FEATURE ARTICLE

IMPACT OF THE IMPLEMENTATION OF RETIREMENT AND RE-EMPLOYMENT ACT ON OLDER WORKERS' EMPLOYMENT OUTCOMES

BACKGROUND

In 2012, the Retirement and Re-employment Act (RRA) was enacted for older workers to work beyond the retirement age of 62 by setting out re-employment conditions under which employers are to offer eligible workers re-employment.

FINDINGS ON THE IMPACT OF THE RRA

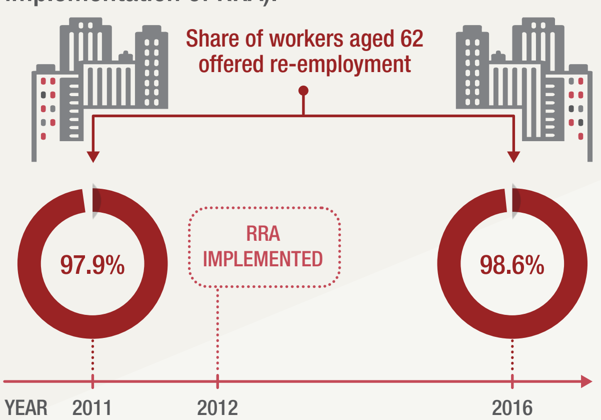
The RRA has raised employment rate of the targeted group of employees by an average of 1.6 percentage-points per annum since implementation.

RRA: Eligible workers aged 62 to 65 to be offered re-employment → RESULTS IN → **1.6%-points** increase per annum in employment rate[1] of targeted group of employees

CHANNELS THROUGH WHICH THE RRA OPERATES

The RRA could have affected[2] employment rates via two channels.

Firms' demand for workers channel: The RRA could directly affect firms' demand for workers as it compels employers to offer re-employment to eligible employees past the statutory retirement age of 62. However, this channel could be limited as most who turned 62 and wished to continue working were already offered re-employment in 2011 (prior to the implementation of RRA).



Social norm channel: The RRA could have set the age of 65 as the new "mental anchor" for workers in terms of the appropriate age to retire, instead of the statutory retirement age of 62.

Note:
[1] *Note that the definition of employment rate in this study deviates from the official definition. Refer to the write-up for the difference between the two.*
[2] *While retirement policies in other countries typically links pension payout to retirement age, the RRA is not linked to pension age eligibility. Hence, it does not change the financial incentives of older workers to continue working at different ages.*

EXECUTIVE SUMMARY

- The Retirement and Re-employment Act (RRA) was implemented in 2012 to provide older workers with the opportunity to work beyond the age of 62 by setting out the conditions under which employers are to offer eligible workers re-employment till age 65. This study evaluates the impact of the implementation of the RRA on the employment outcomes of older workers.
- We find that the RRA has raised the employment rate[1] of the older employees covered by the RRA by an average of 1.6 percentage-points per annum since implementation. The RRA likely affected employment rates through the social norm channel, as workers could have taken the re-employment age of 65 as the new "mental anchor" on the appropriate age to retire, instead of the statutory retirement age of 62. We also find no evidence of a pre-emptive shedding of older workers in 2011 before the implementation of the RRA.

The views expressed in this paper are solely those of the authors and do not necessarily reflect those of the Ministry of Trade and Industry, Ministry of Manpower, or the Government of Singapore.[2]

INTRODUCTION

Against the backdrop of an aging workforce, the Retirement and Re-employment Act (RRA) was enacted in 2012[3] to provide older workers with the opportunity to work longer, while allowing employers the flexibility to continue to tap on the experience of older workers. Specifically, the RRA sets out the conditions under which employers are to offer eligible[4] workers re-employment beyond the retirement age of 62, up to age 65. In the event employers are unable to do so after a thorough review, employers are required to offer Employment Assistance Payment to help the workers while they look for alternative employment or undergo re-training.

In this study, we examine the employment outcomes of older workers arising from the implementation of the RRA. The RRA may affect the employment outcomes of older workers through the following channels: (i) firms' demand for older workers as the legislation requires them to offer re-employment beyond age 62 and up to age 65, and (ii) supply of older workers (i.e., their decision to accept re-employment past age 62). In addition, we investigate whether there were pre-emptive layoffs of older workers by firms before the re-employment obligations under the RRA came into force in 2012[5].

The rest of the paper is organised as follows. We first present a brief literature review. We then discuss the data and empirical methodology used to quantify the net impact of the RRA on employment outcomes. Lastly, we present the results before concluding.

[1] For the ease of communicating the results, the employment rate in this study refers to the share of workers who continued in employment out of the full sample of workers who had worked for the same employer in the past three years (note that to be eligible for re-employment under the RRA, one of the requirements is that workers have to have served the current employer for at least three years before turning 62). This is a working definition of the employment rate used for this study and differs from the official definition which refers to the proportion of employed persons in the working-age population.

[2] We would like to thank Tan Kok Kong, Tee Koon Hui, Yong Yik Wei and Andy Feng for their useful suggestions and comments. We are also grateful to Toh Hanqing, Teo Ya Chih and Sim Li Chuan for their support and inputs to this study. All remaining errors belong to the authors.

[3] The intention to enact RRA was announced in 2007, which stipulated that the re-employment legislation will be enacted in 2012. See Annex A for a brief timeline of retirement-related legislation in Singapore.

[4] Broadly, workers are eligible for re-employment if they (i) are Singapore citizens or permanent residents, (ii) have served the current employer for at least three years before turning 62 years of age, (iii) have satisfactory work performance as assessed by the employer, and (iv) are medically fit to continue working.

[5] Under the Retirement Age Act which was introduced in 1993, it is an offence to dismiss workers below the statutory minimum retirement age (60 in 1993, and later raised to 62 in 1999). If employers are found guilty of dismissing workers on grounds of age, MOM will take appropriate enforcement actions.

LITERATURE REVIEW

Many studies[6] have found that an increase in pension-linked retirement age leads to relatively large increases in employment rates. For example, in Austria, two pension reforms raised the early retirement age at which individuals can first claim retirement benefits from 60 to 62 for men, and from 55 to 58.25 for women. The reforms led to the employment rates of affected men and women rising by 9.8 and 11 percentage-points respectively. In the UK, the state pension age for women was increased from 60 to 61, and caused the employment rate of women at age 60 to rise by 7.3 percentage-points. Such results are likely driven in part by financial incentives where, for example, the raising of pension-linked retirement age makes it necessary for those with lesser means to continue working to make up for the loss in pension income.

Other than financial incentives, behavioural explanations such as social norms are likely to have also played a part[7]. A study by Behaghel and Blau (2012) provides evidence of social norms at play in retirement decisions. The authors found that in the US, a pre-existing spike in retirement at age 65 shifted in tandem with a reform to delay the full retirement age[8] by a few months, even though the reform did not create substantial financial incentives for workers to change the age at which they retire[9]. The authors argued that the workers' retirement behaviour and responses to the policy change reflected an aversion to deviating from the official retirement age norm. In particular, workers could have perceived that they would be in a worse-off situation if they deviated from a perceived social norm or "mental anchor" on the age to retire.

IMPACT CHANNELS OF THE RRA

The RRA could affect the employment outcomes of older workers through both supply and demand channels. On the supply-side, as the RRA is not linked to age eligibility for Central Provident Fund (CPF) pay-outs from individuals' retirement accounts, older workers' decision to accept re-employment and continue working is unlikely to be influenced by financial incentives[10]. Rather, such decisions could be affected through the social norm channel. By stipulating that workers are eligible for re-employment up to the age of 65, the RRA could have set the age of 65 as the new "mental anchor" for workers in terms of the appropriate age to retire, instead of the statutory retirement age of 62. More workers may then continue to work till 65 years old, thereby raising the employment rate of older persons. Indeed, among private sector local employees offered re-employment at age 62, the percentage who accepted the offer increased from 94.8 per cent in 2011 (prior to the implementation of the RRA) to 98.1 per cent in 2016.

On the demand-side, the RRA could directly affect firms' demand for workers as it compels employers to offer re-employment to eligible employees past age 62. However, the RRA's impact on firms' demand is likely to be limited as private sector firms were already offering re-employment to a large majority (97.9 per cent) of workers who just turned 62 and wished to continue working in 2011 (prior to the implementation of RRA) (Exhibit 1). In addition, the majority of workers who accepted re-employment in the same job at age 62, either on a new or existing contract, did not see a wage reduction upon re-employment both before and after the implementation of the RRA, suggesting that firms continued to have a strong demand for such workers. The strong demand for older workers by firms could in part be due to the relatively tight labour market during this period, given the tightened foreign worker policy.

[6] *See Staubli and Zweimuller (2013), Cribb, Emmerson & Tetlow (2014) and Mastrobuoni (2009) for studies on the impact of changes in pension-linked retirement age in the US, UK and Austria respectively.*

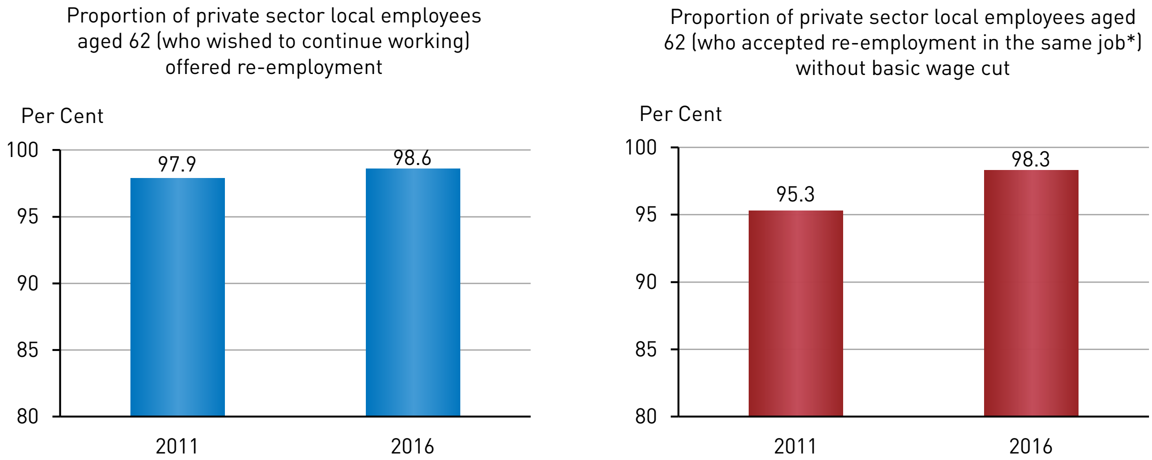
[7] *For example, a comprehensive study of social security provisions and retirement behaviour in 11 developed countries showed that even very detailed empirical models of retirement incentives could not fully account for the large jumps in retirement rates at the normal and early pension eligibility age, which suggests that social norm could have caused a significant group of people to retire at a specific age. See Gruber and Wise (2004).*

[8] *The full retirement age (FRA) is the reference age at which a pension benefit claimant can receive a specific amount of benefit. The reform delayed the FRA and was equivalent to cutting the benefits for claimants claiming at ages from 62 to 70, i.e., the benefits schedule shifted downwards for all claiming age.*

[9] *The authors evaluated that the change in financial incentives due to the cut in benefits was too small to account for the shift in the spike in retirement age to coincide with the new FRA.*

[10] *This is distinct from many developed countries where the retirement age is linked directly to age eligibility for pension withdrawal.*

Exhibit 1: A large majority of private sector local employees aged 62 who wished to continue working were offered re-employment in both 2011 and 2016, and a large majority of those who accepted re-employment in the same job* did so without experiencing a cut in basic wages



Source: Labour Market Supplementary Survey, Manpower Research and Statistics Department, MOM
*Note: Re-employment in the same job refers to either a new contract or a continuation on an existing contract. In 2016, 99.5% of the re-employment offered to local employees aged 62 were of this form.

The RRA is also unlikely to impose a costly burden on employers as flexibility for employers has been built into the RRA. For example, employers are allowed to assess whether the employees meet work performance standards before offering them re-employment. Re-employment also need not be for the same job, as both the employer and employee have the flexibility to make changes to existing job arrangements to suit their needs, including lesser work load and correspondingly lesser pay. Nevertheless, if the RRA is costly to employers, there is a possibility that firms could have pre-emptively laid off older workers before the RRA came into force in 2012. We investigate whether this was systematically observed in 2011 in our analysis below.

In summary, we expect the net impact of the RRA on the employment outcomes of older workers to be positive, though modest. First, on the supply-side, the RRA is not linked to pension age eligibility, which means that the financial incentives to adjust retirement behaviour may not be large. Second, on the demand-side, the RRA's impact on firms' demand is likely to be limited given that most firms were already offering re-employment past age 62 before 2012. Instead, the likely channel affecting the employment outcomes of older workers could be through the changing of the social norm on the appropriate age to retire.

DATA AND EMPIRICAL METHODOLOGY

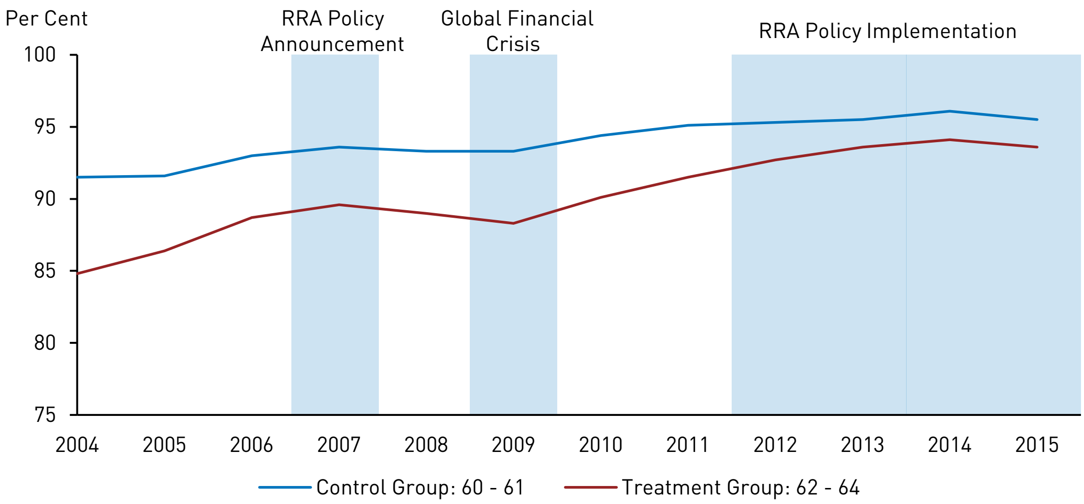
To study the impact of the implementation of the RRA, we use an individual-level dataset collected from administrative sources that contains variables such as gross wages, industry, gender and age. The dataset spans the period of 2001 to 2015.

As the RRA covers Singaporeans and permanent residents who have served their current employers for at least three years prior to them turning age 62, we only include in the dataset individuals in each year who fulfilled this criteria. We then construct the employment outcome (i.e., employed or not employed) for each individual in each year. The constructed employment outcomes for the individuals sum up to an employment rate for each age group in each year. As such, our employment rate for each group in each year show the share of workers in that group who continued working that year, having already worked for the same employer in the past three years.

The employment rates for two age bands are plotted in Exhibit 2 – the first band contains individuals aged 60 and 61, while the second band contains individuals aged 62 to 64 (i.e., the target group covered by the re-employment provisions in the RRA). We observe the following trends:

(i) Employment rates of individuals in both bands had been generally rising over the years, reflecting delayed retirement;
(ii) Employment rates of individuals in both bands dipped slightly during the Global Financial Crisis, likely due to a stressed labour market then; and
(iii) The employment rate of individuals in the 62 to 64 age band who were affected by the RRA rose at a faster pace than that of individuals in the 60 to 61 age band from 2012 to 2015, suggestive of a positive impact due to the implementation of the RRA.

Exhibit 2: Employment Rates of Workers by two Age Bands



However, these top line trends do not take into account factors such as industry composition which could differ across age cohorts. To control for these factors and also to establish statistical significance, we formally estimate the impact of the RRA on employment rate by adopting a difference-in-differences (DID) regression strategy. Specifically, by exploiting the RRA age eligibility criterion, we compare changes in the employment outcomes of individuals who were eligible for RRA by age (62 to 64 years old) with the outcomes of individuals who were slightly younger and hence not eligible for RRA (60 to 61 years old), while controlling for the characteristics of the individuals (e.g., gender and industry of employment). In the absence of the RRA, the employment rate of the older group of individuals is likely to have continued on an upward trend. Using the slightly younger group of individuals as a control group allows us to take into account this counterfactual upward trend, thereby enabling the causal impact of the RRA to be isolated.

We implement the DID by pooling together individuals in the 2011 to 2015 time periods who were aged 60 to 64. The regression specification is:

$$y_{iat} = \beta_1 + \beta_2 D_t + \beta_3 T_{at} + \beta_4 T_{at} \times D_t + \sum_{k=1}^{2} \beta_k \text{controls}_{it} + \epsilon_{iat} \quad (1)$$

Where:

y_{iat} represents employment outcome of individual i, of age band a, in year t (i.e., whether the individual from a specific age band was working in year t or not);

D_t is a vector of time dummies taking a value of 1 for each year since the implementation of the RRA (i.e., 2012 and beyond). It accounts for any macro-economic effects (e.g., economic fluctuations) during the periods of observation;

T_{at} is a dummy taking a value of 1 if an individual i meets the RRA's age eligibility criterion (i.e., age band containing individuals aged 62 to 64) in year t and 0 otherwise;

$T_{at} \times D_t$ is the interaction term and its coefficient measures the effect of the RRA;

β_1 is a constant;

controls_{it} include gender and industry dummies.

The coefficient of interest is β_4, which measures the impact of the RRA on employment outcomes. It captures the net impact of the RRA through both the demand and supply channels. A positive coefficient suggests that the RRA led to older workers continuing to work beyond 62 years old.

To determine whether the above empirical strategy is valid, we first conduct a parallel trends test using year 2010 and 2011 to examine whether the employment rate trends of the two age bands (i.e., 60-61 age band and 62-64 age band) were similar before the RRA was implemented in 2012. In line with the top line trends in Exhibit 2, Exhibit 3 below shows that there is no significant difference in the employment trends of individuals in the two age bands in 2011 before the implementation of the RRA.

Exhibit 3: Regression Results for Parallel Trend Test

Dependent variable: Employment outcome of individuals covered by RRA	
Impact in 2011: $T_{at} \times D_t\ (\beta_4)$	0.0066
Number of observations	90,069

*, ** and *** indicate significance at the 95%, 99%, and 99.5% levels, respectively

To further investigate if there was pre-emptive shedding of older workers by firms before the re-employment obligation came into force in 2012, we run a similar regression specification as equation (1), but with the following changes. <u>First</u>, for the time periods, we examine a sample of workers from 2010 to 2011. <u>Second</u>, we only include in the dataset individuals in each year who had worked for at least two (instead of three) years with the same employer and were aged 60 to 63. We focus on these workers as they would have been covered by RRA in the subsequent year and as such, were at risk of being pre-emptively shed in 2011.

RESULTS AND DISCUSSION

Our findings suggest that the RRA has a positive, though small, impact on the employment rate of eligible older workers, raising it by 1.6 percentage-points on average per annum (Exhibit 4). As the RRA's impact on firms' demand for older workers is likely to be negligible, the modest positive impact is likely to be due to social norms; that is, more workers decided to continue working in line with the new "mental anchor" of retirement, linked to the re-employment age of 65. Hence, despite the fact that a large majority of private sector firms were already offering re-employment before 2012, the implementation of the RRA still had a positive impact in encouraging workers to continue working beyond age 62.

Separately, we find no evidence of the pre-emptive shedding of workers in 2011 before the implementation of the RRA as can be seen from the results in column 2 of Exhibit 4. It is likely that employers were making decisions on the employment of their workers based on business considerations and the ability of their workers, rather than trying to replace them pre-emptively which could be disruptive to business. This finding is consistent with our view that the RRA is not onerous on employers and did not reduce the demand for workers by firms.

Exhibit 4: Regression Results

Dependent variable: Employment outcome of individuals covered by RRA		
	(1)	(2)
Impact of RRA: $T_{at} \times D_t\ (\beta_4)$	0.016***	0.0054
Time periods (Year)	2011 to 2015	2010 to 2011
Number of observations	289,381	89,343

*, ** and *** indicate significance at the 95%, 99%, and 99.5% levels, respectively
Standard errors are clustered at individual level

CONCLUSION

Against the backdrop of an aging workforce, the RRA was enacted in 2012 to provide opportunities for older workers to work beyond the retirement age of 62. The introduction of the RRA in 2012, coupled with the efforts by the tripartite partners to encourage age-friendly workplaces, has made a positive impact on the employment of older Singaporeans. This study finds that the RRA has raised the employment rate of the targeted group of older employees by an average of 1.6 percentage-points per annum since its implementation, possibly by influencing retirement social norms on the supply-side.

From 1 July 2017, the re-employment age will be raised from 65 to 67 to allow older workers to work longer. Besides legislative changes, the government will continue to shape policies to be inclusive for older workers and to help them work for as long as they are willing and able.

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REFERENCES

Behaghel, Luc, and David M. Blau. 2012. "Framing Social Security Reform: Behavioral Responses to Changes in the Full Retirement Age: Dataset." American Economic Journal: Economic Policy, 2012, 4(4): 41–67.

Cribb, J., C. Emmerson and G. Tetlow. 2014. "Labour supply effects of increasing the female state pension age in the UK from age 60 to 62." IFS Working Paper, W14/19.

Gruber, Jonathan, and Wise, David A. 2004. "Social Security Programs and Retirement Around the World: Micro Estimation." University of Chicago Press.

Mastrobuoni, Giovanni. 2009. "Labor Supply Effects of the Recent Social Security Benefit Cuts: Empirical Estimates Using Cohort Discontinuities." Journal of Public Economics, 93 (11–12): 1224–33.

Staubli, Stefan, and Zweimüller, Josef. 2013. "Does raising the early retirement age increase employment of older workers?" Journal of Public Economics, 108: 17-32.

ANNEX A: TIMELINE OF RETIREMENT-RELATED LEGISLATION IN SINGAPORE

1993

Retirement Age Act (RAA) enacted to provide for a minimum retirement age of 60.

1999

Retirement age raised to 62.

A new provision to allow employers to reduce wages by up to 10% when an employee turns 60, based on reasonable factors.

2007

Retirement and Re-employment Act (RRA) was announced with timeline for enactment in 2012.

A new provision requiring employers to offer re-employment up to 65 to eligible employees who turn 62.

2012

RRA was implemented.

2015

Re-employment age to be raised to 67 by 2017 was announced.

July 2017

New re-employment age of 67 will come into effect.

Remove option of employers to cut wages at age 60.

Re-employment by another employer will be recognised.