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Trends in Malta's Current Account and their underlying causes

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Policy Note

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Abstract

Malta's current account has improved substantially since 2009, by about four times the change seen in the euro area. Cyclical demand factors did not cause this, while lower oil prices and a better real exchange rate explain a minor part. Structural developments, such as improving energy intensity and falling import content, appear to have played a much larger role. These factors should have positive macroeconomic impacts, such as reducing vulnerability to oil price shocks and increasing multipliers.

The note establishes that Malta's current account is stationary, a necessary condition for avoiding sustainability problems in external accounts. This reflects a recovery in the national saving rate, driven by better fiscal performance, and rising corporate and household savings due to export-oriented services sectors. Conversely investment has declined, as these sectors rely more on human capital. To ensure growth remains sustainable, there should be a renewed emphasis on investment in education and infrastructure.

JEL Classification: E21, E32, F32.
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Table of Contents

Executive Summary

The current account of the balance of payments is a key economic indicator, which can be understood as either the difference between what a country exports and what it imports, or else as the difference between national savings and investment. While the two measures are equivalent, the first approach mainly emphasises competitiveness, whereas the second is more concerned about growth dynamics. Consequently, this policy note looks at Malta's current account and attempts to answer three questions:

- **How has Malta's current account position developed over recent decades?**

Up to the early 1980s, Malta had very high current account surpluses. Export growth accelerated due to the rapid expansion of industry and tourism, while consumer imports were restricted. In the 1980s adverse international conditions resulted in a decline in exports of goods and tourist activity. When these started to recover, the current account position did not recover, on account of higher imports of consumer and capital goods. This changed after EU membership due to a very significant rise in exports of services, with Malta starting to form part of the group of EU countries with relatively high current account surpluses. Our current account position improved by 11.9 percentage points since 2009, the largest change amongst euro area countries and about four times the change seen on average.

- **Is the change in Malta's current account position cyclical or structural?**

To understand better whether changes are cyclical or structural, Malta's cyclically adjusted current account position was calculated in line with the approach adopted by the European Commission. The latter was, however, adjusted to reflect better local circumstances, such as lower long-term income elasticities of exports and imports. The cyclically adjusted and the unadjusted current account position for the Maltese economy track closely each other. While European Commission (2015) estimates that between 2007 and 2015, under unchanged cyclical differences, Malta's current account position would have improved by an additional 6.9 percentage points compared to its observed change, the approach adopted in this note suggests a slightly larger improvement of 7.6 percentage points. This suggests that cyclical demand factors are not causing the improvement in Malta's current account position. Moreover regression analysis indicates that neither can one attribute the change to the impact of lower oil prices and an improved real exchange rate, even though the impact of such factors appears to be stronger in Malta than in other countries. Other (structural) factors appear to have caused this development.

- **What are the macroeconomic implications of the change in Malta's current account position?**

One of the factors driving the change in the current account is the improvement in energy intensity, and the consequent drop in fuel imports. This should reduce Malta's vulnerability to oil price shocks. Related to this is the decline in Malta's import intensities, mainly due to the changing composition of its economy. A lower import leakage means that multipliers are rising over time, increasing the possible impact of fiscal and other policies. Furthermore it means that expansion of export activity is having more impact domestically, resulting in higher consumption and social welfare than in the past.

An important finding is that Malta's current account is stationary, a necessary (although not a sufficient) condition for avoiding sustainability problems in external accounts. One of the key developments that has driven this has been the recovery in the national saving rate, which had practically halved in the decade prior to EU accession. By contrast, with the exception of 2009, the national saving rate has been on a consistent upward path since 2006, driven by better fiscal performance and rising corporate savings principally due to the new export-oriented services sectors. The strong economic growth registered in recent years, combined with higher dependence on labour in the new sectors, has also contributed to raise disposable income and, in turn, household saving. Conversely investment has declined, mainly because the new sectors rely more on human capital.

This suggests that if these sectors continue to grow, while national saving stays stable, it is highly likely that Malta's current account could remain in surplus. To ensure growth remains sustainable, this surplus should be used to increase investment in education and other activities that improve human capital, while also boosting infrastructure outlays.

How has Malta's current account position developed over recent decades?

The current account of the balance of payments is a key economic indicator closely followed by policymakers.[2] There are two broad ways of conceiving it: either as the difference between what a country exports and what it imports, or else as the difference between national savings and investment. While the two measures are equivalent in monetary terms, they are concerned with two different issues. The first approach mainly emphasises competitiveness, whereas the second is more concerned about growth dynamics. Edwards (2002) gives a very good overview of the changing views of economists on the current account since the late 1940s, starting with the initial concentration on trade flows and elasticities, followed by the intertemporal saving and investment focus in the 1970s and 1980s culminating in the Lawson Doctrine,[3] to the subsequent emphasis on current account sustainability and the current interpretation of current accounts as signs of economic imbalances.

Past research on Malta's current account has focused on assessments of sustainability[4] and on the role of the private and public savings gaps in driving its development.[5] More recently, the analysis has focused on the shift towards consistent current account surpluses, which is being attributed to the emergence of high value-added export-oriented services sectors.[6]

Chart 1 shows Malta's current account position as a share of GDP since 1970. Up to the early 1980s, Malta had very high current account surpluses. This is diametrically opposite to the traditional view that developing countries run very high current account deficits as they invest heavily, while they still have low savings on account of their low income. In part, this reflected Malta being "an unusual case of fiscal conservatism coexisting with financial repression and rigid controls on capital movement and trade".[7] Export growth accelerated

[2] It is one of the key indicators in the European Union's macro imbalances procedure, with a country's three-year backward moving average of the current account balance as a percent of GDP needing to be within a range of a surplus of 6% of GDP and a deficit of 4%. The IMF, due to its mandate of lending money to member states with balance-of-payments deficits, is also very interested in the current account (see Ghosh & Ramakrishnan, 2006).

[3] The Lawson Doctrine, associated with the British Chancellor of the Exchequer Nigel Lawson, argued that as long as the fiscal accounts are balanced, a large current account deficit is not of any concern.

[4] Demarco (1999).

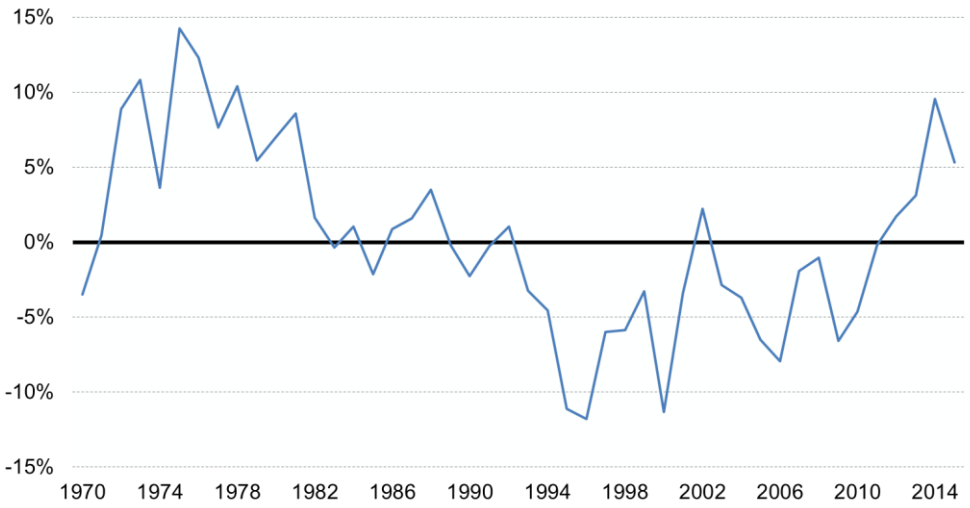
[5] Grech (2000).

[6] Grech, Micallef & Zerafa (2016).

[7] Findlay & Wellisz (1993).

due to the rapid expansion of industry and tourism, while consumer imports were restricted.[8] That said, irrespective of what the intertemporal traditional view implies, a small open economy facing borrowing constraints and subject to considerable external shocks may be better off in the long run if it goes through a period of high surpluses in order to accumulate foreign reserves.

Chart 1
TRENDS IN MALTA'S CURRENT ACCOUNT POSITION
(% of GDP)

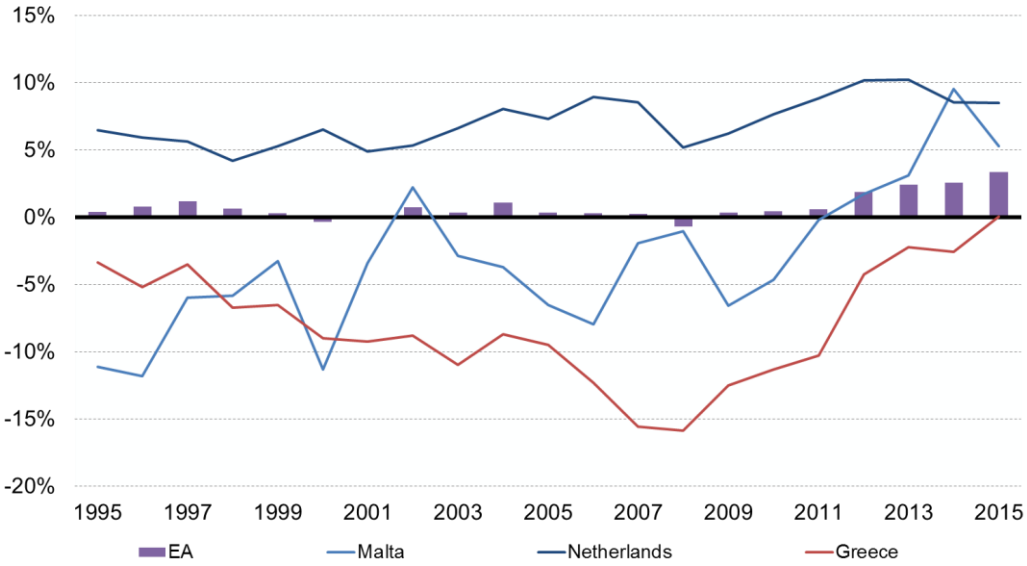


Source: Authors' calculations using CBM macroeconomic time series database.

In fact, the situation for Malta changed significantly in the 1980s when adverse international conditions resulted in a decline in exports of goods and tourist activity. Subsequently the current account position did not recover, on account of growing government deficits combined with very high rates of investment and increasing private consumption. This changed after EU membership due to a very significant rise in exports of services.

[8] For more details, see Grech (2015).

Chart 2
MALTA'S CURRENT ACCOUNT POSITION VIS-A-VIS THAT OF LARGEST SURPLUS AND DEFICIT COUNTRIES IN THE EU
(% of GDP)



Source: Authors' calculations using CBM macroeconomic time series database and AMECO.

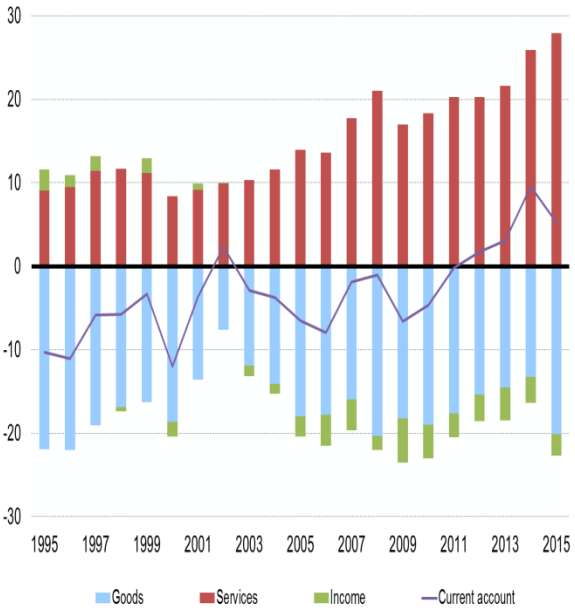
Focusing on developments over the last two decades, the profile of Malta's current account position has shifted from having a very high deficit to forming part of the group of EU countries with relatively high current account surpluses in recent years. Nevertheless, on average, Malta had a current account deficit of 3.2% of GDP since 1995, whilst the Netherlands, the EU country with the most consistently high surplus, averaged a 7.1% surplus. Greece was the EU country with the worst performance over this period, and had a deficit that averaged 8.0% of GDP. However, as can be seen in Chart 2, even Greece has experienced a significant improvement in its current account position after the financial crisis. Malta has seen its current account position improve by 11.9 percentage points since 2009, the largest improvement amongst euro area countries and about four times the change seen on average.

The change in Malta's current account was mainly driven by the rapid growth of net export services (see Chart 3). While the trade deficit in goods increased by 1.8% of GDP between 2009 and 2015,[9] the services surplus rose by 11.0% of GDP. There was also an improvement in the income account of 2.7 percentage points over this period. A significant proportion of this was due to an increased inflow of EU funds. The rest was accounted by

[9] Note however, that if the analysis did not include 2015 – a year characterised by very large imports of capital goods – the trade deficit would have improved by 4.9 percentage points, accounting for a significant part of the overall improvement in the current account.

lower net outflows of profits made by foreign owned firms. The latter development could partly reflect the changing composition of the services sector, with more external services activity generated by firms who are retaining funds locally to finance their very high rate of expansion. Malta's services sector is, in fact, changing significantly, as can be seen in Chart 4. On the one hand, the traditionally strongest services sector – tourism – has experienced a steady increase, accounting for nearly half of the improvement in the services surplus since 2009. On the other, the financial services sector, after exceptional surpluses between 2008 and 2011, appears to have settled to much lower levels. This development was offset by other services sectors, notably remote gaming, maintenance & repair, telecommunications and computer & information services. These sectors, as evidenced by the continued rise in their employment, are now generating substantial export revenues.

Chart 3
MAIN BALANCES IN MALTA'S CURRENT ACCOUNT
(% of GDP)



Source: Authors' calculations using CBM macroeconomic time series database.

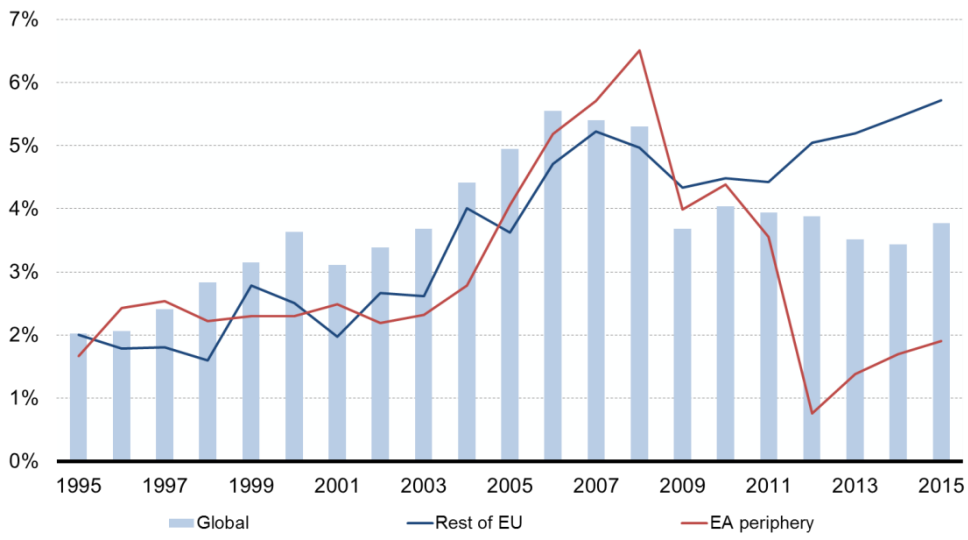
Chart 4
DECOMPOSITION OF MALTA'S SERVICES SURPLUS
(% of GDP)

Source: Authors' calculations using Eurostat database.

Is the change in Malta's current account position cyclical or structural?

The financial crisis has reignited interest in the current account. While before the crisis, there was concern about the size of global imbalances, the subsequent slowdown in activity and trade was accompanied by a "sizable reduction in global external imbalances".[10] The sum of current account balances of all the countries in the world in absolute terms fell from 5.3% of global GDP in 2008 to 3.8% in 2015 (see Chart 5). This development has led to several studies on whether this rebalancing is cyclical or structural, with particular focus on trends in the EU. By 2008 the share of the euro area's periphery in total global imbalances had nearly doubled to 10%, before falling to just 3%. Conversely the rest of the EU's share has risen to 21% of the total. On the one hand, the euro area periphery countries have registered lower deficits, while on the other the core countries have experienced higher surpluses.

Chart 5
DEVELOPMENTS IN GLOBAL IMBALANCES
(% of GDP)



Source: Authors' calculations using World Economic Outlook database.

To understand better these trends, economic literature has focused on the calculation of cyclically adjusted current account positions, looking at issues of import compression during recessions and the influence of foreign demand.[11] Changes in real exchange rates have tended to be considered as non-cyclical factors.

[10] See Haltmaier (2014).

[11] For instance, see European Central Bank (2014). A less refined approach is to try to extract the cyclical elements by applying statistical filters to current account data (see Bardakas, 2016).

The European Commission, for instance, has adopted the methodology of Salto & Turrini (2010) to compute measures of cyclically adjusted current account positions. This involves adjusting levels of imports and exports to reflect respectively the potential domestic output level and that of a country's trading partners. Furthermore, the adjustment of the current account position also takes into consideration changes in the real exchange rate, assuming that their impact on exports and imports last for two years.[12] While very intuitive, this approach suffers from a major defect, namely the assumption that income elasticities of exports and imports are both equal to 1.5 for all EU countries. Fabiani, Federico & Felettigh (2016) instead advocate calculating these elasticities empirically, similarly to the approach taken in Christodoulopoulou & Tkacevs (2014).

In this light, this note computes a cyclically adjusted current account position for Malta using empirically derived elasticities. The first step involves the construction of a measure for Malta of demand from our main trading partners. This was computed using GDP data from the World Economic Outlook database and the trade in goods shares for Malta from the Central Bank's macroeconomic time series database. While there is a close relationship between developments in Malta's exports and developments in the weighted GDP of Malta's trading partners (as can be seen in Chart 6), the long-term income elasticity stands at 1.33, or lower than the measure adopted by the European Commission.

To derive the import elasticity, one option would be to derive a measure of import demand based on the import content of the GDP expenditure sub-components (as suggested in Fabiani, Federico & Felettigh, 2016). This is the approach taken in the Central Bank of Malta's core macroeconometric model.[13] However, this measure is very highly correlated to GDP, and moreover if this measure is adopted, one is restricted to using an HP filter to determine the cyclical element in each GDP sub-component. Using instead GDP, one can adopt more refined measures of the cycle such as those derived from a production

[12] The adjustment is as follows:

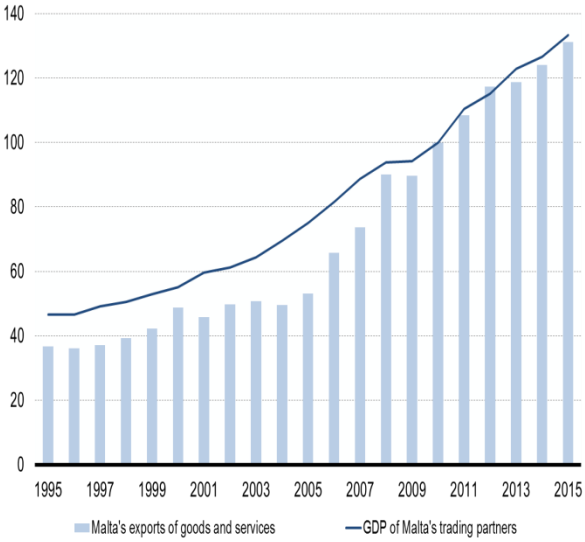
$$uca_t = \frac{CA_t}{P_t Y_t} + \theta_M \frac{P_t^M M_t}{P_t Y_t} \times \frac{Y_t - Y_t^*}{Y_t^*} - \theta_X \frac{P_t^M X_t}{P_t Y_t} \times \frac{Y_t^F - Y_t^{F*}}{Y_t^{F*}} + \left[\frac{P_t^X X_t}{P_t Y_t}\eta_X - \frac{P_t^M M_t}{P_t Y_t}\eta_M\right] (0.4 \times \Delta reer_t + 0.15 \times \Delta reer_{t-1})$$

where *uca* and *CA* are, respectively, the adjusted and unadjusted current account balance; *PY* is nominal GDP, $P^M M$ and $P^X X$ are nominal imports and exports; *Y* and *Y** are, respectively, real actual and potential output (and denote the same variables for trading partners Y^F and Y^{F*}); reer is the log of the real effective exchange rate; η_X and η_M are, respectively, the elasticities of exports and imports with respect to the real effective exchange rate; θ_X and θ_M are the income elasticity of exports and imports.

[13] See Grech & Rapa (2016).

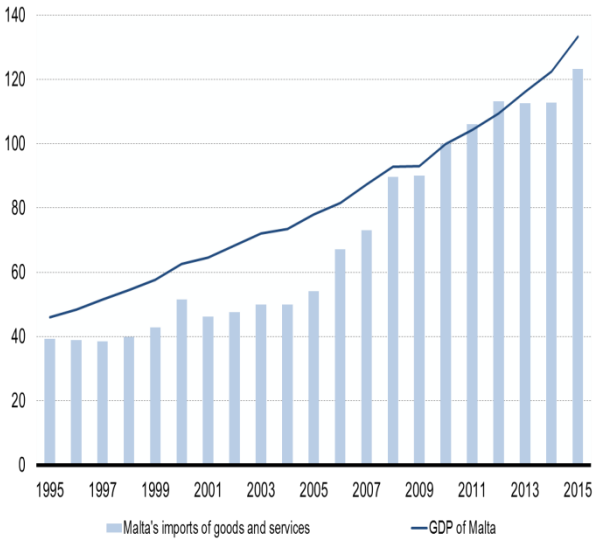
function.[14] There is a close positive correlation between Malta's imports and its GDP (see Chart 7). The estimation of the long-term income elasticity of imports for Malta is, however, lower than that of exports and stands at 1.25, and is once again smaller than the 1.5 standard measure used by the European Commission in its cyclically adjusted current account methodology.

Chart 6
MALTA'S EXPORTS AND DEVELOPMENTS IN GDP OF MAIN TRADING PARTNERS
(2010 = 100)



Source: Authors' calculations using World Economic Outlook and CBM databases.

Chart 7
MALTA'S IMPORTS AND DEVELOPMENTS IN ITS GDP
(2010 = 100)



Source: Authors' calculations using CBM macroeconomic time series database.

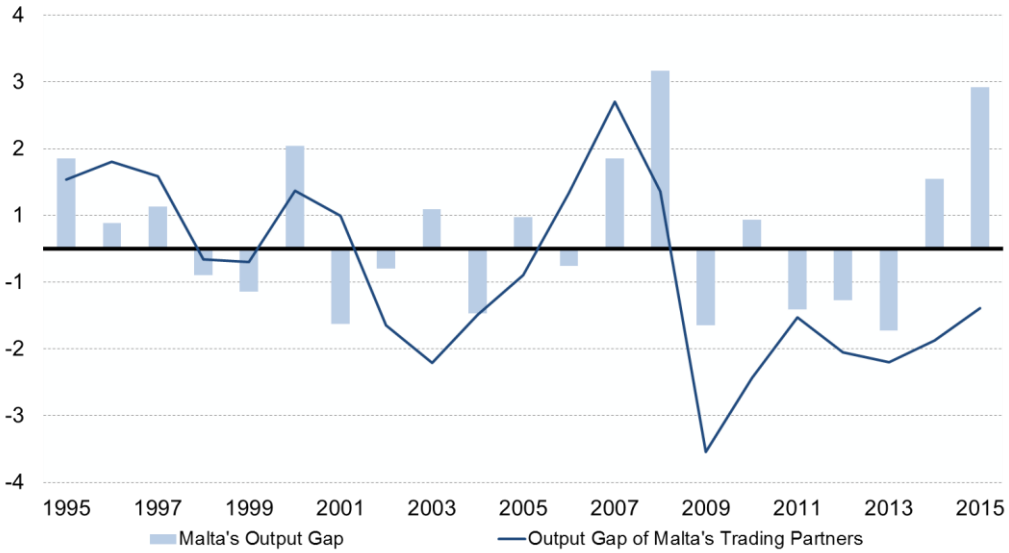
Besides the issue of having different income elasticities for imports and exports, the other key determinant of the cyclically adjusted current account position is the difference in the cyclical position between a country and its trading partners. The comparison for Malta is shown in Chart 8. While the output gap for the Maltese economy follows the approach described in Grech & Micallef (2016) that for Malta's trading partners is derived as a composite of output gaps for EU countries derived from the AMECO database and those for non-EU countries taken from the World Economic Outlook database. The individual country cyclical positions are then combined using weights reflecting the relative share of that country in Malta's total exports of goods. Computed on this basis, Malta's economic cycle broadly tracks that of its main trading partners[15]. However, the output gap for Malta is more volatile, particularly in the early 2000s. In recent years there is quite some difference in the relative cyclical position, with Malta experiencing a smaller drop in activity in 2009 and its output gap turning into a significant surplus. This occurred despite the fact that Malta's

[14] For details on this approach applied for Malta see Grech & Micallef (2016).

[15] There is a positive correlation of 0.6 for the period 1980 to 2015.

potential output growth has been accelerating, in contrast to the trend seen in its trading partners.

Chart 8
CYCLICAL DIFFERENCES BETWEEN MALTA AND ITS TRADING PARTNERS
(% of Potential GDP)



Source: Authors' calculations using World Economic Outlook, AMECO and CBM databases.

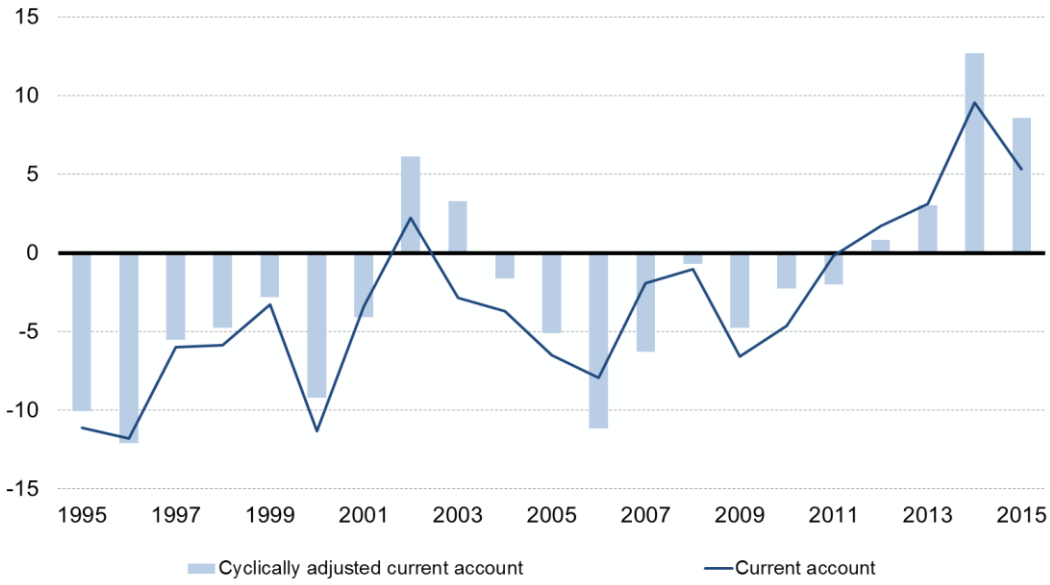
The fact that Malta's economy is performing much better than that of its trading partners implies that its cyclically adjusted current account position should exceed the unadjusted position. On the one hand, Malta's exports would be higher if its trading partners were not operating below capacity. On the other, its imports would be lower if GDP were closer to its potential level, rather than be substantially above as at present. The impact of the first factor is, of course, higher than the impact of the second, because exports are a larger share of GDP, while the income elasticity of exports is higher than that of imports. The output surplus enjoyed by Malta is also similar in size to that of its trading partners' combined output gaps.

Chart 9 plots the cyclically adjusted and the unadjusted current account position for the Maltese economy over the period 1995 to 2015. The two measures track closely each other, with only some minor exceptions.[16] In view of the assumptions that needed to be taken when computing the cyclically adjusted measure, such as relying on estimates of unobservable variables such as output gaps and assuming time-invariant income elasticities, an attempt was made to compare these findings with those of other institutions. European Commission (2015) estimates that between 2007 and 2015, under unchanged cyclical differences, Malta's current account position would have improved by an additional 6.9 percentage points

[16] The degree of correlation between the two measures stands at 0.9 for the period 1980 to 2015.

compared to its observed change. This is similar to the results in Chart 9, where over the same period the adjusted current account improves by 14.8 percentage points, as against nearly 7.2 percentage points in the unadjusted position.

Chart 9
CYCLICALLY ADJUSTED CURRENT ACCOUNT: MALTA
(% of GDP)



Source: Authors' calculations using World Economic Outlook, AMECO and CBM databases.

This analysis suggests that cyclical demand factors are not causing the improvement in Malta's current account position. However some studies, notably Haltmaier (2014), argue that changes in real exchange rates were nearly as big a cause of external rebalancing across the world as the cyclical changes in economic activity. Changes in oil prices are also mentioned as possible causes for temporary changes in current account positions. To demonstrate this, Haltmaier (2014) regresses changes in current account balances on current and lagged values of changes in the output gap differential (defined as trading partner output gap minus home country output gap), on changes in the log of the real exchange rate, on changes in the log of oil prices and on the lag of the current account balance for 35 countries from 1980 onwards.[17]

[17] Another example of this type of study is Brissimis et al (2010), which regresses the current account balance on the real exchange rate, the government saving gap, the private investment ratio, inflation volatility, bank lending to the private sector, the difference between real GDP per capita in the domestic economy and a comparative one, demographic developments and the real interest rate.

Table 1

THE IMPACT OF CYCLICAL DIFFERENCES, REAL EXCHANGE RATES AND OIL PRICES (1980 to 2013)

	Estimated coefficient		Long-run effect	
	35 countries (Haltmaeir, 2014)	Malta (Grech, 2016)	35 countries (Haltmaeir, 2014)	Malta (Grech, 2016)
Change in the output gap differential (trading partners minus home country output gap)	0.44	0.44	0.28	0.31
Real exchange rate	-0.06	-0.15	-0.04	-0.11
Oil price	-0.02	-0.06	-0.01	-0.04
Lagged current account	-0.57	-0.41		

Note: This table shows the equation results of a regression of changes in current account balances on changes in the relative cyclical position of trading partners and a home country, changes in the real exchange rate and in the oil price and the lagged current account position of the home country. The long run effect shows the cumulative effect of changes in the explanatory variables. Thus for instance, whereas a one-percentage point increase in the output gap differential improves the current account balance by 0.28 percentage points on average across the 35 countries studied by Haltmaeir (2014), it leads to a 0.31 percentage points improvement in Malta. The impact of the real exchange rate and of oil prices is, on the other hand, much stronger in Malta than in the countries studied by Haltmaeir (2014).

Source: Authors' calculations, Haltmaeir (2014).

These estimates are compared with those derived applying the same regression[18] on Maltese data (see Table 1). This suggests that the impact of oil prices on the current account position is more pronounced in Malta, reflecting our economy's stronger reliance on imported oil. A 1% rise in the oil price, in fact, induces in the long run a 0.04% deterioration in Malta's current account, as against a 0.01% change in the countries studied in Haltmaier (2014). The real exchange rate also plays a more pronounced role in Malta. In the long run a 1% appreciation in the real exchange rate brings about a 0.11% worsening in the current account position for Malta, as against a 0.04% deterioration, on average, across the 35 countries surveyed in Haltmaier (2014). This greater influence of the real exchange rate is in line with the results for Malta shown in Christodoulopoulou & Tkacevs (2014). Cyclical differences are the strongest determinant of the current account position for Malta, similarly to the results for other economies, though again the long run elasticity is stronger.

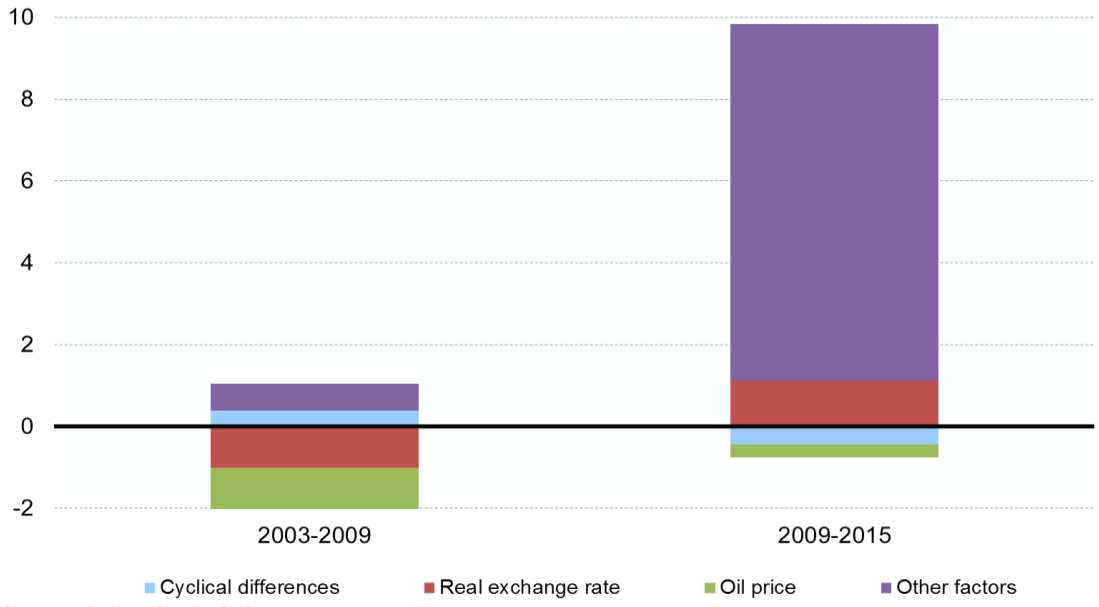
The long-run elasticities derived from this regression can be used to assess the contribution of changes in oil prices, real exchange rates and cyclical differences towards Malta's current account position during different periods. Any change that cannot be attributed to these

[18] $\Delta CA_t = c + \Delta oil_t + \Delta rer_t + \Delta(gaptrad_t - gapmt_t) + CA_{t-1}$

where *CA* is the unadjusted current account balance as a % of GDP; *oil* is the log of the price of Brent crude, *rer* is the log of Malta's real exchange rate, *gaptrad* is the output gap in Malta's trading partners while *gapmt* is Malta's own output gap.

three factors is considered as due to structural changes. This decomposition is shown in Chart 10 for two periods: the years between Malta's EU accession and the onset of the financial crisis and the years following the financial crisis. In the first period, Malta's current account position had deteriorated by 3.7 percentage points of GDP. This mostly reflected rising oil prices, though the appreciation in the real exchange rate also contributed to widen the deficit. On the other hand, cyclical differences reduced the current account deficit slightly during this period. Other (structural) factors also contributed positively to the current account, but were the third most important factor during this period. By contrast, these factors appear to account for nearly the entire improvement in the current account position in the post-financial crisis years. Changes in the oil price and in cyclical differences, in fact, offset most of the impact induced by the improvement in the real exchange rate.

Chart 10
ESTIMATED IMPACT OF CYCLICAL DIFFERENCES, REAL EXCHANGE RATE AND OIL PRICE ON CURRENT ACCOUNT CHANGES
(% of GDP)



Source: Authors' calculations.

What are the macroeconomic implications of the change in Malta's current account position?

The analysis presented in the previous section indicates that the change in Malta's current account position was mostly of a structural nature. This implies that it is highly likely to persist in the coming years. In this light it is important to study its possible macroeconomic implications.

One of the structural factors driving the change in the current account appears to be the improvement in the energy intensity of the Maltese economy. Whereas in 2005 it took 162.8kg of oil equivalent to generate €1,000 of GDP, by 2014 this had fallen to 118.7, or more than a quarter less.[19] In fact, while in 2005, Malta required nearly 9% more oil than the EU average to generate the same amount of economic output, it now needs 3% less than the EU average. This turnaround reflects a number of developments, notably the reduced importance of exports of goods (which fell by nearly 17% in their relative significance over the same period) and the improvement in the efficiency in the generation of electricity. Given that Malta imports all of its fuel, these developments undoubtedly generated an underlying improvement in Malta's structural current account position. Amongst other things, the progress in energy intensity should reduce Malta's vulnerability to oil price shocks.[20]

Another factor responsible for driving the recent improvements registered in Malta's current account is the general reduction of Malta's import intensities.[21] As shown in Chart 11, Malta's overall dependence on imports fell by around 8pp between 1995 and 2011, with reductions registered in the import intensities of all three expenditure items.[22] It can also be noted that most of the fall in import intensities occurred between 2010 and 2011, a period characterised by a marked increase in the share of services in Maltese output. These findings continue to highlight that the recent improvement of Malta's current account is not caused by cyclical fluctuations but is rather an effect of the changing structure of the Maltese economy. Moreover, these results also imply that multipliers have risen over time, increasing the possible impact of fiscal and other policies. Furthermore it means that expansion of export

[19] Eurostat, 2016.

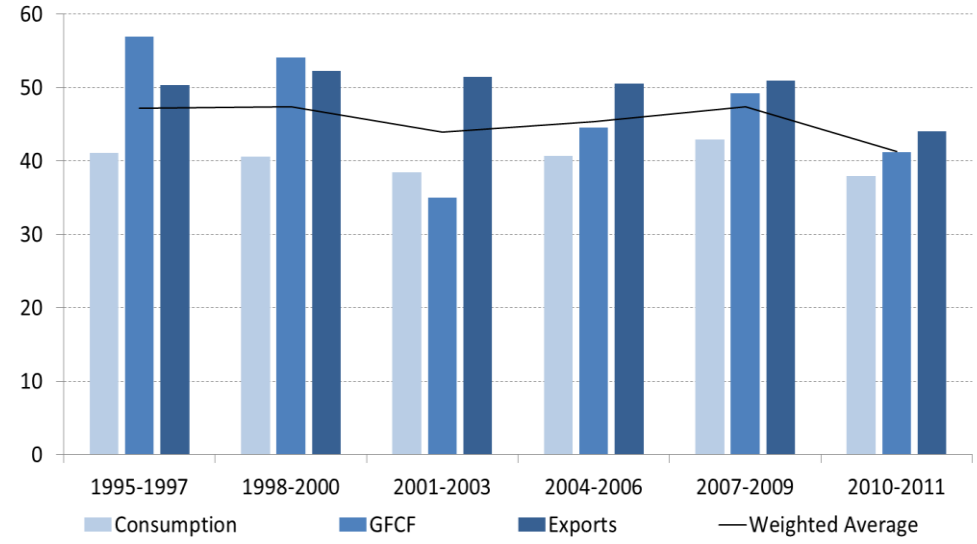
[20] Grech & Rapa (2016) suggests that a permanent 20% increase in the oil price would lower real GDP by 0.4 percentage points in 3 years, boost the gross debt to GDP ratio by 0.3 percentage points and raise the unemployment rate by 0.1%.

[21] The average import intensity is highly correlated with the current account balance with a correlation coefficient of -0.6.

[22] Import intensities are derived using the methods explained in Claus (2003).

activity is having more impact domestically, resulting in higher consumption and social welfare than in the past.

Chart 11
IMPORT INTENSITITES OF MALTESE GDP EXPENDITURE COMPONENTS
(% of respective expenditure item)



Source: Authors' calculations using OECD data.

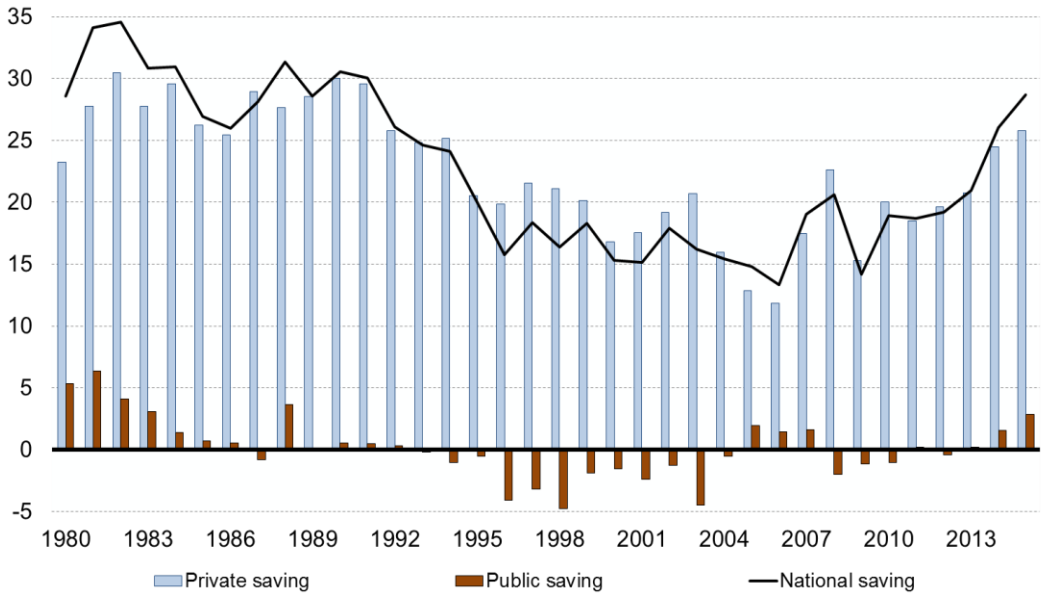
Grech (2000) had indicated that Malta's external accounts did not exhibit stationary behaviour[23] up to 1997, and the current account position was deteriorating by 0.6 percentage points of GDP every year. This finding, together with econometric tests that showed that this was being driven by worsening public finances, was quite worrying as stationarity is a necessary (although not a sufficient) condition for avoiding sustainability problems in external accounts.[24] By contrast, running the same econometric tests on data spanning to 2015 indicates that the current account position is now stationary. In fact, in recent years most external account sustainability indicators have registered a strong positive upturn. For instance, the net international investment position has grown from 28% of GDP in 2006 to nearly 49% in 2015, the third highest ratio in the EU. The public sector's external

[23] A stationary process is one where statistical properties, such as the mean of the time series, are constant. Since current account deficits need to be financed by external debt or by foreign direct investment, a country running permanently deteriorating deficits would end up facing unsustainable external debt or very little domestic ownership of its economy.

[24] Trehan & Walsh (1991) show that given the equality relation between the current account and the capital account, a stationary current account implies that the present discounted value of the expected stock of assets would converge to zero. Quintos (1995) defines this as a 'strongly sustainable' current account position, and shows that even if the current account is integrated of order 1, this position is 'weakly sustainable', though the country would eventually have problems to finance its external debt.

loans fell from 7% of GDP to 5% during the same period, while the general government's external loans declined from 3% of GDP to 2%, the lowest in the EU.

Chart 12
DEVELOPMENTS IN NATIONAL SAVING RATE
(% of GDP)



Source: Author's calculations using CBM macroeconomic time series database.

One of the key developments driving the improvement in Malta's current account was the recovery in the national saving rate. Chart 12 shows how the latter practically halved in the decade prior to EU accession. The main cause was a significant deterioration in public savings, as government started running substantial primary deficits.[25] However there was also a notable decline in private saving. This reflected in part the restructuring of the Maltese economy that preceded EU membership. During this period, a number of sectors that had previously been shielded by tariff and non-tariff barriers had to improve their competitiveness, with some firms closing down or changing significantly their operations. National accounts employment data show that employment in manufacturing fell from 34,840 in 1995 to 26,950 in 2004, a drop of 23%. Grech (2014) also shows that from growth rates of over 5%, household disposable income fell to slightly negative. Consequently the household saving rate more than halved. Gatt (2014) suggests that bank lending was another important

[25] A similar narrative can be applied to the decline in national saving in the preceding decade, which for a large part reflected the disappearance of high primary surpluses in government finances.

cause for developments during this period, as bank lending was growing at nearly 20%. Reductions in credit constraints may have led households to save less.[26]

By contrast, with the exception of 2009, the national saving rate has been on a consistent upward path since 2006. On the one hand, public saving has improved by some 5 percentage points in recent years. On the other, the emergence of new export-oriented services sectors, combined with the impact of greater competition and restructuring on previously existing sectors, has led to a much higher growth in profits. The combined gross operating surplus of Maltese firms grew by €1.9 billion in the decade following 2006, more than double the increase in the decade preceding EU accession. This led to a significant improvement in corporate saving. Furthermore, the strong economic growth registered in recent years, combined with higher dependence on labour in the new economic sectors, has contributed to raise disposable income. While consumption has increased, the household saving rate is estimated to have returned to levels last seen in the late 1990s.

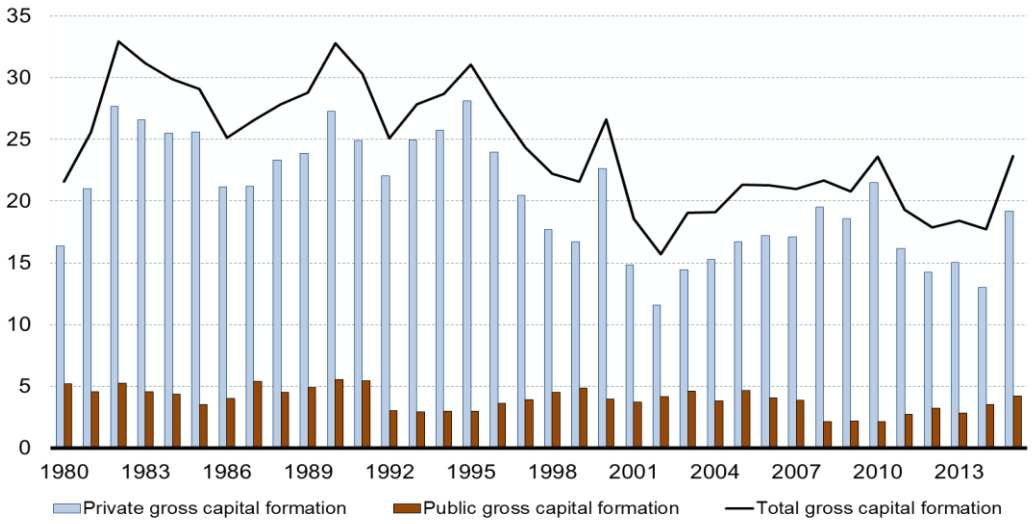
Trends in investment mirrored to a certain extent those in savings. However there were some important differences. For instance, while there was a decline in total gross capital formation in the 1990s, the reduction was more restrained, with a drop of 11 percentage points as against 16 percentage points in the national saving rate. This probably reflected the need for firms to invest more as part of their pre-EU accession efforts to increase competitiveness. Another important different trend was the fact that public investment remained relatively stable in this period, as against the sharp drop in public saving. Subsequently public investment gradually fell, halving by 2008 to its lowest historical level, before recovering sharply in recent years. In fact, public gross capital formation accounted for more than half of the rise in total investment since 2009.

During the first part of the 2000s, private investment was relatively stable[27] (see Chart 13), while saving continued to fall. In the second half private capital formation picked up steadily reaching levels last seen in the late 1990s. However, this trend was reversed in the first half of the 2010s, possibly reflecting the growing share of the services sector, which depends more on investment in human rather than on physical capital. That said, 2015 saw the emergence of yet another services sub-sector, aviation services, which is heavily capital-intensive, resulting in a sharp rise in the private investment ratio.

[26] A similar consideration can be made for the mid-1990s when financial liberalisation led to lending growth rates spiking to over 35%.

[27] Note that the large investment in 2000 was due to one sector changing significantly its production lines, while the drop in 2001 was also due to a statistical issue, namely the impact of the national airline selling and then leasing back its aircraft.

Chart 13
DEVELOPMENTS IN TOTAL GROSS CAPITAL FORMATION
(% of GDP)



Source: Author's calculations using CBM macroeconomic time series database.

The current account position, conceived as the difference between saving and investment can be broken down into a private saving gap (private saving less private investment) and a public saving gap (public saving less public investment).[28] This redefinition allows one to study the influence of the fiscal position on the country's external accounts. Furthermore one can attempt to study whether there is a correlation between the saving and investment decisions made by the private sector and fiscal policy.[29] For instance, the Ricardian equivalence hypothesis posits that the private sector neutralises any increase in the fiscal deficit through higher saving, as agents expect future rises in taxes. Similarly the crowding-out theory implies that a fiscal deficit, especially when an economy is operating at full capacity, could reduce private investment and lead to higher saving.

Evaluating whether an economy is characterised by Ricardian equivalence has important policy implications. For instance, it can indicate whether fiscal deficits could lead to external account issues, or whether private saving would counteract partly, or fully, imbalances in government finances. On the other hand, in small open economies like Malta if private investment is not closely correlated with private saving, large investment projects could still result in volatile current account positions.

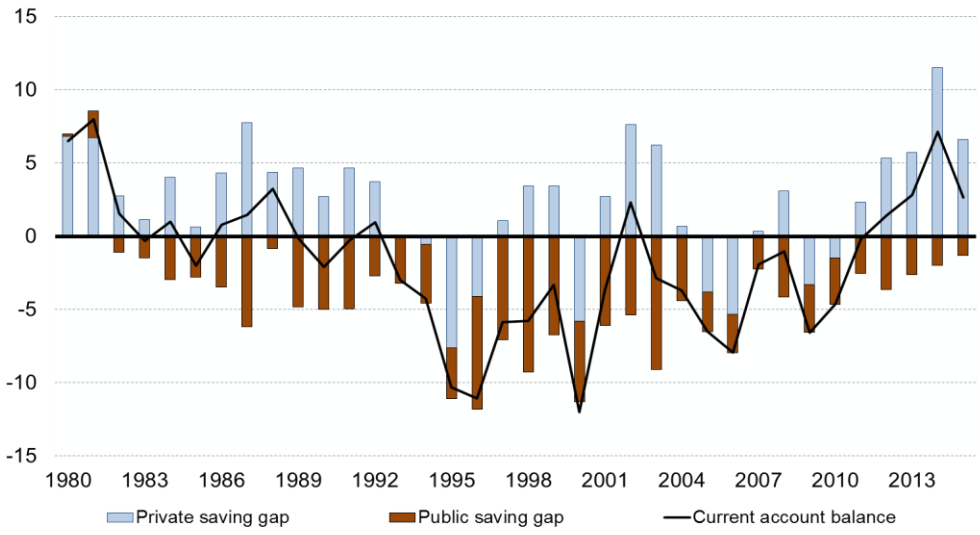
Chart 14 decomposes the current account into a private saving gap and a public saving gap. At first glance, this seems to invalidate the hypothesis that they are inversely related.

[28] See Centeno (1995) or Grech (2000).

[29] See, for instance, de Castro & Fernandez (2009).

National saving is not stationary, and the current account and the fiscal deficit appear to be positively, rather than negatively, related. This suggests that it is more likely that the Maltese economy exhibits patterns more consistent with the Keynesian twin deficit framework.[30]

Chart 14
DECOMPOSITION OF CURRENT ACCOUNT POSITION
(% of GDP)



Source: Author's calculations using CBM macroeconomic time series database.

While private saving and private investment have a strong positive correlation when one looks at the period 1980 to 2015, they appear to have a much weaker relationship during recent decades. On the other hand, the relationship between government saving and government investment appears to have strengthened substantially, particularly since EU membership. This suggests that while public investment is increasingly being financed internally by Government (primarily through the use of EU funds), private investment is going in the opposite direction, with the rise in private saving not bringing about a commensurate increase in private capital formation. The reasons for the latter development are not easy to ascertain. It is true that bank lending to private firms has remained fairly stable,[31] raising the

[30] Regressing the current account on the fiscal balance and the real exchange rate (as in de Castro & Fernandez, 2009) indicates a strong positive relationship between the external and the fiscal position.

[31] Bank lending to transport, storage, information & communication rose by 29% between 2006 and 2015, while that for manufacturing and for accommodation and food services rose by 3.7% and 3.2%, respectively. Bank credit to the wholesale & retail sector rose by 18%, while that for construction & real estate fell by 4%. In no sector was the trend in lending similar to that in value added. For instance manufacturing value added rose by 11%, while accommodation and food services had a 77% rise. Construction & real estate rose by 33%, while the value added of wholesale & retail increased by 53%. The transport, storage, information and communication sectors grew by a combined 81%.

question of whether investment was held back due to lack of access to finance. However, the financial resources of many firms have improved significantly, with corporate saving nearly doubling from 9% of GDP in 2006 to 19% in 2015, meaning that firms could invest more using their own funds should they need to.

Table 2

CHANGE IN RATIO TO GDP OF SELECTED NATIONAL ACCOUNTS COMPONENTS BY SECTOR (2006 to 2015)

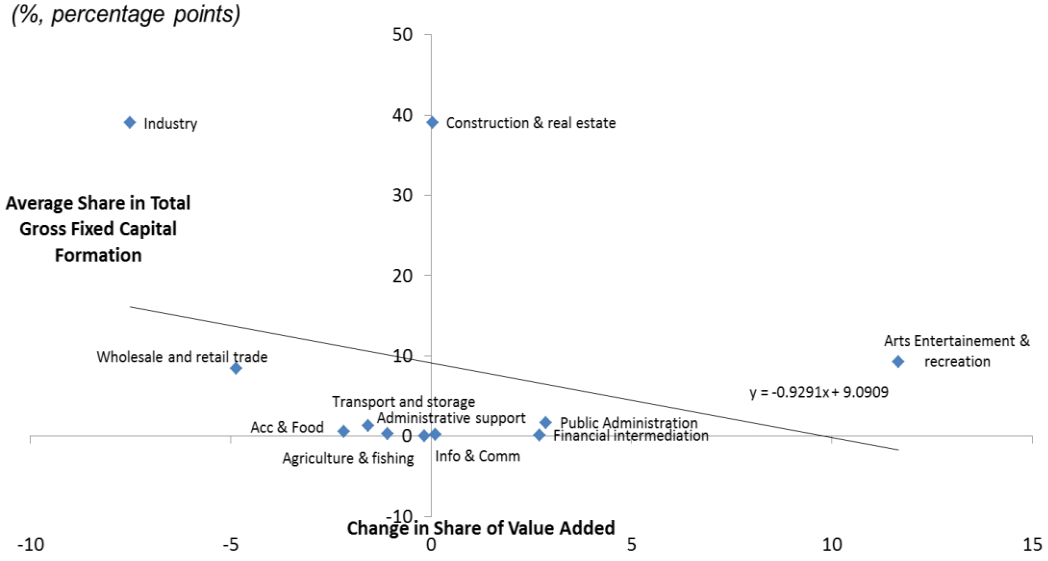
	Gross Fixed Capital Formation	Gross Value Added	Gross Operating Surplus
Agriculture & fisheries	-0.18	-0.82	-0.48
Industry	2.51	-4.46	-0.21
Construction & real estate	-3.41	-2.50	-1.32
Wholesale & retail	0.04	-1.17	-0.14
Transportation & storage	3.42	-0.25	0.18
Accommodation & food services	0.32	0.12	0.84
Information & communication	0.48	0.84	0.36
Financial & insurance services	-0.11	-1.26	-1.92
Professional, technical & administrative support	-0.40	3.34	1.19
Public administration, education, health & social work	-0.60	-0.06	-0.19
Arts, entertainment & recreation; other services	0.06	7.19	6.00

Source: Authors' calculations.

To understand developments in gross fixed capital formation one needs to look at sectoral compositions. Table 2 compares sectoral changes between 2006 and 2015 in ratios to GDP of investment, gross value added and gross operating surplus. These bring out a number of interesting trends. Industry and transportation & storage are the only two sectors to have seen a significant increase in their investment ratio, and in both cases their gross value added is lower in relative terms than it was in 2006. This could imply that the sectors are restructuring towards more capital-intensive modes of production. On the other hand, the decline in construction & real estate gross fixed capital formation exceeds the relative drop in their gross value added and operating surplus. Accommodation & food services and, to a certain extent, information & communications have increased investment in line with developments in their activity; while agriculture and financial services have lowered investment less than the relative drop in their value added and operating surplus. The main trend evident in Table 2 is that the services sectors which are increasing their share of

economic activity, such as remote gaming, professional services and administrative support, are doing so without significant changes in gross fixed capital formation.

Chart 15
RELATION BETWEEN SECTORAL GROSS FIXED CAPITAL FORMATION AND VALUE ADDED
(%, percentage points)



Source: Authors' calculations using OECD data

This trend is also confirmed by Chart 15 which plots sectorial growth between 1995 and 2011, against the sectorial share in total investment averaged over the same period. This scatter plot shows that there is a negative relation between sectors that which have a higher propensity to invest and the growth in their share in overall GVA. Sectors which have traditionally contributed significantly to total investment, such as industry (which on average contributes to around 40% of total investment), and wholesale and retail (whose investment on average makes up around 10% of total GFCF), have experienced a significant decline in their share of GVA. On the other hand, industries which tend to play a smaller role in investment dynamics (mainly financial intermediation, public administration and to some extent arts, entertainment & recreation) have expanded rapidly in the last years. Therefore Malta's shift from capital intensive industries to the more labour intensive sectors is likely to have led to a compositional effect that has weighed negatively on total investment growth.

This suggests that if these export-oriented services sectors continue to grow, while national saving stays stable, it is highly likely that Malta's current account could remain in surplus over the coming years. While this surplus could be invested abroad, another potentially more welfare-enhancing option would be to increase investment in education and other activities that improve Malta's human capital, while also boosting spending on infrastructure. This would help sustain the pace of economic growth seen in recent years.

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