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ASSESSING THE MACROECONOMIC IMPACT OF EXTENDING HOTEL HEIGHT LIMITATIONS

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Abstract

This paper presents estimates of the macroeconomic impact of the recently revised policy framework by the Malta Environment and Planning Authority (MEPA) to facilitate the vertical extension of hotels which are rated as three-star or above by the Malta Tourism Authority (MTA). The simulations are based on the Central Bank of Malta's structural econometric model described in Grech and Micallef (2014).

Under the baseline scenario, we find that the policy has a positive effect on economic activity, with its impact on GDP being felt from 2015 onwards and stabilizing at around 0.25% in the long run. Model decomposition suggests that this effect is driven by a number of factors including the initial investment in construction, the impact on the supply potential and higher tourism exports. The policy also has positive effects on employment, income and the fiscal balance.

This policy should not be assessed in isolation but rather from a holistic perspective as part of ongoing efforts by policy makers and the business community to upgrade the tourism product. Model simulations suggest that the macroeconomic impact of this policy, both in terms of output and employment, would be higher if the investment in supply infrastructure is complemented with demand-side oriented policies to address the issue of seasonality.

Table of Contents

1. Introduction

This paper presents estimates of the macroeconomic impact of the recently revised policy framework by the Malta Environment and Planning Authority (MEPA) to facilitate the vertical extension of hotels which are rated as three-star or above by the Malta Tourism Authority (MTA) and are operative all year round. The simulations are based on the Central Bank of Malta's structural econometric model described in Grech and Micallef (2014).

The Hotels Height Limitation Adjustment Policy was initially approved by the Government in May 2013 with the main objective being that of upgrading the tourism product and the facilities of the existing bed stock, thereby ensuring a more competitive tourism sector. In 2014, however, MEPA published a new revised policy framework as it was felt that the initial one was too restrictive, thereby rendering a significant number of proposals for the upgrading and extensions of hotels unfeasible.[2]

The revised policy applies exclusively to hotels which are not located in a scheduled area, Outside Development Zone (ODZ), on a ridge edge or within Urban Conservation Area. Eligible hotels may apply to vertically extend their establishments to not more than two additional floors above the height limitation permitted in the Local Plan. MEPA may also consider the extension of a hotel to more than two floors above the height limitation provided that (i) the hotel premises are not less than 5,000sqm, (ii) site is surrounded by existing or planned road infrastructure, or (iii) that the site accommodates stand-alone buildings. In all cases, applications will be assessed against three main criteria, mainly a commitment to improve the overall product, to address the issue of seasonality and to target markets and new product niches.[3]

The rest of this paper is organised as follows. Section 2 focuses on the importance of tourism for the Maltese economy and the main trends within the sector. Sections 3 and 4 describe the simulation and the baseline results, respectively. Section 5 assesses three different scenarios to evaluate the robustness of the baseline results. Section 6 concludes and outlines some policy recommendations.

[2] Height Limitation Adjustment Policy for Hotels – Boosting Malta's competitiveness in the tourism market – MEPA, June 2014. The previous policy allowed only hotel developments in qualifying tourism areas to exceed the building height limitation by two floors where the maximum allowable developable floor space had not been achieved or will not be exceeded.

[3] Accommodation Development – Policy for the consideration of applications for hotels height limitation – MTA, August 2014.

2. The importance of tourism for the Maltese economy

The Maltese tourism industry is one of the main pillars of the economy, playing a key role in economic activity, investment and job creation. Figure 1 plots a number of charts to highlight the main trends in the tourism industry, both domestically and in an international context.

According to the World Travel and Tourism Council, jobs directly generated by the Maltese tourism industry amounted to 25,500 in 2013, or 14.8% of total employment, and this is projected to increase to 33,000 by 2024.[4] The total contribution to employment, which also includes indirect and induced effects, stands at 26.4%.[5] Similarly, the total contribution of the tourism sector to the overall economy in 2013 was estimated to be €1.8 billion, equivalent to 25.5% of GDP, and is projected to rise to around €2.6 billion, or 30.4% of GDP, in ten years' time. Chart 1.1 shows that the domestic tourism industry has the highest contribution to both GDP and employment compared to other competing Mediterranean destinations.

National Statistics Office (NSO) data show that tourist expenditure and arrivals in 2013 increased by an annual rate of 8.6% and 9.6%, respectively, to €1.4 billion and to nearly 1.6 million visitors (see Chart 1.2). When compared to the pre-crisis levels of 2007, this translates into increased tourism exports of 36.1% and a rise of 27.2% in tourist arrivals. This performance compares favourably with developments in other markets.[6]

The buoyancy in the tourism industry is also evident in terms of average tourist spending per night stayed in Malta. This increased from €96 in 2007 to almost €112 in 2013. However, tourists' average length of stay in Malta declined by 0.7 nights, to 8.1 nights (see Chart 1.3). This drop can be partly explained by an increase in business travellers, whose stays are, on average, shorter than leisure visitors, but tend to spend more per night stayed.

Supply side factors have also played an important role in sustaining the increase in demand. Between 2007 and the first half of 2014, the number of bed places available in three-to-five star hotels rose by an average of 14.3%, with the largest absolute increase being registered in four-star establishments (see Chart 1.4). At the same time, partly reflecting the advent of low-cost airlines operating to and from Malta, the number of destinations covered rose to 82 routes. Concurrently, aircraft movements at the Malta International Airport, including both scheduled and non-scheduled flights, rose from 27,356 in 2007 to 30,752 in 2013 (see Chart 1.5).

Finally, all leading tourism indicators suggest that this sector continued to perform strongly during 2014 and, bar unforeseeable developments, the number of inbound tourists, nights stayed and tourists' expenditure are likely to record positive annual growth for the fifth consecutive year. Nonetheless, the sector still faces challenges related to seasonality, with occupancy rates in hotels during winter and the shoulder period being substantially lower than in the summer months (see Chart 1.6).

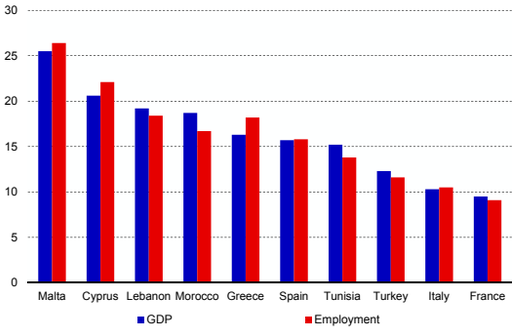
[4] World Travel and Tourism Council (2014).

[5] Direct employment includes jobs in hotels, travel agencies, airlines and other passenger transportation services (excluding commuter services). It also includes the activities of the restaurant and leisure industries directly supported by tourists. Total employment comprises the direct, wider effects from investment, the supply chain and induced income impacts.

[6] According to the United Nations World Tourism Organisation, in 2013 the global industry recorded an average growth in arrivals of 5.0%, while the Southern Mediterranean Europe region went up by 6.1%.

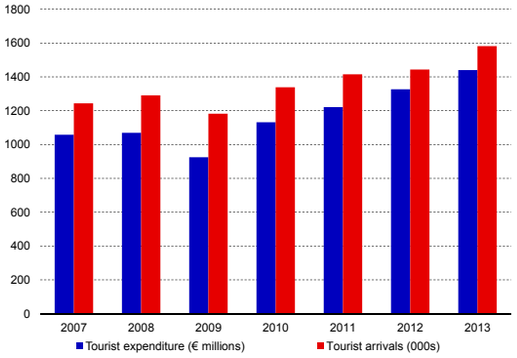
Figure 1: Main tourism indicators and trends

Chart 1.1
CONTRIBUTION OF TRAVEL AND TOURISM TO GDP AND EMPLOYMENT
(per cent in 2013)



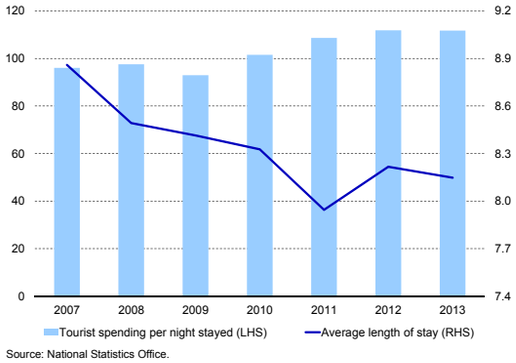
Source: World Travel and Tourism Council.

Chart 1.2
TOURIST EXPENDITURE AND ARRIVALS



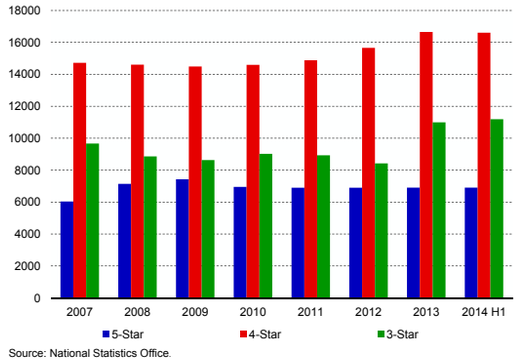
Source: National Statistics Office.

Chart 1.3
SPENDING PER NIGHT AND AVERAGE LENGTH OF STAY
(euro; nights)



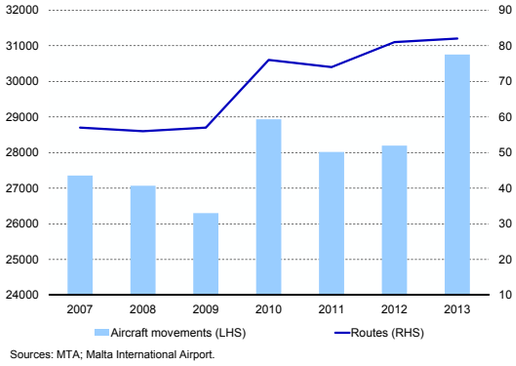
Source: National Statistics Office.

Chart 1.4
AVERAGE NUMBER OF BED PLACES
(number of beds available)



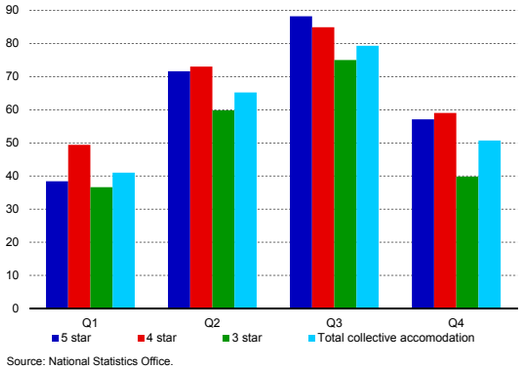
Source: National Statistics Office.

Chart 1.5
AIRCRAFT MOVEMENTS AND ROUTES COVERED
(flights; number of routes)



Sources: MTA; Malta International Airport.

Chart 1.6
OCCUPANCY RATES
(per cent in 2013)



Source: National Statistics Office.

Sources: World Tourism and Travel Council; NSO; MTA and MIA.

3. Design of policy simulation

The simulations are based on the Central Bank of Malta's structural econometric model, as described in Grech and Micallef (2014), which has been recently updated to include macro, fiscal and financial linkages.[7] The model contains both Keynesian and neo-classical features, with output driven by supply in the long run but demand- driven in the short run due to sluggish adjustment of quantities and prices Unlike single equation exercises, structural models have the advantage of also capturing feedback loops, so that for example changes in tax rates cause changes in income, and in turn, these changes in turn affect tax revenues.

While the model is mainly focused on the aggregate macroeconomic variables, it also contains considerable sectoral disaggregation. For instance, overall investment is divided into three categories, residential investment, government investment and non-dwelling public investment. Similarly, the model makes a distinction between tourism and non-tourism exports. Given these features, the model is ideally suited to quantify and trace the impact of policy measures on overall economic activity and the main macro variables, like employment, trade and the fiscal balance.

Table 1 outlines a number of hotel statistics for the three categories under consideration as at the end of the second quarter of 2014, which form the basis of the policy simulation. The full set of calculations and assumptions is found in Appendix A.

Table 1
HOTEL STATISTICS AS AT END 2014Q2

	Number of establishments	Number of bedrooms	Number of bed places
5-Star	15	3,468	6,905
4-Star	45	7,983	17,496
3-Star	49	5,172	11,834

Source: National Statistics Office.

The economic impact of this policy is simulated as follows. The above information was used to calculate the number of additional hotel rooms and bed capacity if all or some of the eligible hotels would participate in this initiative. Given the criteria set by MEPA and MTA, this policy can be applied for by 7 establishments within the 5-star category, and to 37 and 48 hotels in the 4-star and 5-star categories, respectively. We assume that 50%, 25% and 10% of these eligible hotels within the three respective categories would take up the offer to improve their current tourism product and expand their bed capacity. This would translate in approximately 18 hotels and an increase of 5.8% in bed capacity (see table 2).[8]

This figure is however further adjusted to take into account the fact that hotels are operating close to full capacity only during the third quarter of the year.[9] As a result, when adjusted for the

[7] The model contains 177 equations, 28 of which are behavioural equations estimated in error-correction form on the basis of quarterly data for the period 2000-2012.

[8] In order to estimate the number of additional rooms that would result from the addition of two floors, information on the total number of rooms per hotel was supplemented by data on the existing number of floors. Eligible 5-star hotels have an average of 8 guest floors, while following discussions with MTA we assumed that the two other hotel categories have an average of 5 guest floors each (see Appendix A).

[9] This is done by taking the ratio of the nights stayed in the three to five star hotel categories during summer 2013 as a percentage of the total nights in all categories during the whole year.

seasonality in occupancy rates, this policy will result in an average increase in nights stayed of around 1.8%. The expansion in capacity is assumed to increase gradually, starting from the second half of 2016 and reaching its full potential from 2019 onwards (see Chart 1).

In terms of construction, we estimate that the capital investment by the hotel industry will amount to €100 million, spread over a period of four years.[10] Investment is assumed to start in 2015 and will continue until the first half of 2019.[11]

Table 2
BASELINE CALCULATIONS AND ASSUMPTIONS

	5-star	4-star	3-star	Total	Currently available in all categories	Increase due to policy
Bedrooms	236	656	203	1,095	18,564	5.90%
Bed capacity	479	1439	464	2,381	40,936	5.80%
Assumed increase in bed capacity						5.80%
Nights in 3-5 star hotels between July-September 2013						2,600,781
Increase in nights attributable to policy (=5.8%*2,600,781)						150,845
Total nights in all categories during 2013						8,501,147
Impact of policy in terms of % increase in total nights over a whole year (=150,845/8,501,147)						1.80%

Source: Own calculations.

[10] The investment of €100 million is in net present value terms. We applied a discount rate of 4.75%, which was the average bank lending rate to non-financial corporations for 2013. We assumed that a representative hotel within the 5-star category will invest €150,000 per additional room, €75,000 for the 4-star category and €60,000 for the 3-star. These figures were designed in conjunction with the MTA and MHRA based on recent investment trends in the respective hotel categories.

[11] Technically, the simulation is conducted by appropriately shocking two behavioural equations in the Central Bank of Malta's model – non-dwelling private investment and tourism exports – on the basis of calculations described above. The first step consists in giving a shock to non-dwelling private investment starting from 2015 that lasts till 2019Q2; this is intended to capture the impact of construction investment on economic activity. This shock is calibrated to reflect the share of construction investment in overall non-dwelling private investment. The shock to investment will also have an impact on the capital stock and in turn, to potential GDP. The latter is modelled through a standard Cobb-Douglas production function with constant returns to scale. In a second stage, we give another shock to tourism exports starting gradually from 2016Q3 that reaches its full potential in 2019. The equation for tourism exports has three main explanatory variables: it is positively affected by foreign demand and bed capacity and negatively by a deterioration in price competitiveness (the real effective exchange rate is deflated by consumer prices). Since the model does not make a distinction between varying levels of capacity utilization, the full impact of the shock was calibrated a priori, at 1.8%, to reflect the issue of seasonality mentioned in the text.

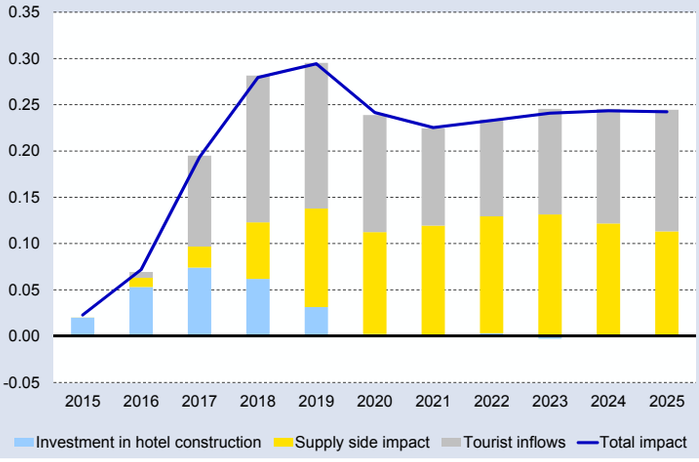
4. Results

The chart below plots the impact of the simulation on real GDP for the period 2015–2025. As expected, the simulation has a positive effect on real GDP, with the impact becoming gradually evident from 2015 onwards, reaching a peak in 2019 before stabilizing at around 0.25% in the long run.[12] Appendix B shows the impact of this policy on the main macroeconomic, labour, fiscal and financial variables.

The chart decomposes the impact on real GDP into three different contributors. Initially, the main driver of growth is the higher construction investment in the hotel industry. The increase in investment boosts the country's supply potential, which explains why this category continues to contribute positively to economic activity even after the initial construction investment in hotel accommodation is assumed to finish by 2019.

Buoyant economic activity leads to an improvement in the labour market, with an increase in employment growth and disposable income and, subsequently, in private consumption expenditure. The latter is also affected by the positive impact of higher investment in construction on house prices through wealth effects. The increase in the supply capacity exerts downward pressure on prices, which leads to gains in price competitiveness and a gradual increase in real exports.

Chart 1
IMPACT ON REAL GDP
(% deviation from baseline)



The category labelled 'Supply side impact' captures the impact of the initial investment in hotel construction on the country's capital stock, thereby exerting a positive effect on the economy's supply potential. Finally, once the investment in additional hotel floors is finalized, the increase in hotels' bed capacity would accommodate a higher inflow of tourists, especially during the peak season. The increase in total nights and expenditure by tourists will, in turn, percolate to economic

[12] In other words, the level of real GDP will be 0.25% higher in the long run as a result of this policy compared to a no-policy change scenario.

activity via its positive impact on employment and wages, leading to further gains in private consumption and investment.

Higher aggregate demand stimulates imports, especially given the high import content of investment, leading to a deterioration in the trade balance to GDP ratio, especially in the short to medium run. In the long run, however, the trade deficit is corrected by the increase in exports from higher tourist inflows, leading to a small surplus of around 0.1 percentage point of GDP.

The improvement in economic activity also exerts a positive impact on the fiscal balance-to-GDP ratio, due to an increase in government revenue and a reduction in expenditure. The former is driven by higher tax revenues while automatic stabilizers are behind the decline in expenditure. Overall, the fiscal balance improves by around 0.1 percentage point of GDP. The combination of higher GDP and the improvement in the fiscal balance leads to a gradual decline in the government debt-to-GDP ratio.

5. Sensitivity analysis

Scenario analyses like the one presented in the previous section are naturally conditioned by the underlying assumptions and hence, are shrouded by a high degree of uncertainty. One way to quantify this uncertainty is to compute different scenarios by changing some or all of the assumptions underlying the baseline results.

In this section we envisage three different scenarios. In Scenario 1, we assume a lower interest by hotels in pursuing this policy such that the initial investment will amount to €50 million, compared to €100 million in the baseline scenario, with the increase in bed capacity being reduced to 0.9% as a result.[13] The opposite is assumed in Scenario 2, with the investment accelerating to €150 million due to more eligible hotels taking advantage of this scheme.[14] In this scenario, the average annual increase in bed capacity is assumed to increase from 1.8% in the baseline to 2.7%.

In Scenario 3 we assume that investment will remain unchanged compared to the baseline, at €100 million, but that additional efforts are undertaken to increase the occupancy rates. More specifically, in this scenario we assume that number of quarters that hotels operate at close to full capacity increases to two (covering April to September) and hence, the increase in total nights goes up from 1.8% in the baseline scenario to 3.3%.

Figure 2 illustrates the impact of the various scenario analyses on the main variables of interest. In terms of real GDP, the long run impact ranges from around 0.12% to 0.36%. In scenario 3, that is, the one associated with a higher occupancy rate, the long run impact on GDP increases from around 0.25% in the baseline scenario to around 0.35%.

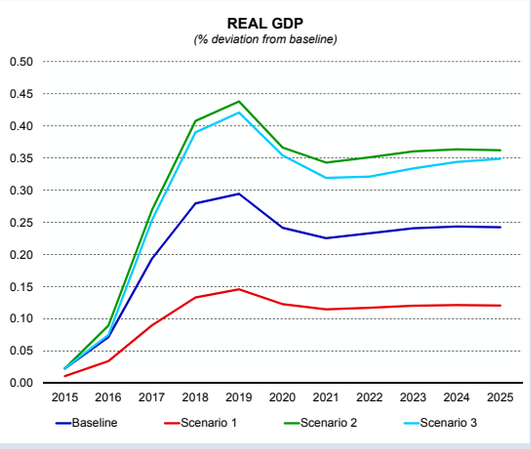
As expected, the impacts of scenarios 2 and 3 on all variables are more pronounced compared to the baseline, while scenario 1 is always lower.[15] However, there are important differences in some variables. For instance, scenario 2 has the largest impact in the long run on private consumption. For exports and employment, the long run impact of scenarios 2 and 3 are very similar. Scenario 3 has a positive impact on the long run trade balance-to-GDP ratio compared to the other scenarios. This is due to the higher inflow of tourists as a result of the average increase in occupancy rates, whilst, at the same time, the more conservative investment in the baseline compared to scenario 2 will result in a smaller increase in imports. Scenario 3 also has the most pronounced impact on the fiscal balance.

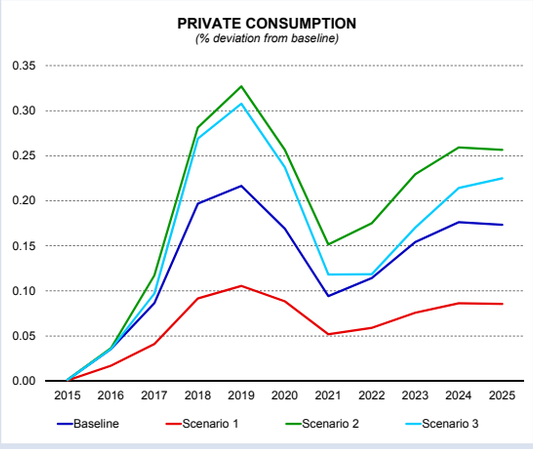
[13] In scenario 1, we assume that 25%, 12.5% and 5% of the eligible 5, 4 and 3 star hotels, respectively, expand their bed capacity. The investment amount of €50 million was derived by assuming the same ratio of investment to the percent increase in total nights in the baseline scenario (=100/1.8). In this case, this ratio is multiplied by 0.9%, which is the calculated percent increase in bed capacity given the assumptions about the number of hotels that are interested in taking up this initiative.

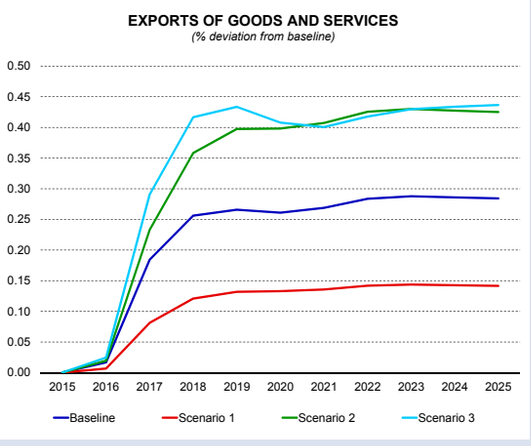
[14] In scenario 2, we assume that 75%, 37.5% and 15% of the eligible 5, 4 and 3 star hotels, respectively, expand their bed capacity. The same calculations apply as in the other scenario.

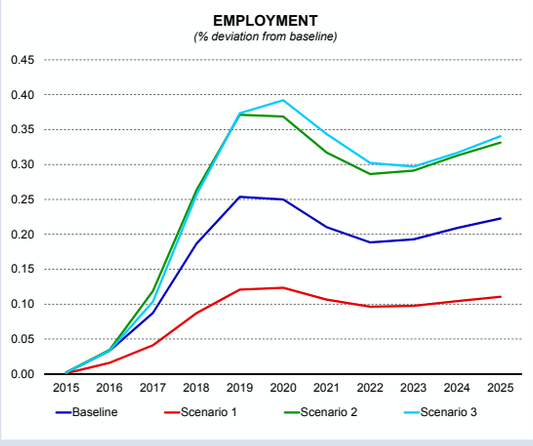
[15] We also conducted another scenario in which the investment per room in the 5-star category is assumed to amount to €100,000 (instead of €150,000) while keeping all other assumptions unchanged. As a result, the total capital investment by the hotel industry will drop from €100 million to €85 million. These changes, however, only have a minor impact on the baseline results – the long-run impact on real GDP drops from around 0.25% to 0.22% - and hence, are not reported in the sensitivity analysis.

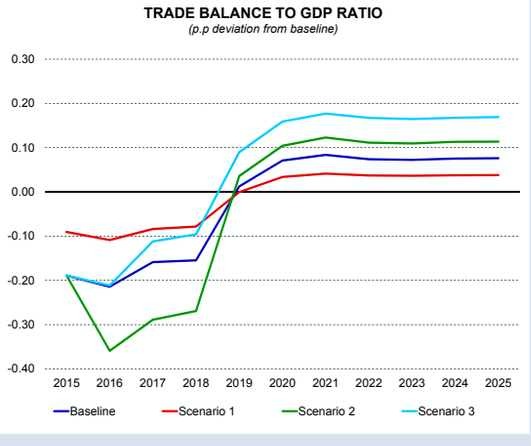
Figure 2: Sensitivity Analysis

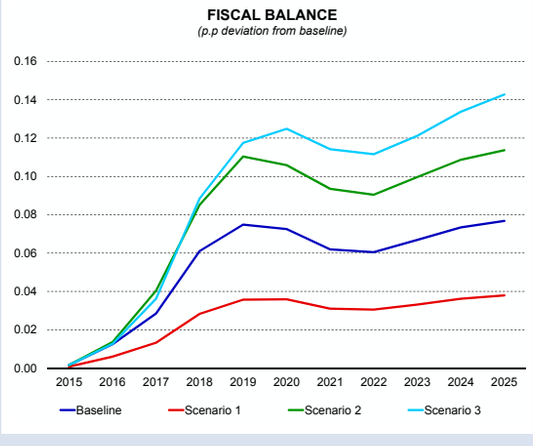












Source: Own calculations.

6. Conclusion

In this paper we use the Bank's structural econometric model to quantify the macroeconomic impact of the revised Hotel Height Limitation Adjustment Policy. We find that the policy has a positive effect on economic activity, with its impact on GDP being felt from 2015 onwards and stabilizing at around 0.25% in the long run. Model decomposition suggests that this effect is driven by a number of factors including the initial investment in construction, the impact on the supply potential and higher tourism receipts. More generally, the simulation underlines the special role of productive investment in stimulating directly both the demand and the supply side of the economy.

As for the other macroeconomic variables, the increase in economic activity leads to higher employment, income and an improvement in the fiscal balance. The trade balance tends to deteriorate in the short to medium run though this effect will be corrected over the longer term from the increase in exports due to higher inflow of tourists, leading to a small surplus in the long run.

This policy should not be assessed in isolation but rather from a holistic perspective as part of ongoing efforts by policy makers and the business community to upgrade the tourism product. For instance one possible limitation of this study is that the baseline scenario does not take into consideration the possibility of additional investment by entrepreneurs to upgrade existing facilities which currently are not classified as three star hotels. Discussions with the MTA and MHRA indicate that there is a substantial interest among establishments in lower categories, mainly two-star hotels and guesthouses, to upgrade their services to three-star status so that they can be eligible to benefit from this policy. Additionally, notable interest is also expressed from owners of hotels which are currently non-operative, thereby contributing further to the upgrade of the local tourism product. Furthermore this study excludes the potential conjunctural investment related to the possible refurbishment of the remaining floors in the hotels expanding their bed stock.[16] Hence, benefits and economic spill-overs resulting from such additional investment will yield an even more pronounced impact than those reported in the baseline scenario.

Finally, model simulations suggest that the macroeconomic impact of this policy would be higher if the investment in tourism supply infrastructure, in the form of additional bed capacity by hotels, is complemented with additional marketing efforts to increase demand during non-peak seasons in order to generate additional revenue to cover higher running costs. This is especially important given the strong seasonality of tourism in Malta, with a number of hotels operating significantly below capacity for a number of months. Given the anticipated increase in capacity, demand side-oriented policies should be pursued in tandem to attract more tourists during the winter and shoulder seasons, focusing on already identified sectors which have shown growth potential such as culture and heritage, business and sport tourism.[17]

[16] Discussions with MHRA suggest that investment solely related to refurbishment will lead to a supplementary 15% increase in total investment.

[17] Ministry of Culture and Tourism (2012).

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Appendix A
Baseline assumptions and calculations

5-star hotels

Total bedrooms in all (15) 5- star hotels	3,468	
Total bed covers in all (15) 5- star hotels	6,905	
Bedrooms in 7 eligible 5-star hotels	2,565	
Bed capacity in 7 eligible 5-star hotels	5,328	
Average number of guest floors	8.2	
Rooms per floor	38	
Bed capacity per floor	80	
Maximum increase in bedrooms if eligible hotels build 2 additional storeys (%)	13.6	
Maximum increase in bed capacity if eligible hotels build 2 additional storeys (%)	13.9	
Assuming **50%** of eligible hotels expand their capacity:	%	Absolute
Bedrooms increase in the 5-star category	6.8	236
Bed capacity increase in the 5-star category	6.9	479

4-star hotels

Total bedrooms in all (45) 4-star hotels	7,983	
Total bed covers in all (45) 4-star hotels	17,496	
Bedrooms in 37 eligible 4-star hotels	6,564	
Bed capacity in 37 eligible 4-star hotels	14,386	
Assumption on the average number of guest floors	5	
Rooms per floor	35	
Bed capacity per floor	78	
Maximum increase in bedrooms if eligible hotels build 2 additional storeys (%)	32.9	
Maximum increase in bed capacity if eligible hotels build 2 additional storeys (%)	32.9	
Assuming **25%** of eligible hotels expand their capacity:	%	Absolute
Bedrooms increase in the 4-star category	8.2	656
Bed capacity increase in the 4-star category	8.2	1,439

3-star hotels

Total bedrooms in all (49) 3- star hotels	5,172	
Total bed covers in all (49) 3-star hotels	11,834	
Bedrooms in 48 eligible 3-star hotels	5,066	
Bed capacity in 48 eligible 3-star hotels	11,592	
Assumption on the average number of guest floors	5	
Rooms per floor	21	
Bed capacity per floor	48	
Maximum increase in bedrooms if eligible hotels build 2 additional storeys (%)	39.2	
Maximum increase in bed capacity if eligible hotels build 2 additional storeys (%)	39.2	
Assuming **10%** of eligible hotels expand their capacity:	%	Absolute
Bedrooms increase in the 3-star category	3.9	203
Bed capacity increase in the 3-star category	3.9	464

Appendix B
Baseline results

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Economic activity											
Real GDP	0.02	0.07	0.19	0.28	0.29	0.24	0.23	0.23	0.24	0.24	0.24
Private consumption	0.00	0.04	0.09	0.20	0.22	0.17	0.09	0.11	0.15	0.18	0.17
Investment	1.57	1.80	1.75	1.67	0.59	0.06	0.05	0.04	0.03	0.03	0.04
Exports of goods & services	0.00	0.02	0.18	0.26	0.27	0.26	0.27	0.28	0.29	0.29	0.28
Imports of goods & services	0.20	0.24	0.35	0.42	0.26	0.19	0.17	0.19	0.20	0.21	0.21
Trade balance to GDP ratio	-0.19	-0.21	-0.16	-0.15	0.01	0.07	0.08	0.07	0.07	0.08	0.08
Prices and cost developments											
GDP deflator	0.00	-0.01	-0.01	0.00	0.02	-0.01	-0.05	-0.06	-0.03	-0.02	-0.01
Unit labour costs (ULC)	-0.02	-0.01	-0.06	0.01	0.06	0.08	0.05	0.03	0.02	0.01	0.01
Labour market											
Employment	0.00	0.03	0.09	0.19	0.25	0.25	0.21	0.19	0.19	0.21	0.22
Real disposable income	0.00	0.04	0.10	0.20	0.21	0.15	0.11	0.13	0.16	0.17	0.17
Fiscal variables											
(% of GDP)											
Fiscal balance	0.00	0.01	0.03	0.06	0.07	0.07	0.06	0.06	0.07	0.07	0.08
Public debt	-0.02	-0.06	-0.17	-0.29	-0.39	-0.40	-0.40	-0.44	-0.51	-0.58	-0.64
Asset prices and credit											
Loans to the private sector	0.00	0.02	0.08	0.18	0.25	0.24	0.19	0.17	0.18	0.19	0.20
House prices	0.00	0.02	0.04	0.15	0.25	0.28	0.23	0.17	0.15	0.17	0.18
Non-performing loans ratio	0.00	-0.02	-0.04	-0.06	-0.07	-0.06	-0.05	-0.05	-0.05	-0.05	-0.05

Appendix C
Sensitivity Analysis

Scenario 1

	5-star	4-star	3-star	Total	Currently available in all categories	Increase due to scheme (%)
Bedrooms	118	328	101	547	18,564	2.9
Bed capacity	239	719	232	1,191	40,936	2.9

Overall Impact

Nights in 3-5 star hotels July-Sep. 2013	2,600,781
Increase in nights attributable to policy	75,638
Total nights in all categories during 2013	8,501,147
Impact of policy in terms of % increase in total nights over a whole year	0.9

Scenario 2

	5-star	4-star	3-star	Total	Currently available in all categories	Increase due to scheme (%)
Bedrooms	354	985	304	1,642	18,564	8.8
Bed capacity	718	2158	696	3,572	40,936	8.7

Overall Impact

Nights in 3-5 star hotels July-Sep. 2013	2,600,781
Increase in nights attributable to policy	226,915
Total nights in all categories during 2013	8,501,147
Impact of policy in terms of % increase in total nights over a whole year	2.7

Scenario 3

Extending the baseline effects to capture an increase in occupancy rates in the months of April - June

Nights in 3-5 star hotels **Apr.-Sep.** 2013	4,862,656
Increase in nights attributable to policy (assuming baseline increase in bed capacity of 5.8%)	282,034
Total nights in all categories during 2013	8,501,147
Impact of policy in terms of % increase in total nights over a whole year	3.3