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Unit Labour Costs, Wages and Productivity in Malta: A Sectoral and Cross-Country Analysis

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Policy Note

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Abstract

ULC growth in Malta averaged 2.2% per annum between 2010 and 2014. International institutions have recently expressed concern that this increase, the highest among EU economies, could eventually lead to a loss in price competitiveness. Macro-economic indicators, including GDP, Balance of Payments and employment, however, do not indicate a loss in competitiveness. A closer look at the two main components of ULCs – compensation per employee and labour productivity – reveals that developments in ULCs were not driven by excessive wage increases but rather by a slowdown in productivity. The note focuses on the following four broad questions: (i) Is Malta's ULC growth out of synch given its economic performance? (ii) Is ULC growth excessive given the structural changes in the Maltese economy? (iii) What do firm-level surveys tell us about the sectoral and structural characteristics behind productivity in Malta after the crisis? and (iv) How do domestic wages, both economy-side and sectoral, compare vis-à-vis other European countries?

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Executive Summary

ULC growth in Malta averaged 2.2% per annum between 2010 and 2014. International institutions have recently expressed concern that this increase, the highest among EU economies, could eventually lead to a loss in price competitiveness. Macro-economic indicators, including GDP, Balance of Payments and employment, however, do not indicate a loss in competitiveness. This could be explained in either of two ways: that the ULC is not a reliable indicator of loss of competitiveness in a context of Malta's economic transformation to a service based economy, or that the effects of the loss of competitiveness are lagging substantially the rise in ULC.

A closer look at the two main components of ULCs – compensation per employee and labour productivity – reveals that developments in ULCs were not driven by excessive wage increases but rather by a slowdown in productivity. This note focuses on the following four broad questions:

- ***Is Malta's ULC growth out of synch given its economic performance?***

Cross-country comparisons based on a number of demand and supply indicators – such as the output gap, potential output and the unemployment rate – suggest that developments in Malta's ULCs are not excessive given developments in economic activity.

- ***Is ULC growth excessive given the structural changes in the Maltese economy?***

Since before the crisis, pronounced structural changes have occurred in the Maltese economy, with a diversification of its economic base and a shift from traditional industries towards higher-value added activities, mostly in the services sector. ULC growth in Malta is broadly comparable to that in Finland, which has registered a broadly comparable decline in the share of its manufacturing industry. That said, Maltese industry has improved its competitiveness over the last fifteen years, whereas there was a slight deterioration in Finland.

- ***What do firm-level surveys tell us about the sectoral and structural characteristics behind productivity in Malta after the crisis?***

According to the Wage Dynamics Network (WDN) survey, increases in costs between 2010 and 2013 were matched or even exceeded by gains in labour productivity. Around 25% of firms reported that productivity growth exceeded labour costs. This result is at odds with official statistics. Regression analysis shows that labour productivity is more

likely to be lower in firms with a higher share of labour in total costs which suggest that structural features of the economy, such as the diversification of economic activity towards services, could potentially be behind the recent slowdown in productivity.

- ***How do domestic wages, both economy-side and sectoral, compare vis-à-vis other European countries? Is Malta losing ground compared to other economies?***

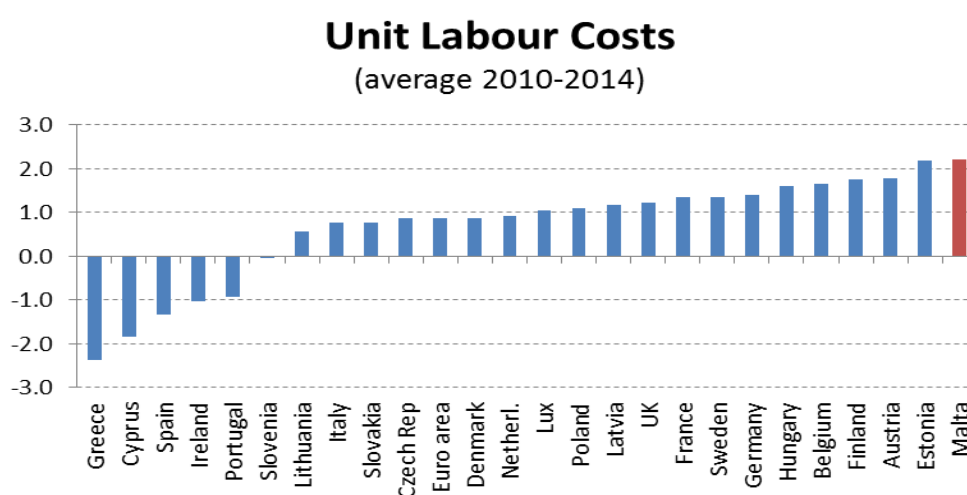
Malta has one of the lowest labour costs per hour in the euro area and has maintained its cost competitiveness despite the reduction in labour costs in stressed countries.

ULC developments in Malta: is it due to wages or productivity?

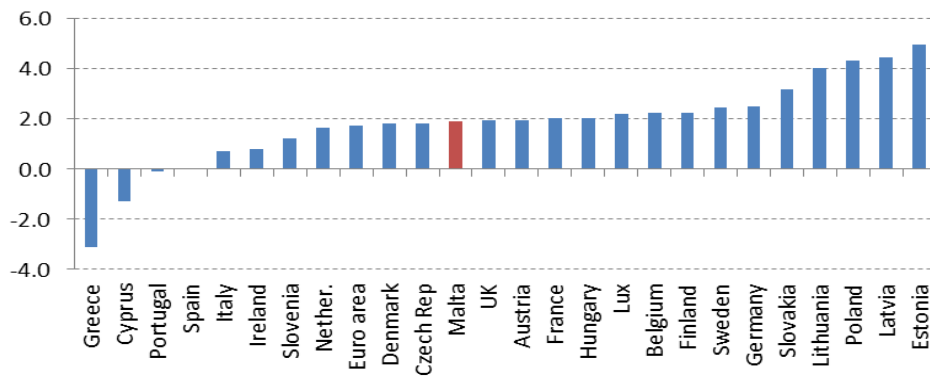
Chart 1 plots the average growth rate between 2010 and 2014 for ULCs and its two components, compensation per employee and labour productivity. During this period, ULCs in Malta averaged 2.2%, the highest increase among EU countries.

Developments in Malta's ULCs were mainly driven by a slowdown in productivity rather than an excessive increase in wages. Growth in compensation per employee averaged slightly less than 2%, broadly in line with the euro area average, and less than half the wage increases observed in the Baltic and some Eastern European economies. On the contrary, Malta's labour productivity has deteriorated during this period, contracting on average by -0.3% compared to an increase of 0.9% in the euro area. Malta is one of three countries, the others being Greece and Italy, with a decline in productivity and its performance contrasts starkly with the Baltic countries, which have registered average productivity improvements of around 3%.

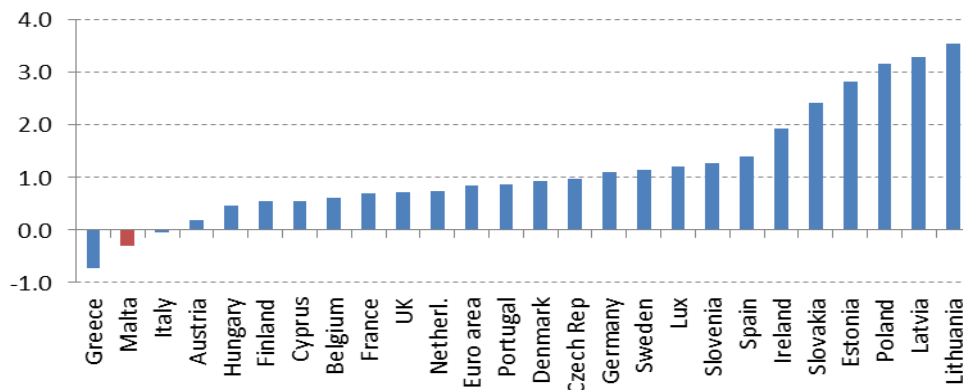
Chart 1



Compensation per employee (average 2010-2014)



Labour productivity (average 2010-2014)



Is Malta's ULC growth out of synch given its economic performance?

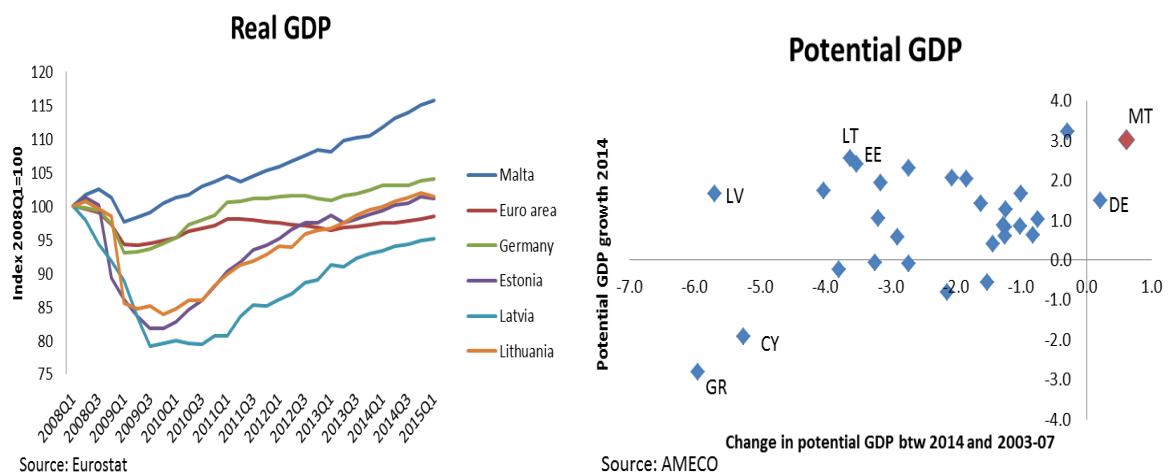
The Maltese economy has weathered the economic and financial crisis relatively well (see chart 2). After contracting in 2009, economic activity recovered strongly such that, by mid-2010, real GDP had already surpassed the pre-crisis peak. After the crisis, Malta has registered one of the highest rates of GDP growth among the euro area countries, with real GDP standing at around 15% higher at the end of 2014 compared to 2008Q1. According to the European Commission, Malta is one of only two countries in the EU (the other being Germany) in which potential GDP in 2014 had already exceeded the pre-crisis growth rate.

Similarly, the domestic labour market performed relatively well after the crisis, at a time when labour market performance in a number of euro area countries deteriorated drastically. Employment growth had already returned to its pre-crisis growth trend in 2010, with job

creation in the services sector continuing unabated even during the crisis. The modest increase in unemployment in 2009 started to be reversed by early 2010 and since then, the unemployment rate has declined close to its historical lows, being among the lowest in the euro area, despite increasing labour participation rates.² Estimates of Malta's structural unemployment rate have remained broadly unchanged between 2008 and 2013.³

Given these developments, chart 3 compares the growth in ULC vis-à-vis a number of demand and supply indicators, such as the output gap, potential output and the unemployment rate. The charts show a clear positive relationship between ULC growth and the output gap and potential GDP growth. On the contrary, a negative relationship exists between ULC and the unemployment rate or the change in the unemployment rate compared to the pre-crisis unemployment rate. All these relationships suggest that Malta's ULCs between 2010 and 2014 are broadly in line with what one would expect given its economic performance.

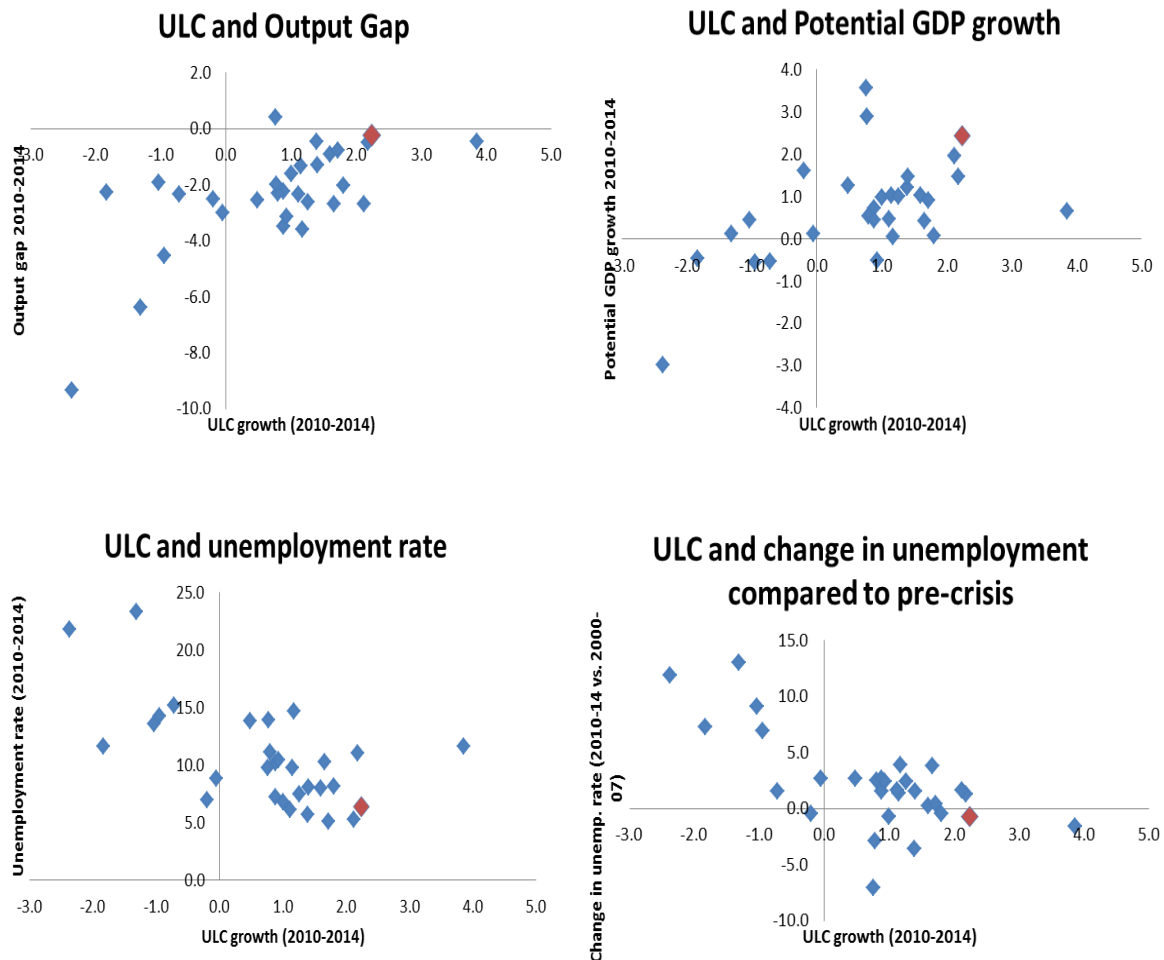
Chart 2: Actual and Potential GDP



² Micallef, B. (2013)

³ Micallef, B. (2014)

Chart 3: ULC growth compared to Demand-Supply Indicators

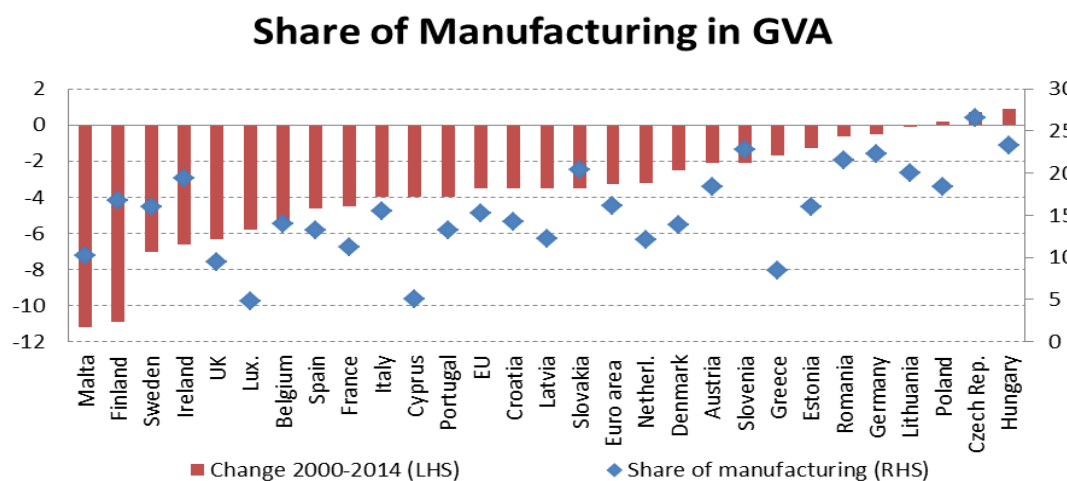
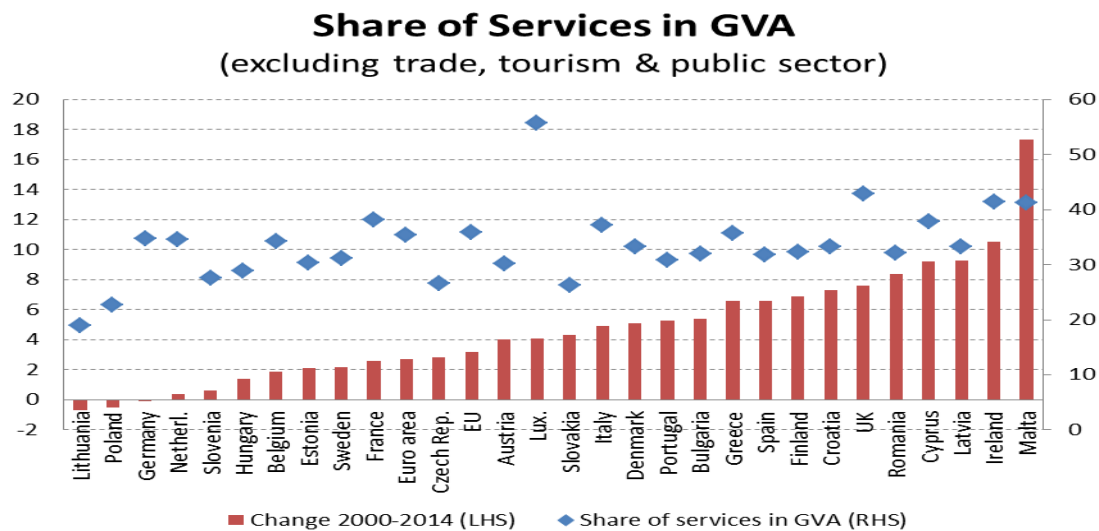


Is ULC growth excessive given the structural changes in the Maltese economy?

Even before the crisis, pronounced structural changes have occurred in the Maltese economy, with a diversification of its economic base and a shift from traditional industries towards higher-value added activities, mostly in the services sector. Chart 4 shows that the share of non-traditional market services (that is, excluding wholesale & retail trade, tourism and public administration) in Gross Value Added (GVA) has increased by 17 percentage points between 2000 and 2014, by far the highest increase among EU countries. In 2014, Malta's share of services was one of the highest in the EU, broadly in line with the UK and Ireland. The increase in the share of services has coincided with the relative decline in the share of manufacturing. During this period, the share of manufacturing in GVA declined by

11 percentage points, from 21.4% to 10.2%. There is a strong possibility that such a quite sharp shift from manufacturing to services explains, at least partially, why Malta's competitiveness, has not, at least as yet, been impaired by the notable drop in productivity.

Chart 4



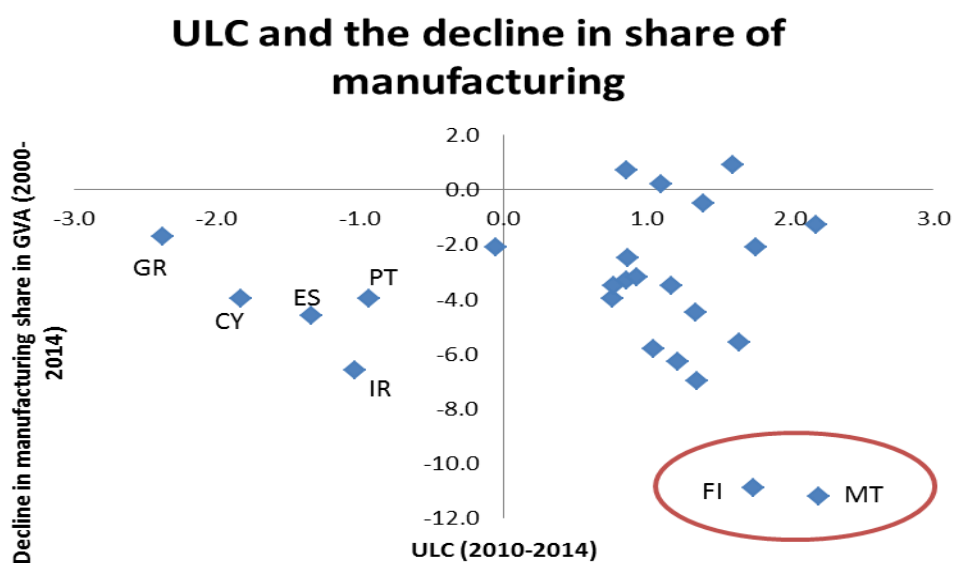
Malta stands out, together with Finland, as the country with the most pronounced decline in the share of manufacturing. In the latter country, the drop in manufacturing has been due to the declining ICT and paper sectors. Finland has also been singled out by the IMF as suffering from a loss of competitiveness, owing to low productivity and high wage growth.

Compared to Malta, however, the macroeconomic environment in Finland had deteriorated substantially after the crisis (see Appendix A for details).

The change in the economy’s production structure from traditional industries towards higher value-added services have broader implications, for instance, by shifting activity towards sectors with a higher share of labour in total costs. The latter is broadly equivalent to the ULC, which, for the whole-economy, corresponds to the share of labour in economic activity.⁴

Chart 5 plots the average ULC between 2000-2014 with the decline in the share of manufacturing. The chart shows that ULC developments in Malta over this period was broadly comparable to that in Finland, which has registered a broadly comparable decline in the share of its manufacturing industry. Finland deterioration in competitiveness can be explained to a considerable extent by the sudden downturn in the fortunes of its flagship industry – NOKIA – following the introduction of Apple’s i-phone in 2007. Finland did not experience growth in non-traditional services sector, as was the case with Malta, sufficiently to make up for the contraction in its industry and this may explain why Malta’s economic indicators, unlike Finland’s, still showed a positive macro-economic narrative in spite of the drop in the importance of manufacturing.

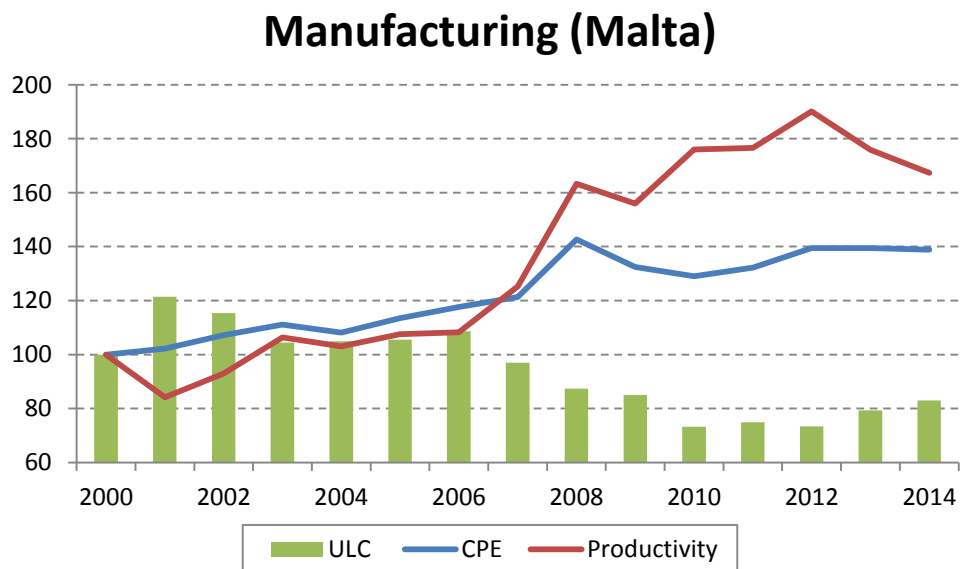
Chart 5



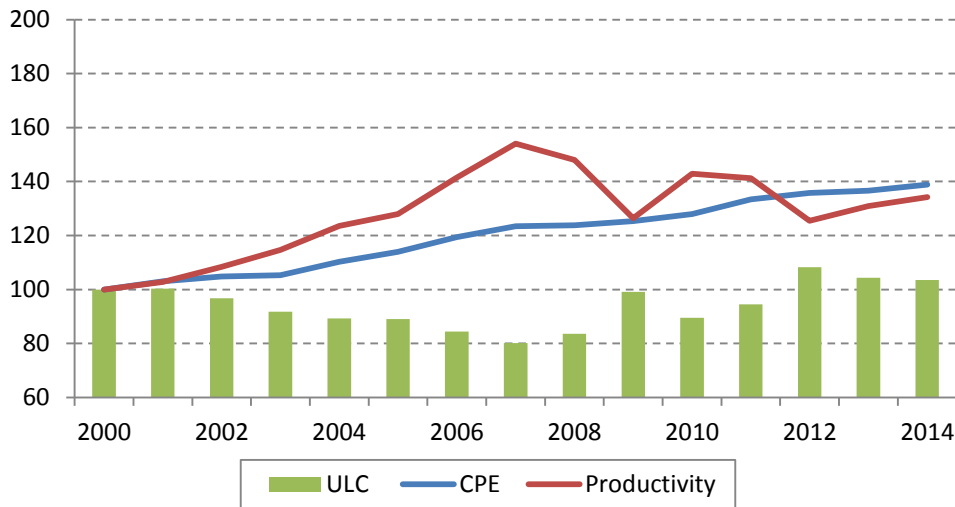
⁴ Multiplied by a price index.

While sectoral price deflators are not available for Malta, one can arrive at measures of productivity for the manufacturing sector for Malta using the industrial production price index. It should be noted that Malta's manufacturing industry is dominated by the electronics industry – servicing companies such as Nokia. In fact, the performance of manufacturing's ULC post-2010 is similar in Malta and Finland. In Malta we estimate a deterioration of 13% as against a deterioration of 16% in Finland. However, there is a major difference between Malta and Finland when one takes a longer perspective. Malta's manufacturing ULC in 2014 was 17% below its 2000 level, whereas in Finland it is 3% above. This implies that even though its relative economic importance has declined, Maltese industry has become more competitive over the last 15 years.

Chart 6



Manufacturing (Finland)



What do firm-level surveys tell us about the sectoral and structural characteristics behind productivity in Malta after the crisis?

The absence of sectoral price deflators renders an in-depth analysis of sectoral productivity challenging at a time when it is being increasingly recognised that economy-wide measures of productivity have to be complemented by sectoral and, if available, firm-level developments.⁵

We circumvent this problem by using the findings of the Wage Dynamics Network (WDN) survey. The survey, carried out using face-to-face interviews with 178 firms for the reference period 2000-2013, focuses on a wide array of factors such as key firm characteristics, the economic environment after the crisis, the adjustments made by firms and aspects related to wage and price setting behaviour.⁶ Chart 7 plots the weighted responses of firms, grouped by sector and size class, to the following question: “How did average productivity per employee (compared to labour costs per employee) evolve in your firm during 2010-2013?”

According to the WDN survey, increases in costs between 2010 and 2013 were matched or even exceeded by gains in labour productivity. Around 25% of firms reported that growth in productivity per employee exceeded labour costs, with the improvement in productivity being especially pronounced in manufacturing, the financial sector and, to a lesser extent, other

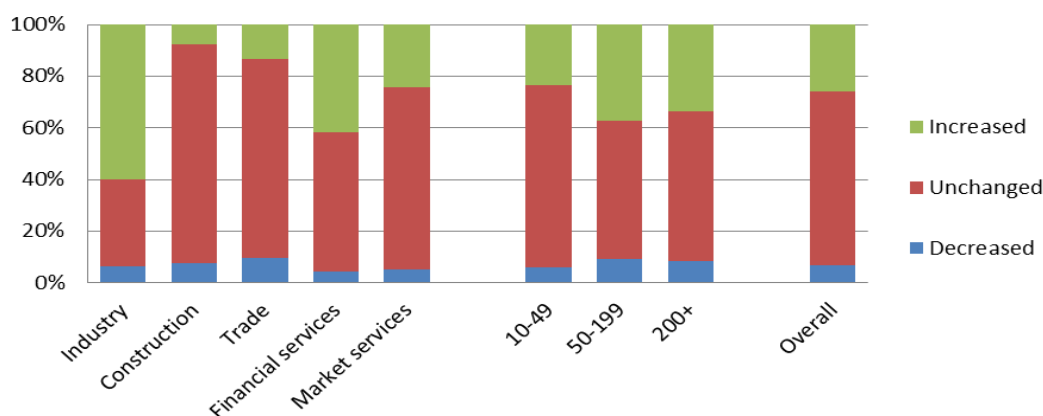
⁵ Di Mauro and Ronchi (2015)

⁶ Details of the main WDN findings are available in Micallef and Caruana (2015)

market services. This result is at odds with official statistics that point to a sharp deterioration in labour productivity after the crisis. This could be, to a certain extent, the result of the difficulty of accurately measuring output in an increasingly service-oriented economy.⁷

Chart 7

**Average productivity per employee
(compared to labour costs per employee)
2010-2014**



We investigate in more detail the determinants of higher productivity by accounting for various factors, such as differences by sector or firm size, workforce characteristics, its production structure and firm specific shocks. The analysis is conducted using a probit model with the dependent variable being a binary variable that takes the value of 1 if the firm has registered a 'moderate' or 'strong' increase in productivity compared to labour costs between 2010-2013 (See Annex 1 for more details).

Regression analysis shows that labour productivity is more likely to be lower in firms with a higher share of labour in total costs. This finding confirms that the significant shift towards services observed in recent years, which are typically more labour intensive, is likely to be an important driver behind the slowdown in domestic labour productivity. Firms that have implemented changes to their production structure, for instance, by out-sourcing part of their operations, are also more likely to experience an improvement in productivity.

The characteristics of the workforce also seem to matter. Workforce stability and a higher share of skilled workers are positively related to labour productivity. Interestingly, skilled

⁷ It could also be affected by the fact that, by construction, micro enterprises, which generally exhibit lower productivity levels compared to larger firms, are excluded from the survey.

manual workers are found to have a greater and more statistically significant effect compared to skilled non-manual workers. These findings support policies that raise the workforce's skill base, not only through investment in education to improve the quality of human capital but also to strengthen active labour market policies, such as lifelong learning and adequate incentives for both employers and employees to promote the development of job-specific skills. On the contrary, the share of part-timers is negatively related with productivity, although this effect is not statistically significant at conventional levels.

Another interesting finding is that, out of the 3 shocks considered in the model – demand, uncertainty and credit – firms with a reduced access to external finance were found to be less likely to experience improvements in productivity. This finding suggests that credit impairments, not only via the quantity but perhaps also its price, could provide another important channel through which the financial sector affects labour productivity.⁸

How do domestic wages, both economy-side and sectoral, compare vis-à-vis other European countries? Is Malta losing ground compared to other economies?

Chart 8 ranks the labour costs per hour in euro in selected EU economies in 2014. With the exception of Bulgaria and Romania, the lowest labour costs per hour were recorded in the Baltic countries and the highest in Scandinavian and core European economies. In the former category, labour costs amount to less than €9.00 per hour while, in the latter group, hourly labour costs stand between €30.00 to slightly higher than €40.00. In 2014, average hourly labour costs stood at €24.60 in the EU and €29.20 in the euro area.

Labour costs in Malta, at €12.30 per hour in 2014, rank at the lower end of the table, being generally higher than in the Baltic and Eastern European countries, but lower than in most other euro area economies. This is also due, to an extent, to the low share of employers' social security contributions in total labour costs, which, at around 8%, compares favourably with the euro area average of 25%. Domestic hourly labour costs are also lower than in other Mediterranean economies, such as Spain, Italy, Slovenia and Cyprus.

This information suggests that the Maltese economy is quite competitive in terms of labour costs compared with other euro area countries and has even maintained its cost

⁸ Micallef and Gauci (2014) documents a decline in interest rate pass-through for domestic NFCs after the crisis.

competitiveness despite the reduction in labour costs in stressed countries since the financial crisis.

The limited sectoral composition suggests that the higher hourly labour costs in Malta compared with the euro area since 2012 were mainly driven by the services sector (influenced by the remote gaming industry). On the contrary, the increase in hourly labour costs in domestic manufacturing, at 1.7%, was considerably lower than in the euro area and Germany, at 3.9% and 5.4%, respectively. This bodes well for the cost competitiveness of the domestic manufacturing base.

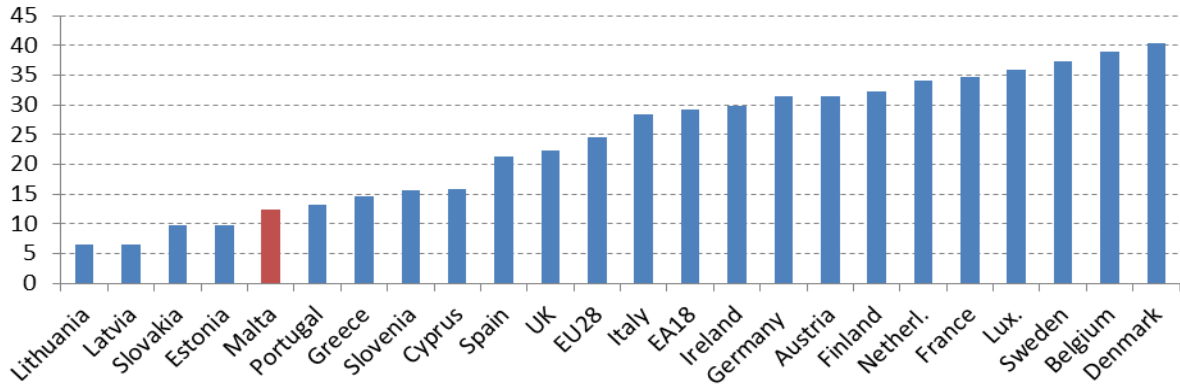
Chart 9 compares hourly labour costs by economic sector across different country groupings. Such detailed sectoral information is only available for 2012. A similar pattern is observed in most countries, with the highest hourly labour costs observed in the financial and insurance sector, and the lowest in the accommodation and food industry.

Hourly labour costs in Malta were slightly less than half in the European Union in 2012. At sectoral level, the gap between hourly costs in Malta and the European average varied. In the accommodation and food service industry, costs stood at 53%, reflecting the lowest gap in costs, while professional, scientific and technical services recorded costs at 36% of the European average, signifying the largest variance in labour costs. In the latter sectors, the relatively low domestic hourly labour costs compared to the European average have persisted despite the significant shift towards services observed in Malta in recent years

Hourly labour costs in Germany, commonly considered as one of the most competitive economies in the euro area, are higher than the EU average and in Mediterranean countries, although lower than in Nordic economies. In the export-oriented manufacturing sector, hourly labour costs in Germany are more than three times in Malta. Despite relatively higher hourly labour costs, Germany has been successful in maintaining the competitive edge of its manufacturing industry, with its share in GVA remaining broadly unchanged over the past decade, at slightly higher than 22%. These findings confirm that competitiveness involves both price and non-price elements. The competitiveness of the German manufacturing sector is not due to low wages but rather to the quality of its exports, including the development of new technologies and its ability to drive innovation owing to a highly skilled workforce that, in turn, demands higher labour rates.

Chart 8

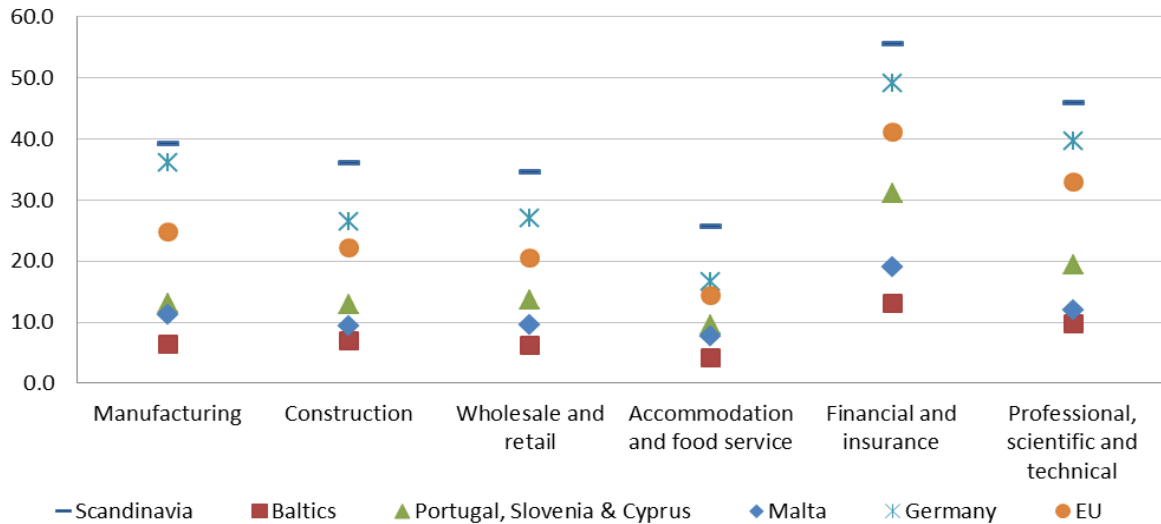
Level of hourly labour costs in 2014
(mean labour costs per hour in euro)



Source: Eurostat

Chart 9

Sectoral hourly labour costs in selected countries
(average labour costs per hour in euro in 2012)



Source: Eurostat

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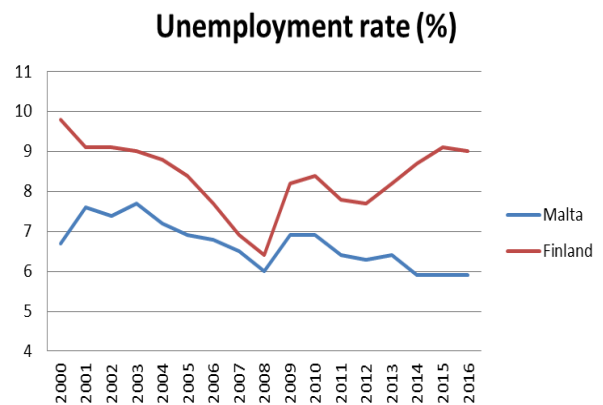
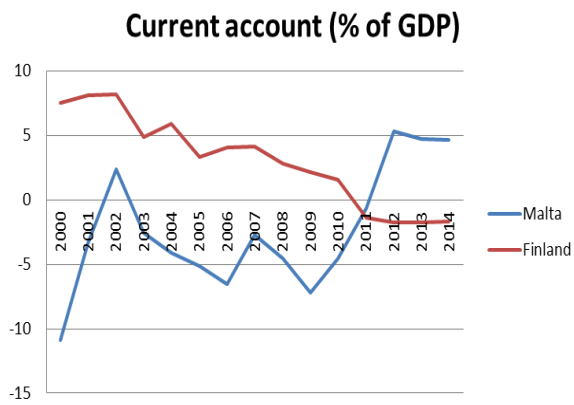
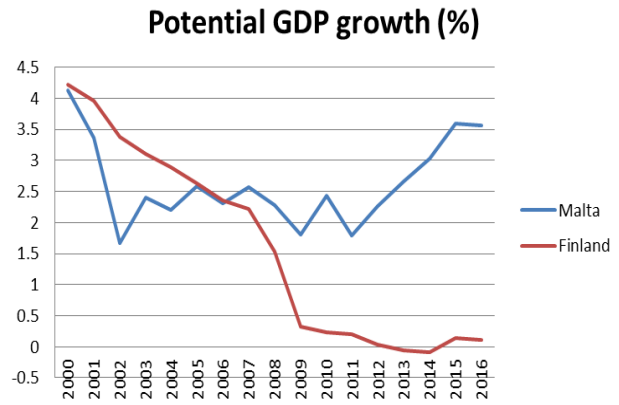
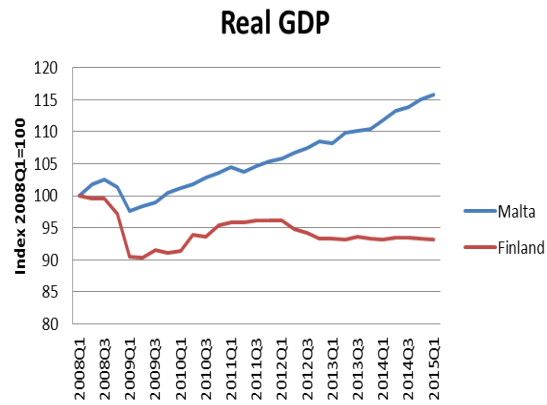
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Appendix A: Malta vs Finland

This section compares the trends in the main macroeconomic variables between Malta and Finland.



Appendix B: Probit estimation for firm-level determinants of productivity

The set of explanatory variables include the following:

Firm's characteristics: a set of variables that capture the economic sector of activity (manufacturing, construction, wholesale & retail trade and other services) and the size of the firm in terms of number of employees (10-49, 50-199, 200+).

Workforce characteristics: a set of variables that capture the share of high skilled workers, the share of part-timers & temporary workers and workforce stability. The latter is a dummy variable that takes the value of 1 if worker flows (entries plus exits) have decreased in 2013 compared to 2010.

Labour share: the share of labour costs (e.g. wages, salaries, bonuses, SSCs) in total costs

Outsourcing: a dummy variable that takes the value of 1 for firms that have out-sourced part of their activity during 2010-2013

Adjusted labour input: a dummy variable that takes the value of 1 for firms that needed to significantly reduce their labour input or alter its composition during 2010-2013

Shocks: a dummy variable that takes the value of 1 for firms that reported a strong or moderate decrease in demand and access to external finance or a strong or moderate increase in uncertainty.

The dependent variable being a binary variable that takes the value of 1 if the firm has registered a 'moderate' or 'strong' increase in productivity compared to labour costs between 2010-2013.

Determinants of Higher Firm-Level Productivity between 2010-2013

Average Marginal Effects

Firm size	
10-49 (Reference group)	
50-199	0.080
200+	0.046
Sector of economic activity	
Manufacturing (Reference group)	
Construction	-0.492 ***
Trade	-0.117
Services	0.004
Workforce characteristics	
Share of high skilled (manual)	0.272 *
Share of high skilled (non-manual)	0.060
Share of part-timers & temporary workers	-0.168
Workforce stability	0.237 ***
Production structure	
Share of labour in total costs	-0.389 **
Outsourcing	0.152 **
Shocks	
Adjusted labour input during 2010-2013	0.101
Negative demand shock	-0.110
Reduction in access to finance through usual channels	-0.342 *
Increase in uncertainty	-0.057
<hr/>	
Observations	177
Prob > chi2	0.000
Pseudo R2	0.181

Notes: (*), (**) and (***) denote statistical significance at 10, 5 and 1 percent, respectively.

The dependent variables takes the value of 1 if labour productivity have registered a 'moderate increase' or 'strong increase' between 2010-2013 and zero otherwise.