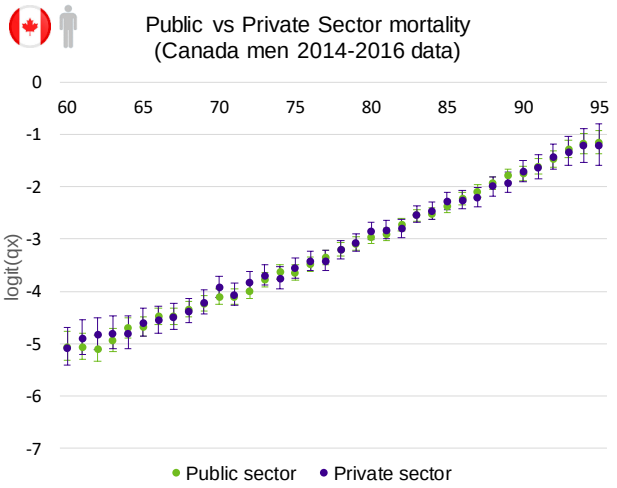
[9] More detailed exposition of how these techniques are used by Club Vita to identify detailed longevity assumptions can be found in What longevity predictors should be allowed for when valuing pension scheme liabilities? (UK), Key factors for explaining differences in Canadian pensioner baseline mortality (Canada) and Calibrating ZIP+4 VitaCurves (US).

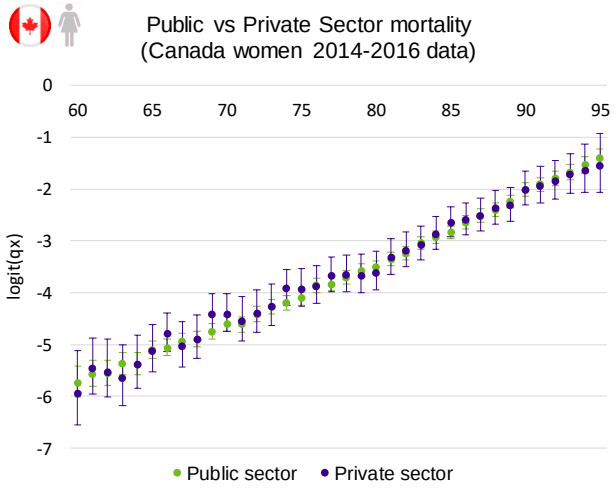
[8] Measured using postcode (UK), postal code (Canada) or ZIP+4 code (US)

[9] This is the transformation we apply to mortality rates to achieve a broadly linear shape. See our Longevity Lexicon for an explanation.









Source: Crude pensioner mortality rates with 95% confidence intervals, 2015-2017 normal health (UK), 2014-2016 all health (Canada)

2.2 DO OTHER VARIABLES HAVE DIFFERENT MEANINGS?

The other variables we consider in our VitaCurves baseline mortality model are place of residence, pension amount, salary, retirement health, pension form (i.e., joint/single life pension[10]) and manual/non-manual occupation type (i.e., blue/white collar). It is hard to see strong reasons for these variables having fundamentally different meanings for public and private sector employees.

The closest argument is that similarities in benefit structures within public sector plans together with the potential for longer service in the public sector could result in a slight systemic difference in pension amounts. However, the private sector also contains industries associated with long service (e.g., privatised utility companies) and a variety of benefit structures, many of which are broadly equivalent to common public sector benefit structures. Any systemic difference is likely to be small and could potentially be captured by a public/private covariate rather than by splitting the data sets completely.

On this basis we would argue that stratification by public/private sector is not justified. Instead it should be retained as a candidate covariate to maximise

[10] Canada only, forthcoming in US

the data informing the model fitting and allow the data to tell us if it is a useful predictor of longevity differences.

3 SHOULD WE ADD PUBLIC/PRIVATE SECTOR AS A COVARIATE?

When fitting a model to data with a range of potential predictors, it is important to have objective measures with which to assess the benefit of introducing new covariates. When constructing our VitaCurves model, we use two statistical measures, the Akaike Information Criterion (AIC) and the Bayesian Information Criterion (BIC). Both measures increase in magnitude with a better fit of the model to the underlying data. To avoid over-fitting, each measure also penalises the addition of extra variables; there is a "tipping point" whereby adding an extra variable adds spurious complexity to the model which is not justified by the improvement in fit to the underlying data. We have used these two measures to assess the use of a public/private sector covariate in the UK and Canadian VitaCurves models.

For ease of presentation we only show the results here for the AIC. We note that using the BIC instead gives the same overall results with respect to the importance of the public/private sector variable. We have used pension amount, rather than salary, as the affluence measure throughout to maximise the underlying data set analysed[11]. A summary of the data underlying these calculations is provided in the Appendix B.

The charts on the following page show the change in the AIC measure after introducing different covariates to our models for normal health pensioners in the UK and all health pensioners in Canada. The covariates being assessed are:

- **Longevity group (driven by place of residence);**
- **Pension amount;**
- **Occupation (manual, non-manual or unknown);**
- **Pension form (joint, single life or unknown - proxy for marital status, only available in Canada); and**
- **(Former) Public or private sector employee**

The bigger the bar in each chart, the better the model[12]. The charts step through the covariates by level of importance, at each step assessing whether adding an extra covariate is advantageous and if so, which covariate is best to add[13]. To see the effect of the public/private sector variable observe the **green** bars.

STEP 1:

We first look at the effect of introducing each variable on their own to assess the single most important covariate.

We see how

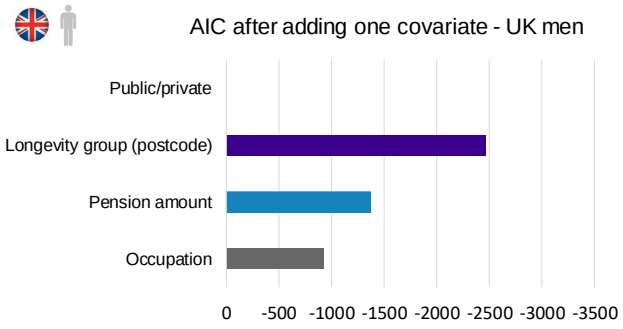
- The most important covariate (by quite a distance) for both UK and Canadian pensioners is the longevity group (set based on place of residence).
- The public/private sector covariate is the least beneficial for all our data sets. In fact, it actually has a negative impact on the model when introduced for UK men and Canadian men and women.

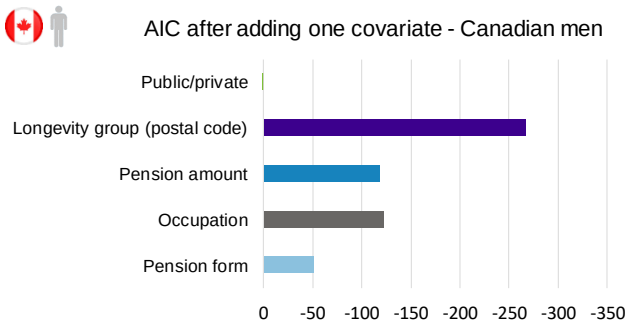
[11] The data set analysed needs to contain every data field for each individual included. In general, we find that salary is preferable to pension amount as a proxy for affluence, but it is not available for all participants.

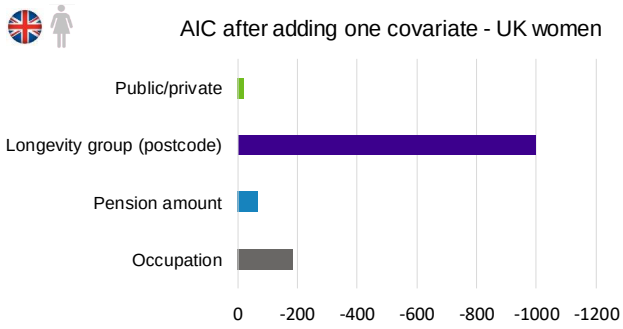
[12] **Technical note:** AIC values are negative, and the general aim is to *minimise* this measure. The changes shown are the reductions in the AIC measure for presentational convenience.

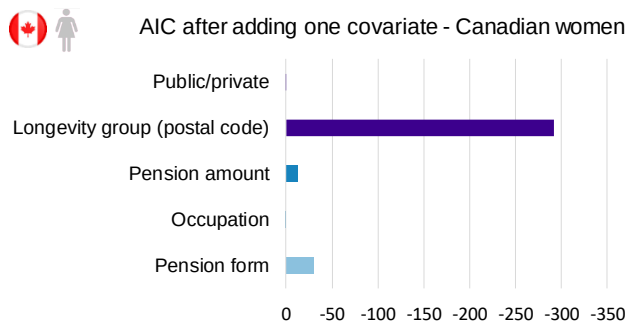
[13] **Technical note:** We have introduced additional rating factors as simple "main effects" i.e. shifts of the mortality curve up and down. An optimised model is likely to include interactions with the age term to capture the compensation law of mortality (convergence with age across covariate profiles). Whilst it would be possible to optimise the models at each stage using these extra interaction terms, in our experience this would tend only to change "borderline" conclusion in the stepwise analysis of the benefits of adding additional covariates presented here.

STEP 1 – RESULTS



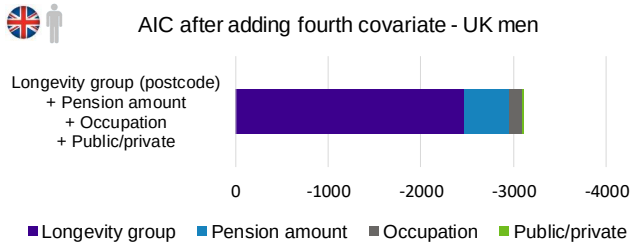


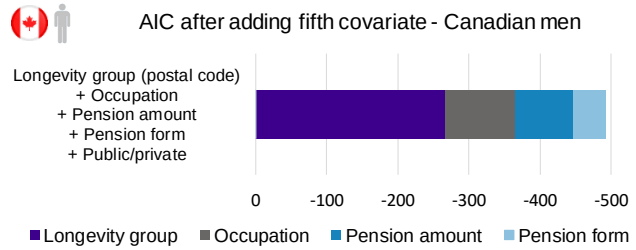


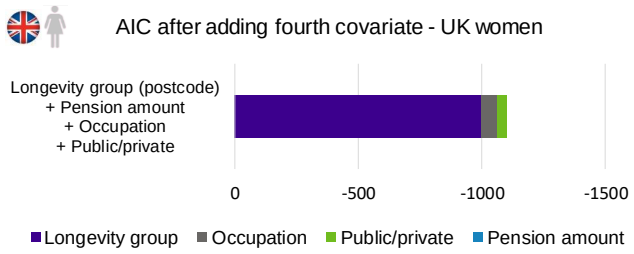


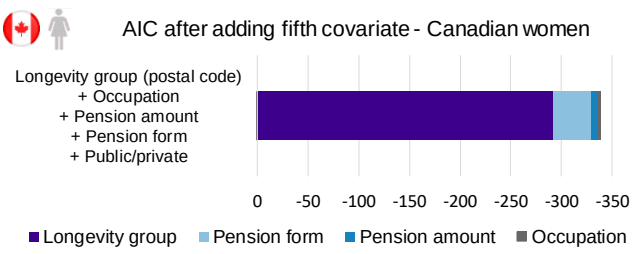
Source: Club Vita analysis, see Appendix B for details of data.

STEP 2 - RESULTS









Source: Club Vita analysis, see Appendix B for details of data.

STEP 2:

For each group we step through the covariates, selecting the most useful and testing the improvement to the model of adding each of the remaining covariates. This gives us an analysis of the order of importance of each covariate for creating a model for our different groups. After stepping through the covariates in order of importance we obtain the following results:

- For UK men, Canadian men and Canadian women, the public/private sector covariate adds little to no benefit to the model (there is no green in the Canadian charts and only a tiny sliver of green at the 4th covariate level for UK men).
- For UK women the public/private sector covariate adds some marginal benefit at the third covariate level. However, the effectiveness of the model is really driven by longevity group and as we saw in step 1, if you did not have longevity group (postcode) data for a participant it would be better to use pension amount or occupation instead as a primary covariate.

A public/private sector covariate is not fundamental to capturing differences in longevity between individuals for any of the groups examined.

There could be some marginal benefit for introducing it to the analysis for UK women. However, to date we have not included it in our model:

a) For consistency with our VitaCurves for pensioner men (we would prefer to use the same covariates for both groups, and at an overall plan level the benefit of using sector as a covariate will be marginal)

b) To avoid a proliferation of VitaCurves (each covariate included in the model at least doubles the number of curves required)

We will continue to monitor the situation and may add public / private as a covariate in the UK if the evidence becomes more compelling.

4 CONCLUSION

We have seen there is a great variety in life expectancy outcomes for both private and public sector pension plans. The average life expectancy amongst participants in some public sector plans exceeds those in some private sector plans and vice versa. Whether or not public sector pensioners have higher or lower life expectancy than their private sector counterparts depend very much on the mix of plans (or individuals) you include in your comparison.

Our analysis shows that amongst the different covariates that we can use to predict life expectancy amongst British and Canadian pensioners, whether someone worked in the public or private sector provides little to no extra benefit. We expect there also to be little difference in public and private sector pensioners in the US (once we have controlled for other factors) and look forward to investigating this further when we have built up our US data set.

Regardless of whether you are setting assumptions for a private or public sector plan, our findings highlight the importance of capturing the diversity of different pension plans (and even the individuals within those plans). Using an approach which allows for the characteristics of your membership (place of residence, pension amount, occupation etc) and builds on datasets containing both public and private sector data will provide for a much more tailored estimate of life expectancy than an approach which relies on a binary “public or private” choice.

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RELIANCES & LIMITATIONS

In this paper (the "Paper"), Club Vita LLP ("Club Vita") has provided an overview of the evidence for a differential in the mortality rates of public and private sector pensioners observed in the Club Vita datasets both in the UK and Canada as well as other relevant research in the UK, Canada and the US. The Paper is based upon Club Vita's understanding of legislation and events as of April 2020 and therefore may be subject to change. Future actuarial measurements may differ significantly from the estimates presented in the Paper due to experience differing from that anticipated by the demographic, economic or other assumptions. The Paper should not be construed as advice and therefore not be considered a substitute for specific advice in relation to individual circumstances and should not be relied upon. Where the subject of the Paper refers to legal matters please note that Club Vita is not qualified to give legal advice, therefore we recommend that you seek legal advice if you are wishing to address any legal matters discussed in this Paper. Please be advised that Club Vita (nor its respective licensors) does not accept any duty, liability or responsibility regarding the use of the Paper, except where we have agreed to do so in writing.

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APPENDIX A: ABOUT CLUB VITA

A1 CLUB VITA

Established in 2008, Club Vita is the leading provider of longevity analytics to occupational pension plans in the UK, Canada and the US.

A2 THE DATASET

The Club Vita database is drawn annually from the administration systems of large occupational defined-benefit pension plans. It currently covers:

- Over 230 UK pension schemes
- Over 100 US pension plans
- Over 60 Canadian pension plans

This dataset ('VitaBank') contains pensioner mortality data from the early 1970s onwards, with substantial (and statistically meaningful) volumes from the early 1990s. We have a diverse sample of the retired populations in the UK, Canada and US representing a broad range of industries and geographies. In the UK and Canada this data represents **one in four** of all those with a DB pension.

All data undergoes rigorous data cleansing prior to entry to the dataset. As a result of these checks we are, for example, able to:

- Identify the date from which a plan has a full record of deaths

  This ensures we only use a plan's data from the point where we have full reporting of data.

- Identify whether the rating factor data we have is reliable, for example, that pension amounts are credible (given salary)

  This enables us to exclude records where there are concerns on data quality – this is done in a way that avoids introducing biases, for example, via excluding more death records than living records.

- Maximise the quality of data via:
  - Verification and correction of postcodes
  - Existence verification exercises *(we routinely verify that there are no unrecorded deaths amongst the 85+ population)*

A3 THE 'VITACURVES' RATING FACTOR MODEL

Since VitaBank is drawn directly from administration systems, we have detailed information on each and every individual. This means we are able to readily differentiate mortality rates, and improvements therein, by factors such as occupation, affluence, and postcode-based lifestyle factors.

Using these data we have developed a proprietary rating factor model whereby individual pension plan members have age specific mortality rates determined by his or her specific characteristics. These mortality rates have been graduated from first principles using generalised linear models (GLMs) rather than relying on ad hoc adjustments to published tables. This ensures that the pattern of convergence of mortality with advanced age is correctly captured. Currently the rating factor model captures a spread of over 10 years in life expectancy from age 65.

The rating factor model ('VitaCurves') is fully documented and the methods have been published and peer reviewed by the UK[14] and Canadian[15] actuarial professions. For further information on accessing Club Vita's analysis contact Mark Sharkey (UK), Erik Pickett (US) or Richard Brown (Canada).

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[14] https://doi.org/10.1017/S1357321711000018

[15] https://www.cia-ica.ca/docs/default-source/2018/218068.pdf

APPENDIX B: SUMMARY OF CALCULATIONS AND DATA RELIED UPON

B1 CRUDE LIFE EXPECTANCIES

In section 2.1, plans have only been included where there is more than 1,000 years of exposed to risk over the period assessed. Plans with lower exposures are likely to be subject to too much random variation for the observation to be meaningful. Plans with no or very few individuals at older ages (85+) have also been excluded. To avoid problems with the sparseness of data at extreme old ages the mortality rates have been calculated in five-year age bands and at the oldest age bands, VitaBank's average data is used where plans have insufficient data to use their own crude death rates.

In calculating the life expectancies, we have included widow(er)s experience. This reduces random variation in the life expectancy calculation for women and provides insight into mortality rates at the oldest ages where there are considerable volumes of data in relation to widows.

B2 DATA RELIED UPON

In the table below, we give a summary of the data volumes relied upon for the Club Vita analysis presented in this paper.

Data description	Where used	Lives exposed to risk	Number of deaths
UK male pensioners and dependants 2014-2018	Section 2.1	4,475,797	144,954
UK female pensioners and dependants 2014-2018		5,069,949	152,973
Canada male pensioners and dependants 2012-2016		1,225,462	38,487
Canada female pensioners and dependants 2012-2016		690,463	40,374
UK male pensioners 2015-2017	Section 3.1 Section 4	1,693,638	54,151
UK female pensioners 2015-17		1,403,856	26,410
Canada male pensioners 2014-2016		1,225,462	38,487
Canada female pensioners 2014-2016		649,527	14,074