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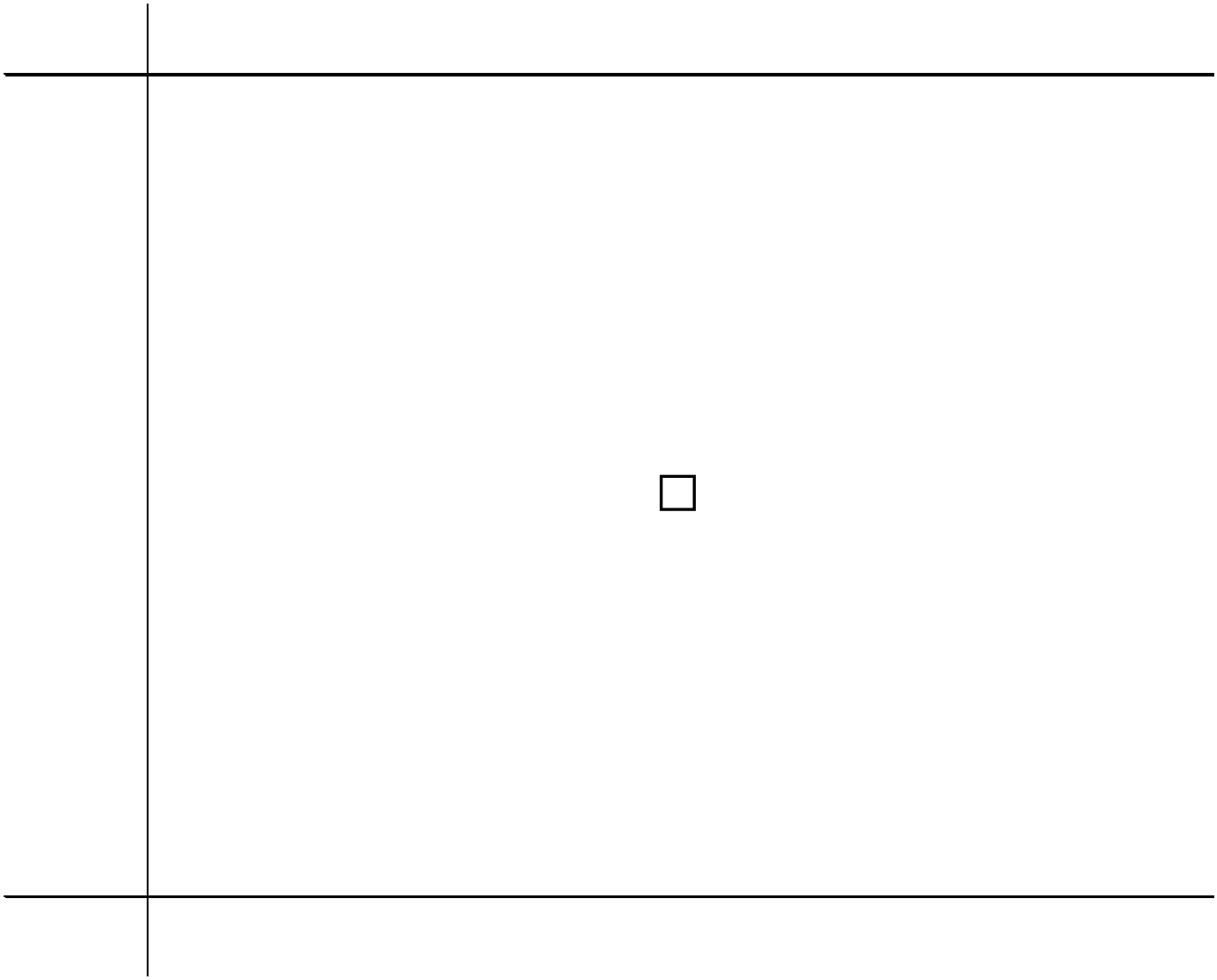

The Curse of Tourism?

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Abstract

The purpose of this paper is to investigate the effect of tourism on economic growth. Our analysis covers 133 countries over the period 1995 to 2007, including 32 countries highly dependent on tourism during that period. The results show that specialization in tourism

1. Introduction

Tourism is an important sector of many countries' economies, and its significance is likely to increase also in the future (Goeldner & Brent Ritchie 2012). For a small number of countries, receipts from tourism are an important, if not the most important, source of income. Tourism bestows a number of social and economic benefits on the countries involved. Besides being a source of economic revenue, the process of cultural exchange between the host population and tourist visitors is often cited as a potential source of social benefits (Armenski *et al.* 2011). In addition, tourism is a relatively 'clean' industry as regards the environment, although many debates surround this issue (Kreag 2011; Bastola 2012).

The economic effects are perhaps the most tangible outcome of tourism, since the receipts from tourism not only increase the inward flow of foreign exchange income but also help generate employment opportunities (Zortuk 2009; Polat *et al.* 2010) and stimulate the level of economic activity in the country (Ivanov & Webster 2006). According to the World Tourism Travel Council (WTTC), the world tourism industry accounted for 10 per cent of the world's GDP in 2004 (WTTC 2013).

In spite of the aforementioned benefits of tourism, there is a possibility that tourism can also exert negative effects such as causing deterioration of the environment through the physical impact of tourist visits and over-exploitation of natural resources (Capó *et al.* 2007). Moreover, tourism can cause unwanted lifestyle changes that might have negative impacts on the traditions and customs of the host community (Cooper *et al.* 1993). Since tourism is often highly seasonal, it can lead to undesirable fluctuations in economic activity (and associated seasonal changes employment, wages, price level and the like) over time. Last but not least, receipts from tourism can be quite volatile as they depend on economic situation in the source countries of tourists, are subject to spillover effects from nearby countries, and can change

dramatically in response to political uncertainty or upheavals in the destination countries. The changes in volume and destinations of tourist flows during the recent global financial crisis, and the effects of the recent political instability in the Middle East, demonstrate the volatility of tourist flows.

In this paper, we explore the effect of tourism on economic growth in a broad panel of countries. Since receipts from tourism are a component of trade, we consider the marginal effect of tourism after accounting for trade. In th

turn, increases the prices of non-

regions of Spain, the Balearics and the Canary Islands, both noted for very high and long-standing exposure to tourism. They find that the tourist inflow boom of the 1960s induced a significant increase in wealth in Spain generally, whilst the increased focus on tourism and non-traded goods has led to a decline of manufacturing and agriculture in these two regions. While this change in production did lead to an increase in incomes, there is evidence that these two regions might not be able to maintain high economic growth for much longer. The reduction in natural resources such as beaches or natural areas is not the sole driver of growth slow down. Rather, it is the heavy focus on the tourism sector that has led to the neglect of other sectors that might provide economic activity and employment during a recession in the tourism industry. The decline of the traditional sectors (manufacturing and agriculture) has deprived these tourism-dependent regions of much-needed economic diversity. The failure to introduce economic diversification into these regions could lead to their becoming mono-industrial areas whose populations might find it difficult to gain competence in activities unconnected with tourism. The neglect of economic diversification, on-going education and training, combined with a lack of technological innovation at the local level are symptoms and drivers of the Dutch Disease for these regions.

Using a theoretical model, Chao *et al.* (2006) discuss the existence of the Dutch Disease through a demand shock from a tourism boom using a dynamic framework, examining the impacts of tourism on capital accumulation, sectoral output and resident welfare in an open dynamic economy. The authors show that the expansion of tourism causes an increase in

Dutch Disease is likely to lead to a decline of capital stock that may cause a loss in resident welfare in the long-run, as a result of the existence of externality that impedes diversification in other economic sectors.

Also using a theoretical framework, Nowak *et al.* (2004) investigate the impact of a tourism boom on structural adjustment, commodities, factor prices and welfare. Their analysis used a hybrid of the Ricardo-Viner-Jones and the Heckscher-Ohlin models under the assumption of full employment. In this open economy, the terms of trade were given exogenously. Three sectors represent the economy in the model: a non-traded goods sector, an agricultural sector producing an exportable good, and a manufacturing sector producing an importable good. They find that a tourist boom may cause immiserization of residents: that is, that they may be rendered poorer than before the tourism boom. Tourist consumption consists largely of non-traded goods and services. When a tourism boom occurs, there is first an immediate, local and favorable effect owing to increases in the relative price of such non-traded goods. However, in the longer term a negative effect is encountered owing to the efficiency loss that occurs in the presence of increasing returns to scale in manufacturing. Whenever this negative effect outweighs the initially positive effect, immiserization is the result. Nowak & Sahli (2007), in turn, examine the relation between the Dutch Disease and coastal tourism in a small island economy in a general equilibrium model. They find that boom of inbound tourism may cause a loss of welfare when tourism uses coastal land intensively.

Holzner (2005) examines whether Dutch Disease has an impact on the tourism sector in more than 100 countries. The results indicated a negative effect of tourism on both real exchange rate variability/distortion and economic growth. One explanation given is that countries drawing high incomes from tourism tend to be more outward oriented. Tourism

might generate high levels of final-goods imports, such as those to which tourists are accustomed in their countries of origin and for which they create a demand in the tourism host country. This effect would strengthen import lobbies and the advocates of trade liberalization.

In a related later study, Holzner (2011) examines the impact of the Dutch Disease on tourism-dependent countries. His results show that, when controlling for initial output level, physical capital and human capital, countries with higher shares of tourism income in GDP enjoy faster growth than other countries. His findings indicate that tourism-

2013). We follow Figini & Vici (2007) and Holzner (2011) who defined tourism specialization as the share of receipts from international tourism in GDP. Since some

alternative proxy for human capital. Table 1 lists the variables used while Table 2 displays the descriptive statistics.

4.2 An Empirical Model of Economic Growth with Tourism

The standard Solow model of growth assumes output to be the product of labor and capital, $Y=K^{\alpha}(AL)^{1-\alpha}$, where $0 < \alpha < 1$, K stands for the stock of physical capital, L represents labor and A is a catch-all parameter reflecting technological progress, quality of institutions and any other factors that increase output for given stocks of labor and capital. Mankiw, Romer and Weil (1992) use this basic formulation of the Solow model to derive a growth regression that can be estimated:

$$- = \quad + \quad + \frac{}{1-} \ln( ) + \frac{}{1-} \ln(\quad + \quad + \quad) +$$

where *s* is the savings rate, *n* is the rate of population growth, is the depreciation rate, *g* is the rate of technological progress, and is the error term; and *g* are not observed but their sum is proxied as 0.05. This growth regression can be further augmented to add additional factors of production: Mankiw et al. (1992) add human capital, and Li, Liu and Rebelo (1998) include also foreign direct investment. Many other conditioning variables have been proposed in the literature. The initial output per capita helps account for the fact that countries that are relatively poor tend to grow faster: it is easier to catch up than to lead. Government consumption can be included to account for the distortionary effects of taxation and the dead-weight loss of government spending (see Barro, 1991, and others). Openness to trade has been shown to make countries more productive, holding other determinants of growth constant (Sachs and Warner, 1995).[5] Given their nature, as factors of growth augmenting the productivity of labor and capital, most of these variables can be seen as falling within the term A in the above production function.

[5] For a broad overview of these attempts, see Levine and Renelt (1992), and Sala-i-Martin (1997), and the subsequent replications of their assessments.

In our analysis, we build on this literature and include three basic factors of production, physical and human capital and labor; two productivity-augmenting parameters, government consumption and openness to trade, and our variable of interest, the share of tourism revenue in output. Therefore, we estimate the following baseline regression:

$$= {}_0 + {}_1 \quad + {}_2 \quad + {}_3 \quad + {}_4 \quad + {}_5 \quad + {}_6 \quad +$$

where *g* is the growth of GDP per capita at constant prices, *tourism* is tourist receipts as a percentage of GDP, *school* captures the percentage of the relevant-age population enrolled in secondary school, *trade* is the sum of exports and imports of goods and services as a share of GDP, *inv* is the gross fixed capital formation as percentage of GDP, *gov* measures the general government final consumption expenditure as percentage of GDP, *popgr* is the annual population growth rate, and $_{it}$ is the error term. Furthermore, note that as an alternative specification, we replace schooling with life expectancy at birth (*le*).

Tourism is a part of exports so that including tourism and trade in the same regression may result in double counting of tourism. Therefore, we subtract tourism as share of GDP from trade as share of GDP and denote the resulting variable *tradec*.

Our data take the form of a panel. Therefore, we use the Hausman Specification Test to determine whether a random-effects model or a fixed-effects model is to be preferred. In other words, this test examines whether fixed effects are correlated with the regressors, since the null hypothesis is one of no correlation. The results are reported in Table 3: panels A and B for the models with schooling and life expectancy, respectively, whiles panels C and D present analogous results while replacing trade with trade cleared of tourism receipts. The test results suggest clearly that a fixed-effects model is appropriate for our analysis: we reject the null hypothesis in favor of the fixed-effects model at $p<0.05$. Therefore, in the remainder of the paper, we only present and discuss fixed-effects results.

Table 4 presents the baseline results: with human capital measured by schooling (columns 1 and 3) and, alternatively, by life expectancy (columns 2 and 4), and with overall trade (columns 1

Finally, we turn to examine the possible presence of Dutch-Disease type of effects. The real appreciation associated with the Dutch Disease affects the economy by undermining the competitiveness of its exports. Therefore, a relatively simple and straightforward test of whether tourism has this kind of effect is to include the interaction between tourism specialization and openness to trade. While this is an indirect test, it has the advantage that it directly captures the inter-relation between exports overall and tourism specialization. An alternative would be to measure the effect of tourism on the real appreciation of

positive when using life expectancy. The effect of trade on growth is positive and significant. The interaction term again has a negative and significant effect on economic growth. Very similar pattern is obtained when considering countries with above-average tourism specialization.

In contrast, in countries with low dependence on tourism, we find no significant relationship between tourism and economic growth. The interaction term between tourism and trade is not significant either. The effect of trade, however, remains strongly significant and positive. Hence, there is no evidence of the Dutch Disease in the countries with limited dependence on tourism. Instead, the effect of tourism is negative only in economies that are highly dependent on both exports and tourism.[6]

A potential weakness of results is that they may be affected by endogeneity bias: tourism may be also driven by economic growth, so that the relationship between then becomes bidirectional.[7] This is especially likely in the source countries of tourism; given that we look at revenue from receiving tourists, this possibility is less acute in our case. Nevertheless, to successfully account for the possibility of tourism being endogenous, we would need to identify suitable instruments. Since we use interaction terms involving both trade and tourism revenue, the resulting analysis would become rather complex. For the sake of keeping it simple and tractable, we leave this issue up to future work.

5. Concluding Remarks

In this study, we investigate the relationship between tourism and economic growth using annual data for 133 countries covering the period 1995 to 2007. Our results suggest that

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tourism specialization overall has no significant effects on economic growth. This finding can be attributed to the fact that receipts from tourism may undermine competitiveness of manufacturing exports, in a manner akin to the Dutch Disease. When we account for this possibility, we find that, on the one hand, both trade and tourism foster growth, but, on the other hand, that high dependence on both tourism and trade is associated with significantly lower economic growth. The same pattern is obtained in the sub-sample of countries with above-average reliance on tourism but not in the sub-sample of countries with limited dependence on tourism. Hence, dependence on exports of the non-traded sector (tourism) can undermine the competitiveness of the traded sector.

This finding complements the previous literature and helps reconcile the seemingly contradictory findings, whereby some studies report a positive effect of tourism while others find no significant effect. Reliance on tourism has a positive impact on growth, except when countries are highly open to both trade and tourism.

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Table 1: Variables used in the present study

G	Growth of GDP per capita at constant prices

Table 6: Split samples based on economic development

VARIABLES	Developed countries	Developing countries	Developed countries	Developing countries
Gov	–0.446***	–0.227**	–0.250*	–0.190**
	(0.157)	(0.0976)	(0.137)	(0.0825)
Inv	0.101	0.119*	0.0971	0.132***
	(0.105)	(0.0635)	(0.0818)	(0.0425)
Popgr	–0.963	–0.965**	–0.907*	–0.328
	(0.945)	(0.404)	(0.453)	(0.375)
Tourism	–0.364	–0.0836	–0.0448	–0.00228
	(0.334)	(0.122)	(0.109)	(0.107)
Trade	0.0548***	0.0624***	0.0560***	0.0614***
	(0.0119)	(0.0202)	(0.0110)	(0.0193)
School	–0.00873	0.119***		
	(0.00951)	(0.0311)		
Le			–0.323***	0.304***
			(0.0790)	(0.108)
Constant	6.641**	–7.239**	24.45***	–21.73***
	(2.946)	(2.838)	(6.045)	(6.718)
Observations	247	771	332	1,123
R-squared	0.271	0.144	0.265	0.105
Number of countries	28	103	29	103

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 7: Interaction term between tourism and trade T

	(1)	(2)
VARIABLES	growth	growth
Gov	–0.251***	–0.221***
	(0.0942)	(0.0768)
Inv	0.129**	0.126***
	(0.0594)	(0.0374)
Popgr	–1.045***	–0.508
	(0.374)	(0.323)
Tourism	0.224	0.303**
	(0.158)	(0.134)
Trade	0.0833***	0.0716***
	(0.0161)	(0.0142)
School	0.0631***	
Tourism*Trade	–0.201***	–0.209***
	(0.0584)	(0.0595)

Table 8: Effect of