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1.4. Can tourism save 2021 GDP growth?

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1.4.1. Introduction

In 2020, the Greek economy faced a strong blow due to the international spread of the coronavirus (COVID-19). Thus, the Gross Domestic Product (GDP) fell by 8.2%.[1] This major recession in the Greek economy was primarily a result of the deterioration of the balance of goods and services, over 10 billion euro compared to 2019, and secondarily, due to the sharp decline in private consumption, over 6 billion euro compared to 2019. In particular, the exports of goods and services decreased by 21.7%, while the fall of 6.8% for imports was not sufficient to limit the deterioration of the balance of goods and services. In turn, the decline in exports was caused exclusively by the decline in exports of services of about 44%, while exports of goods recorded a small increase of 4.3%.[2]

The fall in exports of services was caused by the significant reduction of travel receipts recorded during 2020. In particular, incoming passenger traffic decreased by about 78.2% and amounted to 7.406 million visitors, versus 34 million visitors in 2019, while the travel receipts in 2020 amounted to 4,319 million euro, a decrease of about 76.2% compared with 2019.

For the period January-March 2021, the travel receipts reduced by 511 million euro (-86.1% compared to 2020), amounting to 83 million euro. This decrease is due to the decrease of the incoming travel traffic by 85.2%, as well as to the reduction of the average expenditure per trip by 5.6%. Despite this, the government cabinet seems to be quite optimistic and invested in a recovery of tourism in 2021, due to an increase in travel of about 50%. In the same context are also the two scenarios recently published by Eurobank for Greek tourism. The first scenario, called "conservative", estimates that travel receipts will amount to 40.3% of 2019 revenues, while the latter, characterized as "more aggressive", estimates 55.7%.

As for its current estimates for the GDP in 2021, according to the spring forecasts of the European Commission, the Greek economy is expected to grow by 4.1%. In the same way, the forecasts of the Ministry of Finance estimate a growth of 3.6% for this year.[3]

In this article, we (a) explore the multiplier effects that will have for 2021 the change of both the components of autonomous demand (government consumption expenditure, investment, exports) and, separately, the travel receipts to GDP, employment and imports of the Greek economy and (b) compare these two different results.[4] Our analytical framework bases on the concept of the Sraffian multiplier; using data from the Supply and Use Tables to capture the structure of the Greek economy (for details see Rodousakis and Soklis 2020 and Mariolis et al., 2020 and 2021). The changes to the components of final demand are based on the projections of the European Commision and the Greek Ministry of Finance, respectively. Finally, we adopt the official government opinion that the travel receipts in 2021 will be equal to 50% of the receipts of 2019, i.e., an increase of 4.54 billion euro.

1.4.2. Multiplier effects on the Greek economy

Using data from ELSTAT, we estimate the multiplier effects of the increase in government spending, investments, exports and international travel receipts on GDP, employment and imports of the Greek economy. These effects are shown in Table 1.4.1, which shows for every 1 billion euro increase (decrease) in the components of autonomous demand and travel receipts the corresponding increase (decrease) in billion euro in GDP and imports, while in terms of employment,

1. This was due to the extraordinary measures taken by the government to support the workers who were out of work because of the pandemic. The exact size of unemployment is not feasibly reflected in elements of ELSTAT; for this issue, see Papadimitriou et al., 2020.

2. Private consumption decreased by 5.2%, gross fixed capital formation remained virtually stagnant, and public consumption increased by 2.7%.

3. For a complete picture of the possible GDP growth of the Greek economy, see also Papadimitriou et al. (2021).

4. It should be noted that neither scenario distinguishes between exports of goods and exports of services.

TABLE 1.4.1 Multiplier effects

	GDP	Employment	Imports
Investments	0.68	18.93	0.60
Government	1.48	33.52	0.35
Exports	0.78	16.60	0.50
Tourism	1.07	26.40	0.32

Source: Mariolis et al. (2021).

this increase (decrease) corresponds to thousands of people.

1.4.3. Impact on GDP, employment and total imports

According to the European Commission's Spring 2021 forecast for the changes in the elements of autonomous demand of the Greek economy in 2021, the government's final consumption is expected to increase by approximately 0.786 billion euro, gross fixed capital formation is expected to increase by approximately 3.060 billion euro, and exports are expected to increase by approximately 4.992 billion euro. Therefore, using Table 1.4.1, we estimate that the European Commission's projections correspond to a total (direct and indirect)

- increase in GDP by around 4.26%;
- increase in the levels of total employment of about 4.44%;
- increase in total imports by about 7.03%.

According to Ministry of Finance (MinFin) projections for the changes in the elements of autonomous demands of the Greek economy in 2021, the government's final consumption is expected to increase by approximately 0.536 billion euro, gross fixed capital formation is expected to increase by approximately 1.662 billion euro, and exports are expected to increase by approximately 5.705 billion euro. Our estimations suggest that MinFin projections correspond to a total (direct and indirect)

- increase in GDP of about 3.80%;
- increase in the levels of total employment of about 3.83%;
- increase in total imports by about 6.16%.

In Tables 1.4.2–1.4.4, we present in detail the multiplier effects of the components of autonomous demand for both scenarios.

Finally, the analysis of the multiplier effects of the country's travel receipts shows that if the receipts of 2021 reach 50% of the receipts in 2019, this, *ceteris paribus,* will cause an

- increase in the country's GDP by about 2.9%;

TABLE 1.4.2 Multiplier effects of the elements of autonomous demand on GDP (%)

	Ministry of Finance	European Commission
Total	**3.80%**	**4.26%**
Investments	0.67%	1.24%
Government	0.47%	0.69%
Exports	2.66%	2.32%

TABLE 1.4.3 Multiplier effects of autonomous demand elements on employment (%)

	Ministry of Finance	European Commission
Total	**3.83%**	**4.45%**
Investments	0.84%	1.54%
State expenses	0.48%	0.70%
Exports	2.52%	2.20%

TABLE 1.4.4 Multiplier effects of autonomous demand elements on total imports (%)

	Ministry of Finance	European Commission
Total	**6.17%**	**7.04%**
Investments	1.52%	2.80%
State expenses	0.29%	0.42%
Exports	4.35%	3.81%

- increase in employment in the economy by about 3.19%;
- increase in total imports by about 2.21%.

Our estimates show, based on both scenarios, that most of the growth of the economy is expected to be caused by the positive effects of export growth, followed by the positive effects of fixed capital formation and by the small increase in government spending. Also, our estimates seem to be in line with the forecasts of both the Ministry of Finance and the European Commission: Based on the scenario of the European Commission, we estimate growth of 4.26% versus 4.1% of the Commission, while based on the scenario of the European Commission, we estimate growth of 3.8% versus 3.6% of the Ministry. In comparison to our estimates, there is an overestimation of the range of increase in employment and the exports of goods and services.

Regarding the scenario that, *ceteris paribus,* tourism revenues will be around 50% of 2019, the analysis shows an increase in GDP of 2.89%. Compared to the two scenarios mentioned above, this result can be considered, at first, as impressive, but it has perfectly logical explanations, which are the following:

1. GDP in 2020 dropped to 165.8 billion euro from 183.4 billion euro in 2019.
2. For travel receipts, reference is made to a size corresponding to 2019. Thus, 50% of receipts in 2019 is equivalent to an almost 100% increase in receipts in 2021 compared to 2020.
3. The multiplier of tourism is above the average of the economy and, in fact, much higher than the multiplier of investment and the multiplier of exports (the latter includes goods not only services).
4. Public expenditure, which has quite a high multiplier footprint not only in relation to the average of the economy, but also in relation to tourism, on the basis of both scenarios, is almost stagnant in 2021.
5. According to a study by KEPE on behalf of the Ministry of Finance, the impact of funding from the National Plan for Recovery and Sustainability (ESAA) on GDP for 2021 will be of the order of 0.30%.[5]

Finally, it is worth noting that, often, to find the total (direct and indirect) impact of tourism on GDP, a tourism multiplier of 2.5 is used. This leads to a total (direct and indirect) contribution of tourism to GDP of about 30%. It is rather obvious that estimates for the contribution of tourism to GDP of 30% are incorrect, as this would mean the recession of the Greek economy in 2020 would be at least 20%. On the contrary, combining the above framework of multiplier effects with national concepts that reflect the specific weight of the tourism sector in the economy, we recently estimated that the total multiplier effect of the tourism sector in the Greek economy is around 12% of GDP, while the share of tourism in GDP is in the range of 6%-7.2% (Rodousakis and Soklis, 2021).

1.4.4. Conclusions

The analysis of the multiplier effects in the Greek economy for 2021 shows that based on the assumptions of the scenarios of the Ministry of Finance and the European Commission for autonomous demand, we estimate a GDP growth of 3.8% and 4.26%, an increase of employment of 3.83% and 4.45%, and an increase of total imports of 6.17% and 7.04%, respectively. Further, based on the hypothesis that tourism revenues will hover at 50% of 2019, we estimate one *ceteris paribus* increase in GDP of 2.9%, in employment of 3.19%, and in total imports of 2.21%. The above results show that tourism can be the “pillar” of development for 2021, and it seems that the relevant government planning for 2021 is based on this fact.

However, this fact is temporary and deals with the special conditions that prevail in the Greek and international economies due to the pandemic of COVID-19. Tourism, due to its specific characteristics, has long proven that it cannot play the role of the “locomotive”

5. For the period 2021-2026, KEPE estimates that the ESAA will contribute to growth cumulatively by 7.2%.

of the Greek economy (Rodousakis and Soklis, 2021). Indicatively, it is sufficient just to consider that in the period 2008-2019, travel receipts rose by about 56.2% and, at the same time, the nominal GDP reduced by about 24.2%.

Therefore, given that the positive effects of the National Plan for GDP Recovery and Resilience will begin to emerge from 2022 onwards, the other components of autonomous demand, other than exports, do not appear to be able to support GDP growth above 2% for 2021. Increasing tourism revenues by 4.54 billion euro is the only way for the Greek economy to receive the short-term growth stimulus that it so desperately needs.

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