THE ROLE OF TRAVEL-RELATED SERVICES IN THE EVOLUTION OF THE GREEK HICP

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ABSTRACT

This paper investigates the role of travel-related services – specifically package holidays, restaurants and hotels, and passenger transport by air – in the evolution of the Harmonised Index of Consumer Prices (HICP) in Greece. With tourism representing a substantial sector of the Greek economy, understanding how the prices of these services interact with broader inflationary dynamics is of increasing importance, particularly in the context of the euro area's harmonised statistical framework. The study begins with an overview of the HICP and the national Consumer Price Index (CPI), highlighting methodological differences and similarities in how travel-related services are treated within each. It then examines the individual components of travel-related services to assess their contribution to the overall HICP, using official monthly data and decomposition techniques. Subsequently, the paper tracks the historical evolution of these services prices, exploring seasonal patterns, structural shifts and the impact of major economic events, such as the COVID-19 pandemic and the subsequent recovery. To place the Greek experience in a broader context, the analysis incorporates a cross-country comparison, examining how travel-related services inflation has varied across euro area countries and identifying potential sources of heterogeneity. The findings aim to inform both statistical and policy discussions, shedding light on the weight and behaviour of a vital sector within inflation measurement and offering insight into price dynamics that are often volatile yet economically significant. The paper concludes by summarising key findings and proposing ideas for future research.

Keywords: travel-related services; HICP; CPI; Greece; euro area

JEL classification: Z39; E31; E61; F45

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Ο ΡΟΛΟΣ ΤΩΝ ΤΑΞΙΔΙΩΤΙΚΩΝ ΥΠΗΡΕΣΙΩΝ ΣΤΗΝ ΕΞΕΛΙΞΗ ΤΟΥ ΕΛΛΗΝΙΚΟΥ ΕΝΑΡΜΟΝΙΣΜΕΝΟΥ ΔΕΙΚΤΗ ΤΙΜΩΝ ΚΑΤΑΝΑΛΩΤΗ (ΕΝΔΤΚ)

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ΠΕΡΙΛΗΨΗ

Το παρόν άρθρο διερευνά το ρόλο των ταξιδιωτικών υπηρεσιών – και συγκεκριμένα των πακέτων διακοπών, των υπηρεσιών εστίασης και φιλοξενίας και της αεροπορικής μεταφοράς επιβατών – στην εξέλιξη του Εναρμονισμένου Δείκτη Τιμών Καταναλωτή (ΕνΔΤΚ) στην Ελλάδα. Δεδομένου ότι ο τουρισμός αποτελεί σημαντικό τομέα της ελληνικής οικονομίας, η κατανόηση του τρόπου με τον οποίο οι τιμές αυτών των υπηρεσιών αλληλεπιδρούν με την ευρύτερη πληθωριστική δυναμική αποκτά όλο και μεγαλύτερη σημασία, ιδίως στο πλαίσιο του εναρμονισμένου στατιστικού πλαισίου της ζώνης του ευρώ. Η μελέτη ξεκινά με μια επισκόπηση του ΕνΔΤΚ και του εθνικού Δείκτη Τιμών Καταναλωτή (ΔΤΚ), επισημαίνοντας τις μεθοδολογικές διαφορές και ομοιότητες στον τρόπο με τον οποίο αντιμετωπίζονται οι ταξιδιωτικές υπηρεσίες σε κάθε δείκτη. Στη συνέχεια, εξετάζονται οι επιμέρους συνιστώσες των ταξιδιωτικών υπηρεσιών προκειμένου να αξιολογηθεί η συμβολή τους στο συνολικό ΕνΔΤΚ, με τη χρήση επίσημων μηνιαίων δεδομένων και τεχνικών ανάλυσης. Στη συνέχεια, το άρθρο παρακολουθεί τη χρονική εξέλιξη των τιμών αυτών των υπηρεσιών, διερευνώντας εποχικά πρότυπα, διαρθρωτικές μεταβολές και την επίδραση σημαντικών οικονομικών γεγονότων, όπως η πανδημία COVID-19 και η επακόλουθη ανάκαμψη. Για να ενταχθεί η ελληνική εμπειρία σε ευρύτερο πλαίσιο, η ανάλυση περιλαμβάνει διακρατική σύγκριση, εξετάζοντας πώς διαφέρει ο πληθωρισμός των ταξιδιωτικών υπηρεσιών μεταξύ των χωρών της ζώνης του ευρώ και εντοπίζοντας πιθανούς παράγοντες ετερογένειας. Τα ευρήματα αποσκοπούν στο να ρίξουν φως στο βάρος και τη συμπεριφορά ενός ζωτικού τομέα στη μέτρηση του πληθωρισμού και να προσφέρουν πληροφορίες για τη δυναμική των τιμών, η οποία είναι συχνά ευμετάβλητη αλλά και οικονομικά σημαντική. Το άρθρο ολοκληρώνεται συνοψίζοντας τα βασικά ευρήματα και προτείνοντας κατευθύνσεις για μελλοντική έρευνα.

ΜΗ ΤΕΧΝΙΚΗ ΣΥΝΟΨΗ

Η μελέτη εξετάζει το ρόλο που παίζουν οι ταξιδιωτικές υπηρεσίες – όπως τα πακέτα διακοπών, οι υπηρεσίες εστίασης και φιλοξενίας και οι αεροπορικές μεταφορές – στη διαμόρφωση του Εναρμονισμένου Δείκτη Τιμών Καταναλωτή (ΕνΔΤΚ) στην Ελλάδα. Πρόκειται για υπηρεσίες που συνδέονται στενά με την τουριστική δραστηριότητα, έναν από τους σημαντικότερους τομείς της ελληνικής οικονομίας, και γι' αυτό η εξέλιξη των τιμών τους επηρεάζει άμεσα το συνολικό πληθωρισμό. Η μελέτη αναδεικνύει επίσης τις διαφορές μεταξύ του εθνικού Δείκτη Τιμών Καταναλωτή (ΔΤΚ) και του ΕνΔΤΚ, καθώς ο δεύτερος καταγράφει και τη δαπάνη των ξένων επισκεπτών, κάτι που είναι ιδιαίτερα κρίσιμο για μια χώρα με τόσο ισχυρό τουριστικό αποτύπωμα.

Η διερεύνηση του θέματος στηρίζεται σε επίσημα μηνιαία στοιχεία τιμών για την περίοδο 2016-2025 και αξιοποιεί τεχνικές ανάλυσης, προκειμένου να εκτιμηθεί η συμβολή των εξεταζόμενων ταξιδιωτικών υπηρεσιών στο συνολικό πληθωρισμό. Παράλληλα, εξετάζεται η ιστορική τους εξέλιξη ώστε να καταγραφούν εποχικά μοτίβα, διακυμάνσεις που προκαλούν παράγοντες όπως η ενέργεια, αλλά και η επίδραση σημαντικών γεγονότων όπως η πανδημία COVID-19 και η μεταγενέστερη ανάκαμψη. Η μελέτη ενσωματώνει επίσης σύγκριση με άλλες χώρες της ζώνης του ευρώ, εστιάζοντας ιδιαίτερα σε όσες έχουν παρόμοιο τουριστικό προφίλ με την Ελλάδα, όπως η Κύπρος, η Μάλτα, η Πορτογαλία και η Κροατία.

Τα ευρήματα δείχνουν ότι οι εξεταζόμενες ταξιδιωτικές υπηρεσίες έχουν μεγάλη βαρύτητα στον ελληνικό ΕνΔΤΚ, καθώς αντιστοιχούν στο μισό σχεδόν της συνιστώσας των υπηρεσιών, γεγονός που αναδεικνύει τον καθοριστικό ρόλο τους στη διαμόρφωση του πληθωρισμού. Λόγω της εποχικότητας και της έντονης εξάρτησης από τη διεθνή ζήτηση, οι τιμές τους παρουσιάζουν μεγαλύτερη μεταβλητότητα σε σχέση με το γενικό δείκτη. Η συμπεριφορά αυτή έγινε ιδιαίτερα αισθητή στη διάρκεια της πανδημίας, όταν η καθίζηση των ταξιδιών οδήγησε σε απότομη πτώση τιμών και σε προσωρινό αποπληθωρισμό. Από την άρση των περιορισμών (περίπου στα τέλη 2021 - αρχές 2022) και μετά, οι ταξιδιωτικές υπηρεσίες κατέγραψαν έντονη άνοδο τιμών, κυρίως λόγω της εκρηκτικής αύξησης της ζήτησης και της ανατίμησης των καυσίμων και άλλων λειτουργικών εξόδων. Οι τιμές σε εστιατόρια και ξενοδοχεία παρέμειναν υψηλές, ενώ τα αεροπορικά εισιτήρια εμφάνισαν μεγάλη μεταβλητότητα, συχνά με έντονες αυξήσεις τους καλοκαιρινούς μήνες.

Σε ευρωπαϊκό επίπεδο, η Ελλάδα αποτελεί την τρίτη κατά σειρά χώρα όσον αφορά τη βαρύτητα των ταξιδιωτικών υπηρεσιών στον ΕνΔΤΚ, γεγονός που την καθιστά ιδιαίτερα ευάλωτη στις διεθνείς εξελίξεις που επηρεάζουν τον τουρισμό. Η σύγκριση με άλλες τουριστικές οικονομίες δείχνει ότι η Ελλάδα καταγράφει την υψηλότερη μεταβλητότητα τιμών μετά την Κύπρο, φαινόμενο που συνδέεται με το έντονα εποχικό προφίλ της και τη μεγάλη εξάρτηση από την αερομεταφορά. Τα αποτελέσματα υποδηλώνουν ότι οι πιέσεις στις τιμές των ταξιδιωτικών υπηρεσιών δεν είναι απλώς συγκυριακές, αλλά ίσως έχουν και πιο μόνιμα χαρακτηριστικά, καθώς οι συνθήκες κόστους, η αλλαγή ταξιδιωτικών συνηθειών και η διεθνής ενεργειακή αβεβαιότητα διαμορφώνουν νέες ισορροπίες.

Συνολικά, η μελέτη καταλήγει στο συμπέρασμα ότι οι εξεταζόμενες ταξιδιωτικές υπηρεσίες αποτελούν έναν από τους βασικότερους μηχανισμούς μέσω των οποίων οι διεθνείς και εγχώριες εξελίξεις μεταφέρονται στον ελληνικό πληθωρισμό. Η σημασία τους για την κατανόηση της πορείας του ΕνΔΤΚ είναι καθοριστική, τόσο λόγω της μεγάλης βαρύτητάς τους όσο και λόγω της έντονης διακύμανσης των τιμών τους. Έτσι, η συνεχής παρακολούθησή τους είναι απαραίτητη για την αξιολόγηση των πληθωριστικών πιέσεων στην ελληνική οικονομία. Η μελέτη προτείνει, τέλος, η μελλοντική έρευνα να εξετάσει το ρόλο παρόμοιων τουριστικών οικονομιών εκτός ευρωζώνης, αλλά και τις αλλαγές που θα φέρει η πράσινη μετάβαση στον τρόπο που διαμορφώνονται οι τιμές στις υπηρεσίες μεταφοράς και φιλοξενίας.

THE ROLE OF TRAVEL-RELATED SERVICES IN THE EVOLUTION OF THE GREEK HICP*

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1 INTRODUCTION

The Greek economy is heavily service-oriented, with the tertiary sector accounting for approximately 78% of total Gross Value Added (GVA) in 2024 (at nominal prices). Among services, tourism holds a particularly significant position (Kasimati and Sideris 2015; Kasimati and Antonopoulos 2025). It contributes to Greece's GDP not only directly but also indirectly, through its linkages with other sectors of production. On the demand side, inbound travel receipts account on average for 7.7% of GDP for the period 2016-2024, a share that has been rising in recent years, apart from the pandemic period, reaching 9.1% in 2024. The sector's direct contribution is higher when including transport receipts and tourism-related investment and amounts to about 12.7% of GDP in 2024 (Ikkos and Koutsos 2025).

On the supply side, Kasimati et al. (2020) identify accommodation and food service activities as the two main components of the tourism sector. Similarly, Nikiforos et al. (2025) highlight the macroeconomic importance of these activities, owing to (i) their substantial share in total employment and (ii) their critical role in improving Greece's current account balance. Hence, the sector's share in total GVA averages 6.4% during the period 2016-2024, rising to 7.3% in 2024 (ELSTAT 2025), while its contribution to total employment is also notable, averaging 13.1%. The overall impact of tourism becomes even more pronounced when adding its induced impact, i.e. its effects on other related sectors. Thus, tourism's overall contribution is estimated at 19.4% of GDP and 20.0% of total employment in 2024 (WTTC 2025).

Table 1 presents the classification of goods and services related to tourism consumption under the corresponding sector of economic activity according to NACE rev. 2 (IOBE 2012). As shown in the Table, accommodation is assigned to Division 55 of NACE, while food and beverage service activities fall under Division 56. In addition to Divisions 55 and 56, we consider passenger transport by air (NACE Division 51) and package holidays as representative of travel-related services. In terms of consumer price measurement, the accommodation and food service activities are captured within the "Restaurants and hotels" category (ECOICOP group 11), passenger air transport is classified under "Transport" (ECOICOP group 07) and package holidays are included in "Recreation and culture" (ECOICOP group 09). These sub-components are defined as travel-related services inflation indices and are critical for understanding inflation dynamics in tourism-intensive economies like Greece.

The purpose of this paper is to examine the role of travel-related services in shaping the evolution of the Greek HICP over the period 2016-2025. Specifically, the analysis examines how the weighting, pricing and seasonal patterns of these services have influenced overall inflation dynamics in Greece and how they compare to other euro area countries. Section 2 reviews the similarities and differences in the treatment of travel-related services between Greece's CPI and the HICP. Section 3 investigates the contribution of travel-related subcomponents to the overall Greek HICP, while Section 4 explores cross-country heterogeneity in travel-related services inflation across euro area member countries. The final section summarises the main findings and proposes ideas for future research.

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Table 1 Classification of goods and services related to tourism consumption under sectors of economic activity based on NACE rev. 2

Goods and services related to tourism consumption	NACE rev. 2 category	2024* (constant prices, EUR millions)	% of total GVA
Accommodation	*Division 55:* Accommodation	13,778	6.9%
Restaurants	*Division 56:* Food and beverage service activities		
Travel agencies	*Division 79:* Travel agency, tour operator reservation service and related activities	1,147	0.6%
Land transport	*Division 49*: Land transport and transport via pipelines	3,719	1.9%
Water transport	*Division 50*: Water transport	4,432	2.2%
Air transport	*Division 51:* Air transport	1,334	0.7%
Car rental	*Division 77:* Rental and leasing activities	1,469	0.7%
Cultural services	*Division 91:* Libraries, archives, museums and other cultural activities	n/a	
Amusement and sports activities	*Division 93:* Sports activities and amusement and recreation activities	429	0.2%
Conventions and trade shows	*Group 82.3:* Organisation of conventions and trade shows	n/a	
Shopping for goods, gifts, souvenirs	*Group 47.2:* Retail sale of food, beverages and tobacco in specialised stores	n/a	
All sectors	*Total Gross Value Added (GVA)*	*199,340*	*100.0%*

Sources: IOBE (2012), Hellenic Statistical Authority and author's own calculations.
Notes: Groups 82.3 and 47.2 are sub-categories of NACE rev. 2 Division 82 "Office administrative, office support and other business support activities" and Division 47 "Retail trade, except of motor vehicles and motorcycles", respectively.
* Provisional data.

2 TRAVEL-RELATED SERVICES IN THE CPI AND THE HICP: DIFFERENCES AND SIMILARITIES

CPI measures changes over time in the prices of goods and services purchased, used or paid for by households. It is the primary indicator of inflation in all member states of the European Union (EU) and serves as a key input for assessing cost of living trends and economic stability. To ensure representativeness, each country constructs a "consumer basket" comprising a set of goods and services that reflect the average consumption pattern of households. This basket includes expenditure categories such as food and beverages, housing, energy, transport, communications, health, education and hospitality (ELSTAT 2012). Many of these items are purchased frequently and thus directly influence households' perceptions of inflation.

To enhance comparability of inflation measures across EU member states, a harmonised index, the HICP, was introduced in 1996 (ELSTAT 2016). The HICP differs from the national CPI mainly in its domestic concept, as it includes all goods and services purchased within a country by both resident and non-resident households. This design enables the HICP to capture price movements relevant to the single monetary policy of the Eurosystem and to facilitate the assessment of price stability and inflation convergence required by the Maastricht criteria for Economic and Monetary Union (EMU) membership. The HICP series is published monthly, currently using 2015=100 as the base year.[1]

As one of the most critical macroeconomic indicators, the HICP informs both monetary and fiscal policy, providing policymakers with a consistent and reliable measure of consumer price changes across the euro area (Gonçalves et al. 2021). Within this framework, the prices

1 As of 2026, the HICP base year will be updated to 2025=100.

Table 2 Weights (‰) of travel-related services in the CPI and the HICP in Greece in 2025 (based on COICOP 5-digit level of aggregation)

		2025	
		CPI	HICP
[CP00]	All-items HICP	1000.00	1000.00
[SERV]	Services (overall index excluding goods)	416.39	487.04
Total weight of travel-related services		***139.21***	***225.78***
[CP0733] Passenger transport by air			
07331	Domestic flights	8.59	7.48
07332	International flights	10.76	10.11
0733	Passenger transport by air *(weight of 07331+07332)*	19.35	17.59
[CP096] Package holidays			
09601	Package domestic holidays	0.85	2.93
09602	Package international holidays	1.25	4.27
096	Package holidays *(weight of 09601+09602)*	2.10	7.20
[CP11] Restaurants and hotels			
11111	Restaurants, cafés and dancing establishments	87.06	118.32
11112	Fast food and take away food services	18.30	24.92
1111	Restaurants, cafés and the like	105.36	143.24
1112	Canteens	6.37	8.42
111	Catering services *(weight of 1111+1112)*	111.73	151.66
11201	Hotels, motels, inns and similar accommodation services	5.90	48.11
11202	Holiday centres, camping sites, youth hostels and similar accommodation services	0.14	1.22
112	Accommodation services *(weight of 11201+11202)*	6.04	49.32
11	Restaurants and hotels *(weight of 111+112)*	117.76	200.98

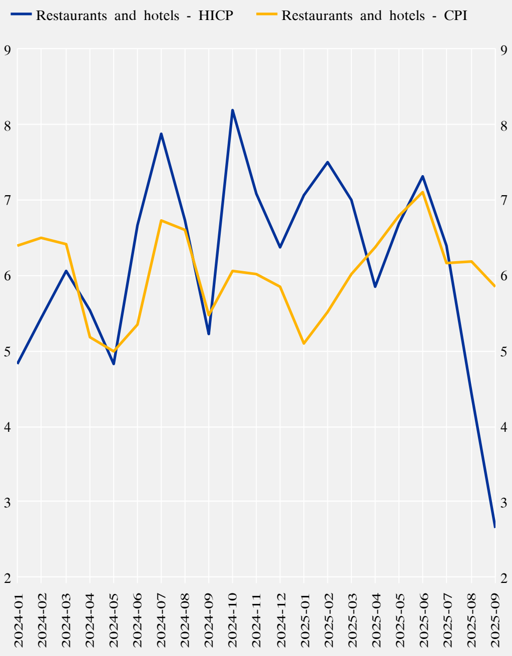
Sources: Eurostat database and author's own calculations.
Note: Accommodation services (sub-category 112) include the items mentioned in subcategories 11201 and 11202, but exclude short-term accommodation rental services provided by short-term rental platforms.

of travel-related services (i.e. package holidays, restaurants and hotels, and passenger air transport) play an increasingly significant role. These components are highly sensitive to both domestic and international demand conditions and often display pronounced seasonality, usually associated with holiday effects including Easter (Eiglsperger et al. 2025). This reflects the dynamics of the tourism sector, which is a major contributor to the Greek economy (ETC 2023).

Although the CPI and the HICP include the same sub-categories of goods and services, they differ in their weighting structure (Kasimati et al. 2021). Table 2 lists the 2025 weights assigned to these sub-components in both the CPI and the HICP. The weights are designed to indicate the importance of services, measured as shares in total household consumption. As can be seen in Table 2, the weights of travel-related services indices and sub-indices reflect divergences between the CPI and the HICP. This is explained by the fact that the weights compiled for the HICP index include the expenditure of private households, the expenditure of foreign visitors and the expenditure of individuals living in various social institutions, while the expenditure of residents abroad is excluded. On the other hand, the CPI tends to cover the expenditure of domestic residents only. In addition, weights for the CPI

Chart 1 Restaurants and hotels in Greece's HICP and CPI

(annual percentage change)



Sources: Eurostat and author's own calculations.

are calculated on the basis of data from the Household Budget Survey, whereas the HICP uses additional household expenditure data from the national accounts (Eidukas 2016). These methodological differences explain the variations observed between the Greek CPI and the HICP in the weighting and inflation patterns of travel-related services.[2]

As shown in Chart 1, discrepancies between the annual rates of change for restaurants and hotels in the CPI and HICP indices reflect the impact of foreign visitor expenditure and seasonal volatility, which are more strongly captured in the HICP due to Greece's pronounced tourism seasonality. While both indices aim to measure consumer price dynamics, their scope, weighting and data sources lead to systematic differences in how travel-related services affect the overall inflation rate. The HICP's broader coverage makes it more suitable for cross-country comparisons and monetary policy, while the CPI remains a more domestically focused indicator, particularly relevant for analysing resident household purchasing power.

3 THE CONTRIBUTION OF TRAVEL-RELATED SERVICES TO SERVICES INFLATION

Among the five main components of the HICP, the services component consistently carries the highest weight (Bank of Greece 2025). Table 3 presents the average annual rates of change in the services component, together with the contributions of travel-related services sub-indices over the period 2020-2025. In terms of their relative weighting in the HICP, the three travel-related sub-indices together account for a weight of 225.78‰, representing slightly less than 50% of the total weight of the services component (487.04‰ in 2025). Specifically, the combined contribution of these sub-indices to services inflation, which stands at 5.0% in 2025 (based on data for the first nine months), amounted to 61% in 2025 and 70% in 2024.

Following the sharp fall in travel-related activities in 2020 and 2021 due to pandemic-related restrictions, these sub-indices rebounded from 2022 onwards, causing a significant upward effect on services inflation. The restaurants and hotels category has been the primary driver of this recovery, reflecting both increasing demand and higher input costs (notably for energy[3]). The passenger transport by air and package holidays sub-indices also show consistently positive contributions, in line with large tourism flows and higher international travel costs. The sustained high contribution of these components in 2024 and 2025 suggests that travel-related services remain a key source of underlying inflationary pressure within the services sector. This indicates that inflation in these categories is not merely a temporary phe-

2 The different base years for the CPI (2020=100) and the HICP (2015=100) do not affect the variations observed in travel-related services between the two indices, since inflation rates are used for comparison.

3 Past record has shown that rising energy prices have consistently contributed to inflationary pressures (Lazaretou and Palaiodimos 2025). In addition, research by Corsello and Neri (2025) reveals that energy prices fuel a group of fast-moving items, such as transport-related services.

Table 3 Inflation of the services component and contributions of selected travel-related services

	Services inflation[1]	Restaurants and hotels	Passenger transport by air	Package holidays
2020	-1.4	-0.46	-0.48	0.01
2021	-1.0	-0.18	0.07	0.00
2022	4.5	3.38	0.46	0.08
2023	4.5	2.96	0.32	0.09
2024	4.4	2.59	0.34	0.17
Jan.-Sep. 2025	5.0	2.50	0.45	0.12

Sources: ELSTAT and author's calculations.
1 This column presents the annual rates of change (%) in prices for the services component, while the next columns display the contributions of travel-related services to the annual change in services inflation. The sum of these contributions per year does not equal the total inflation rate of the services component, as the table includes only three sub-indices out of a large number of services sub-indices that make up the services component.

nomenon, but may be related to structural shifts in post-pandemic consumption patterns or cost structures in the tourism industry.

4 THE EVOLUTION OF TRAVEL-RELATED SERVICES PRICES IN THE HICP OVER THE PERIOD 2016-2025

Between 2016 and 2025, inflation dynamics in Greece displayed distinct cyclical phases in response to successive global and domestic shocks. The examined travel-related sub-indices showed a clearly different behaviour from the HICP index, reflecting their exposure to tourism demand, energy costs and transport constraints (see Chart 2).

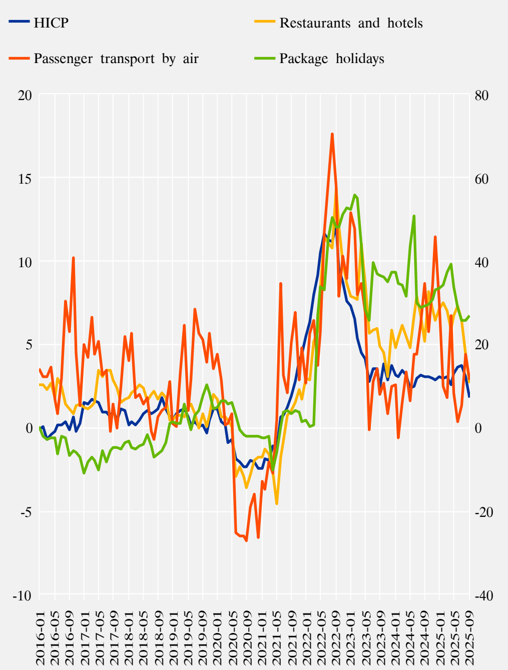
During the pre-pandemic period (2016-2019), Greece experienced a phase of subdued and stable inflation, with the overall HICP inflation averaging close to 0.7%. Inflation in restaurants and hotels was persistently higher, fluctuating around 2%-3%, in line with the gradual recovery of domestic demand and the steady expansion of the tourism sector following the sovereign debt crisis. In contrast, passenger air transport exhibited substantial volatility, with seasonal peaks frequently surpassing 20%-30%, largely driven by fuel-price movements and strong tourist arrivals. Prices for package holidays remained either negative or close to zero throughout this period, suggesting probably limited pricing power among tour operators amid strong competition and price discounting.

The start of the COVID-19 pandemic in 2020 suddenly reversed these trends. As containment measures and international travel bans took effect, both headline and sectoral inflation turned negative. The overall HICP fell to around -2% in late 2020, while prices in restaurants and hotels declined by roughly -3% as demand collapsed and temporary tax reductions were introduced. The impact on passenger air transport was extraordinary, with prices dropping by more than 25% at the height of the crisis. Inflation for package holidays also turned slightly negative. This deflationary episode reflected a sharp contraction in demand for travel-related services, together with significant excess capacity and deep uncertainty in the tourism industry.

A strong rebound followed in 2022 and 2023, when global reopening and supply-chain disruptions triggered an abrupt and persistent rise in inflation rates not seen for decades (Kofina and Petroulakis 2023; Catiforis 2022). The strong inflationary pressures were driven by a series of adverse supply and demand shocks that affected economies across the globe (Papageorgiou and Rizos 2024). Headline

Chart 2 Inflation rates in travel-related services and headline HICP

(annual percentage change)



Sources: Bank of Greece, Eurostat and author's own calculations.

inflation accelerated to above 12% in September 2022, while the impact on travel-related services was stronger. The rise in prices for restaurants and hotels climbed to nearly 14%, as energy and food costs soared (Bragoudakis et al. 2024), and passenger air transport inflation reached an exceptional 70% in August 2022, reflecting elevated jet-fuel prices and increasing air-travel demand. Inflation in package holidays also rose above 12%, driven by capacity constraints and the release of pent-up household savings. This phase illustrated the re-normalisation of tourism activity following the pandemic, combined with cost-push pressures intensified by Russia's invasion of Ukraine in February 2022, the conflict in the Middle East in October 2023 and the subsequent energy-price shock (Bank of Greece 2023, 2024).

From mid-2023 onwards, inflation gradually moderated across all categories, though travel-related services remained above the pre-pandemic levels. The overall HICP inflation eased to around 3% by 2024, while inflation for restaurants and hotels stabilised at a level between 6% and 7%, reflecting persistent wage and food-price pressures in the hospitality sector (Bragoudakis et al. 2024). Passenger air transport continued to display volatility, alternating between temporary deflation in early 2024 and renewed surges above 30% during the summer months, in line with global energy fluctuations and limited airline capacity. Inflation for package holidays followed a similar but milder path, settling around 7%-9% as tourism demand normalised and supply conditions improved.

Overall, it seems that the travel-related services inflation in Greece has been more volatile and persistent than HICP inflation. The pattern underscores the strong cyclical sensitivity of tourism-dependent sectors to global economic shocks. By September 2025, headline inflation had largely normalised, yet prices in hospitality and air transport remained comparatively elevated, pointing to structural rigidity and sustained demand in Greece's tourism-driven economy.

5 CROSS-COUNTRY HETEROGENEITY: TRAVEL-RELATED SERVICES INFLATION ACROSS EURO AREA COUNTRIES

The examination of travel-related services weights in euro area inflation demonstrates substantial cross-country heterogeneity (see Table 4). This heterogeneity reflects differences in the share of household consumption devoted to travel-related services across the twenty euro area countries. These differences are driven by a combination of factors, including geography, income levels, tourism intensity and cultural consumption patterns. Understanding these variations is essential for interpreting travel-related services inflation and for designing policy responses that account for country-specific consumption structures.

Table 4 Weights (‰) of the HICP travel-related services sub-indices in the euro area countries (2025)

		Euro area	Belgium	Germany	Estonia	Ireland	Greece	Spain	France	Croatia	Italy	Cyprus	Latvia	Lithuania	Luxembourg	Malta	Netherlands	Austria	Portugal	Slovenia	Slovakia	Finland
[CP00]	All-items HICP	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00
[SERV]	Services (overall index excluding goods)	456.49	443.07	461.58	348.49	527.46	487.04	478.24	495.24	324.64	408.8	450.09	277.11	283.39	383.9	450.61	446.77	480.42	448.15	355.93	303.58	444.62
Total weight of travel-related services		***135.72***	***102.93***	***103.77***	***126.32***	***249.43***	***225.78***	***186.19***	***126.93***	***134.11***	***139.72***	***249.07***	***66.79***	***84.89***	***120.4***	***182.86***	***129.19***	***186.48***	***170.08***	***125.23***	***97.27***	***106.92***
[CP0733] Passenger transport by air																						
07331	Domestic flights	1.58	0	0.43	0	0	7.48	1.87	4.03	0.14	1.75	0	0	0	0	0	0	0	0.68	0	0	0.32
07332	International flights	7.75	3.54	7.13	10.51	12.92	10.11	4.07	10.38	3.85	6.79	21.17	11.13	5.5	5.4	13.26	12.36	10.73	6.99	1.14	1.1	8.26
0733	Passenger transport by air *(weight of 07331+07332)*	9.33	3.54	7.56	10.51	12.92	17.59	5.95	14.41	3.99	8.54	21.17	11.13	5.5	5.4	13.26	12.36	10.73	7.67	1.14	1.1	8.58
[CP096] Package holidays																						
09601	Package domestic holidays	2.03	0.44	1.23	0	0	2.93	8.91	0	1.77	2.55	2.61	0	0	0	0	0	0	1.8	9.92	3.63	0
09602	Package international holidays	11.28	10.21	21.11	14.32	20.3	4.27	10.7	4.75	6.21	2.01	28.2	3.57	14.16	18.9	10.8	13.81	17.2	2.86	10.07	7.49	11.14
096	Package holidays *(weight of 09601+09602)*	13.31	10.65	22.34	14.32	20.3	7.2	19.61	4.75	7.98	4.56	30.81	3.57	14.16	18.9	10.8	13.81	17.2	4.66	19.99	11.12	11.14
[CP11] Restaurants and hotels																						
11111	Restaurants, cafés and dancing establishments	64.32	69.96	27.9	49.71	172.73	118.32	102.51	74.84	62.29	68.32	129.3	23.53	32.84	63.1	72.78	43.08	80.87	93.61	71.08	42.1	53.31
11112	Fast food and take away food services	19.01	10.26	22.45	23.85	18.37	24.92	34.07	0.88	12.93	23.6	36.11	6	7.19	7.8	11.84	31.86	21.33	6.51	3.6	12.15	18.09
1111	Restaurants, cafés and the like	83.33	80.23	50.35	73.56	191.1	143.24	136.58	75.71	75.22	91.92	165.42	29.52	40.03	70.9	84.62	74.94	102.2	100.12	74.67	54.25	71.41
1112	Canteens	6.24	1.45	6.1	11.25	7.52	8.42	4.62	10.15	5.99	2.94	3.19	8.61	13.43	6.1	1.03	2.16	8.22	9.65	4.72	23.23	7.3
111	Catering services *(weight of 1111+1112)*	89.57	81.68	56.45	84.81	198.62	151.66	141.2	85.87	81.21	94.86	168.6	38.13	53.46	77	85.65	77.1	110.43	109.77	79.4	77.47	78.71
11201	Hotels, motels, inns and similar accommodation services	16.03	3.98	12.29	14.72	16	48.11	11.16	9.97	8.77	26.06	28.48	13.05	8.24	15.4	73.15	11.47	40.35	39.49	18.03	6.3	6.75
11202	Holiday centres, camping sites, youth hostels and similar accommodation services	5.4	2.6	4.39	0	0.05	1.22	1.46	10.44	28.53	3.37	0	0	1.23	2	0	14.44	4.96	1.24	2.06	1.13	1.73
112	Accommodation services *(weight of 11201+11202)*	23.51	7.07	17.42	16.67	17.6	49.32	19.43	21.9	40.93	31.76	28.48	13.96	11.77	19.1	73.15	25.92	48.12	47.98	24.7	7.57	8.49
11	Restaurants and hotels *(weight of 111+112)*	113.08	88.74	73.87	101.49	216.21	200.98	160.63	107.77	122.14	126.62	197.09	52.09	65.23	96.1	158.8	103.02	158.55	157.75	104.1	85.05	87.2

Sources: Eurostat database and author's own calculations.

The HICP sub-component "passenger transport by air" exhibits notable variation, with an overall euro area aggregate weight of 9.33. Country-specific weights range from a low of 1.10 in Slovakia to a high of 21.17 in Cyprus, underscoring substantial differences in household spending on air travel. The highest weights are observed in Cyprus, Greece, France, Malta, Ireland and the Netherlands, reflecting a greater reliance on air transport for domestic and international travel, particularly in island nations and geographically peripheral countries. Conversely, Slovakia, Slovenia, Belgium and Croatia record the lowest weights, suggesting a smaller role for air travel in household consumption, possibly due to greater dependence on land transport or lower frequencies of international travel. These patterns highlight the influence of geographic location, infrastructure and travel habits on the relative importance of air transport in household expenditure.

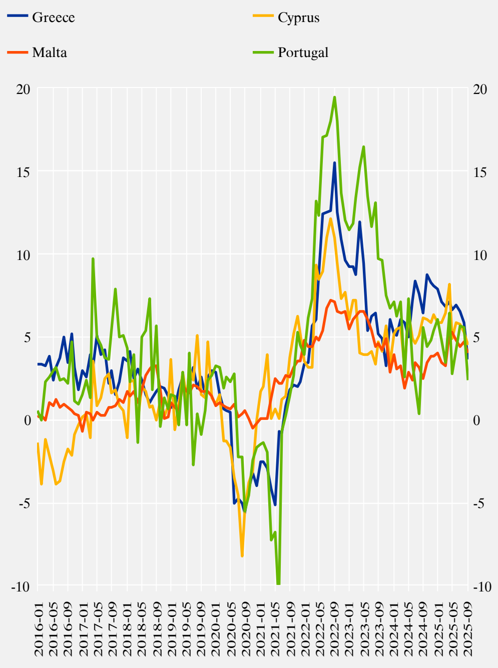
Similarly, the weight of "package holidays" varies considerably across countries, with an average of approximately 13.9, close to the euro area aggregate of 13.31. Country-specific weights range from 3.57 in Latvia to 30.81 in Cyprus. The highest weights are observed in Cyprus, Germany, Ireland, Slovenia, Spain and Luxembourg, reflecting a larger share of household spending on organised holiday packages, which may be associated with higher income levels or stronger preferences for pre-arranged travel. In contrast, Latvia, Italy, Portugal, France and Greece report the lowest weights, indicating that package holidays represent a smaller component of household consumption in these economies. Overall, these differences illustrate the diversity of travel consumption patterns within the euro area.

The "restaurants and hotels" sub-component shows the greatest degree of variation, with an overall euro area aggregate weight of 113.08. Country weights range from 52.09 in Latvia to 216.21 in Ireland, highlighting large cross-country differences in household spending on hospitality services. The highest weights are recorded in Ireland, Greece, Cyprus, Italy, Spain and Malta, suggesting that restaurants and hotels constitute a significant portion of household budgets in countries with strong tourism sectors or high domestic demand for hospitality services. Conversely, Latvia, Lithuania, Germany, Slovakia and Finland exhibit the lowest weights, indicating a comparatively smaller role for restaurants and hotels in household consumption. Across all euro area countries, the sub-index for catering services consistently exceeds that of accommodation services, reflecting higher household spending on meals and dining relative to lodging. These findings highlight the importance of tourism intensity, income levels and cultural habits in shaping household expenditure patterns within the hospitality sector.

In this section, we also examine the evolution of prices and inflation for travel-related services in Greece and a group of comparable EU

Chart 3 Inflation rates of the Travel Services Price index in selected EU countries

(annual percentage change)



Sources: Bank of Greece, Eurostat and author's own calculations.

economies. The selection of comparable countries – Cyprus, Malta, Portugal and Croatia – is based on their status as tourist destinations competing with Greece. For each country, we construct a composite inflation index, referred to as the Travel Services Price index, using a weighted average of three sub-indices (restaurants and hotels, passenger air transport and package holidays), all adjusted to a common base year (2015=100). The analysis covers the period 2016-2025 (latest data available as of September 2025), capturing the effects of recent economic shocks, namely the COVID-19 pandemic (2020-2021) and the subsequent inflationary crisis (from 2022 onwards).

Chart 3 presents the year-on-year inflation rates based on the Travel Services Price index for the selected countries. The COVID-19 pandemic led to a sharp GDP decline as governments implemented restrictive measures to contain the spread of the virus. Following the severe decline in economic activity and the consequent uncertainty, commodity prices and inflation rates both fell (Le et al. 2021). Inflation in the travel-related services sector followed a similar trajectory, albeit to varying degrees across countries. In Cyprus, the fall in travel-related services inflation was the most pronounced among the selected economies, averaging -5.1% between June and October 2020, followed by Greece and Portugal. This comparatively milder decline in Greece compared to Cyprus may reflect the extent of stringent containment measures during key phases of 2020[4].

As the global economy recovered, aggregate demand rebounded more strongly than supply, generating inflationary pressures (Bernanke and Blanchard 2023), which were further amplified by Russia's invasion of Ukraine in February 2022. The geopolitical shock led to a sharp increase in commodity prices and intensified overall inflation (Caldara et al. 2022). Regarding the travel-related services sector, inflation rose to unprecedented levels, with Portugal and Croatia recording the largest increases among the countries examined, while Malta experienced comparatively lower inflation rates. In sum, the Travel Services Price index appears to intuitively capture price developments in the tourism industry, providing a useful summary metric.

6 CONCLUSIONS

This paper examines the role of travel-related services inflation, namely restaurants and hotels, passenger air transport and package holidays, in shaping the evolution of the Greek HICP during the period 2016-2025. The findings demonstrate that these services constitute an important and dynamic part of consumer expenditure in Greece, having a significant impact on the country's inflation profile through both their weight in the index and their price volatility.

The analysis reveals that the combined weight of travel-related services accounts for almost half of the total services component of the HICP, highlighting their critical role in the measurement of consumer prices. This weight reflects not only the domestic relevance of tourism-related consumption, but also Greece's exposure to foreign visitor expenditure, which the HICP captures more comprehensively than the national CPI. As such, the Greek HICP seems to incorporate the cyclical fluctuations and external shocks transmitted to the tourism sector, linking domestic inflation dynamics with global travel demand and energy markets.

From a business cycle perspective, travel-related services have exhibited strong cyclical sensitivity as well as structural persistence over a medium-term horizon. Their prices declined sharply during the COVID-19 pandemic, contributing to a temporary deflationary episode, but rebounded strongly during the post-pan-

4 The containment measures, including mobility limitations, business closures and social-distancing mandates, are documented by the Oxford COVID-19 Government Response Tracker (OxCGRT) that collected information on policy measures to tackle COVID-19 over the years 2020, 2021 and 2022.

demic recovery, driven by pent-up demand, rising supply-chain costs and energy prices. In particular, inflation for restaurants and hotels has remained persistently elevated since 2022, reflecting continued cost pressures and a robust tourism rebound, while passenger air transport and package holidays continue to display noticeable seasonal and fuel-related price volatility. These developments suggest that inflationary pressures within the tourism sector are not purely temporary but partly structural, linked to changes in consumer behaviour[5], supply conditions and global energy trends.

The cross-country comparison highlights that Greece, together with other tourism-intensive economies such as Cyprus, Malta and Portugal, exhibits higher weights and greater volatility in travel-related services inflation than the euro area average. This heterogeneity reflects differing consumption patterns and tourism dependencies.

Overall, the results emphasise that travel-related services represent a vital and characteristic channel through which external and domestic shocks raise consumer price inflation. Their weight, volatility and sustained price momentum make them a key sector for understanding inflation persistence in Greece's services economy. Continuous monitoring of these components is therefore essential for understanding the behaviour of a vital sector within inflation measurement, assessing the transmission of global shocks and informing national policy responses to inflationary developments.

Future research could build on these findings in two ways. First, a comparative study could extend the analysis to non-euro area mediterranean economies, allowing for a better understanding of how exchange rate regimes affect inflation in tourism services. Second, as climate change and sustainability increasingly influence travel behaviour and energy use, future work could investigate the long-term structural implications of the green transition for price dynamics in transport, accommodation and related services.

5 Karakitsios et al. (2024) consider consumer behaviour as an additional factor that may determine international price differences.

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