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Aaron G. Grech*

The Impact of Pension Age Changes – The Case of Malta

After remaining unchanged for several decades, the pension age in Malta started to rise in 2012. This process, which will continue until 2026, was introduced to help boost the workforce and partially countervail the impact of the country's demographic transition. The scope of this article is to review evidence on the impact to date of these changes and to use this to try to understand the potential impact of remaining pension age changes.

In 1948 the Old Age Pensions Act introduced a means-tested pension for elderly persons living in Malta. This was followed by a comprehensive scheme of social insurance in 1956 and then an earnings-related pension scheme in 1979. While the latter improved the generosity of the system, the age at which pensions started being paid remained unchanged at 61 years for men and 60 years for women. This changed with Act No. XIX of 2006, which included provisions to gradually raise the pension age for both genders to 65. As a result of this reform, the pension age rose to 62 for those born between 1952 and 1955, to 63 for those born between 1956 and 1958, to 64 for those born between 1959 and 1961 and to 65 for those born from 1962 onwards. This means that women who were due to receive a pension at age 60 in 2012 instead had to wait until they reached age 62 in 2014. Similarly, men who were due to become beneficiaries in 2013 had to wait until 2014 to receive their pension. This rise in pension age was the first in a series of such reforms that will see the Maltese pension age rise incrementally to 64 in 2022, followed by the final rise to age 65 in 2026.

Besides introducing the rise in pension age gradually, the reform stipulated that under certain conditions individuals could still receive a state pension at age 61. Those born between 1952 and 1961 need to have 35 years of contributions, whilst those born between 1962 and 1968 require 40 years. The amount of contributions required to be able to receive a pension at age 61 has been increased

to 41 years for those born after 1968 as part of a reform package announced in the 2016 budget, which also introduced enhanced pensions for those who opt to continue working after age 61 even though they already qualify for a pension. Those who opt to receive their pension at 61 are precluded from working until they reach the pension age set for their birth cohort. After they reach pension age, individuals are allowed to receive their state pension while also participating in the labour market.

Under the standard Eurostat definition, Malta's working age population, i.e. all those aged between 15 and 64, is expected to fall by 3.3% to just over 275,000 during the next decade. However, this definition ignores the official pension age in Malta. Figure 1 shows that on the basis of the pre-reform pension age, Malta's working age population in 2013 was about 18,000 (or 6.4%) lower than the amount implied by the standard definition. Over the coming decade, Eurostat population projections imply a fall in the effective working age population to just over 251,000 without pension age reform. However, if one takes into account the gradual rise in pension age, the effective working age population is forecast to increase by over 6,000 (or 2.3%) to nearly 275,500 over the same period. The first increase in the pension age boosted the effective working age population by 3.3%. The second rise, in 2018, should add a further 2.5%, followed by another 2.3% boost in 2022 and a final increase of 1.5% in 2026. By the time the official pension age reaches 65, the effective working age population should be 9.6% higher, or about 24,000 larger, than if the pension age had remained at 61 for men and 60 for women.

The impact of the first changes in pension age

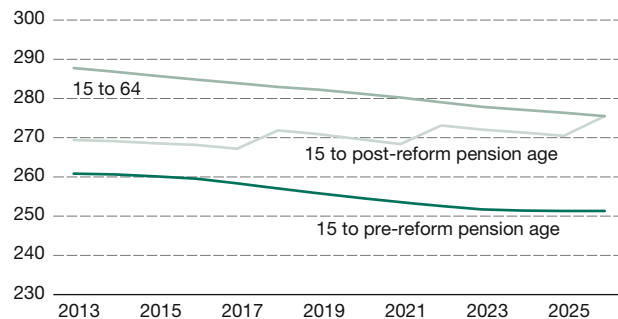
The fact that the number of persons potentially available for work should rise instead of fall as a result of the pension age changes does not necessarily mean that all of these individuals will remain in employment. Employment

* The views expressed are those of the author and do not necessarily reflect those of the institutions he is affiliated with.

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Figure 1
Working age population in Malta, according to different definitions, 2013-2025

in thousands of people



Source: Author's calculations using data from Eurostat's Europop 2013 projections.

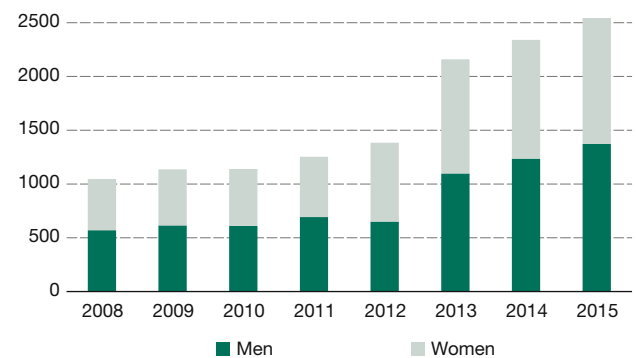
rates decline markedly with age. For instance, while about 92% of men aged 45-49 were employed in 2015 according to Labour Force Survey data from Eurostat, only 89% of the adjacent age cohort (i.e. those aged 50-54) worked. The cohort closest to pension age (those aged 55-59) had an employment rate of 83%. While being able to draw a state pension greatly affects labour market choices (the employment rate was 33% for the age 60-64 cohort, which straddles the current pension age), it is not the sole determinant. Health conditions, care responsibilities, the availability of other social benefits and reliance on savings also play key roles.

Assessing how the increase in the effective working age population brought about by the pension age change could translate into higher employment is particularly difficult, as this policy is unprecedented in Malta. Existing international literature suggests that 20-50% of those affected by a pension age rise remain in employment.¹ These estimates can be compared with actual labour market performance in Malta during the years around the first pension age increase. It is important to note that this period was characterised by rather buoyant economic activity, significant reductions in the tax burden on labour and the introduction of several active labour market policies. All of these factors may have boosted the probability that those affected by the pension age change continued working.

1 For the impact in the US, see G. Mastrobuoni: Labour supply effects of the recent Social Security benefit cuts: empirical estimates using cohort discontinuities, in: *Journal of Public Economics*, Vol. 93, No. 11-12, 2009, pp. 1224-1233. For the impact in the UK, see J. Cribb, C. Emmerson, G. Tetlow: Incentives, shocks or signals: labour supply effects of increasing the female state pension age in the UK, IFS Working Paper W13/03, Institute for Fiscal Studies, 2014.

Figure 2
Registered employed in Malta – men aged 61 and women aged 60 and 61, 2008-2015

number of persons



Source: Jobsplus.

Labour Force Survey data indicates that whereas the number of employed men aged 60-64 rose from 3,700 to 3,900 between 2010 and 2012, this figure increased to 4,500 in 2013 and rose to 4,700 in 2015. Similarly, while the number of women aged 60-64 who remained in employment declined from 900 in 2010 to 800 in 2012, it rose to 1,200 in 2013, increasing further to 2,000 in 2015. The employment rate of this age group rose from 26% in 2012 to 33% in 2015 amongst men, and from five per cent to 14% amongst women. Men aged 60-64 accounted for over a sixth of the total increase in male employment between 2012 and 2015, while women in the same age category accounted for more than an eighth of the rise in female employment.

At such a level of detail, Labour Force Survey data may suffer from significant margins of error. Thus, in order to further verify that the rise in pension age was accompanied by a lengthening of working lives, this data was compared with the national employment register by single year of age.² This data (shown in Figure 2) indicates that employment in the affected ages (males aged 61 and females aged 60 and 61) rose in the three years after the change in 2012. There was an increase of over 720 males and nearly 440 women, accounting for eight per cent of the total rise in male employment and four per cent of that in female employment. This is smaller than the impact suggested by the Labour Force Survey, which could be in part explained by the fact that the latter source also captures part-time employment.

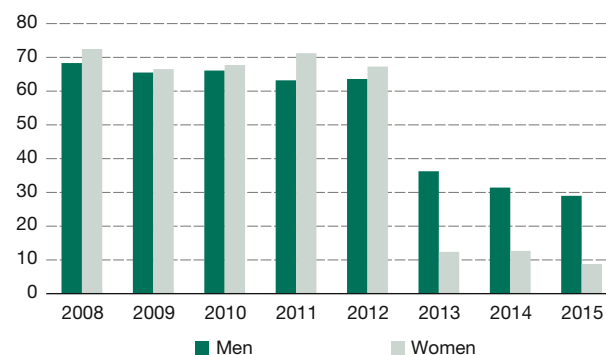
2 Unpublished data, available upon request from Malta's Jobsplus agency.

Eurostat data on the number of pension beneficiaries in Malta shows that in the year when the pension age rose, there was an increase in total pension beneficiaries of about 550, compared to increases of 1,850 beneficiaries in adjacent years. Similarly, the Annual Reports of the Ministry for the Family and Social Solidarity indicate that new pension claims fell to 1,700 from about 3,000 in the pre-reform years.³ Thus, employment and social security administrative data suggests that as a result of the rise in the pension age to 62, dependence on benefits fell by about 1,300.

Over the last ten years, national employment register data indicates that between ages 50 and 59 each cohort had an employment drop-out rate of two per cent per year. Thus, for instance, while there were 2,511 employed 50-year-old men in 2005, there were 1,966 employed 60-year-old men in 2015. Assuming no migration and mortality affected this cohort, a fifth of the employed male 50-year-old cohort in 2005 dropped out of employment by the time they reached age 60 in 2015. Reaching pension age leads to a spike in the employment drop-out rate (see Figure 3). Amongst women, on average, 69% used to leave employment upon reaching pension age. Once the pension age rose to 62 in 2012, the employment drop-out rate at the pre-reform pension age fell to 12%. The improvement in the drop-out rate for men was less pronounced, initially falling from 65% to 36%. This probably reflects the fact that men are likelier than women to have the amount of contribution years necessary to be able to draw a full pension at age 61. Aggregating across genders, whereas prior to the shift to a higher pension age there used to be an employment drop-out rate of 64%, this has now fallen to 25%. The rise in pension age to 62 led about 60% of those who used to exit the labour market at the pre-reform age to instead continue working. This is close to the upper end of the range of estimates found in international studies.⁴

Grech and Micallef indicate that after falling significantly in 2009, the Maltese economy's potential growth rate doubled in subsequent years, driven by improvements in the potential labour supply.⁵ The analysis above shows that the rise in pension age led to an upward increase in employment of around 1,100 workers, equivalent to an increase of 0.6% of the potential labour supply. Using the labour input coefficient used in Grech & Micallef, this equates to a positive contribution of 0.3 percentage

Figure 3
Employment drop-out rate in Malta at pre-reform pension age, 2008-2015
in %



Source: Author's calculations using data provided by Jobsplus.

points to potential output, or around a tenth of potential output growth.⁶

The possible impact of the remaining changes in pension age

To assess the impact of the remaining changes in pension age by 2026, one needs to make a number of assumptions on the future reaction of employees to changes in pension ages. The data shown in Figure 3 suggests that it is highly unlikely that the employment drop-out rate for women could improve further over time. This rate is very low and has remained stable. On the other hand, the employment drop-out rate for men is still significant and has shown signs of declining since 2013. The recent introduction of financial incentives to retire later could also help to further influence behaviour. In this light, the employment drop-out rate for men at the new pension age is assumed to improve in line with the change seen since 2013 until it reaches that for women. When there are further increases in the pension age, it can be assumed that drop-out rates will react similarly to what happened after the rise of the pension age to 62, i.e. that initially 60% of those who would have stopped working instead opt to work another year to reach the new pension age and that men will gradually adjust to women's employment drop-out rate.

To project employment going forward, a cohort projection approach was applied to employment data by single year of age from the national employment register. Basi-

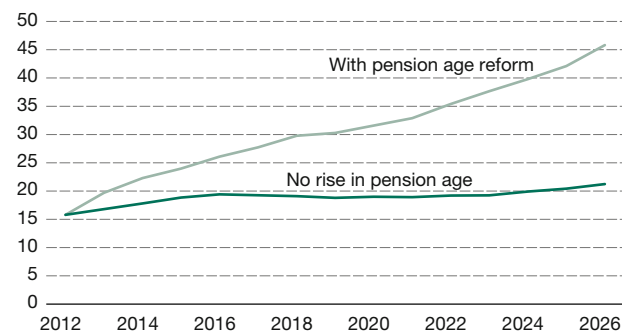
3 Report available at <https://mfss.gov.mt/en/Pages/Publications.aspx>.

4 See G. Mastrobuoni, *op. cit.*; and J. Cribb et al., *op. cit.*

5 A.G. Grech, B. Micallef: Assessing potential output growth of the Maltese economy using a production function approach, in: Xjenza, Vol. 3, No. 1, 2015, pp. 57-63.

6 Ibid.

Figure 4
Employment rate of those aged 60 to 64 in Malta –
projection under different scenarios
 in %



Source: Author's calculations.

cally, the current employment drop-out rates are applied to the number of individuals currently in employment. For instance, there were nearly 2,100 men aged 59 who were in employment in 2015. Using the current employment drop-out rate between ages 59 and 60, i.e. four per cent, this approach projects that in 2016 there should be 2,016 employed 60-year-old men.

Figure 4 compares the projected employment rate of those aged 60-64 under the reformed pension age with a baseline projection that assumes no rise in the pension age. Under the latter scenario, there is a gradual improvement in the employment rate from 15.8% in 2012 to 21.2% in 2026. This reflects the underlying trend increase in employment among women. Even if one assumes no behavioural changes, i.e. if employment drop-out rates remain the same, the fact that younger women tend to be in employment at higher rates than older cohorts causes the overall employment rate to improve over time. The assumption that employment drop-out rates will improve as a result of pension age changes greatly amplifies the rise in the employment rate of those aged 60-64. The first rise in 2012 – to a pension age of 62 – has already boosted the employment rate of this age category by five percentage points. Assuming that the remaining increases in pension age will have the same relative impact as the first increase, the employment rate of those aged 60-64 would nearly double to 46% by 2026.

While this improvement may seem quite pronounced, the projected employment rate for those aged 60-64 in 2026 is significantly lower than the employment rate of 64% that characterises those aged 50-54 at present. Countries that already have a pension age of 65 also tend to have similar employment rates for those aged 60-64. For

instance, the employment rate for this age bracket in Germany is 53%; in Sweden it stands at 66%; and in the UK, Denmark, and the Netherlands, 48% of those aged 60-64 are in employment. Furthermore, using an approach similar to the one employed here, the European Commission indicates that pension reform should boost the employment rate of those aged 55-64 in Malta by 4.7 percentage points by 2020 and by 10.8 percentage points by 2040.⁷

On the basis of the assumptions described above, the gradual increase of the pension age to 65 should boost employment by over 7,200 by 2026. About 56% of this increase should be among men. In the four years that will see a rise in the pension age (2013, 2018, 2022 and 2026), employment is projected to rise on average by over 800 annually compared to the baseline of no change in the pension age. In intervening years, when the employment drop-out rate gradually adjusts, the average rise is less than half this amount. According to projections in the European Commission's latest Ageing Report, this implies that by 2026 the gradual rise of the pension age in Malta to 65 could result in a 3.6 percentage point increase in the labour supply.⁸ This higher labour input would translate to a 2.1 percentage point boost in the level of potential output. In years where there is an increase in the pension age, potential output growth is estimated to be boosted, on average, by 0.2 percentage points. In intervening years, the gradual adjustment in employment rates would raise potential growth by 0.1 percentage point, on average.

These projections compare well with those of international studies. Karam, Muir, Pereira and Tuladhar, using the IMF's Global Integrated Monetary and Fiscal Model, suggest that raising the retirement age by two years would raise GDP by almost one per cent in the short to medium term.⁹ In a study on the UK, Barell, Kirby and Orazgani argue that a one year extension of working lives increases GDP by one per cent about six years after its implementation.¹⁰ They also find that had the UK kept its pension age at 60 for women and 65 for men, growth between 2010 and 2030 would be on average 0.3% lower annually.

⁷ European Commission: The 2015 Ageing Report: Underlying Assumptions and Projection Methodologies, European Economy 8, 2014.

⁸ European Commission: The 2015 Ageing Report: Economic and budgetary projections for the 28 EU Member States (2013-2060), European Economy 3, 2015.

⁹ P. Karam, D. Muir, J. Pereira, A. Tuladhar: Macroeconomic Effects of Public Pension Reforms, IMF Working Paper WP/10/297, International Monetary Fund, 2010.

¹⁰ R. Barell, S. Kirby, A. Orazgani: The macroeconomic impact from extending working lives, DWP Working Paper No. 95, London 2011, Department for Work and Pensions.

Besides increasing the labour supply and potential output, a higher pension age also impacts on government spending and revenue. Pension generosity data and projections from the Pensions Strategy Group were used to compute the effect on outlays of the gradual increase in the eligibility age, while the impact on revenue was estimated by applying current implicit tax rates on labour income and on consumption on the projected income of those who continue working as a result of the pension age changes.¹¹ Taken together, the lower spending and the higher revenue are estimated to have improved Malta's deficit-to-GDP ratio by 0.2 percentage points in 2013 and 2014. This estimate is identical to that presented in recent draft budgets by the Ministry for Finance.¹² Going forward, the impact of the pension age changes on the deficit-to-GDP ratio is projected to gradually rise to reach 1.0 percentage point by 2026.

Thus, the cumulative impact of these changes on Malta's public debt by 2026 will be 7.7% of GDP. Had the higher pension age not been enacted, the government would possibly have had to address this additional debt burden either by gradually cutting spending or by raising taxes. Using the Central Bank of Malta's macroeconomic model, we estimated the impact on potential GDP of having to either raise direct tax revenue or cut public investment gradually by 1.0 percentage point of GDP by 2026.¹³ These policies would lower the level of potential GDP by 0.3 to 0.4 percentage points. This indicates that in addition to the direct positive impact on potential GDP arising from an increased labour supply, the gradual rise in the pension age also has the benefit of reducing the need to raise taxes or cut spending to address the ageing transition, and hence indirectly boosts potential output even further.

It is important to emphasise that the results presented here (summarised in Table 1) assume that the employment drop-out rate at age 61 continues to improve over time, and that future increases in the pension age have the same effect as that observed when the pension age rose in 2012. If, on the other hand, the effective retirement age does not continue to improve, the economic and fiscal benefits of the gradual increase in pension age to 65 could be substantially lower. Thus, it is very important that the government continues to enact measures to incentivise the lengthening of working lives.

11 Pensions Strategy Group: Strengthening the Pension System: A Strategy for an Adequate and Sustainable Maltese Pension System, 2015.

12 Ministry for Finance: Malta – Draft Budgetary Plan 2015, 2014.

13 O. Grech, N. Rapa: STREAM – A Structural Macro-Econometric Model of the Maltese Economy, Central Bank of Malta Working Paper WP/01/2016, 2016.

Table 1

Estimates of cumulative impact of pension age changes in Malta, 2013-2026

in percentage points

	Population 15 to pension age	Potential labour supply	Potential output	Public debt as % of GDP
2013	3.3	0.6	0.3	0.2
2014	3.3	0.7	0.4	0.4
2015	3.2	0.7	0.4	0.7
2016	3.3	0.9	0.5	1.0
2017	3.4	1.2	0.7	1.4
2018	5.8	1.6	0.9	1.8
2019	5.9	1.8	1.0	2.4
2020	5.9	1.9	1.1	2.9
2021	5.8	2.2	1.2	3.6
2022	8.1	2.5	1.4	4.3
2023	8.1	2.8	1.6	5.1
2024	7.9	2.9	1.7	5.9
2025	7.6	3.2	1.9	6.7
2026	9.6	3.6	2.1	7.7

Note: This table shows the estimated cumulative impact of pension age changes on multiple variables in comparison to the baseline of an unchanged pension age. Note that to calculate the annual impact of the policy on the fiscal deficit, one needs to subtract the public debt of two adjoining years (e.g. in 2026 the impact is 1.0% of GDP).

Sources: Author's calculations.

Another thing to keep in mind is that the approach taken here assumes that the increase in the supply of labour directly reflects the rise in employment induced by the higher pension age. Individuals are assumed to be able to either remain in employment or else to receive a pension. This reflects the fact that in Malta individuals with a full contributory record will still be able to retire after they turn 61. Given that Eurostat data shows that men in Malta have, on average, a working career duration of 40 years and that most employees at older ages are men, it seems fair to assume, at least for the next decade, that the large majority of employees will reach age 61 with a full record. As a result of this, if they wanted to continue working past 61 but their employer did not offer them such an opportunity, they would be unlikely to register as unemployed and seek alternative employment. If they did so, they would forgo receiving a pension and instead receive unemployment benefits, which are significantly lower.

Consequently, the assumption that the rise in the pension age should not result in higher unemployment seems

quite realistic, at least in the medium term. A number of studies suggest that those opting to work longer tend to retain their level of wages,¹⁴ and further studies indicate that these individuals are more likely to be those earning higher wages.¹⁵ This suggests that it is unlikely that the rise in the pension age should have any noticeable effects on wage levels in Malta, at least not in the coming decade.

Conclusions

This article presents evidence of how the Maltese labour market is being impacted by a gradual rise in the pension age. Prior to the reform, there had been concerns that the rise in the pension age could negatively impact the individuals affected by the change. However, the experience thus far indicates that employment in the affected age cohorts has risen. At the same time, employment in other demographic categories has also improved, so much so that the youth unemployment rate in Malta has fallen from 14.1% in 2012 to 11.8% in 2015, the lowest on record. If these positive trends continue, the gradual rise in the pension age will significantly contribute towards addressing the challenge of an ageing population. The estimates presented here, in fact, suggest that by 2026 this policy will have increased labour supply and demand by 3.6 percentage points, boosting potential output by 2.1 percentage points and lowering the public debt burden by 7.7 percentage points. Furthermore, the increase in pension age is unlikely to result in any noticeable increase in unemployment and should not affect wages for the cohorts affected by it.

14 For example, see P.S. Martins, A.A. Novo, P. Portugal: Increasing the Legal Retirement Age: The Impact on Wages, Worker Flows and Firm Performance, IZA DP No. 4187, Institute for the Study of Labor, 2009.

15 See S. Staubli, J. Zweimüller: Does raising the early retirement age increase employment of older workers?, in: *Journal of Public Economics*, Vol. 108, December 2013, pp. 17-32.