

## ECONOMIC POLICY RESPONSES TO COVID-19 AND EXPENDITURES ON DOMESTIC TRAVEL: INTERNATIONAL EVIDENCE

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In response to the unprecedented circumstances resulting from the COVID-19 pandemic, various national government policies were implemented to reduce the serious economic damage caused by the pandemic and attempts to control it. These policies generally aimed to kick-start domestic-led recoveries in many sectors. This study examines how different types of fiscal measures adopted by governments in response to this pandemic are associated with the growth of expenditure on domestic travel in 2020. Utilizing data from 76 countries and applying OLS estimator and 2SLS regression (which mitigates the potential endogeneity problem), the study shows that governments' additional spending and tax reductions (especially in non-health sectors) positively contributed to rising expenditure in domestic travel destinations. Similar results are found for countries that are very reliant on tourism. Our findings lend empirical support for Keynesian theory's prediction concerning the effect of government spending and tax reduction on household consumption behavior in the short run, particularly during periods of economic stress and uncertainty.

**Key words: Consumption expenditure; COVID-19 pandemic; Domestic travel; Economic policies; Keynesian theory; Tourism**

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### Introduction

The COVID-19 pandemic resulted in a damaging health crisis and worldwide economic slowdown that led to rapid and widespread shutdowns of

businesses and people's mobility (OECD, 2020a). Due to the implementation of nonpharmaceutical interventions, such as quarantine and border closure, travel and tourism became one of the most severely impacted industries during the pandemic

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(Farzanegan et al., 2021; Nunkoo et al., 2022; Provenzano & Volo, 2022; United Nations World Tourism Organization [UNWTO], 2021a). The number of international tourist arrivals declined by 74% in 2020 compared to that in 2019, with this number reaching as much as 80%–90% decline in many developing countries (UNWTO, 2021b). United Nations Conference on Trade and Development [UNCTAD] (2021) predicted that the crash in international tourism could cause a loss of more than US\$4 trillion in global gross domestic product (GDP) in the years 2020 and 2021 combined.

In response to these uncertainties, governments have taken numerous measures to limit the human, social, and economic damage wrought by the pandemic (International Monetary Fund [IMF], 2021). One of the policies that many governments have implemented to stimulate their economy is to revive domestic tourism, so that travel and tourism can recover as much as possible (Organisation for Economic Co-operation and Development [OECD], 2020b). Hence, domestic tourism's promotion and the creation of "travel bubbles" within countries that allow travel to resume between certain locations have been considered by many nations as viable short-term strategies (OECD, 2020b; Provenzano & Volo, 2022). Although much attention is focused on enabling international tourism and investing in domestic tourism for a faster recovery of the sector (Farzanegan et al., 2021), domestic contributions to travel and tourism were already highly significant in many economies (World Travel and Tourism Council [WTTC], 2018). For instance, while there are substantial variations between countries, domestic tourism accounted for an average of about 75% of tourism expenditure in OECD countries prior to the pandemic (OECD, 2020c). Consequently, this not only highlights the importance of domestic tourism as a critical means of increasing travel demand, but also, due to the spatial and temporal displacement of tourists caused by pandemic-related changes in consumer decision-making, this crisis has created huge potential for tourist dispersion beyond traditional destinations and attractions (Ballantine, 2020; Hall et al., 2021).

This study examines the relationship between government economic responses to the COVID-19 pandemic and domestic travel in 2020 across 76 advanced, emerging, and low-income developing

economies. More specifically, the research investigates the association between different types of fiscal measures employed by governments to mitigate the COVID-19 pandemic and the growth of spending on domestic travel. These measures are obtained from a recently developed IMF database (IMF, 2020, 2021). The measures include various types of fiscal tools including additional spending, tax cuts, loans, equity injections, and guarantees. The IMF (2020) divides them into different categories based on their budgetary and debt-related implications for public finances in the near future and beyond. According to the IMF (2020), additional government spending and forgone revenues globally amounted to \$3.3 trillion or 4.1% of GDP in April 2020; by June 2021 this had expanded to \$10.4 trillion or 9.7% of global GDP in June 2021 (IMF, 2021). Liquidity support measures (such as equity, loans, and guarantees) also rose from a total of \$4.5 trillion (5.6% of GDP) to \$6.1 trillion (6.2% of GDP) over this period. The database reveals that countries vary greatly in the extent and choice of fiscal stimuli due to a range of factors such as their target groups and financing constraints. For instance, while the US has provided a sizable fiscal support strategy through revenue and spending measures of 25.4% of GDP and 2.2% of guarantees as of June 2021, Italy offers 10.9% of GDP in additional spending and forgone revenues, but 6.2% in below-the-line programs and 35.1% in guarantees (IMF, 2021). Consequently, the economic impact of these measures and different sectors' pace of recovery varies from country to country.

Despite the popularity of countercyclical fiscal policies to reduce the risk of protracted recessions, there is no consensus in the literature on the effectiveness of these policies (Barro, 1974). The possible impacts of these policies on consumer and business confidence as well as aggregate demand have been investigated by several studies and their findings vary (e.g., Blanchard & Perotti, 2002; Galí et al., 2007; Giavazzi & Pagano, 1990; Konstantinou & Tagkalakis, 2011; Matsusaka & Sbordone, 1995). The reason behind these mixed results is that different types of fiscal instruments can impact the economy through different channels (Coenen et al., 2012).

The basic form of most stimulus measures follows the standard Keynesian theory of countercyclical

policies. A widely accepted view based on Keynes's (1936) theory is that fiscal stimuli can boost consumer confidence through reducing the risk of increasing precautionary savings, hence leading to higher consumer spending. This, in turn, sustains domestic economic activities and lifts the economy out of recession. Konstantinou and Tagkalakis (2011) tested this theory for nine OECD countries and found that consumer confidence had a positive relationship with tax cuts. However, there are studies and theories that have challenged Keynes's view on fiscal policies. These arguments are mainly grounded in microeconomic thought of rational expectations against the ad hoc nature of Keynes's theory. One of the leading theories of this nature is the Ricardian Equivalence theorem (Ricardo, 1951) which was elaborated upon by Barro (1974). Barro argued that higher government spending and lower taxes will motivate the rational and forward-looking consumer to save as they will expect that taxes to be levied will be increased in the future in order to balance the government's budget. Therefore, this generated negative effect on private consumption can offset the macroeconomic effects of increased government spending and make the Keynesian fiscal policy ineffective in boosting economic activities. Other studies, such as that by Auerbach and Gorodnichenko (2012), showed that the effectiveness of fiscal stimuli can considerably vary over the business cycle, being more positive in recessions and less positive or even negative during economic booms. Konstantinou and Tagkalakis (2011) argued that this counterintuitive outcome can be explained by the standard Keynesian crowding out effect (see also Alesina & Ardagna, 2010; Blanchard & Perotti, 2002; Giavazzi & Pagano, 1990; Kwaak & Wijnbergen, 2017).

Considering these views on the effectiveness of fiscal policies on consumers' behavior and economic activities, the present article examines associations between various types of pandemic-related fiscal policies, provided by the IMF (2021), and domestic travel expenditures (as a proportion of households' consumption). This study contributes to the growing COVID-19 literature in three ways. First, while the relationship between government economic response to the pandemic and aggregate consumption has largely been explored recently (e.g., Baker et al., 2020; Kubota et al.,

2021), the link between economic responses to COVID-19 and growth of spending on domestic travel within countries has received little attention in tourism research. Assaf et al. (2021) suggest that "domestic tourism as a conscious choice to reduce the negative impacts of tourism (both environmentally and in the context of a pandemic) or as a consequence of a financial crisis" (p. 3) is one of the most important questions to be considered during and after the COVID-19 pandemic. Second, although recent studies such as Chen et al. (2020), Yeon et al. (2021), and Kaczmarek et al. (2021) investigated the links between COVID-19-related government responses and tourism variables (e.g., arrivals, stock returns of travel and leisure companies), to the best of our knowledge, no empirical study has yet examined the link between various fiscal measures in response to this pandemic and domestic travel in 2020. Third, and more generally, this study deepens our understanding of the nexus between this health crisis and tourism activities; it also expands the empirical literature on this important topic which is still in its early stages.

The remainder of this article is structured as follows. The next section presents the methodology and describes the data employed in this study and also specifies the dependent, explanatory, and control variables to be used in the regression models. This is then followed by the empirical results and the conclusions of the article.

### Data and Methodology

This study uses yearly data from 76 advanced, emerging, and low-income developing economies (listed in Table A1 in the Appendix). The sample countries represent approximately 95% of the world's domestic tourism spending in 2019 (World Bank, 2019). This sample covers all economies for which data on domestic travel spending in years 2019 and 2020 (to calculate the growth variable) were obtainable. Given that the sample includes low-income developing nations (e.g., Cambodia), emerging market economies (e.g., Oman), and advanced economies (e.g., Germany), we document a substantial variation in the variables across countries that provides an appropriate context for regression analyses. Due to the lack of data availability for the key variables of interest in this study

(fiscal policies), we were not able to run panel data regressions with monthly or quarterly data across countries. Only annual values of these variables are currently provided by the IMF.

### *Dependent Variable*

The dependent variable employed in this study is the domestic tourism spending data from 2019 to 2020. Data on this variable were obtained from Euromonitor International's (2021) tourism database, which has been commonly used by previous similar studies (e.g., Al-Mulali et al., 2015; Gholipour & Foroughi, 2020). Table A2 in the Appendix provides descriptions, data sources, and descriptive statistics for the employed variables.

### *Variables of Interest*

An IMF database (2020, 2021) for selected economies' fiscal measures in response to the COVID-19 pandemic is employed to obtain the variables of interest in this study. These measures are categorized into three main groups: "above-the-line" measures; "below-the-line" measures; and "contingent liabilities" measures. "Above-the-line" measures refer to increases in government spending and reductions in tax income—directly impacting economic activity via fiscal multipliers. It is divided into two main subcategories: 1) "additional spending and forgone revenues" in both health and non-health sectors (e.g., health services, tax cuts or tariff reductions for strategic health imports, and wage subsidies or direct transfers), and 2) "accelerated spending and deferred revenue" in areas other than health (e.g., bringing forward public infrastructure spending and postponed social security contributions and tax payments). "Below-the-line" and "contingent liabilities" are generally seen as "liquidity support" measures. The former largely involve the creation of assets in firms—for instance, loans or equity injections to strategic companies. The latter measures are outside budget revenues and expenditures providing support through either "guarantees" or "quasi-fiscal operations" (e.g., microfinancing special loans and guarantees granted to banks, SMEs, and households). Percentages of GDP for all fiscal variables are used in this study.

### *Control Variables*

Apart from the above-mentioned fiscal measures, we control for three key determinants of domestic travel expenditures over 2019–2020: restrictions on internal movement score, household income [measured by GDP per capita, purchasing power parity (PPP)], and travel and tourism infrastructure and resources (measured by the Travel & Tourism Competitiveness Index). The Travel & Tourism Competitiveness Index is included in the model to capture the set of factors and policies that enable the sustainable development of the Travel & Tourism (T&T) sector, which in turn, contributes to the development and economic competitiveness of a country (World Economic Forum [WEF], 2019).

We include restrictions on internal movement score in the model because the vast majority of governments throughout the world imposed restrictions on the movement of their citizens (e.g., Nunkoo et al., 2022) during the timeframe of our study. In order to explain the spending on domestic tourism, it is crucial to account for this significant restraining factor. Based on the demand theory, GDP per capita (PPP), which reflects both household income and relative prices of goods and services, is added as an explanatory variable (e.g., Divisekera, 2009). More specifically, the PPP method in our cross-sectional data permits us to compare income in real terms by eliminating price level differences between economies (World Bank, 2022). As the model utilizes GDP per capita (PPP), inflation rate is not included as an explanatory variable. Finally, several studies demonstrate that the quality of travel infrastructure and resources, such as ports, railroads, roads, and hotel rooms, has a substantial impact on tourists' expenditures (e.g., Gholipour et al., 2023; Massidda et al., 2022).

### *Model*

The empirical model in this study is specified as follows:

$$\text{Domestic\_Travel}_i = \beta_0 + \beta_1 \text{Econ\_Policy}_i + \beta_2 X_i + u_i \quad (1)$$

where *Domestic\_Travel* stands for the growth of spending on domestic tourism between 2019 and

2020; *Econ-Policy* represents one of the economic policy responses (fiscal measures) to the COVID-19 pandemic; vector  $X$  includes the control variables (restrictions on internal movement, household income, and tourism competitiveness);  $u$  stands for the error term;  $i = 1, \dots, N$  denotes the country; and  $\beta$ s are the estimated parameters.

## Results

The ordinary least squares (OLS) method is employed to obtain the estimations. Table 1 presents regression results for the growth of expenditures on domestic travel as a dependent variable. Columns 1 to 5 of the table provide estimated results for “above-the-line” fiscal measures with subcomponents listed as explanatory variables. Columns 6 to 10 include estimations for “liquidity support” subcomponents. Column 11 includes the two main measures of “above-the-line” and “liquidity support.” Finally, column 12 incorporates all subcomponents of both “above-the-line” and “liquidity support” measures. The control variables are included in all models.

OLS regression models with bootstrapped standard errors are also applied for the full and subsamples. This is done in order to minimize the potential problem of employing a small sample in this research. The obtained estimated coefficients (not reported) are found to be very similar to and consistent with those of the provided OLS regression analyses, both in terms of direction and magnitude.

The results presented in Table 1 show that both “total\_spending\_and\_forgone\_revenue” and its subcomponent of “spending\_on\_non-health\_sector” have positive associations with the 2019–2020 growth of expenditures on domestic travel. The estimated coefficients of these variables are also found to be statistically significant (at least at the 5% level) across different models. These results, to a large extent, confirm the prediction of Keynesian theory that government spending and tax reduction can boost households’ confidence and consequently their consumption expenditures in the short term. It is also in line with findings of previous studies that show fiscal policies can be effective during economic recessions (e.g., Auerbach & Gorodnichenko, 2012) and the widely accepted

view in the literature that such stimuli can lead to a positive outcome for consumer confidence and hence reduce the risk of increasing precautionary saving. This scenario can consequently result in higher levels of spending and contribute to sustained domestic demand and boosted short-term economic growth (Konstantinou & Tagkalakis, 2011; Matsusaka & Sbordone, 1995).

The relationships between spending on domestic travel and both “spending\_on\_health\_sector” and “accelerated\_spending\_and\_deferred\_revenue” are, however, found to be insignificant (see columns 2, 4, and 5 of Table 1). Similarly, no significant relationships were obtained between “liquidity support” measures and the dependent variable. The insignificant coefficients for these measures, can be due to the fact that the key goal of many of these policies is not only mitigating the devastating economic effects of the pandemic, but also preventing a deeper health crisis from generating long-lasting demand weaknesses and compromising people’s well-being (IMF, 2020). Hence, the main objective of many of these measures has been to save lives and treat those who are infected. Fiscal measures such as guarantees and liquidity support that involve the creation of assets, like loans or equity in firms, limiting layoffs and bankruptcies in affected firms and sectors, will reveal their influence on the demand and consumption over a longer period of time.

The above analyses are also repeated for economies that rely heavily on tourism and subsequently can be, firstly, more vulnerable, and secondly, at risk to the economic and tourism downturn caused by the COVID-19 pandemic. To achieve this aim, the sample countries were limited to those that derived at least 10% of their GDP from the travel and tourism sector in 2019 (World Bank, 2021b). Of these economies, 37 fell into this category ranging from 10.11% (Tanzania) to 31.4% (Cambodia) of their GDP directly contributed by the travel and tourism industry. Table 2 presents the regression results for this subsample. Overall, the findings are comparable to those presented in Table 1, with “total\_spending\_and\_forgone\_revenue” and “spending\_on\_non-health\_sector” maintaining their positive and statistically significant coefficients. These findings for both full sample and tourist-reliant economies are in line with the recent

Table 1  
Regression Results: Full Sample of Economies

Explanatory and Control Variables	Dependent Variable: Growth of Expenditures on Domestic Travel 2019–2020											
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Total_spending_and_forgone_revenue	0.046*** (0.017)										0.047*** (0.017)	
Spending_on_health_sector		0.060 (0.072)			0.010 (0.072)							0.029 (0.074)
Spending_on_non-health_sector			0.051*** (0.018)		0.049*** (0.019)							0.041*** (0.020)
Accelerated_spending_and_deferred_revenue				-0.033 (0.041)	-0.014 (0.040)							-0.055 (0.051)
Liquidity_support						-0.014 (0.013)					-0.015 (0.013)	
Loans_and_equity_injections							0.049 (0.047)			0.044 (0.047)		0.074 (0.059)
Guarantees								-0.015 (0.014)		-0.017 (0.015)		-0.017 (0.015)
Quasi_operations									-0.018 (0.025)	-0.021 (0.026)		-0.023 (0.025)
Movement_restriction	-0.374** (0.161)	-0.353** (0.168)	-0.373** (0.160)	-0.342** (0.169)	-0.366** (0.163)	-0.356** (0.167)	-0.370** (0.168)	-0.357** (0.167)	-0.360** (0.168)	-0.374** (0.168)	-0.374** (0.160)	-0.372** (0.163)
TT_Competitiveness	-0.138 (0.183)	0.088 (0.168)	-0.116 (0.178)	0.135 (0.163)	-0.109 (0.184)	0.224 (0.187)	0.127 (0.162)	0.208 (0.180)	0.155 (0.168)	0.256 (0.190)	-0.035 (0.203)	0.062 (0.208)
Log_GDP_per_capita	0.179 (0.252)	0.101 (0.115)	0.077 (0.109)	0.307 (0.264)	0.186 (0.263)	0.265 (0.261)	0.216 (0.267)	0.266 (0.261)	0.252 (0.264)	0.179 (0.270)	0.165 (0.252)	0.086 (0.267)
R <sup>2</sup>	0.18	0.11	0.19	0.11	0.19	0.11	0.11	0.11	0.11	0.13	0.20	0.23
Number of obs.	76	76	76	76	76	76	76	76	76	76	76	76

Note: Standard errors are shown in parentheses. Constant included but not reported. There is no issue of multicollinearity since the VIF is found to be below 5 for all variables. \*\* $p < 0.05$ ; \*\*\* $p < 0.01$ .

Table 2  
Regression Results: Tourism-Dependent Economies

Explanatory and Control Variables	Dependent Variable: Growth of Expenditures on Domestic Travel 2019–2020											
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Total_spending_and_forgone_revenue	0.060* (0.030)										0.060* (0.031)	
Spending_on_health_sector		0.095 (0.126)			0.069 (0.124)							0.085 (0.130)
Spending_on_non-health_sector			0.058* (0.032)		0.061* (0.033)							0.051 (0.037)
Accelerated spending and deferred_revenue				-0.210 (0.337)	-0.291 (0.333)							-0.342 (0.368)
Liquidity_support						-0.021 (0.024)						
Loans_and_equity_injections							0.160 (0.135)			0.165 (0.138)		0.072 (0.154)
Guarantees								-0.027 (0.024)		-0.028 (0.024)		-0.028 (0.025)
Quasi_operations									0.001 (0.222)	-0.066 (0.223)		0.045 (0.241)
Movement_restriction	-0.550* (0.318)	-0.580* (0.333)	-0.558* (0.320)	-0.557* (0.336)	-0.515 (0.328)	-0.610* (0.333)	-0.562* (0.329)	-0.607* (0.330)	-0.585* (0.339)	-0.599* (0.337)	-0.576* (0.319)	-0.515 (0.344)
TT_Competitiveness	-0.085 (0.415)	0.175 (0.408)	0.024 (0.402)	0.277 (0.405)	0.021 (0.416)	0.444 (0.460)	0.256 (0.394)	0.488 (0.453)	0.238 (0.419)	0.546 (0.480)	0.124 (0.470)	0.295 (0.512)
Log_GDP_per_capita	0.540 (0.704)	0.726 (0.736)	0.482 (0.721)	0.788 (0.727)	0.321 (0.747)	0.745 (0.726)	0.561 (0.749)	0.725 (0.721)	0.837 (0.835)	0.317 (0.891)	0.445 (0.712)	0.194 (0.903)
R <sup>2</sup>	0.30	0.23	0.28	0.22	0.31	0.23	0.25	0.24	0.21	0.28	0.32	0.35
Number of obs.	37	37	37	37	37	37	37	37	37	37	37	37

Note: Standard errors are shown in parentheses. Constant included but not reported. There is no issue of multicollinearity as the VIF is found to be below 5 for all variables. \*p < 0.10.

findings of an OECD (2020a) report on how public spending and tax policies can help governments deal with the COVID-19 crisis. The report highlights that these additional fiscal measures are highly critical generally and currently, and for developing countries in particular, since they can stimulate consumption and build confidence (OECD, 2020a). For this aim to be achieved, international coordination is urgently needed for enabling countries to progress with constrained financial resources. Multilateral collaboration is vital for the global economy to recover more quickly and strengthen its resilience to future shocks as well (OECD, 2020a; Villacé-Molinero et al., 2021).

With reference to the control variables, only “movement\_restriction” is found to be significant (as can be seen in Tables 1 and 2), showing a

negative association with expenditures on domestic travel. This is not a surprising outcome as countries with tightened internal movements to contain the spread of the virus have experienced curtailed demand, particularly in tourism and travel (IMF, 2020).

#### *Robustness Checks With an Alternative Estimation Method*

For robustness testing, a two-stage least squares (2SLS) estimator is utilized. This analysis is conducted to account for the potential endogeneity bias which could be caused by simultaneity issues (e.g., bidirectional relationship between fiscal measures and expenditures on domestic travels). Okafor et al. (2022) showed that economies with large tourism

Table 3  
2SLS Regression Results: Full Sample of Economies

Dependent Variable: Growth of Expenditures on Domestic Travel 2019–2020								
Explanatory and Control Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Total_spending_and_forgone_revenue	0.082** (0.042)							
Spending_on_health_sector		0.425 (0.348)						
Spending_on_non-health_sector			0.110* (0.061)					
Accelerated_spending_and_deferred_revenue				−0.061 (0.071)				
Liquidity_support					−0.112 (0.081)			
Loans_and_equity_injections						0.404 (0.504)		
Guarantees							−0.100 (0.090)	
Quasi_operations								−0.194 (0.151)
Movement_restriction	−0.388** (0.160)	−0.335** (0.190)	−0.393* (0.167)	−0.330** (0.165)	−0.353* (0.213)	−0.467* (0.257)	−0.358* (0.195)	−0.400* (0.212)
TT_Competitiveness	−0.337 (0.284)	−0.133 (0.280)	−0.394 (0.331)	0.143 (0.159)	0.911 (0.604)	0.143 (0.210)	0.663 (0.519)	0.450 (0.323)
Log_GDP_per_capita	0.105 (0.264)	−0.036 (0.391)	0.061 (0.284)	0.333 (0.261)	0.180 (0.339)	−0.223 (0.710)	0.205 (0.311)	0.007 (0.388)
p value of the Sargan statistic (overidentification test of all instruments)	0.413	0.293	0.378	0.101	0.777	0.568	0.288	0.523
Number of obs.	76	76	76	76	76	76	76	76

Note: Standard errors are shown in parentheses. Constant included but not reported. Legal origin is used here as an instrument for each of the economic policy responses (fiscal measures) to the COVID-19 pandemic.

\* $p < 0.10$ ; \*\* $p < 0.05$ .



sectors responded more aggressively by using economic stimulus packages to lessen the effect of the COVID-19 pandemic.

Legal origin of countries is used as an instrument for fiscal measures, under the assumption that while differences in legal traditions and origins can be associated with cross-country differences in financial developments and policies (Beck et al., 2003; LaPorta et al., 2008; Oto-Peralías & Romero-Ávila, 2014), they may not be independently related to spending on domestic travel. The instruments are found to be valid as the  $p$  values of the Sargan statistic (for overidentification test of all instruments) are insignificant in all models. Overall, the obtained results of this robustness check, presented in Table 3, show consistent findings with those of the OLS regressions (Table 1).

#### *Robustness Check: Controlling for Outbound Expenditures*

In Table 1, the provided models control for three key determinants of domestic travel expenditures (i.e., restrictions on internal movement score, household income, and travel and tourism infrastructure and resources). However, one may argue that domestic travel might also increase during the pandemic due to less outbound travel being possible. To address this point, in Table 4 the growth of outbound expenditure from 2019 to 2020 is included as an additional control variable. Data on outbound expenditure were collected from Euromonitor International (2021), which defines outbound expenditure as “the amount paid by residents of the country of reference for the acquisition of goods and services, including transport, for and during trips abroad. All spending that is made in the destination is included. Trips that are over 24 hours are included however day-trippers and transit passengers are excluded.”

Overall, the results are highly comparable to those of Table 1. Both “total\_spending\_and\_forgone\_revenue” and its subcomponent of “spending\_on\_non-health\_sector” show positive and significant relationships with domestic travel expenditure growth (see columns 1, 3, 5, and 11 of Table 4). As well, the coefficient of “Growth of outbound expenditures 2019–2020” is found to be negative and statistically significant across all

estimated models in Table 4. This means that travelers in countries experiencing a stronger decline in outbound tourism tended to spend more on domestic travel in 2020.

#### Conclusion

The COVID-19 pandemic and the subsequent worldwide mobility restrictions and lockdowns led to sharp declines in virtually every industry, and the travel and tourism sector was one of the hardest hit. The spread and devastating impacts of COVID-19 in 2020 compelled many concerned countries to take urgent, drastic, and unprecedented fiscal measures to minimize as much as possible the healthcare and economic effects of this crisis. In this study, we explore the relationship between different types of such fiscal measures and the growth of domestic travel spending in 2020 across 76 countries. This study is the first to examine the association between economic policies in response to the COVID-19 pandemic and domestic traveling spending. Controlling for other determinants of domestic travel, our cross-sectional regressions show that economies in which policymakers have implemented stimulus fiscal policies such as tax cuts and increased fiscal expenditures revealed significantly stronger growth of spending on domestic travel. We discovered similar results for economies that are most reliant on tourism with no evidence of the Ricardian effects. These findings strongly suggest that governments’ use of these fiscal measures can potentially boost activities in the travel and tourism sector through boosting confidence and increasing consumers’ spending on domestic travel, at least in the short term. This is an important finding because, as argued by several recent studies (e.g., Brodeur et al., 2021; Jordá et al., 2022), consumer confidence could be negatively impacted in the long term by the COVID-19 pandemic due to factors such as reluctance to make discretionary purchases, shift to greater precautionary savings, and pessimism regarding their long-term economic outlook. Therefore, government fiscal policies in the short term can play a significant role in mitigating such potential negative economic impact of COVID-19 in the long run. In their investigation of the link between public perceptions about such fiscal support measures and spending behavior,

Table 4  
 Estimation Results: With Full Sample of Economies and an Additional Control Variable

Explanatory and Control Variables	Dependent Variable: Growth of Expenditures on Domestic Travel 2019–2020											
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Total spending_ and_forgone_revenue	0.040** (0.017)										0.041** (0.017)	
Spending_on_health_sector		0.060 (0.069)			0.016 (0.070)							0.026 (0.071)
Spending_on_non-health_sector			0.045** (0.018)		0.042** (0.019)							0.034** (0.019)
Accelerated_spending_and_deferred_revenue				-0.031 (0.039)	-0.014 (0.039)							-0.068 (0.049)
Liquidity_support						-0.008 (0.013)					-0.010 (0.010)	
Loans_and_equity_injections							0.062 (0.045)			0.058 (0.046)		0.097* (0.058)
Guarantees								-0.006 (0.014)		-0.008 (0.014)		-0.008 (0.014)
Quasi_operations									-0.028 (0.024)	-0.029 (0.025)		-0.029 (0.024)
Movement_restriction	-0.411** (0.156)	-0.398** (0.162)	-0.411** (0.156)	-0.388** (0.163)	-0.403** (0.159)	-0.399** (0.162)	-0.420** (0.161)	-0.399** (0.162)	-0.410** (0.161)	-0.426** (0.162)	-0.409** (0.157)	-0.416** (0.157)
TT_Competitiveness	-0.203 (0.179)	-0.026 (0.166)	-0.189 (0.175)	0.020 (0.162)	-0.184 (0.180)	0.074 (0.190)	0.007 (0.160)	0.051 (0.185)	0.050 (0.164)	0.099 (0.190)	-0.130 (0.202)	-0.044 (0.203)
Log_GDP_per_capita	0.278 (0.248)	0.332 (0.258)	0.276 (0.247)	0.404 (0.256)	0.282 (0.258)	0.365 (0.254)	0.304 (0.256)	0.368 (0.255)	0.343 (0.254)	0.265 (0.260)	0.263 (0.249)	0.182 (0.259)
Growth_of_outbound_expenditures_2019–2020	-0.026** (0.010)	-0.029*** (0.011)	-0.026** (0.010)	-0.029** (0.011)	-0.026** (0.010)	-0.028** (0.011)	-0.031*** (0.011)	-0.028** (0.011)	-0.031** (0.011)	-0.031** (0.011)	-0.024** (0.011)	-0.029** (0.011)
R <sup>2</sup>	0.24	0.19	0.25	0.19	0.25	0.19	0.20	0.19	0.20	0.22	0.19	0.30
Number of obs.	76	76	76	76	76	76	76	76	76	76	76	76

Note. Standard errors are shown in parentheses. Constant included but not reported.

\* $p < 0.10$ ; \*\* $p < 0.05$ .

Georgarakos and Kenny (2022) also argued that public perceptions about the adequacy of such fiscal policies and the generally positive view about the adequacy of these government interventions have a causal effect on consumer spending, specifically increasing spending on large items such as vacations. They demonstrated that such beliefs influence household expectations regarding own income prospects, future access to credit, and financial sentiment, but not expectations regarding future taxes, implying that there is no evidence of Ricardian effects in household behavior. Intriguingly, they also discovered that perceptions influence spending among households that did not receive government aid, suggesting that fiscal interventions can have far-reaching effects, as they can even affect the behavior of those who did not receive financial support from the government during the pandemic. This again highlights the short-term importance of appropriate fiscal policies in response to the COVID-19 pandemic.

It should be noted that although countries with large domestic market shares can experience quicker recoveries in their travel and tourism sectors in the short term, as suggested by Bausch et al. (2021), it is not possible for domestic tourism to completely replace the loss of international tourism in countries that greatly depend on international tourism. Overall, it can be argued that, in the short term, expansionary government spending and tax reductions can serve as tools for reducing damage done to the national economy and softening the adverse impact of the pandemic on the tourism industry. It may also have other direct by-products, such as helping the economies of regional and rural centers, and one such unintended outcome is the creation of new tourism opportunities and trajectories that may reduce carbon emissions and alter people's travel and tourism practices (Gössling et

al., 2020). These impacts as well as the long-run responses to the current COVID-19-related policies will need to be investigated in depth when the relevant data become available.

The findings reinforce those of recent studies that argue that the COVID-19 crisis and its impact on the tourism economy have the potential to change tourists' behavior as well as the focus of travel research (Assaf et al., 2021). As this article has suggested, clearly of significance here is the potential implications of government financial stimulus policies as well as shifts between different modes of consumption (Hall et al., 2021). Consequently, current and future studies in this area—in particular those using precrisis data—need to consider important exogenous factors such as fiscal support and stimulus measures as shown in this study in their forecasting models and policy implications (Bausch et al., 2021), in seeking to ascertain potential future tourism pathways.

A limitation of our study is that data for tourism sector-specific stimulus packages were not available for all nations. For this reason, we have concentrated on the link between aggregate economic policy responses to COVID-19 and expenditures on domestic travel. When more data become available, future research should examine to what extent tourism-specific stimulus packages have aided the revival of the domestic tourism sector, controlling for other confounding factors that would have contributed to the sector's recovery. Another limitation of the research is that it used macrolevel variables as explanatory variables of domestic travel expenditures, yet individual-level characteristics such as gender and education were not included. Future studies are encouraged to explore the relationship between economic policy responses to the pandemic and domestic travel pattern by using such individual-level data.

## Appendix

Table A1

## List of Sample Economies

Argentina, Australia, Austria, Belgium, Bolivia, Brazil, Bulgaria, Cambodia, Canada, Chile, China, Colombia, Costa Rica, Croatia, Czech Republic, Denmark, Dominican Republic, Ecuador, Egypt, Estonia, Finland, France, Georgia, Germany, Greece, Guatemala, Hong Kong, Hungary, India, Indonesia, Ireland, Israel, Italy, Japan, Jordan, Kazakhstan, Kenya, Laos, Latvia, Lithuania, Malaysia, Mexico, Morocco, Myanmar, Netherlands, New Zealand, Nigeria, Norway, Oman, Panama, Peru, Philippines, Poland, Portugal, Qatar, Romania, Russia, Saudi Arabia, Singapore, Slovakia, Slovenia, South Africa, South Korea, Spain, Sri Lanka, Sweden, Switzerland, Tanzania, Thailand, Tunisia, Turkey, Ukraine, United Arab Emirates, UK, Uruguay, US, and Vietnam

Table A2

## Definitions of Variables, Data Sources, and Descriptive Statistics

Notation	Variable	Data Source	Mean (SD)
Domestic_Travel	Growth of expenditures on domestic travel. Expenditures on domestic travel refers to “the spending on travel and tourism services by domestic visitors on their trips” (in USD million). “It includes travel within the country, which covers air travel as well as other modes of transport”.	Euromonitor International (2021)	-0.294 (0.678)
Total_spending_and_forgone_revenue	Total of public additional spending and forgone revenue announced by the government in response to the COVID-19 pandemic. It includes fiscal measures for both health and non-health sectors as a percentage of GDP.	IMF (2021)	6.705 (5.533)
Spending_on_health_sector	Additional spending and forgone revenue in the health sector only, as a percentage of GDP.	IMF (2021)	1.087 (1.174)
Spending_on_non-health_sector	Additional spending and forgone revenue in areas other than health, as a percentage of GDP.	IMF (2021)	5.434 (4.971)
Accelerated_spending_and_deferred_revenue	Accelerated spending and deferred revenue in areas other than health, as a percentage of GDP.	IMF (2021)	0.840 (1.900)
Liquidity_support	Liquidity support is the sum of ‘below-the-line’ (i.e. loans and equity injection) and ‘contingent liabilities’ (i.e. guarantees and quasi-fiscal operations), as a percentage of GDP.	IMF (2021)	5.089 (6.85)
Loans_and_equity_injections	Equity injections, asset purchases, loans, debt assumptions, including through extra-budgetary funds. A percentage of GDP.	IMF (2021)	0.752 (1.640)
Guarantees	Guarantees on loans, deposits, etc., as a percentage of GDP.	IMF (2021)	3.572 (5.821)
Quasi_operations	Quasi-fiscal operations which are defined as non-commercial activity of public corporations on behalf of the public government. A percentage of GDP.	IMF (2021)	0.764 (3.055)
GDP_per_capita	GDP per capita, PPP (current international \$), year 2019.	World Bank (2021a)	33,608.3 (22,306.9)
TT_Competitiveness	The Travel & Tourism Competitiveness Index 2019 (Overall Score). Scores range from 1 (= worst) to 7 (= best).	WEF (2019)	4.293 (0.559)
Movement_restriction	Average of restrictions on internal movement score from 1 January to 31 December 2020. Scores range from 0 (no measures), to 1 (recommend not to travel between regions/cities), and 2 (internal movement restrictions in place).	Hale et al. (2021)	0.918 (0.466)

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