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The Possible Impact of Pension Age Changes on Malta's Potential Output

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Policy Note

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Abstract

As from 2012, the pension age in Malta started rising from 61 for men and 60 for women to eventually reach 65 for both genders in 2026. However individuals with enough contribution years will still be allowed to retire at 61. This paper evaluates the effects of the first change in the eligibility age, using employment and beneficiaries data covering that period. These effects are then extrapolated to 2026, suggesting that the pension age rise could result in a increase in the potential labour force of 3.6%. The latter, in turn, implies a boost to Malta's potential output of 2.1 percentage points. The policy is also estimated to have reduced the deficit to GDP ratio by 1% of GDP by 2026. These results point towards the importance of introducing further incentives to ensure that relatively few individuals opt to retire at 61 rather than work to the standard pension age.

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Executive Summary

After remaining unchanged for several decades, the pension age in Malta started to rise in 2012. This process will continue till 2026 and will impact thousands, contributing to boost the workforce and partially countervailing the impact of the ageing transition. Understanding the potential impact of pension age changes on potential output is therefore quite important for policymakers. Consequently, this note attempts to answer three questions:

- **How will the pension age change in Malta over the next decade?**

Until 2012, the pension age in Malta stood at 61 for men and 60 for women. Thereafter it started to rise gradually to 65 for both genders with the final rise scheduled for 2026. In theory, pension age changes imply that there should have been no new pensioners during 2013, and similarly in 2018, 2022 and 2026. However the legislation still allows individuals to receive a pension at age 61 if they have the required minimum number of contribution years. The latter will also be increasing over time, while the Budget for 2016 also introduced financial incentives for those who opt to continue working after age 61 despite qualifying for a pension. Due to the changes in pension age the proportion of life spent in receipt of a pension is projected to decline from 25% to 23% over the coming decade in Malta. Across the five largest EU countries, the decline will be from 22% to 21%.

- **What was the economic impact of the first changes?**

The legislated increases in pension age could potentially have a very large impact on Malta's economy. Ignoring changes in pension age, Malta's working age population is projected to decline by 3.3% over the next decade. However if one considers the rise in pension age to 65, the trend is reversed, such that the working age population increases by 2.3%. By the time pension age will have reached 65, the potential working age population will be 24,171 more than if the pension age had remained at 61 for men and 60 for women. However, it is highly unlikely that this improvement in the working age population will result in an equivalent rise in employment as participation rates, particularly among women, are low at advanced ages. Furthermore existing international literature points towards an impact range on employment of between 20% to 50% after a pension age rise.

Data from the Labour Force Survey, the national employment register and administrative data on social security beneficiaries suggest that the first changes in pension age, i.e. the rise from 60 to 62 for women and from 61 to 62 for men, led to an increase in employment of the affected cohort of between 1,000 to 1,300 persons. Moreover national employment

register data suggest that whereas before the change in pension age, on average, 69% of women used to leave employment upon reaching 61, after the change the employment drop-out rate fell to less than 13%. The improvement in the drop-out rate for men was less pronounced, from 65% to 34%. 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 61. Aggregating across genders, the rise in pension age to 61 led 55% of those who used to exit the labour market at that age to instead continue working. This falls close to the upper part of the range of estimates found in international studies. The rise in employment as a result of the first changes in pension age was equivalent to an increase of 0.6% of the potential labour supply. This equates to a permanent positive contribution of 0.3 percentage points to potential output, or around a tenth of potential output growth in those years.

- **What could happen if the other legislated changes in the pension age have a similar effect?**

Since 2013 national employment register data suggest that the employment drop-out rate for men at age 61 has declined gradually, while that for women has remained stable. Assuming that the employment drop-out rate gradually equalises across genders, and that each time the pension age rises, 55% of those who used to exit the labour market instead opt to continue working, we estimate that the employment rate of those aged 60 to 64 could nearly double to 46% in 2026. Despite this improvement, the projected employment rate for this age category is significantly lower than that for those aged 55-59 at present and is similar to that in countries that already have a pension age of 65.

On the basis of these projections, the increase of the pension age should boost employment by over 7,200 by 2026 and raise the potential labour supply by 3.6%. The cumulative impact of pension age changes on the level of potential output could reach 2.1% by 2026. In years where there is an increase in the eligibility age (2013, 2018, 2022 and 2026), 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 points, on average. Besides increasing the labour supply, a higher pension age also lowers government spending and raises revenue. On the basis of projected estimates of pension generosity and current implicit tax rates, by 2026 this policy implies a 1% lower deficit to GDP ratio. If instead of raising the pension age, Government had opted to address this fiscal burden either by gradually cutting investment or by raising taxes, potential GDP would be 0.3 to 0.4 percentage points lower in 2026. Given the significant economic and fiscal benefits of people working to the standard pension age, it is important that Government enacts measures to incentivise the lengthening of working lives.

How will the pension age change in Malta over the next decade?

In 1948, the Old Age Pensions Act introduced a means-tested pension for elderly persons. 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 system generosity, the age at which pensions started being paid remained unchanged: namely 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. The next rise in pension age will impact those who would reach age 62 in 2018, and instead will have to wait till 2019 receive their pension. The next year when in theory there will be no new pension recipients will be 2022, when the pension age will rise to 64, followed by the final rise to age 65 in 2026.

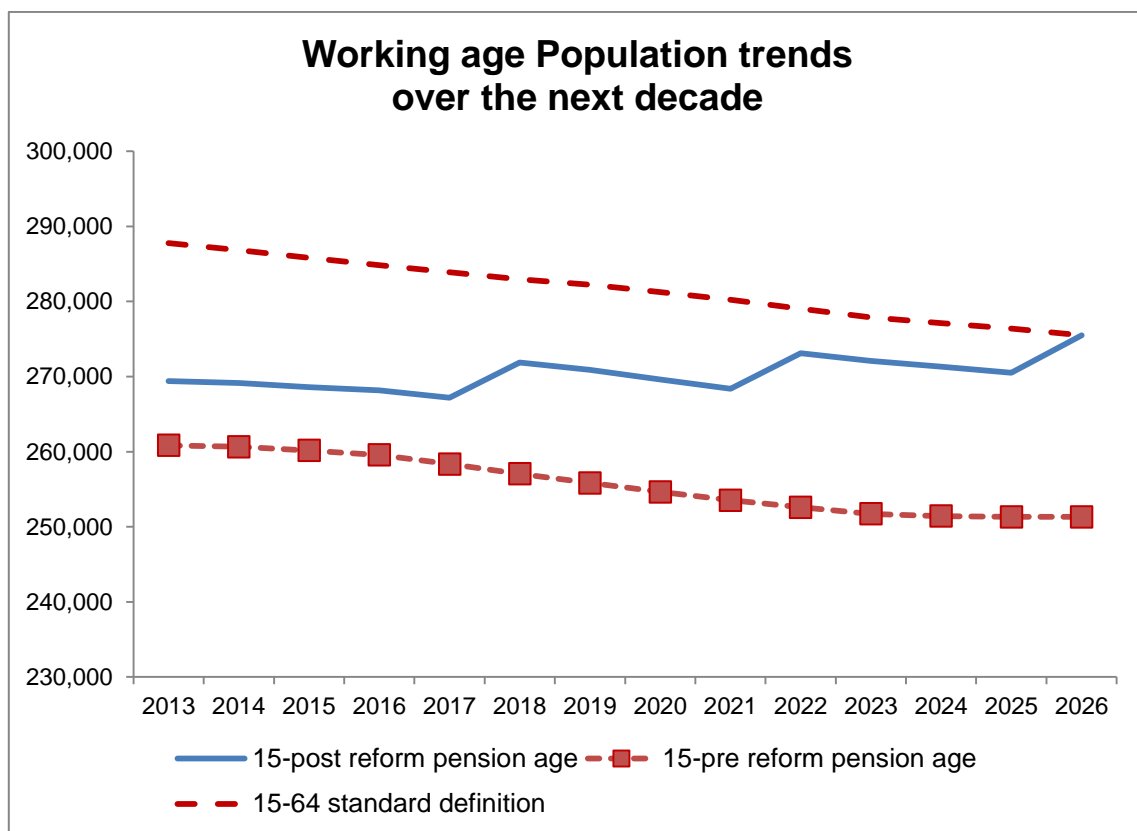
Besides introducing the rise in pension age gradually, Act XIX of 2016 stipulated that under certain conditions individuals could still receive a state pension at age 61. Those born between 1952 and 1961 need to have 35 years of contributions, whilst those born between 1962 and 1968 require 40 years. 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 Budget for 2016. The latter also introduced enhanced pensions for those who opt to continue working after age 61 even though they already qualify for their pension. It is important to note that 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 being in employment.

In 2026 when Malta's pension age will be 65, that in the largest five EU countries will have risen to 67. Eurostat longevity projections suggest that at present the average Maltese man spends 25% of his lifetime in receipt of a pension, as against 22% on average across the largest five EU countries. By 2026, while for the latter the period in receipt of a pension will have fallen to 21%, that for the average Maltese man will have fallen to 23%. This implies that although the pension age will not rise as fast in Malta, there will be some convergence.

What was the economic impact of the first changes?

According to the standard definition, i.e. all those aged between 15 and 64, Malta's working age population will decline by 3.3% to just over 275,000 over the next decade. However this definition ignores completely the pension age set in Malta. Chart 1 shows that on the basis of the pre-reform pension age, Malta's working age population in 2013 was circa 18,000 (or 6.4%) less than the amount implied by the standard definition. Over the coming decade, Eurostat population projections imply a fall to just over 251,000. On the other hand, if one takes into account the gradual rise in pension age, the working age population actually increases over time, by over 6,000 (or 2.3%) to 275,499. The first increase in the pension age boosted the working age population by 3.3%. The second rise, in 2018 will add a further 2.5%, followed by another 2.3% boost in 2022, and a final upward contribution of 1.5% in 2026. By the time pension age will have reached 65, the working age population will be 9.6% higher, or 24,171 more, than if the pension age had remained at 61 for men and 60 for women.

Chart 1



Source: Author's calculations using Eurostat Europop2013 projections.

However, 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 choose to do so. Labour market participation declines markedly with age. For instance while about 94% of men aged 45-49 are active in the labour market according to Labour Force Survey data, only 90% of the adjacent age cohort (ie those aged 50 to 54) participate. The cohort closest to pension age (those aged 55 to 59) has a participation rate of 82%. While being able to draw a state pension affects greatly labour market choices (the participation rate falls to 33% for the cohort straddling the current pension age – 60-64), it is not the sole determinant. Health conditions, care responsibilities, the availability of other social benefits and reliance on savings also play a key role.

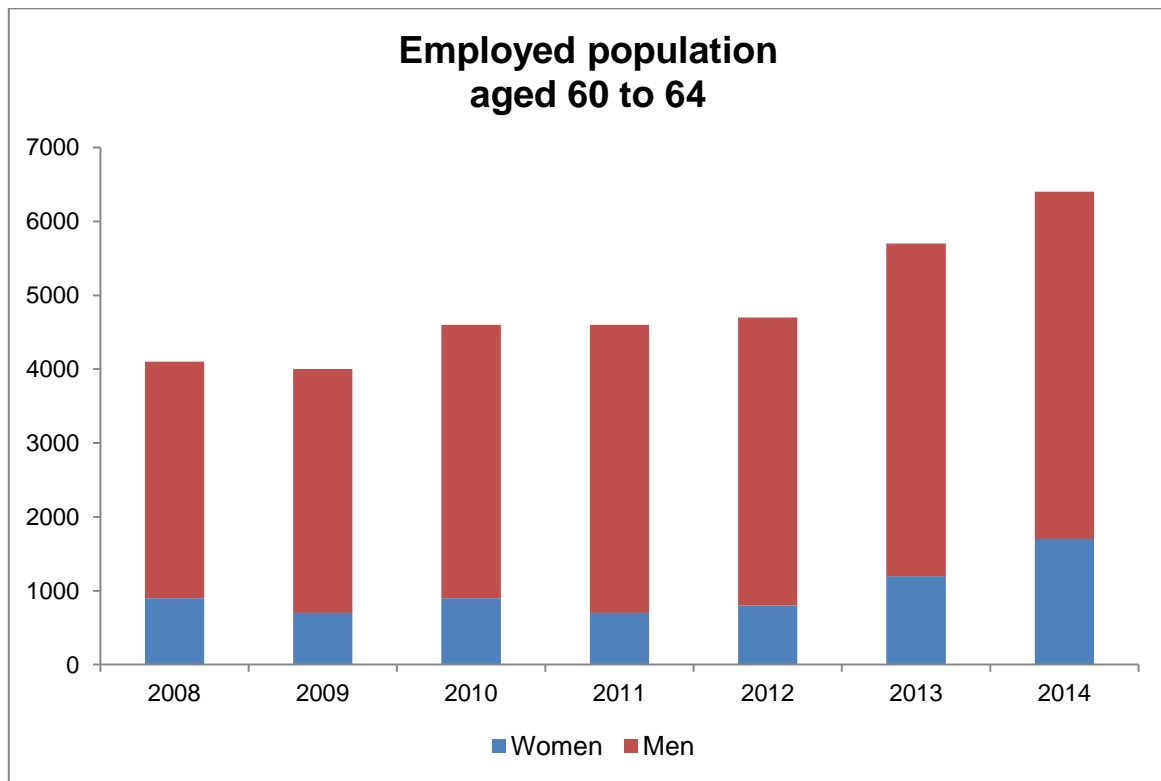
Transforming the boost in the working age population into the probable increase in employment is particularly difficult as this policy is unprecedented in Malta, and also internationally pension age changes are only now beginning to be implemented. Mastrobuoni (2009) estimates that in the United States average retirement ages rose by one month for every two-month rise in the pension age. Studies for the UK (Blundell & Emmerson, 2007) suggest when occupational pension schemes increased their normal pension age by three years, individuals retired between 0.4 and 1.8 years later. Cribb, Emerson & Tetlow (2014) estimate that the rise in women's pension age in the UK from 60 to 61 increased their employment rate at age 60 by 7.3 percentage points and their probability of unemployment by 1.3 percentage points. Interestingly the employment rate of their male partners also increased by 4.2 percentage points. An impact assessment published by the UK's Department for Work and Pensions in 2013 predicted that increasing the pension age to 67 should reduce the inactivity rate of those aged 66 by 22%.

Existing literature therefore points towards an impact on employment of between 20% to 50% after a pension age rise. This evidence can be tested against the labour market performance in Malta during the years around the first pension age increase. Before discussing these data, it is important to stress that this period was characterised by rather buoyant economic conditions, significant reductions in the tax burden on labour and the introduction of several active labour market policies. All of these may have boosted the choice of those affected by the pension age change to opt to remain in the labour market.

Labour Force Survey data (shown in Chart 2) indicate that whereas the number of men aged 60 to 64 who were in employment rose from 3,800 to 4,000 between 2010 and 2012, in 2013 there was an increase to 4,700, rising to 5,000 in 2014. Similarly while in previous years, the number of women aged 60 to 64 who remained in employment had remained stable at around 900, in 2013 it rose to 1,300 followed by a rise to 1,800 in 2014. The employment

rate of this age group rose from 26% in 2012 to 33% in 2015 amongst men, and from 5.3% to 11.8% amongst women. Men aged 60 to 64 accounted for 22.2% of the total increase in male employment in 2013 and 2014, while women in the same age category accounted for 11.0% of the rise in female employment.

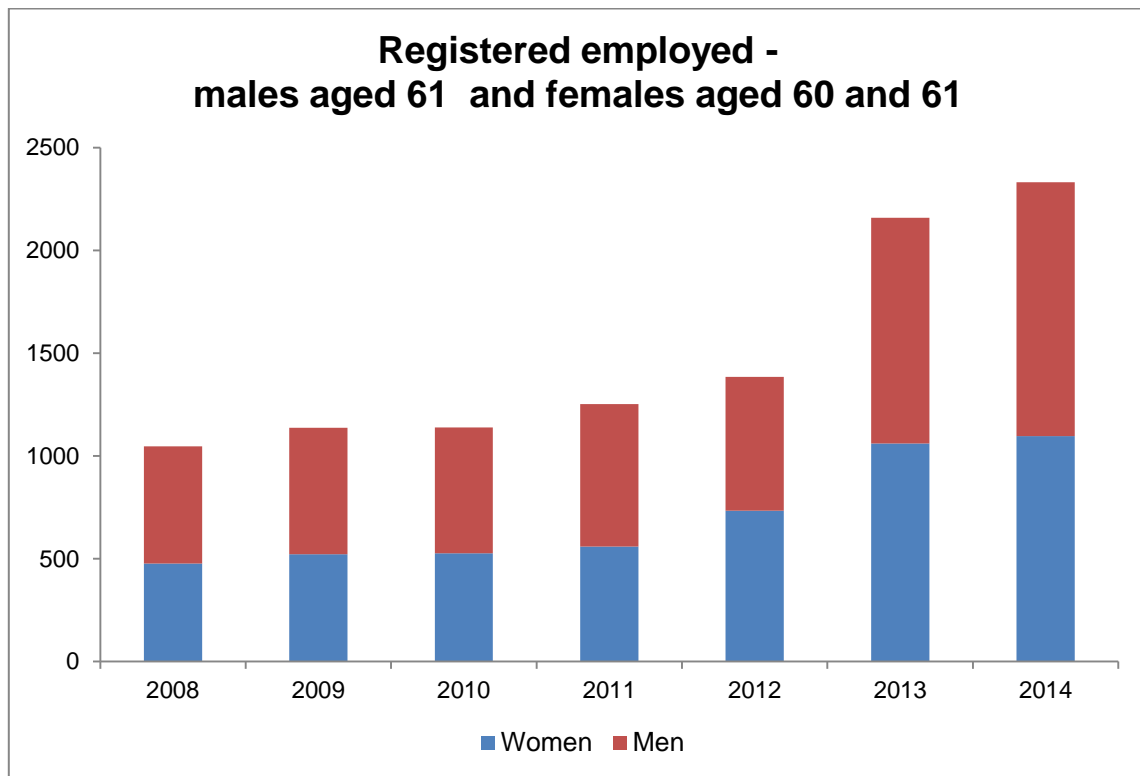
Chart 2



Source: Labour Force Survey

At such level of detail, Labour Force Survey data may have significant margins of error. Thus, in order to further verify that the rise in pension age was accompanied by a lengthening of working lives, we also looked at data from the national employment register by single year of age. These data (shown in Chart 3) indicate that employment in the affected ages (males aged 61 and females aged 60 and 61) rose in 2013 and also in 2014. There was an increase of over 580 amongst males and 364 amongst women, in turn accounting for 11% of the total rise in male employment and 5.6% of that in female employment. This is equivalent to approximately half the impact suggested by the Labour Force Survey, which could be in part explained by the fact that this source also captures part-time employment.

Chart 3



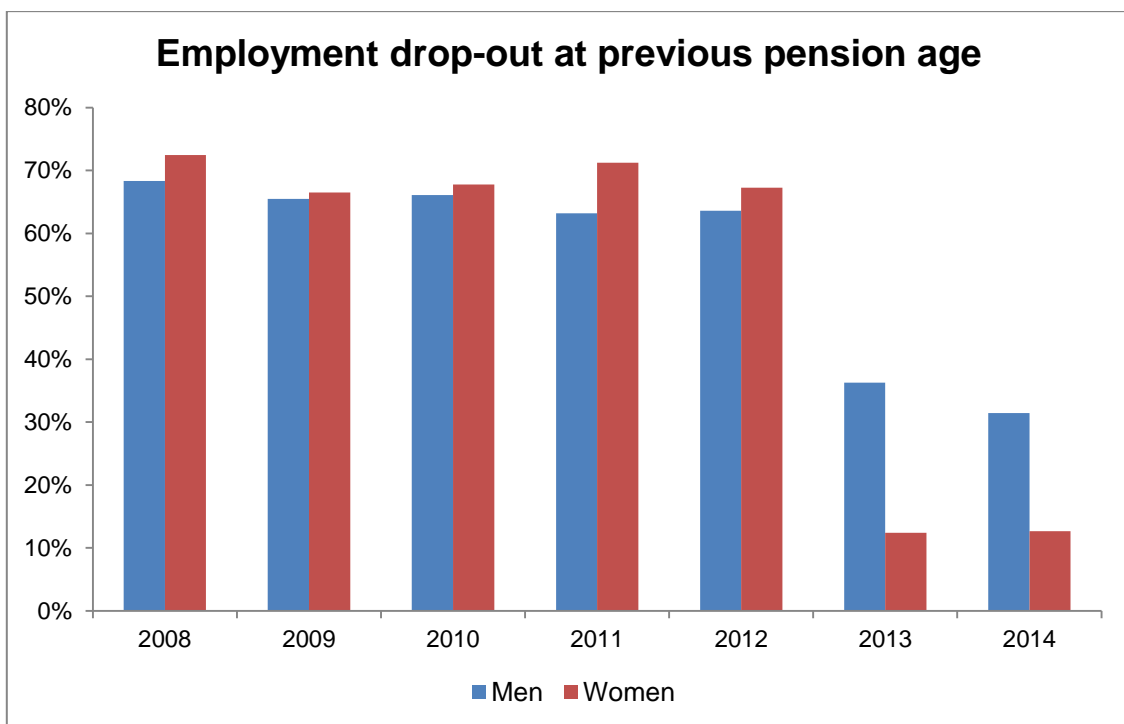
Source: Data provided by the Employment and Training Corporation

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 close to 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 normal years. Thus employment and social security administrative data suggest that as a result of the rise in the pension age to 62, employment rose by between 1,000 to 1,300, a range which is close to the 1,100 rise in employment suggested by the Labour Force Survey.

An interesting development that emerges from the national employment register data is that in the last ten years between ages 50 to 59 each cohort has a drop-out rate from employment of 2% per year. Thus for instance, while there were 2,511 men aged 50 who were in employment in 2005, by 2014 there were 2,065 men aged 59. Assuming no migration and mortality affected this cohort, 18% of the cohort aged 50 and in employment in 2005 dropped out of employment by the time they reached age 59 in 2014. Reaching state pension age leads to a spike in the employment drop-out rate (see Chart 4). Amongst women, on average, 69% used to leave employment upon reaching pension age. Once the

pension age rose to 61, the employment drop-out rate fell to less than 13%. The improvement in the drop-out rate for men was less pronounced, from 65% to 34%. 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 66%, this has now fallen to 30%. This implies that the rise in pension age to 61 led 55% of those who used to exit the labour market at that age to instead continue working. This falls close to the upper part of the range of estimates found in international studies.

Chart 4



Source: Own calculations using data provided by the Employment and Training Corporation

Grech & Micallef (2015) indicates that after falling significantly in 2009, the Maltese economy's potential growth rate nearly doubled by 2013. A significant part of this recovery was driven by improvements in the potential labour supply, which doubled its contribution to potential growth. Micallef (2015) estimates that nearly half of the improvement was due to rising femal participation. Grech (2015) implies that a further third was due to inflows of migrant workers. The analysis above shows that the rise in pension age led to a permanent upward increase in employment of around 1,100 in 2013. This was equivalent to an increase of 0.6% of the potential labour supply. Using the labour input coefficient used in Micallef & Grech (2015), this equates to a positive contribution of 0.3 percentage points to potential output, or around a tenth of potential output growth in 2013 and 2014.

What could happen if the other legislated changes in the pension age have a similar effect?

Impact on employment

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 Chart 4 suggest that it is highly unlikely that over time, the employment drop-out rate for women at the new pension age could improve further. This drop-out 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 introduction of financial incentives could also help change behaviour. In this light we have assumed that over time, the employment drop-out rate for men at the new pension age continues to improve in line with the change seen since 2013 until it reaches that for women. For instance, this implies that by 2018, the employment drop-out rate for men aged 61 will fall from 34% to 13%, and then remain constant.

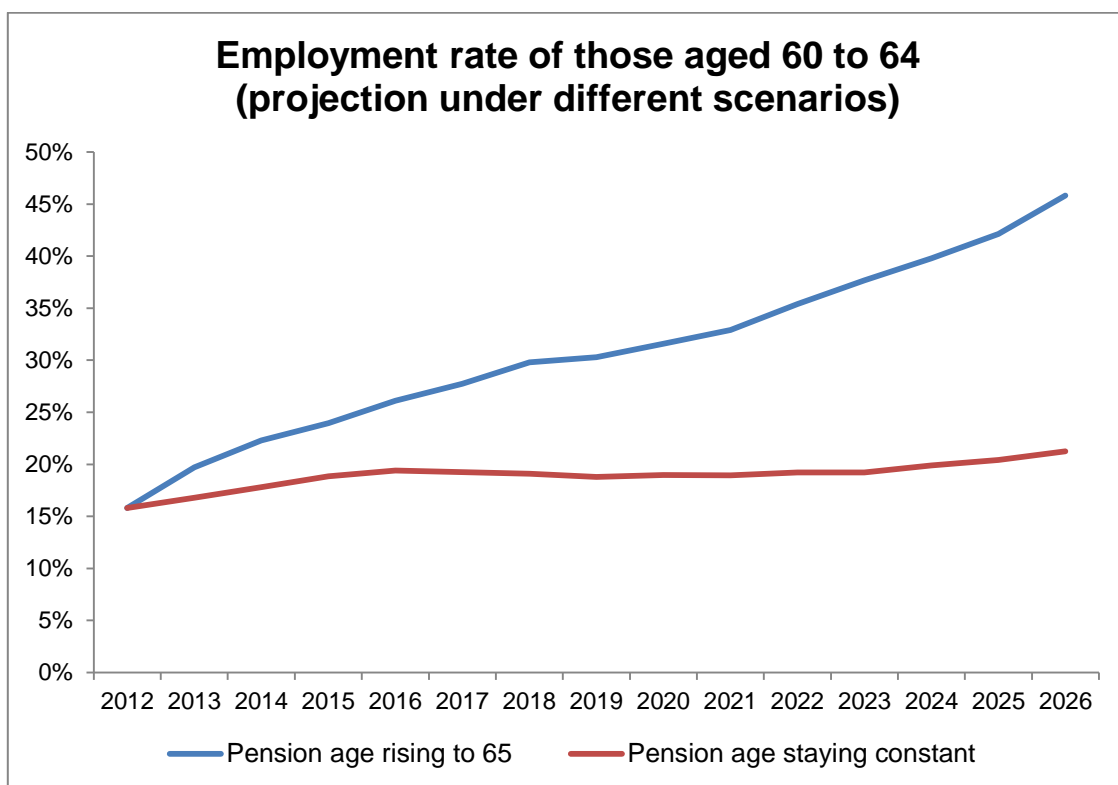
The other major assumption involves what is projected to happen when there are further increases in the pension age. Here we have opted to have the same reaction as that which accompanied the rise to age 61. Therefore initially 55% of those who would have stopped working instead opt to work another year to reach the new pension age. Men are assumed to gradually adjust to women's employment drop-out rate, as described above.

To project employment forwards, we have used employment data by single year of age from the national employment register. Basically we apply the current employment drop-out rates to the amount 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. 4%, we project that a year after there will be 2,016 men aged 60 in employment, and so on.

Chart 5 compares the projected employment rate of those aged 60 to 64 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 more in employment 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 to 64. The first rise – that to a pension age of 61 – has already boosted the employment rate of this age category by 5 percentage points (implying an employment rate a quarter higher than it would have been if pension age had not risen). By 2026, under the assumptions made that the remaining increases in pension age will have the same relative impact as the first increase, the employment rate of those aged 60 to 64 would nearly double to 46% in 2026. While this improvement may seem very strong, the projected employment rate for those aged 60-64 in 2026 is significantly lower than the employment rate of 55% that characterises those aged 55-59 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, in Germany the employment rate for this age bracket is 53%, in Sweden it stands at 66% while in the UK, Denmark and the Netherlands 48% of those aged 60-64 were in employment. Furthermore European Commission (2014) indicates, using a similar approach to the one taken here, that by 2020 the pension reform should boost the employment rate of those aged 55 to 64 in Malta by 4.7 percentage points and by 10.8 percentage points by 2040.

Chart 5



Source: Author's calculations

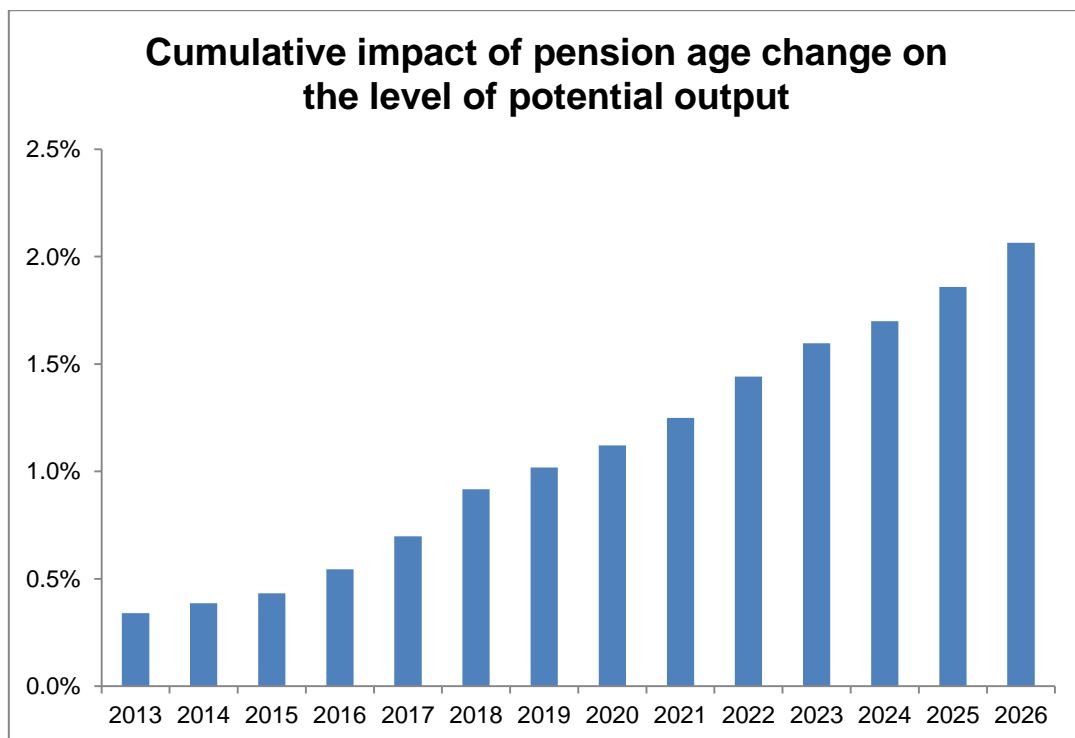
On the basis of the assumptions described above, the gradual increase of the pension age to 65 should boost employment by over 7,200 by 2026. About 56% of this increase should

be among men. The share attributed to women may seem somewhat high given that at present the number of older women in employment is a third of that of men in the same age group. However this ignores the fact that at younger ages, the gap in participation rates is less pronounced and also that women face a larger increase in pension age, five years against four years for men. On average, in the four years with a rise in the pension age, employment is projected to rise by over 800 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.

Impact on potential output

To compute the impact of this rise in employment on the level of potential output, one needs to project the labour force over time till 2026. The approach taken was to use the projected labour supply for Malta published by the European Commission in the latest Ageing Report (European Commission, 2015).

Chart 6



Source: Author's calculations

On this basis, the potential labour supply should rise by 5.8% to 203,000 over the next decade. This implies that whilst the first rise in the pension age boosted the potential labour supply by 0.6%, by 2026 the gradual rise to 65 should result in an upward shift of 3.6%.

Using the labour coefficient used in Grech & Micallef (2015), this suggests that the cumulative impact of pension age changes on the level of potential output could reach 2.1% by 2026 (see Chart 6). In years where there is an increase in the pension age (2013, 2018, 2022 and 2026), 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 points, on average.

These projections compare well with those of international studies. Karam, Muir, Pereira & Tuladhar (2010), using the IMF's Global Integrated Monetary and Fiscal model, suggest that raising the retirement age by 2 years would raise GDP by almost 1 percent in the short to medium term. Borell, Kirby & Orazgani (2011) in a study on the UK argue that a 1 year extension of working lives increases GDP by 1 percent about six years after its implementation. They also find that had the UK kept its pension age at 60 for women and 65 for men, between 2010 and 2030 growth would on average have been 0.3 percent lower.

Impact on government finances

Besides increasing the labour supply, a higher pension age also impacts on government spending and revenue. Using pension generosity data and projections from Pensions Strategy Group (2015), we estimated the impact on outlays of the gradual increase in the eligibility age. On the basis of the implicit tax rates on labour income and on consumption, we also computed the implied increase in revenue arising from the fact that a significant number of those affected by the rise in pension age opted to continue working. Taken together, the lower spending and the higher revenue improved the deficit to GDP ratio by 0.2 percentage points in 2013 and 2014. This estimate is identical to that presented in recent draft budgets (see Ministry for Finance, 2014).

Going forwards, on the basis of the employment projections described above, the impact of the pension age change on the deficit to GDP ratio is projected to gradually rise to reach 1.0 percentage point by 2026. Since by that year the absence of this policy would have increased public debt by 7.7% of GDP, government would possibly have had to address this burden either by gradually cutting spending or by raising taxes. Using the Central Bank of Malta's macro-econometric model (Grech & Rapa, 2016), 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. These policies would lower the level of potential GDP by between 0.3 to 0.4 percentage points. This indicates that besides 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.

Note of caution

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 to 61. If, on the other hand, a significant proportion of individuals continues to take advantage of the early exit age of 61, the economic and fiscal benefits of the increase in pension age to 65 would be substantially lower. Thus it is very important that Government continues to enact measures to incentivise the lengthening of working lives.

Table 1: Estimates of the impact of pension age changes (2013 to 2026) – cumulative effect on levels

	<i>Population 15 to pension age</i>	<i>Potential labour supply</i>	<i>Potential output</i>	<i>Public debt (% of GDP)</i>
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 difference in percentage points to the different variables had pension age remained unchanged. For instance, if pension age had stayed at 61 for men and 60 for women, the number of people aged 15 to pension age would have been 8.1% lower in 2022 compared to the projected number of people aged 15 to 64 (the pension age in 2022). Similarly, assuming away the impact that the rise in pension age could have on the participation rate of those aged 60 to 64, the potential labour supply in 2022 could be 2.5% smaller and this would reduce potential output by 1.4%. Finally if individuals retain their pre-reform labour market behaviour, by 2022 the national debt would be 4.3% of GDP higher. Note that to calculate the 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).

Source: Author's calculations.

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