



Tax-free shopping in Greece: Thinking beyond the current model

A Cebr report for Refundit

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Executive summary

Cebr has been commissioned by Refundit to investigate the impact of tax-free shopping on the Greek economy. Specifically, this analysis looks at the potential economic gains associated with replacing the current tax-free shopping model with an open, consumer-focused alternative. The analysis hinges on a change in legislation such that consumers can claim refunds for eligible purchases directly from an operator, eliminating the need for merchants to enter into a relationship with the operators, which currently works as a bottleneck in the system. The aim of moving to this system is to enable more tourists and merchants to benefit from tax-free shopping. The benefits of such a change would disproportionately apply to merchants away from the capital cities and tourist hotspots which are effectively excluded from participating in the current tax-free shopping scheme. Depending on the take-up rate of sales tax refunds, we find that such a scheme would have brought the following impacts in 2019:

- **Spending eligible for tax-free shopping is estimated to have stood at €2.1 billion in 2019;**
- Depending on the take-up rate, between €0.2 billion and €0.5 billion of this would be returned to customers in the form of VAT refunds under the new TFS scheme;
- On a per visitor basis, these **VAT refunds would reduce the cost of a visit to Greece by approximately 2.8% to 5.7%;**
- Based on the elasticity of demand for international travel with respect to price, **this cost reduction would increase visitor numbers by between 472,000 and 945,000;**
- **These additional visitors would spend between €321 million and €643 million;**
- **Visitor spending patterns would also be impacted by the effective cost reduction.** This would have produced **further additional spending of €396 million to €791 million;**
- **The total increase in spending as a result of the scheme would thus range between €717 million and €1.4 billion;**
- This additional spending would have fed into higher output levels via the tourist spending multiplier. **This would amount to an increase in GDP of between €1.0 billion and €2.1 billion;**
- Taking into account Greece's tax-to-GDP ratio, **this increase to GDP would increase tax revenues by €402 million to €805 million;**
- The introduction of an open, consumer-focused tax-free shopping scheme would have a net positive effect on government tax revenues. **The additional revenues generated would outweigh the losses associated with sales tax refunds by €155 million to €311 million.**

1 Introduction

Tax-free shopping (TFS) is a global phenomenon and has enjoyed increasing popularity over recent years. Globally, tax-free shopping transactions have shown double-digit growth over the past decade.

Tax-free shopping is currently offered in many countries worldwide, including in Japan, China, and all member states of the European Union. Collectively, these countries facilitate millions of tax-free shopping transactions each year.

The clientele taking advantage of tax-free shopping schemes are varied. Many individuals are dedicated shopper-travellers, basing their decisions on foreign travel on the destination country's retail offerings.

The benefits of tax-free shopping are certainly not limited to these individuals, however, with plenty of activity being generated by 'occasional' purchasers. These people may not have had the explicit aim of travelling to a destination simply to take advantage of tax-free shopping but will make purchases that they may not have otherwise considered, on the basis of the cost reduction provided by the tax refund.

The benefits of offering tax-free shopping

From a policy and legal point of view, the objective of a tax-free shopping scheme is to ensure neutrality of tax treatment between tourist expenditure on exported goods. This is because, according to OECD VAT guidelines, exports should generally not be subject to tax.

Apart from these policy considerations, countries which implement a tax-free shopping scheme enjoy a range of other benefits. A TFS system means that merchants are encouraged to issue invoices and declare their sales to tax authorities, thereby reducing the scale of the grey economy in a country. Meanwhile, there are various economic benefits that tend to offset the costs associated with implementing a TFS scheme and the forgone sales tax revenue. This largely occurs through the means of incentivising additional tourist arrivals and encouraging further spending amongst such tourists.

In terms of the number of tourist arrivals, a key consideration is that of the incentive to travel provided by a generous tax-free shopping scheme. Though shopping opportunities represent just one factor behind travellers' destination decisions, the fact that many goods are available more cheaply under a tax-free shopping scheme than in the absence of such a scheme means that tourists would be more inclined to visit, all else being equal. Empirical research has found a positive effect of a decrease in the price of a visit on visitor numbers.

A further channel of economic benefit derives from the stimulation of extra spending. As an effective tax cut for international visitors, the cost of a visit to a country operating a TFS scheme is lessened. This has an influence on consumer behaviour, specifically through encouraging further expenditure. This additional spending is of benefit to participating retailers, who will see higher revenue streams and increased sales levels. Indeed, the prospect of increased sales levels is often cited as a key motivation by retailers when considering whether to introduce measures to facilitate tax-free shopping.

In addition to the direct impacts of tax-free shopping in terms of incentivising additional visitors and additional expenditure, there are further potential benefits in terms of the wider economy. For instance, multiplier effects arise through the interaction of tourism and retail with other sectors of the economy, meaning that each currency unit spent on tax-free

shopping supports a proportionally greater level of broader economic activity. This occurs through effects on upstream supply chains and job creation. For the purposes of illustration, suppose that a foreign visitor travels to Italy to purchase a leather bag. Their purchase increases the income of the retailer directly, while also increasing the income of the leatherworker who produced the bag. There are further increases to the incomes of those who supply the raw materials to the leatherworker, for instance, the tanner. These supply chain effects are often multiplied, given that the relevant parties are likely to invest or employ additional people in order to meet extra demand, with further benefits to the wider economy resulting from the spending of those additional employees.

This additional activity is conducive to a boost to an economy's gross domestic product, which increases the tax base for the government. Indeed, this boost to output means that tax-free shopping often results in a net gain in terms of tax revenues. That is, the economic activity generated by the scheme yields tax revenues from other sources that outweigh the sales tax lost through the refunds process.

The current model of TFS and its shortcomings

Despite the benefits of TFS schemes outlined above, the current operating model of these schemes has some notable shortcomings. In practice, TFS is much less widespread than it could be and even among countries that have adopted a scheme, the take-up rate amongst both visitors and merchants could be substantially improved. This would also increase the benefits for countries' tax revenues, as any barriers to accessing tax-free shopping schemes mean that the economic gains delivered by such a scheme are not fully realised.

The issues with the current tax-free shopping schemes can be summarised as follows:

1. An overwhelming number of retailers are effectively excluded from participating in the current TFS scheme

Under the current model, retailers need to partner with a refund operator to be able to offer TFS. Refund operators choose their partners based on commercial criteria, which means that, in practice, most shops outside the tourist hotspots are excluded from participating in the scheme as they are not deemed commercially viable partners by the refund operators. This also applies for shops selling predominantly lower value goods that do not meet the minimum purchase amount threshold.

2. Excessive implementation and administration costs for merchants render TFS schemes less attractive.

One of the reasons why so many merchants do not offer tax-free shopping stems from weighing up the cost of signing up to a scheme with the potential benefits from increased client spending. Only if the expected increase in sales outweighs these costs will merchants sign up to a scheme. This also means that TFS will only be offered in areas popular with tourists. Merchants in less touristy areas have hardly any incentive to participate in the scheme.

3. The process is perceived as being too complex and bureaucratic by merchants.

Even where it would make economic sense to join a TFS scheme, a merchant might be repelled if the scheme seems too complicated and bureaucratic to run.

4. The process is perceived as being too burdensome by tourists.

Claiming a VAT refund can be perceived as burdensome and typically involves a number of steps. This starts with the need to fill in a form when purchasing an eligible item. At the airport, the forms then need to be stamped by a customs official. Customs can also ask to inspect the goods, meaning goods might need to be transported in the carry-on luggage, depending on the location of the customs counter. Following that, the claim needs to be made at a separate claims counter or, alternatively, the form needs to be mailed to the operator leading to a delay in the receipt of the refund. Shoppers can be put off by this process, given that it adds further time, queuing, and stress to their travel.

5. High service fees make TFS less attractive for shoppers

Sales tax refund providers currently charge a fee for their services as well as the administration of the scheme. This is key to the business model of those providing such services, acting as an intermediary between the customer and the refunding party whilst simultaneously taking a cut of the associated refund. These can be in the form of a flat fee – for instance, a per transaction service charge – or represent a fixed percentage of the refunded value. This allows the refund provider to generate revenue on each sales tax refund transaction.

The fees associated with VAT reclaim intermediaries may also act as a disincentive for consumers to take advantage of tax-free shopping. The presence of fees means that consumers will necessarily receive less than the overall sales tax paid on the items, thus reducing the incentive to make a refund claim for any given level of expenditure.

6. High minimum purchase amounts limit the range of eligible purchases

Many tax-free shopping destinations require a minimum expenditure level in order to be eligible for a tax refund, pricing out certain international visitors. There is considerable cross-national variation in minimum expenditure levels, however, illustrating a degree of flexibility between countries in terms of how to operate tax-free shopping schemes. France possesses one of the highest minimum spend requirements, set at €175. Meanwhile, Spain has recently abolished its minimum spend requirement, previously set at just over €90, meaning all purchases by foreign nationals on qualifying goods are now eligible for VAT reclamation. Across all countries currently operating tax-free shopping schemes, the minimum spend averages between USD 50-USD 60.

These factors in combination mean that the benefits of tax-free shopping often go unrealised. The minimisation of barriers to access and other costs is pivotal to making the tax-free refund process worthwhile, and hence pivotal to reaping the potential economic rewards.

Expanding access and reducing costs – a better tax-free shopping model

The main issue with the current model of TFS is rooted in the fact that retailers need to contractually commit to a TFS operator and shoulder a substantial part of the administrative burden to participate in the scheme. The aim of Refundit is to reduce the scale of that burden. ***Under the proposed 'open', consumer-focused TFS model, there would be no burden on retailers, as visitors claim the refund directly from the operator.*** This is made possible through a change in legislation such that, **by default, every retailer can participate in the scheme**, meaning more purchases come under the remit of tax-free shopping. This would help to avoid the implementation and administration costs from the retailer's perspective, bypassing one of the main hurdles to widening the potential market for a TFS scheme.

In effect, this enables stores across the country to reap the benefits from TFS. Data from Refundit show that in Belgium 54% of transactions were done outside the main cities of Brussels and Antwerp in 2019.¹

The open TFS model also benefits consumers by making the refund process entirely digital and less burdensome. For instance, Refundit asks consumers to make sales tax refund claims via a mobile app, helping to avoid paperwork and queuing at airport counters, two aspects that are both central to the refund process and some of the biggest hindrances to TFS under the current system. Using this app, consumers can claim refunds on eligible purchases from any store, preventing the hindrance of retailers not providing access to tax-free shopping benefits, something that is particularly prevalent amongst smaller stores and those away from urban areas and tourist hot spots.

Given that operators in an 'open', consumer-focused scheme, such as the one proposed by Refundit, incur generally lower operating costs, they are also in a position to offer more competitive rates to customers. Lower service fees in turn make it more worthwhile for consumers to submit a refund request as more of the VAT will be returned to them. This will further increase uptake of TFS among international visitors. Ultimately, the lower administration costs of an open scheme should also allow legislators to drastically cut minimum purchase requirements. In short, an open TFS scheme reduces the barriers to accessing tax-free shopping, helping to maximise the economic gains associated with such schemes.

¹ Sphinx Research and Consulting (2020)

2 Inbound tourism in Greece and the potential size of the tax-free shopping market

The travel and tourism sector is an important aspect of the Greek economy, with a total GDP contribution of around 20.1%.² This makes Greece's tourist sector one of the EU's largest in terms of its size relative to national output.

The benefits of tax-free shopping are only available to visitors who are not resident in the EU, since goods need to be exported out of the single market in order to be eligible. This provides one restriction to the size of tax-free shopping in Greece and, as such, our analysis solely considers the shopping habits of non-EU visitors to the country.

This section of the report shows the potential scale of an 'open' TFS scheme, which would be available to all merchants and non-EU resident travellers, independent of any binding relationship between shops and refund operators. After a quick summary of the size of Greece's inbound tourism sector, the analysis will model potential effects on tourist numbers, tourist expenditure and economic output from the introduction of such a scheme. We further analyse the fiscal implications of the scheme. Results will be shown under three scenarios for illustrative purposes:

- 1) 100% adoption rate, i.e. visitors claim refunds for all eligible purchases
- 2) 75% adoption rate
- 3) 50% adoption rate

2.1 Visitor numbers

Data from the Bank of Greece show that the number of tourists undertaking overnight stays in Greece has increased from 24.8 million in 2016 to 31.3 million in 2019. This represents growth of 26.4%.

The UK is a key source market for Greece, with British nationals making around 3.5 million trips to the country in 2019.³ This has significant implications for the future size of the tax-free shopping market in Greece, given the UK's recent departure from the European Union. As our analysis aims to give a plausible estimate for the potential size of the TFS in Greece going forward, we include the UK in the group of non-EU countries in the following analysis.

For the purposes of our analysis of tax-free shopping, visitor numbers from non-EU countries are of most importance, given that only these visitors could potentially take advantage of the scheme. Between 2016 and 2019, non-EU tourist arrivals, including arrivals from the UK, increased by 22.1% in Greece, rising from 10.5 million to 12.8 million.

2 WTTC Economic Impact Report 2020

3 Bank of Greece

Figure 1 – Number of overnight tourists, EU and non-EU, Greece, 2016-2019

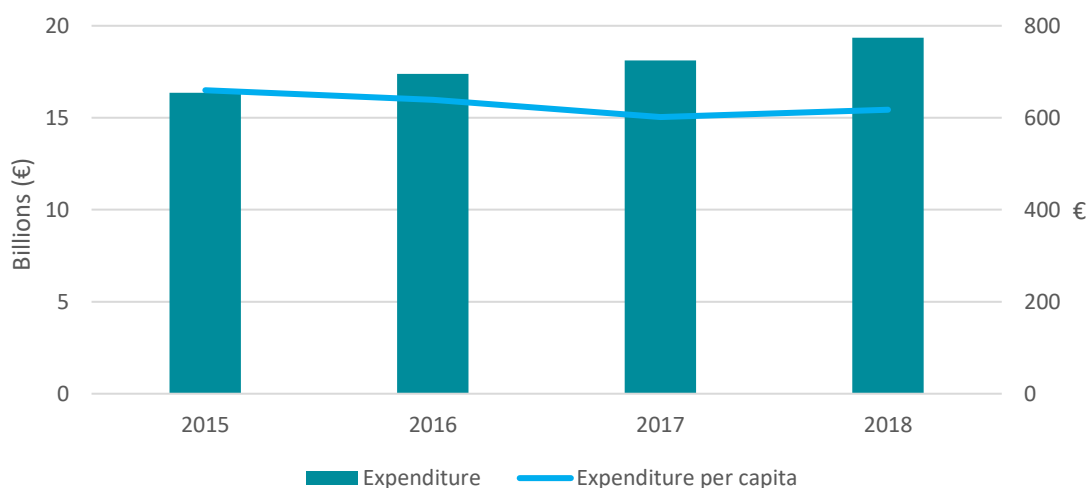


Source: Bank of Greece, Cebr analysis

2.2 Tourist spending

Aggregate tourist expenditure levels have also seen a fair amount of growth over that same time period. Between 2016 and 2019, visitor export levels rose from €16.4 billion to €19.4 billion, representing growth of 18.3%. Aggregate spend has grown at a slightly slower rate than overnight tourist numbers, however, resulting in a fall in the level of spending per visitor. Spending per head decreased from €660 in 2016 to €617 in 2019, though this is slightly up on the near-term low of €602 witnessed in 2018.

Figure 2 – Total tourist expenditure (LHS) and per overnight tourist spend (RHS), 2016-2019

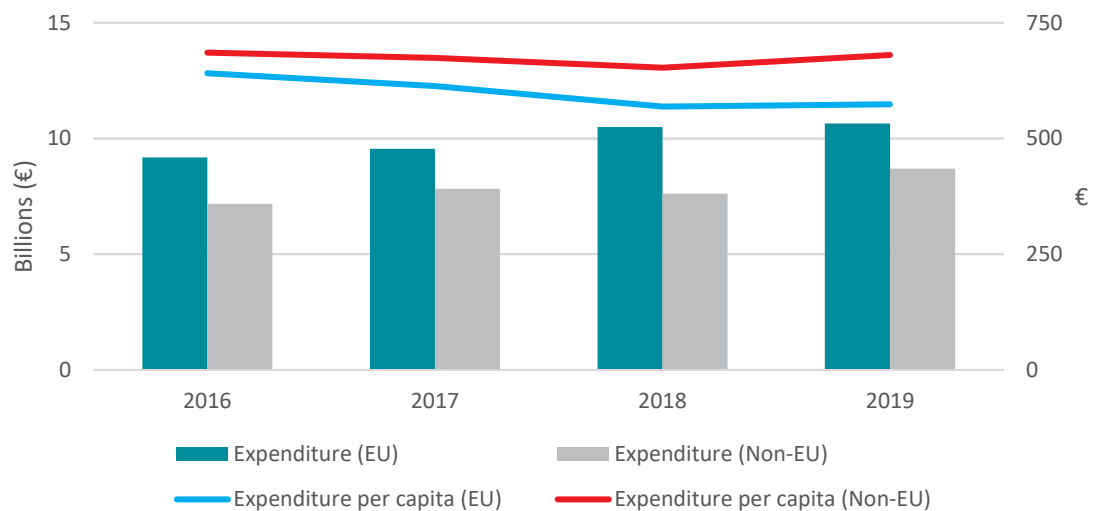


Source: Bank of Greece, WTTC, Cebr analysis

Growth has also been witnessed in terms of spending amongst non-EU visitors. Non-EU tourists spent €7.2 billion in Greece in 2016, with this rising to approximately €8.7 billion by 2019. Nevertheless, this growth has been outweighed by that of non-EU tourist arrivals, meaning expenditure per head amongst non-EU visitors has witnessed a slight decrease over this time period, falling from €686 in 2016 to €680 in 2019. The 2019 figure is up from the near-term low of €653 in 2018, however.

Spending amongst non-EU visitors, including UK visitors, made up 45.0% of total visitor spending in Greece in 2019, while accounting for 40.8% of visitors. This reflects their higher tendency to spend, with average expenditure per head being 18.5% higher than that of their EU counterparts in 2019.

Figure 3 – Total tourist expenditure (LHS) and per overnight tourist spend (RHS), 2016-2019



Source: Bank of Greece, WTTC, Cebr analysis

2.3 Potential market size of an open, consumer-focused TFS scheme

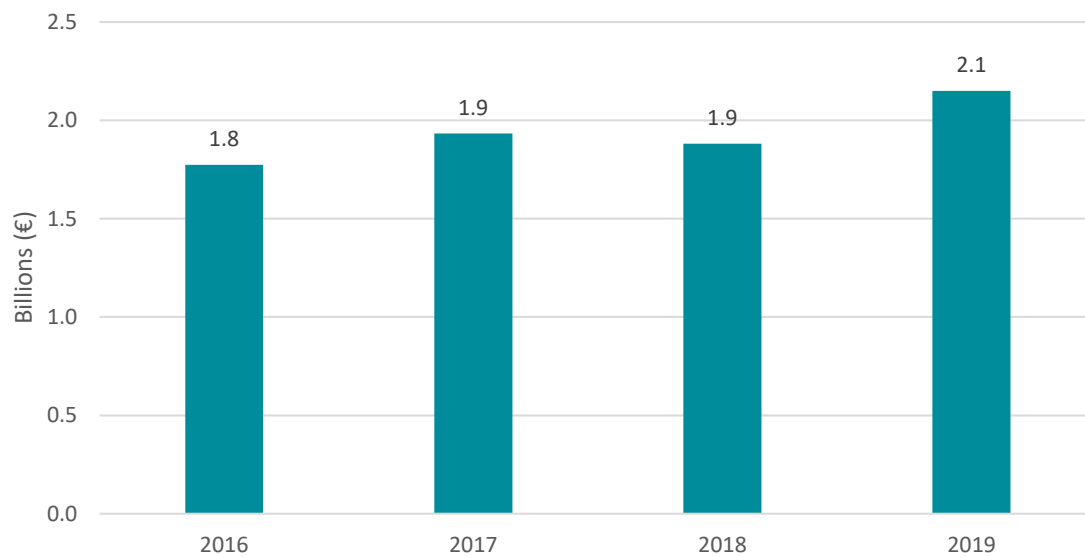
Official data on the breakdown of tourist expenditure across different consumption categories is somewhat lacking for Greece. As such, we draw upon academic literature to estimate the proportion of tourists' budgets spent on goods eligible for tax-free shopping. For visitors to the island of Crete, the proportion of tourists' budgets attributable to purchases – excluding catering, transport, package tours, and services – was found to stand at 24.7%.⁴ For the proportion of budgets attributable to shopping, an almost identical figure (24.5%) was found in analysis by the Bank of Greece, though this was drawn from a survey applying only to cruise ship visitors.⁵ The fact that these two figures fall within a narrow margin is encouraging and provides us with a useful basis upon which to model expenditure behaviour. They should be interpreted as upper bound estimates, however, given that not all aspects of purchases or shopping would be eligible for TFS schemes.

Applying this share to the above analysis of tourist spending amongst non-EU visitors suggests that total shopping expenditure from these visitors has risen from €1.8 billion in 2016 to €2.1 billion in 2019. This figure represents the potential market size of goods potentially eligible for tax-free shopping in Greece. Meanwhile, the total amount of VAT reclaimed on this spending would have amounted to €0.5 billion in 2019.

⁴ Soteriades and Arvanitis (2006)

⁵ Developments in the balance of travel services (2016)

Figure 4 – Non-EU tourist spending on shopping, Greece, 2016-2019



Source: Bank of Greece, WTTC, Cebr analysis

Dividing the total spend figure by the number of non-EU visitors yields tax-free eligible spending of €168 per head in 2019. Given Greece's standard VAT rate of 23%, this would translate into a refundable value of €39 per tourist in the situation in which refunds are provided on all eligible purchases. Dividing this by the total spending per non-EU visitor figure (€680) shows that a sales tax refund would amount to cost savings of 5.7% of total spending per head for non-EU tourists.

The figures analysed thus far are based on the assumption that refunds are claimed for 100% of eligible transactions. Any results based on this scenario can therefore be understood as upper-bound estimates. We further examine scenarios where take-up is more limited, with refunds claimed on either 75% or 50% of all eligible transactions. If only 75% of refunds are claimed, this translates into VAT refunds of €29 per tourist in 2019, representing 4.3% of total per capita spending. Meanwhile, in the case in which 50% of refunds are reclaimed, the corresponding figures are a €19 VAT refund and a 2.8% share of total per capita spending.⁶

2.4 Impact of expanding tax-free shopping access on international visitor numbers

The impact on the number of tourists stems from the effect of tax-free shopping on the average cost of a visit to Greece. The prospect of a cheaper visit acts as an additional incentive for tourists to visit the country. To quantify this impact, we apply the above figures to the price elasticity for incoming tourists.⁷ A 5.7% cost saving for tourists, as in the case in

⁶ At an aggregate level, VAT refunds of €0.2 billion and €0.4 billion would be issued in the 75% and 50% scenarios, respectively.

⁷ We have used an elasticity of -1.3 for tourist numbers with respect to the average cost of a visit. An elasticity describes the percentage change in one variable as a result of a change in another variable. This is a

which all gains from tax-free shopping are realised, yields an increase of 7.4% in the number of non-EU tourists visiting Greece. In 2019, this would have meant an additional 945,000 visitors.

If 75% of potential tax refunds are reclaimed, this translates into an additional 709,000 visitors (5.5% increase). The corresponding figure for 50% reclamation gives an additional 472,000 visitors (3.7% increase).

2.5 Increase in spending due to additional visitors

Assuming that these additional tourists have the same spending profile as the current average non-EU visitor to Greece, this translates into potential additional spending of around €643 million in 2019.

If 75% of potential tax refunds are reclaimed, spending from additional visitors would amount to €482 million. If 50% of potential tax refunds are reclaimed, additional visitor spending would reach €321 million.

2.6 Impact of expanding tax-free shopping access on average spending by international visitors

The aim here is to estimate the extent to which the availability of VAT refunds would change consumer behaviour. Given that VAT refunds reflect a cost reduction for visitors shopping in Greece, one would expect that this leads to higher consumption expenditure. In order to quantify this effect we refer to academic literature, which has found that a 2% decrease in the price of tourists' consumption basket leads to a 3.2% rise in total expenditure.⁸ Our review of a meta-study of tourist spending elasticities finds this value to be well within the range of reasonable estimates.⁹ Combining this with our findings from above, which show that VAT refunds could reduce the overall cost of travel for tourists by 5.7% in the best case, we find that the VAT refund scheme would stimulate an increase in consumption of 9.1% among visitors to Greece. This is equivalent to €791 million in 2019.

Meanwhile, in the case in which 75% of refunds are claimed, 6.8% extra consumption is stimulated amongst visitors to Greece, amounting to an additional €593 million of expenditure. The scenario in which 50% of refunds are claimed gives 4.5% extra, equivalent to €396 million.

2.7 Aggregate impact on expenditure

The potential total increase in spending as a result of a tax-free shopping scheme is the summation of these two effects: the impact on the number of visitors and the increase in expenditure per visitor. Based on 2019 data, we find these separate effects to be €643

conventional elasticity used for tourism and is officially quoted by the UK's Tourism Alliance - http://www.tourismalliance.com/downloads/TA_390_415.pdf

8 Gago et al (2006, FEM Working Paper 40.2006) – Taxing Tourism in Spain: Results and Recommendations

9 Peng, Song, Witt - A Meta-Analysis of International Tourism Demand Elasticities, Journal of Travel Research, 2014, retrieved at

https://www.researchgate.net/publication/270710840_A_MetaAnalysis_of_International_Tourism_Demand_Elasticities

million and €791 million, respectively. This gives an aggregate boost to tourism spending of €1.4 billion if all gains from tax-free shopping are realised.

In the intermediate cases in which 75% and 50% of refunds are reclaimed, the possible aggregate gains amount to €1.1 billion and €717 million, respectively.

3 The economic and fiscal impact of tax-free shopping

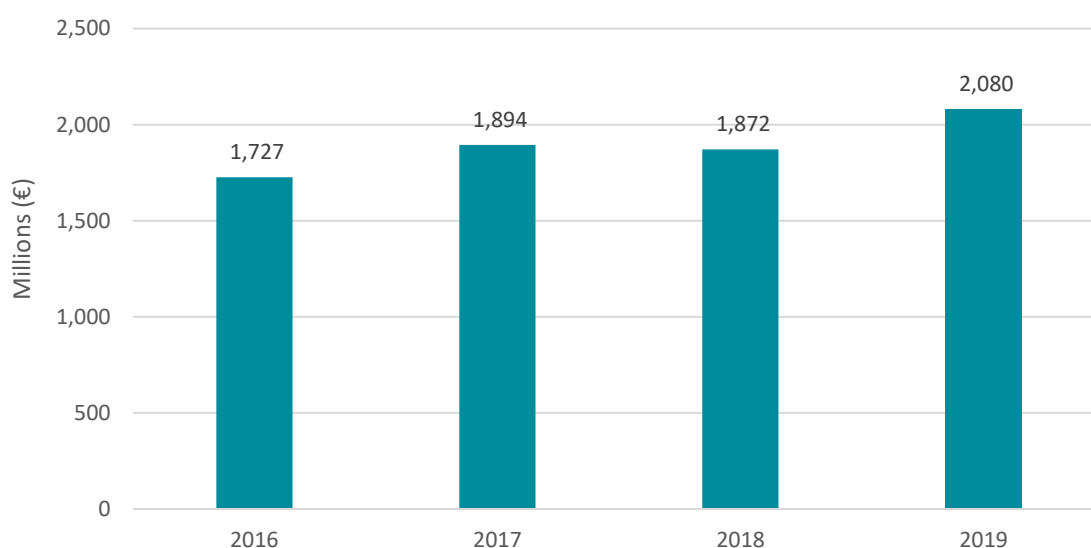
3.1 The marginal GDP impact of tax-free shopping

The preceding analysis covers the direct boost to spending as a result of tax-free shopping schemes in Greece. There are wider economic effects to consider, however, with the tourism sector being dependent on a supply chain covering transport, storage, and other sectors. Tourism makes a considerable contribution to the Greek economy, making up around 20.1% of activity and 25.3% of employment.¹⁰ In order to approximate the potential economic contribution of tax-free shopping to the Greek economy, we calculate the ‘tourist spending multiplier’ by dividing the total contribution of tourism to GDP by total visitor spending.¹¹

We can apply the tourist spending multiplier to our estimate of the spending increase under a tax-free shopping scheme. This gives the marginal GDP impact of tax-free shopping.

As outlined in Section 2.7, this increase in spending was found to reach €1.4 billion in 2019, consisting of the spending from additional visitors (€643 million) and the higher consumption per head induced by the tax-free shopping scheme (€791 million). Taking the product of this figure and the tourist spending multiplier, we find that a fully utilised tax-free shopping system could have a marginal GDP impact of €2.1 billion, equivalent to 1.1% of GDP. Meanwhile, the GDP impacts associated with 75% and 50% refund claim rates stand at €1.5 billion and €1.0 billion, respectively, being equivalent to 0.9% and 0.6% of GDP, respectively. These figures represent the potential additional output generated from the extra spending induced by tax-free shopping.

Figure 5 – Marginal GDP impact of tax-free shopping if all refunds processed, € millions



Source: Cebr analysis

10 WTTC Economic Impact Report Greece 2020

11 The total contribution being the aggregate effects of direct and indirect contributions.

3.2 The fiscal impact

The most recent data from Eurostat show that tax revenue generated in Greece was equivalent to 38.7% of GDP in 2018.¹² In other words, for every additional €1,000 in GDP, the tax revenue for the treasury increases on average by €387. Applying this tax-to-GDP ratio to the marginal GDP effects calculated in the previous section suggests that the potential increase to tax revenues from a fully operative tax-free shopping scheme could reach €805 million. In the cases in which 75% and 50% of refunds are processed, the increases to tax revenue could have reached €604 million and €402 million, respectively.

The potential tax gain from the scheme far outweighs the losses associated with VAT refunds on eligible purchases. In the case in which all refunds are received, we find that the lost sales tax amounts to €494 million, giving an overall net gain of approximately €311 million. Equivalently, for each €100 lost in sales tax revenue, the exchequer stands to gain €160 from other taxes. Meanwhile, in the 75% and 50% cases, the net tax gains stand at €233 million and €155 million, respectively. These figures illustrate that the additional activity stimulated by tax-free shopping, and the associated increase to tax revenues from such activity, significantly outweigh the corresponding loss of revenue from sales tax specifically, even in scenarios with lower take-up rates.

¹² OECD

4 Conclusion

This report shows that a move to an open, consumer-focused TFS scheme has potentially large economic benefits for the Greek economy. In particular, we analyse how an expansion of tax-free shopping can play a role in stimulating the Greek tourism and retail sectors, via the channels of attracting more visitors and encouraging further expenditure. The benefits of expanding TFS would disproportionately accrue to merchants currently excluded from the system across the country.

The analysis in this report outlines the potential gains associated with a tax-free shopping scheme. Though such a scheme is currently in operation in Greece, these gains fall far from being fully utilised as a result of the various barriers preventing consumers from claiming sales tax refunds. As such, the figures presented here reflect the possible economic gain associated with a frictionless tax-free shopping system, wherein consumers can claim a refund for an eligible purchase directly from the operator. We have calculated the size of these effects under three illustrative scenarios, with the rate of refund claims for eligible purchases ranging from 50% to 100%.

Under these assumptions, we estimate that spending eligible for tax-free shopping would have reached €2.1 billion in 2019, with €0.2 billion to €0.5 billion of this being refunded to visitors. These figures are dependent on the take-up rate of sales tax refunds.

Expressing the sales tax refund as a reduction in visitors' travel costs shows that the average trip to Greece would be 2.8% to 5.7% cheaper under an open tax-free shopping scheme. Combining this cost reduction with the elasticity of tourist visits with respect to price suggests that between 472,000 and 945,000 additional people would have travelled to Greece on account of tax-free shopping in 2019. In turn, these additional visitors would have spent between €321 million and €643 million.

Visitor expenditure patterns would have also been impacted by the effective cost reduction. The scheme would have stimulated additional spending between €396 million and €791 million in 2019. As such, total additional spending as a result of tax-free shopping would have reached between €717 million and €1.4 billion.

The marginal effect of the scheme takes into account the tourism spending multiplier, expressed as the ratio of the total contribution of tourism to GDP to total visitor spending. Applying this multiplier to the additional spending generated by tax-free shopping gives an estimate for the addition to economic output stemming from the scheme. We find this additional output to amount to between €1.0 billion and €2.1 billion.

Taking into account the tax revenue associated with an increase to GDP, we arrive at the conclusion that tax-free shopping represents a net gain in fiscal terms. This amounts to a potential net increase in tax revenue of between €155 million and €311 million.

