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An estimate of international receipts and the turnover of the hotel and food sectors during the second year of the pandemic

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Abstract

This article examines the new developments concerning the economic performance of the tourist industry (expressed by economic variables such as the international receipts and the turnover of accommodation and food services) achieved under the pressure of the continuing pandemic crisis. The results of this research show that international receipts for 2021 are estimated to vary between 8.3 and 9.4 billion euros, with the corresponding losses estimated between 8.8 and 9.9 billion euros compared to 2019, the last "normal" year for tourism. In addition, use of the Consumer Price Index (CPI) weight structure leads to the conclusion that, for 2021, the shares attributed to international and domestic tourists in the total turnover of accommodation and food sector services are approximately the same compared to those of year 2020.

Keywords: *Accommodation and catering, non-resident travel receipts, coronavirus, COVID-19, price indices, weighting factors, Greek economy.*

JEL classification: *E39, Z30, Z32*

Introduction

At the beginning of 2020, the outbreak of the COVID-19 pandemic constituted an enemy to all countries alike, which, judging by the results we have already experienced, were heavily affected both socially and economically. As far as the Greek economy is concerned, the pandemic crisis halted its recovery, causing its real GDP to contract by as much as 8.2%, mainly as a result of the reduction in private consumption and exports of services. Once business operations were restricted or closed down altogether to the public, the impact on various sectors of the economy varied widely and those affected most included hotel and accommodation, catering, tourism, transportation, cultural activities and retail trade services.

The gradually and continuously improving management of the pandemic was a decisive factor on the part of the governments all around the world in their effort to contain the spread of the virus and thus to put an end to this global health crisis. This was made possible because, given time, the pandemic related research produces results that could be used both for dealing with it and for preventing it. The aforementioned proper management is estimated to be the key to the gradual fading of the pandemic and ensuring a stable path to recovery. Given the dynamic rebound of the Greek economy in the second quarter of 2021, which confirms that the losses to economic activity as a result of the pandemic will be recovered faster than initially estimated, it appears that the economic performance of the tourist sector will be one of the key factors that will decide the rate of growth of the economy as a whole for year 2021 (Rodousakis and Soklis, 2021).[2]

This short article is based on a previously published study of Kasimati, Kondelis and Lagopoulos (2020) and has the following structure. The first section uses in-

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1. Author's names are in alphabetical order. The views expressed in this article are those of the authors and do not necessarily reflect those of the Bank of Greece. Any errors or omissions are the responsibility of the authors. We would like to thank the two anonymous reviewers for their useful comments and remarks.

– Opinions or value judgments expressed in this article are the authors' own and do not necessarily reflect those of the Centre of Planning and Economic Research.

2. There are studies in the bibliography both for Greece and Europe that examine issues of direction and causality in the economic relation between tourism and economic growth with mixed results and with no prevalence of a specific directional causal relationship (for more details, see Rodousakis and Soklis (2021), Kasimati (2011), Song and Wu (2021) and Antonakakis et al. (2015).

formation on the structure of weights of the CPI and the Harmonized Consumer Price Index (HICP) in order to estimate, first, the part of the Accommodation and Food sectors' turnover that is due to international visitors and that which is due to domestic tourism, and second, how this allocation is affected by the pandemic crisis. The second section presents an analysis of the international receipts up to June 2021, published by the Border Survey of the Bank of Greece. In addition, based on three different scenarios, international receipts are estimated on a monthly basis for the second half of 2021, along with the total losses in the payments of the non-residents compared to 2019. The last section of the article contains the conclusions of this work.

1. The turnover of the Accommodation and Food sectors: breakdown by source of spending (international vs domestic tourists) and projected path for 2021

The turnover of the two main components of the tourist industry (that is, *accommodation* services and *food* services) was considerably lower in 2020 compared to the corresponding figure for the year 2019. This can be attributed to the decrease in demand for those services as tourist flows were substantially decreased, contributing thus to the contraction of GDP. According to ELSTAT (2021), the turnover of accommodation services for 2020 amounted to 2,371,365,548 euros and that of food services to 4,084,227,880 euros. The recorded decline in 2020 compared to 2019 in percentage terms reached 66.8% for accommodation services and 37.2% for food services.

We use the information contained in the weight structure of certain categories of interest of the CPI and the HICP in order to come up with an estimate of the breakdown of the turnover of both accommodation and food services, according to their source: international as opposed to domestic tourists. It should be borne in mind at this point that both the aforementioned indexes contain essentially the same categories of goods and services and that their difference lies in the fact that they use a different weight structure.

The weight structure of the CPI is based primarily on the Household Budget Survey (HBS). On the other hand, while the weight structure of the HICP is based on the same survey, it additionally involves data and information from the *National Accounts* in order to integrate the structure of the expenditure of international tourists as well. As a result, tourist spending is incorporated in the HICP, but not in the CPI. With that in mind, comparing the weight coefficients of the two indexes for hotel accommodation and food services, we establish the following differences in the two indexes:

From Table 1, it can be concluded that international tourists account for 81.28% of the accommodation services turnover, while the corresponding participation rate in the food services turnover amounts to 30.34% (based on 2020 data).

With the aid of the shares established in Table 1, we present in Table 2 the breakdown of the total value of the turnover for each of these two sectors into two parts, according to its source: one that can be attributed to international tourists and one that can be attributed to domestic tourists.

Based on ELSTAT (2021), the turnover of accommodation services during the first quarter of 2021 amounted to 97,977,317 euros and during the second quarter to 596,430,723 euros, recording annual changes of -59.2% and 452.3%, respectively, when compared to the turnover of the same quarters of the previous year (2020). As a result, the turnover for the accommodation sector for the first half of 2021 totaled 694,408,040 euros, posting a 99.6% increase compared to the first six months of the previous year.

TABLE 1 CPI and HICP weights of certain items for 2020

Sector	HICP	CPI	Difference (units)	Difference as a percentage of HICP
Food (and beverage) services	138.08‰	96.19‰	41.89	30.34%
Accommodation services	33.40‰	6.25‰	27.15	81.28%

Source: ELSTAT data, authors' own calculations.

TABLE 2 Breakdown of the 2020 turnover of accommodation services enterprises and of food services enterprises according to the origin of tourists (international and domestic)

Services	Turnover 2020 (in euros)	Non-resident visitor participation	Turnover attributed to international visitors (in euros)	Turnover attributed to domestic visitors (in euros)
Accommodation enterprises	2,371,365,548	**81.28%**	1,927,459,407	443,906,141
Food and beverage enterprises	4,084,227,880	**30.34%**	1,238,959,984	2,845,267,897

Source: ELSTAT data, authors' own calculations.

As far as the food services sector is concerned, the recorded turnover for the first and second quarters of 2021 amounted to 460,584,614 and 1,042,303,819 euros, respectively, leading to a change of -52.5% and 62.3% when compared to the corresponding quarters of the previous year. Hence, the total turnover of the food services sector for the first two quarters of 2021 amounted to 1,502,888,433 euros, down by 6.8% compared to the same time period of the previous year.

Finally, a scenario is adopted for the accommodation services turnover that we believe is most likely to prevail given, on the one hand, the actual data available so far (that is, for the first half of 2021) and, on the other hand, the estimates for the already completed summer months (for which there are no official data as of yet). Based on the economic performance of the tourist sector up to this date, the scenario we adopt is rather optimistic, claiming that the accommodation services turnover attributed to international tourists will level at 200%, while that of domestic tourists will be 120% (both compared to the previous year). The turnover values for this scenario are exhibited in Table 3.

It becomes apparent from Table 3 that the scenario we adopted above enabled us to predict the turnover for the accommodation and catering sectors for the year 2021 as a whole. Subsequently, since we (already) have the official turnover data for the first half of the year, the turnover for the second half of the year was obtained as the difference of the two.

According to Table 4, the increase in the accommodation services turnover in 2021, compared to the previous year, is projected at around 85% while that

TABLE 3 Estimated turnover for 2021

Services	2020 Turnover (in euros)	Turnover estimate due to international tourism (200% of 2020) (in euros)	Turnover estimate due to domestic tourism (120% of 2020) (in euros)	Total turnover estimate for 2021 (in euros)	Percentage change compared to 2020
Accommodation enterprises	2,371,365,548	3,854,918,814	532,687,369	4,387,606,183	85.0%
Food and beverage enterprises	4,084,227,880	2,477,919,967	3,414,321,476	5,892,241,443	44.3%

Source: ELSTAT data, authors' own calculations.

TABLE 4 Estimated turnover for each half of 2021

Time period	Accommodation turnover in 2020	Accommodation turnover in 2021	Annual percentage change compared to 2020	Food turnover in 2020	Food turnover in 2021	Annual percentage change compared to 2020
1st Half	347,971,595	694,408,040	99.6%	1,612,487,913	1,502,888,433	-6.8%
2nd Half	2,023,393,953	3,693,198,143	82.5%	2,471,739,967	4,389,353,010	77.6%
Annual	2,371,365,548	4,387,606,183	85.0%	4,084,227,880	5,892,241,443	44.3%

Source: ELSTAT data, authors' own calculations.

of food services is around 44%. The increase for the total of the two sectors as a whole reaches 59%. Still, compared to 2019, the total turnover in year 2021 falls short by 24.6%.

2. Non-resident travel receipts in 2021

During the decade beginning with 2010, Greece experienced a record-high increase in incoming tourist flows, with the latter more than doubling by the end of that period (in particular, we had 15 million incoming tourists in 2010 and 31 million in 2019). The upward trend in the number of international tourists was nevertheless strongly reversed in the face of the pandemic, diminishing by as much as 76.5% on an annual basis in 2020, due to, on the one hand, the government measures restricting transportation as well as economic activity (local lockdowns), and, on the other, a considerable percentage of people decided to put off traveling for fear of being infected with Covid-19. As a result, the number of international tourists that visited Greece in 2020 reached almost 7.4 million, with the incoming flows reaching their peak (of 67% total arrivals for year 2020) in the time interval between July and October. Despite the stronger, on average, increase in incoming non-resident arrivals in Greece compared to the rest of Europe, the decrease in arrivals in the rest of the European countries was nevertheless milder in 2020 (70% on an annual basis).

One explanation for this, among others, is that the bulk of the incoming non-resident tourists arrive in Greece by air (non-resident arrivals in Greek airports represent well over two-thirds of total tourist arrivals in the country). As far as non-resident receipts, Greece recorded 4.32 billion euros for year 2020, a figure considerably smaller (76.2% lower, to be specific) than that of the previous year. The aforementioned total non-resident receipts could be further distinguished into those originating from EU-27 countries, which amounted to 2.858 billion euros (down by 68.9% compared to the previous year), as well as into those originating from non EU-27 countries, amounting to 1.452 billion euros (down by 82% compared to the previous year). In all, tourist activity as expressed by non-resident receipts receded in the year 2020 to 23.8% compared to the previous year.

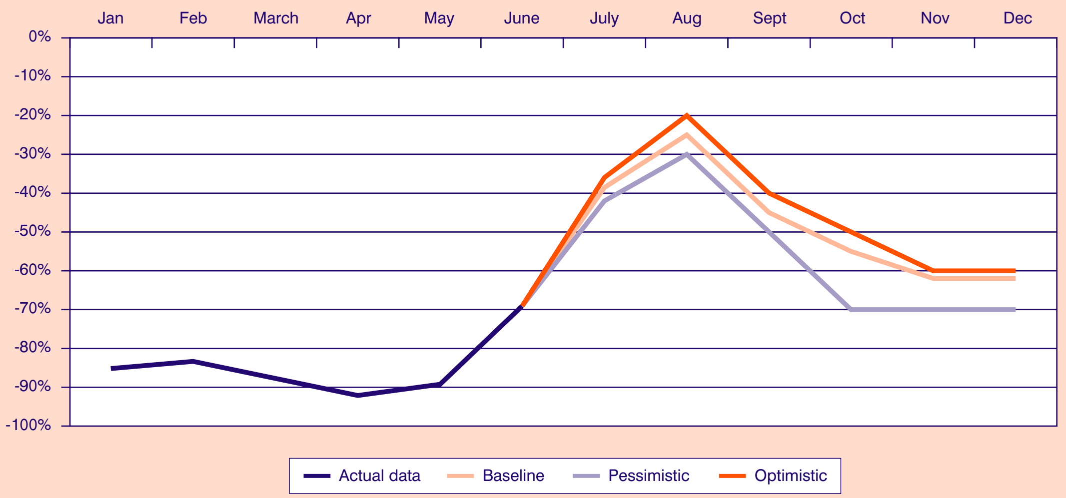
The rest of this section centers around estimating the demand for tourist services for Greece in year 2021 by focusing specifically on non-resident receipts. For the first half of 2021(for which there are published data available), non-resident receipts recorded a 63% increase compared to 2020, but at the same time, they posted a 78% decrease compared to 2019. For the second half of 2021, the estimation of non-resident receipts on a monthly basis involves the use of three scenarios, defined as follows: (a) pessimistic –assumes a 54% decrease in non-resident receipts, which implies that only 46% of 2019 non-resident receipts will be realized in 2021, (b) baseline –assumes a decrease of 51% and (c) optimistic –assumes a reduction of 48%. The above three scenarios are based on airline data regarding the scheduled number of international flights as well as the airline plans for international passenger seats into Greece.[3] The percentage change of 2021 non-resident receipts compared to their 2019 levels, according to each one of the three scenarios for both the published data (available through June 2021)

3. For details concerning the methodology, see Kasimati, Kondelis and Lagopoulos (2020).

and the monthly estimates for the second half of 2021, are shown in Figure 1.

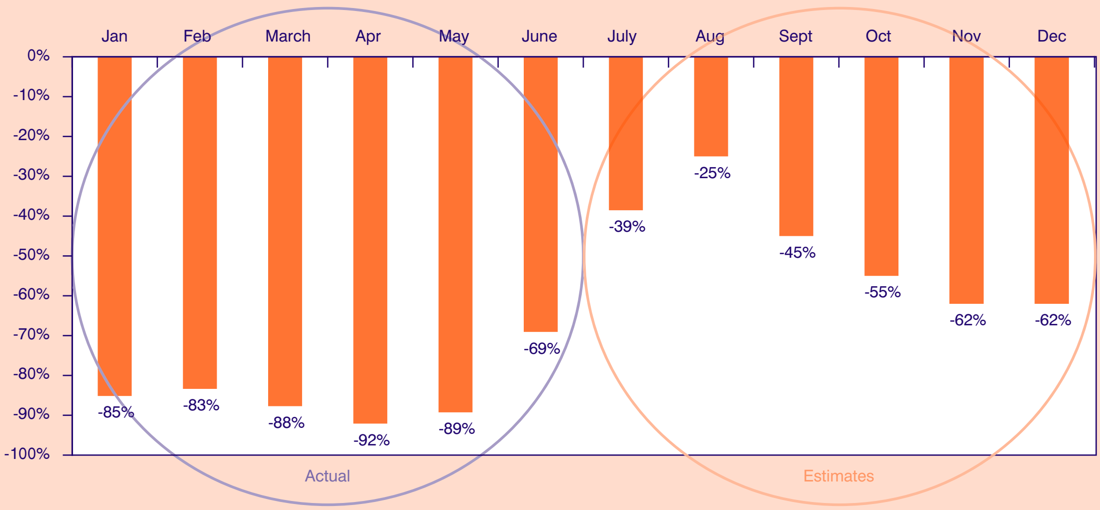
The future prospects concerning the economic performance of the tourist sector seem encouraging if the available non-resident receipts' data for 2021 (as a percentage of their 2019 counterparts) are compared against the corresponding data for year 2020. This comparison shows that a considerable part of the decrease in non-resident receipts during 2020, compared to 2019, has been recovered. Taking into account the published (first half of the year) as well as the estimated (second half of the year) non-resident receipts' data for 2021, based on the baseline scenario, Figure 2 depicts the percentage change in monthly non-resident re-

FIGURE 1
Non-resident travel receipts in 2021: three scenarios (percentage change with respect to 2019)



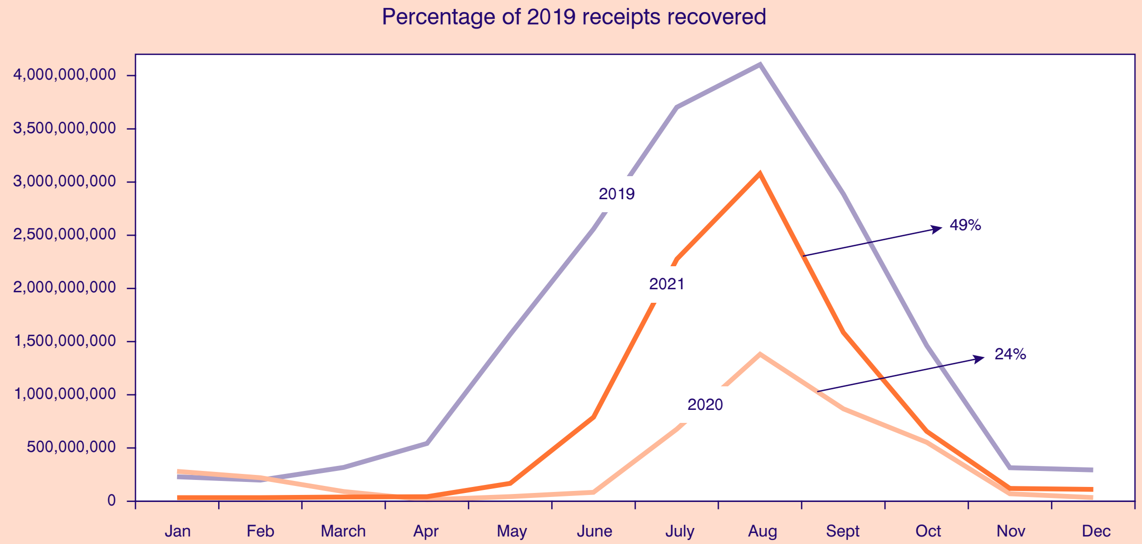
Source: Border Survey of the Bank of Greece and authors' own calculations.

FIGURE 2
Travel receipts in 2021: percentage change with respect to 2019, under the baseline scenario



Source: Border Survey of the Bank of Greece and authors' own calculations.

FIGURE 3
Travel receipts (in euros)



Source: Border Survey of the Bank of Greece and authors' own calculations.

Note: Data for 2019 and 2020 are based on the Border Survey of the Bank of Greece. The data for 2021 are our own estimates based on the baseline scenario.

ceipts for year 2021 compared to year 2019. It should be pointed out that non-resident receipts during July and August 2021 are expected to have an even better performance compared to that of the first half of the same year.

Assuming the pandemic conditions for September 2021 until the end of 2021 follow a similar path to the one we experienced last year, non-resident receipts in 2021 are expected to recover the 2019 level by as much as 46% to 52% (Figure 3). As a result, the level of non-resident receipts in 2021 is expected to range between 8.3 and 9.4 billion euros, while our baseline scenario calls for a level of 8.9 billion euros.

According to a recent study (NBG, 2021), non-resident receipts in 2021 are expected to grow, reaching 50% of their 2019 levels. A necessary condition for this expectation to be fulfilled is that the trend in the current plan of scheduled flights at high capacity for September and partly for October will eventually be realized through effective pandemic control. At the same time, in a study by Rodousakis and Soklis (2021), it is estimated that if non-resident receipts in 2021 reach 50% of their 2019 level, this will, *ceteris paribus*, result in an increase in GDP by 2.9%, in employment by 3.19% and in total imports by 2.21%.

3. Conclusions

As we approach the completion of two years since the beginning of the pandemic, we have enough data and information to analyze at least its direct impact on the tourist sector and the economy in general. Analysis of economic variables related to tourism reveal the contribution of this article in as much as, on the one hand, the turnover of the accommodation and food services sector is broken down and distributed according to its origin to either international or native tourists. On the other hand, an estimation of the international receipts for the year 2021, is presented, based on three scenarios. In summary, the main points of this article are the following:

- According to available data for the first half of 2021 non-resident tourist receipts for that period recorded an increase of 63% with respect to 2020, but, at the same time, an even greater decrease of 78% with respect to 2019.
- Despite the relatively good management of the pandemic on the part of the government, Greece suffered a considerable reduction of non-resident travel receipts in 2020 compared to 2019, reaching as much as 76.2%. Nevertheless, it is expected in 2021 to recover a good part of the lost ground,

which ranges between 46% and 52% (always compared to 2019 and conditional on the fact that pandemic conditions for the rest of the year will resemble those of the same period of the previous year).

- Based on three scenarios (pessimistic – baseline – optimistic), non-resident tourist receipts for year 2021 are expected to range between 8.3 and 9.4 billion euros.
- Taking into account the weighting factors of the CPI and the HICP (and in general the methodology used in the HBS), an estimate of the breakdown of the turnover of accommodation and food services was computed according to the origin of its source: domestic or international. The shares computed based on the 2020 HBS are the following: For accommodation services, the international tourists' share is 81.28%, and the domestic tourists' share is 18.72%. For food services, the international tourists' share is 30.34%, and the domestic tourists' share is 69.66%. The great dissimilarity of the shares makes it absolutely clear that a change in the behavior of international or domestic tourists because of the pandemic will have a highly dissimilar impact on the tourist revenues from each category.

The accumulated experience during the last two years, which were strongly characterized by the pandemic, showed beyond any doubt the power of the tourist sector to either promote economic growth or cause the economy to slow down under different conditions. That knowledge also helped reestablish the need for the diversification and broadening of the economic model of Greece, strengthening other sectors of the economy so that together with the tourist sector, they can all simultaneously lead to a more balanced growth path.

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