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An Estimate of the Possible Impact of Lower Electricity and Water Tariffs on the Maltese Economy[1]

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WP/01/2014

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Abstract

This paper presents estimates of the possible impact on the Maltese economy of the reduction in electricity and water tariffs to residential customers that took place on 31 March 2014 and the subsequent lowering of tariffs to commercial customers, which is expected to take place in March 2015. These estimates are calculated using the structural macro-econometric model described in Grech et al (2013).

Assuming a full and immediate pass-through of these measures, this paper suggests that Malta's real GDP could be boosted by 0.65 percentage points by 2020, with the bulk of the impact being felt during 2015 and 2016. The measures should also lead to lower consumer price inflation and contribute towards an improvement in the international competitiveness of the Maltese economy.

JEL classification: C3, C5, E1, E2.

Keywords: Macro-econometric modelling, Malta, utility tariffs.

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Introduction

The scope of this paper is to try to estimate the possible impact on the Maltese economy of the reduction in electricity and water tariffs to residential and commercial customers using the structural macro-econometric model described in Grech et al (2013).[3] The first change, a 25% average decline in electricity tariffs and a 5% average drop in water service charges to household consumers, occurred on 31 March 2014. The second change, an equivalent drop in charges to commercial customers, is expected to take place in March 2015.

The economic impact of this policy is simulated by means of permanent reductions to the level of the consumption price deflator, export price deflator and user cost of capital. The decrease in the consumption price deflator directly related to the reduction in residential utility tariffs was worked out using the weight of electricity and water utility prices in the Harmonised Index of Consumer Prices (HICP) and the announced decline in these prices.[4] The impact of the reduction in utility prices for businesses was slightly harder to evaluate. The approach was to take from the 2008 Supply and Use Tables for the Maltese economy the implied share in total production costs arising from electricity and water charges,[5] and assume that firms would pass the reduction in tariffs to their consumers in full and immediately.[6] This would have two impacts: export prices would decline while there would be a second round impact on consumer price inflation resulting from businesses passing on their lower costs to their local consumers.[7] Finally, lower utility tariffs were assumed to also impact positively the user cost of capital experienced by Maltese firms in an equivalent way to the change in their operating costs.

[3] This model is estimated for the period 2000Q1 to 2013Q4, using data available as at end March 2014. Note that this model does not have an endogenous fiscal block and therefore impacts may be slightly smaller as eventual changes in fiscal spending (due to changes in government revenue following changes in economic activity) are not allowed to have a multiplier effect.

[4] This comes to 0.55 percentage points in 2014 and 0.15 percentage points in 2015. Note that the effective decline in prices is not exactly 25% and 5% for electricity and water, respectively, as the meter charges remained unchanged. Also HICP weights for 2015 are assumed to be the same as those in 2014. Most probably they will decline slightly. An attempt has been made to downplay slightly the impact in 2015 to reflect this.

[5] This stood at about 3%. Note that this share may have changed since 2008 as electricity prices increased significantly since then. On the other hand, the Maltese economy could have become more energy efficient, particularly as the share of high energy-consuming sectors such as manufacturing has declined.

[6] This would result in an initial drop in 2015 of 0.6 percentage points in the export price deflator and a further 0.2 percentage points decline in the consumption price deflator, followed by a decline of 0.2 percentage points and 0.1 percentage points in the export and consumer price deflators, respectively, in 2016.

[7] The share of locally-produced goods and services in total consumption was assumed to be close to half.

1. Estimating the possible impact on the Maltese economy of the reduction in electricity and water tariffs

The Chart below presents a breakdown of the estimated impact of these different developments on the size of real Gross Domestic Product (GDP) over the period 2014 to 2020. The overall impact of these changes would peak at 0.65 percentage points of GDP by 2019. In terms of the impact on growth rates, the reduction should boost growth by 0.1% in 2014, 0.3% in 2015, 0.2% in 2016 (see Table 1). The impact of the first factor (the direct drop in inflation due to lower utility prices) should raise GDP by less than 0.1 percentage points, with the full impact observed as from 2015. By far the largest impact would result if the decline in operating costs is passed on in full to export prices. This would boost GDP by nearly 0.25 percentage points in the first year, rising to 0.4 percentage points in 2016 and then rising to 0.5 percentage points in subsequent years. The impact of the other two channels – the decline in the user cost of capital and the second-round impact on inflation arising from the passing on to local consumers of reductions in operating costs – are estimated to have a relatively minor impact (peaking at less than 0.05 percentage points).

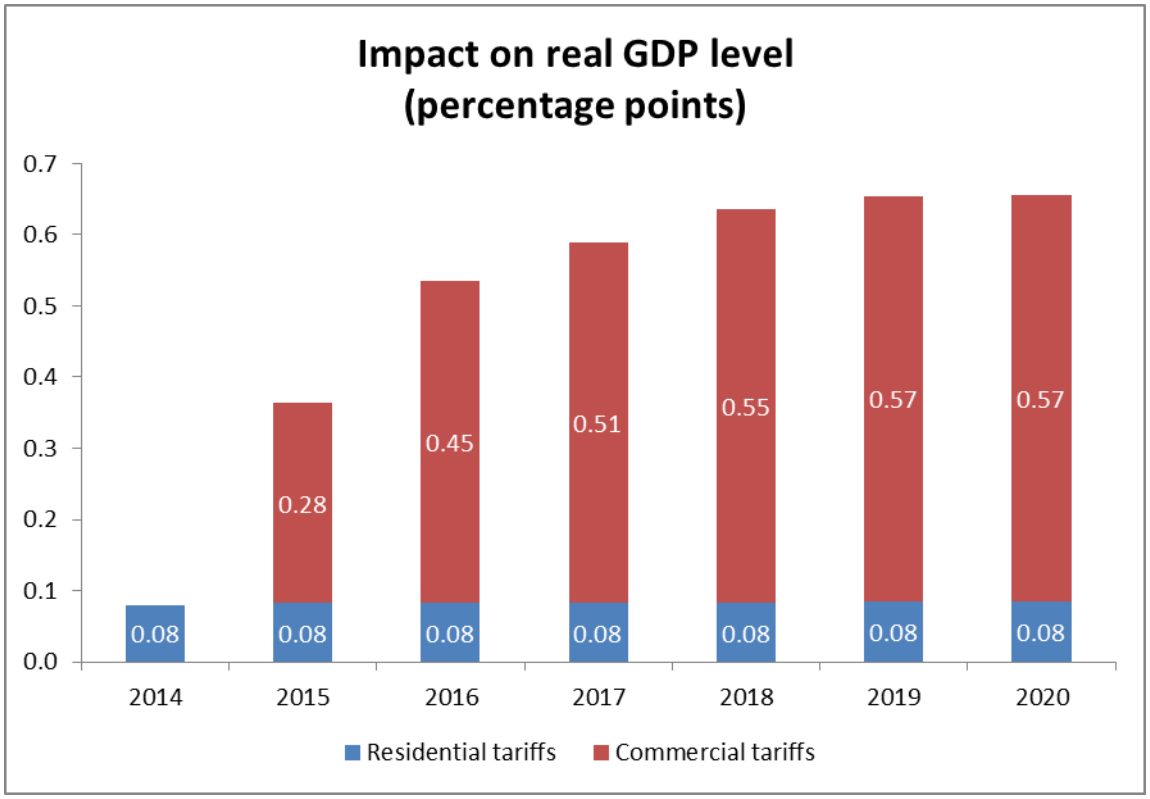
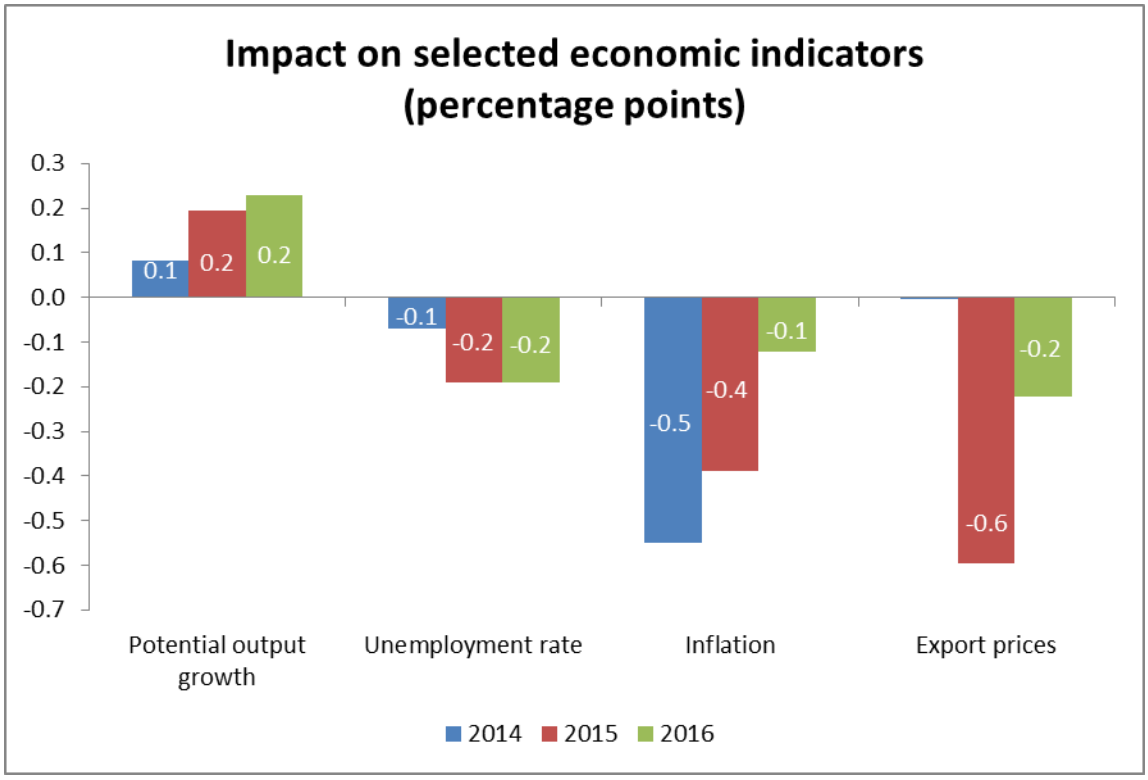


Table 1: Impact on growth rates of full and immediate pass-through of drop in residential and commercial utility tariffs

	2014	2015	2016
GDP	0.08%	0.29%	0.18%
Private consumption	0.39%	0.28%	0.05%
Investment	0.08%	0.72%	0.02%
Imports	0.18%	0.39%	0.18%
Exports	0.00%	0.40%	0.33%
GDP deflator	-0.41%	-0.92%	-0.39%
Consumption deflator	-0.55%	-0.39%	-0.12%
Export deflator	0.00%	-0.59%	-0.22%
Employment	0.02%	0.07%	0.00%
Unemployment rate	-0.07%	-0.19%	-0.19%
Potential GDP	0.07%	0.08%	0.08%

Initially the main economic impact of the reduction in tariffs should be on private consumption, as at this point it is only residential consumers who benefit from reductions. This would result in an increase in imports, due to the import content of private consumption, but also to some increase in investment. In the second year, the improvement in external competitiveness resulting from lower export prices should lead to an increase in exports. This would boost further consumption demand and lead firms to increase investment. Export growth continues to pick up in 2016 as export prices fall further. Firms should continue to increase employment and investment with a lag, resulting in a further slight boost to private consumption in 2018. By this peak, the unemployment rate is expected to have declined from the baseline by 0.2 percentage points (see Chart below).



The reduction in electricity tariffs is expected to boost potential output growth[8] through two main channels. On the one hand, investment should increase, resulting in a higher capital to output ratio and contributing to increase total factor productivity. On the other, increased demand for labour should raise potential labour participation rates and increased efficiency could reduce slightly structural unemployment.

2. Further considerations

In its macroeconomic projections, the Central Bank of Malta has not adopted the assumption of a full and immediate pass-through of both residential and commercial tariffs. The impact of the reduction in residential tariffs is taken to be full and immediate, as reflected in the decline in the HICP as from April 2014. On the other hand, the projections embed the assumption that some sectors, namely those less exposed to competitive pressures and those where in recent years profits have fallen, the reduction in commercial tariffs will not be passed on to consumers but will rather boost profitability. While the multiplier effect of this is less strong than if one assumes that price reductions are effected, there are still significant positive impacts on investment and employment if firms' profit levels improve. In its

[8] For details of the approach taken by the Central Bank of Malta to estimate potential output, see Grech and Micallef (2013).

forecasts the Bank has also assumed that there will be a small lag between the decline in commercial tariffs and the drop in prices to consumers, so that part of the impact of the cut is shifted to 2016.

The Central Bank of Malta will be monitoring developments in producer price indices and in deflators closely around the time that the reduction in commercial tariffs will be taking place, and will modify its macroeconomic projections in light of possible deviations from the assumed rate of pass-through embedded in the forecasts.

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