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How Fast are Small Tourism Countries Growing? Evidence from the Data for 1980–2003[1]

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We analyze the empirical relationship between growth, country size and tourism specialization by using a dataset covering the period 1980-2003. We find that tourism countries are small and grow significantly faster than all the other sub-groups considered in our analysis. Tourism appears to be an independent determining factor for growth: controlling for initial per-capita income and for trade openness does not weaken the positive correlation between tourism specialization and growth. Another finding of our paper is that small states are fast growing only when are highly specialized in tourism. In contrast with some previous conclusions in the literature, smallness *per se* is not good for growth.

Key words: Small states, growth, tourism, cross country comparisons,
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The importance of tourism as a key factor for economic development has been repeatedly stressed in the last few years, both by international institutions and academicians. In the meantime, tourism has become the largest voice in international trade. Namely, world international tourist receipts amounted to 622.7 billion dollars in 2004, scoring an impressive increase with respect to 106.5 billion dollars in 1980 and 273.2 in 1990, with an average 7.1% yearly rate of growth in current terms between 1980 and 2004. These figures represented 6% of overall international exports in 2003 (WTO, 2005).

Surprisingly, this outstanding performance at a worldwide level has not induced – to our knowledge – systematic, cross-country empirical analysis of the growth-effects of tourism specialization. In this respect, this paper sets itself two objectives. First, we wish to assess the growth performance of tourism countries *vis à vis* a series of well defined benchmark country groups. Assessing this performance is especially important for developing countries. In particular, tourism is considered an available option in countries characterized by the presence of relevant endowments of suitable natural resources and, at the same time, of large and persistent productivity gaps in other, more technological and less resource-based sectors.[1] Second, since tourism countries tend quite often to be 'small' (see below),[2] we want to deepen our understanding of the effective role of tourism specialization on the economic performance of small countries.

Regarding the economic performance of small countries, a few empirical contributes are worth mentioning. Easterly and Kraay (2000) conclude that smallness is not an economic disadvantage for a country. According to their findings, smaller countries are not poorer than average neither grow less. Similar encouraging results are provided by Armstrong and Read (1995) and Armstrong, de Kervenoael, Li and Read (1998). These results seem to challenge other, more

pessimistic views, especially from endogenous growth literature, where scale effects often play a role in the determination of an economy's growth rate (Grossman and Helpman, 1991; Aghion and Howitt, 1998).

As for the specific case of small countries specialized in tourism, an additional worry is associated with a standard result of two-sector models of endogenous growth. In these models, being specialized in a low-technology sector (such as tourism, perhaps) is often the source of an adverse effect upon the economy's long run growth rate. In other words, smallness and specialization in tourism are suspected of being a rather unfortunate combination from the viewpoint of long run growth (e.g. Lanza and Pigliaru, 2000b).

As regards the empirical evidence on the effects of tourism specialization, most available results report evidence on levels of income rather than on growth performances. In particular, tourism is generally associated with higher than average income levels in the growing stream of literature on small and island countries' economic performance.[3]

To complement these findings from a dynamic viewpoint, in this paper we look at the cross-country evidence to assess whether tourism is a good growth determining factor. By using a dataset on 143 countries, we find that, in the period 1980-2003, tourism specialization does affect small states' growth positively. This confirms the results by Brau, Lanza and Pigliaru (2005), which were based on the shorter 1980-1995 period. This closer investigation of the role of tourism specialization also adds another dimension to some previous optimistic results on the growth performance of small countries (e.g. Easterly and Kraay, 2000). Small size is far from being a disadvantage where tourism is a key sector of the economy.

Data and main definitions

Our main source of data are the Penn World Tables, version 6.2. To investigate the role of tourism specialization, we match these data with the information on tourism receipts from the 2004 and 2006 edition of the World Bank 'World Development Indicators'. The period covered is 1980-2003, and 143 countries for which information on tourism receipts is available are included. Out of 143 countries, 29 of them have an average population of less than one million during 1960-2003,[4] and therefore meet the definition of 'small country' that we adopt in this paper, following Easterly and Kraay (2000) and Brau *et al.* (2005).

As an identifier of tourism economies, we opt for a measure which is likely to account for the importance of income generated by inbound tourism relatively to total domestic income. Namely, we have defined the 'degree of tourism specialization' as the average ratio of international tourist receipts to GDP.[5]

By considering an average degree of tourism specialization (DTS) greater than 10% over the period 1980-2003, 17 countries come into this category, of which 14 meet our definition of small state. The only 'large' tourism countries are Jordan, Dominican Republic and Jamaica (whose degree of tourism specialization respectively are 10.0, 10.3 and 16.1). Overall, the sub-sample of 29 small countries can be split into two almost identical parts: 14 countries (henceforth STC) above the 10% threshold, and 15 below.

Table 1. List of small countries according to the degree of tourist specialization

Tourist countries (DTS > 10)	Index of tourism specialization	Non-tourist countries (DTS < 10)	Index of tourism specialization
Maldives	43.0	Belize	9.8
Bahamas, The	39.5	Mauritius	9.3
St. Lucia	39.1	Gambia, The	8.0
Bermuda	31.7	Guyana	8.0
St. Kitts and Nevis	30.3	Luxembourg	5.4

Barbados	28.6	Bahrain	4.7
Seychelles	24.6	Cape Verde	4.4
Vanuatu	22.8	Comoros	4.3
St. Vincent and the Grenadines	22.1	Botswana	3.3
Grenada	19.7	Solomon Islands	3.0
Malta	19.4	Swaziland	3.0
Cyprus	18.3	Iceland	2.1
Fiji	13.5	Suriname	1.7
Samoa	11.3	Djibouti	1.2
		Gabon	0.2

Empirical evidence

We consider the growth performance of STCs, relative to the performance of a number of sub-sets of countries, namely OECD, Oil, Small and Less Developed Countries (LDCs).

The general picture for the period 1980-2003 is one of relatively slow growth. As can be seen on Table 2, the average annual growth rate in the OECD group is 1.9% per year. The average growth rate of the whole sample is lower (1.0%), an outcome mainly due to the poor performance of the Oil (14 countries, growing on average at -0.6% per year) and LDC groups (37 countries, growing at 0.0% per year).

The small countries group (SCs) grows slightly faster than the average country in the sample, but a bit slower than the average OECD. This finding is consistent with the optimistic view on the link between smallness and economic performance proposed by Easterly and Kraay (2000) and by Armstrong *et al.* (1998).

Table 2: GDP growth rates by group of countries

Country group	Real per capita GDP growth 1980-2003 (%)	No. countries
OECD	1.91	22
Oil	-0.64	14
Small	1.70	29
Small Tour. >20%	2.34	9
Small Tour. >10%	2.23	14
Small <10%	1.20	15
LDCs	0.06	37
All	1.00	143

However, when we isolate the performance of STCs, we see that tourism specialization is clearly beneficial for growth (this result is irrespective of whether the proportion of 10% or 20% of tourism receipts on GDP is adopted). Tourism specialization seems to be key to understanding why small countries are not at a disadvantage compared to more industrialized ones. In this respect, our findings cast some doubts about the robustness of the above-mentioned optimistic view on 'smallness *per se*' and growth.

Let us now test these results with some econometric analysis. In particular, the determinants of the average annual real per capita GDP growth rate are investigated through a series of cross-sectional least square regressions, the aim of which is to test whether or not the high growth performance of STCs is attributable to tourism specialization *per se*.

We first assess whether it is possible to detect significant advantages or disadvantages for SCs and STCs by adopting the full set of continental and geographical dummies used in Easterly (2001) and Easterly and Kraay (2000)[6] as well as dummies for Oil, OECD and LDC countries. Results in Table 3 strongly support our previous findings. The above-average growth performance of the SCs

as a group (regression (1)) crucially depends of the performance of STCs. Once the SC group is split in two, STCs outperform the remaining countries (regression (2)). In regression (3) we change the demarcation value of tourism specialization from 10% to 20%. The STC dummy stays significant in both regressions.

Table 3: Growth effects of tourism specialization I. Dummy regression analysis

Dependent variable: Average annual real per capita GDP growth, 1980-2003			
Dummies	(1)	(2)	(3)
CONSTANT	0.0217 (4.39)***	0.0211 (4.18)***	0.0243 (4.70)***
OECD	-0.0033 (-0.70)	-0.0028 (-0.57)	-0.0060 (-1.19)
OIL	-0.0179 (-3.25)***	-0.0176 (-3.19)***	-0.0179 (-3.33)***
LDC	-0.0135 (-3.09)***	-0.0136 (-3.08)***	-0.0138 (-3.12)***
SC	0.0094 (2.40)**		
STC >10%		0.0113 (2.20)**	
SC <10%		0.0078 (1.45)	
STC >20%			0.0137 (2.34)**
No. of obs.	143	143	143
R²	0.340	0.341	0.331

All regressions include a full set of regional dummies as defined in Easterly (2001). The excluded dummy is "Northern America".
Figures in brackets are t-statistics (standard errors are White-corrected).
* Significant at 10%   ** Significant at 5%   *** Significant at 1%

In Table 4 we test whether tourism specialization remains a growth-enhancing determinant after a number of traditional growth factors are considered. For instance, STCs might be on a faster growth path simply because they are poorer than average – a mechanism predicted by the traditional Solovian growth model. To control for this type of possibilities, we adopt an approach *à la* Mankiw, Romer and Weil (1992) to the analysis of cross-country growth differentials.

Regressions (2) and (3) show that the STC dummy stays significant even after other factors – the initial level of per-capita GDP and an index of openness – are considered.[7] In regression (4), the index of tourism specialization is included, and the coefficient is significant at the 1%. The estimated value implies that an increase of 10% in the ratio of tourism receipts to GDP is associated with an increase of 0.5% in the annual growth rate of per-capita GDP. Finally, in regression (5) we interact the index of openness with the STC>10% dummy. The significance and the large value of the related coefficient indicates that being specialized in tourism generates a premium on growth over the average positive effect of openness.

An additional way to test whether factors other than tourism specialization are the source of the positive performance of STCs, is to consider how different STCs are from the other countries in terms of a few growth determinants. An usual way to do this exercise is to carry out dummy regressions with respect to the log of the dependent variable of interest. Results are in the last 3 columns of Table 4.

Table 4: Growth effects of tourism specialization - II

Country dummies and variables	Dependent variable							
	Per-capita real GDP, aver 1980-03 (Reg 1)	Per-capita real GDP, aver 1980-03 (Reg 2)	Per-capita real GDP, aver 1980-03 (Reg 3)	Per-capita real GDP, aver 1980-03 (Reg 4)	Per-capita real GDP, aver 1980-03 (Reg 5)	Log real per-capita GDP, aver 1980-03 (Reg 6)	Share of trade in GDP, aver 1980-03 (Reg 7)	Log invest over GDP, aver. 1980-03 (Reg 8)
CONSTANT	0.0658 (2.49)**	0.0714 (2.75)***	0.0761 (2.86)***	0.0739 (2.78)***	0.0734 (2.72)***	8.9462 (44.91)***	1.1259 (2.41)**	-1.6236 (-20.24)***
OECD	-0.0020 (0.34)	-0.0060 (1.14)	-0.0030 (0.52)	.00586 (1.10)	-0.0058 (1.10)	1.1783 (6.52)***	-0.5412 (-1.47)	0.129 (0.18)
OIL	-0.0141 (-2.67)***	-0.0120 (-2.24)**	-0.0125 (-2.30)**	-.0102 (-1.89)*	-0.0118 (-2.19)**	0.5020 (2.05)**	0.0231 (0.14)	0.0913 (1.29)
LDC	-0.0155 (-2.89)***	-0.0167 (-3.11)***	-0.0169 (-3.16)***	-0.0164 (-3.04)***	-0.0167 (-3.09)***	-1.0940 (-8.28)***	-0.4596 (-2.80)***	-0.1836 (-2.85)***
Ln per-capita GDP 1980	-0.0054 (-1.90)*	-0.0064 (-2.28)**	-0.0066 (-2.29)**	-0.0067 (-2.34)**	-0.0066 (-2.27)**			
Share of trade in GDP 1980-2003	0.0047 (2.53)***	0.0042 (2.54)***	0.0040 (2.38)**	0.0034 (1.89)*	0.0041 (2.43)**			
SC < 10%						0.5409 (3.57)***	0.7454 (2.93)***	0.1721 (2.46)**
STC >10%		0.0111 (2.47)**				0.7281 (4.10)***	0.5763 (2.52)***	0.2277 (2.06)**
STC >20%			0.0143 (2.73)***					
Average share of tourism receipts in GDP				0.0535 (3.18)***				
Share of trade x STC >10%					0.0462 (3.15)***			
No. of obs.	142	142	142	141	141	143	142	139
R²	0.343	0.367	0.370	0.371	0.369	0.780	0.234	0.333

All regressions include a set of regional dummies as defined in Easterly (2001). The excluded dummy is 'Northern America'.

Figures in brackets are t-statistics (standard errors are White-corrected).

* Significant at 10%   ** Significant at 5%   *** Significant at 1%

From regression (6) we can see that the reason why STCs are growing faster is not that they are poorer than other small countries. In fact, the latter have a lower estimated coefficient, and the average per-capita GDP of STCs in the period amounted to 10,229 dollars (at 2000 prices), as compared to a sample mean of 8,222. Similarly, regression (7) rules out the possibility that the high growth performance may be accounted for by openness to trade. STC are certainly open to trade, but definitely less than other small countries in the sample. The only positive difference of STC with respect to other small countries can be found with respect to saving/investment propensities, as shown by regression (8), but the difference seems too small to account for the observed growth differential.

On the whole, the positive performance of STCs relative to the other country groups is not captured by the traditional growth factors of Mankiw Romer Weil type models. Tourism specialization is an independent determinant.

Why are the small tourism countries growing fast?

The importance of tourism as an significant growth factor for small countries has often been highlighted (Srinivisan, 1986; Briguglio, 1995; Armstrong *et al.*, 1998). Our evidence goes a step further by pointing out that tourism can be a source of growth higher than that associated with other types of specialization. However, although the period considered is fairly prolonged, it is not possible yet to detect whether the above-described performance constitutes an isolated episode, or is an indication of something of a more persistent nature.

Taken at face value, our results seem to justify a rather optimistic perception of the economic consequences of specializing in tourism. This is not necessarily always the case, however, when long-run implications are considered. That's why understanding the mechanism behind this phenomenon is important, especially from the viewpoint of economic policy.

At least two rather different growth-mechanisms are compatible with the above-described performance of small tourism countries. They can be discussed by using a common analytical framework based on a modified version of Lucas's two-sector endogenous growth model (Lucas, 1988), in which the growth-effects of different specializations can be easily compared (see Lanza and Pigliaru, 1994, 2000a, 2000b for an application to tourism).[8]

This framework considers a world formed of a continuum of small countries characterized by a two-sector economy (manufacturing and tourism), in which the

engine of growth is endogenous (learning-by-doing) and human capital accumulation takes place in the high-productivity sector, i.e. manufacturing. In addition to human capital, production in the slow productivity tourism sector requires the endowment of a natural resource as an additional input (Lanza and Pigliaru, 2000b). Within the world economy, the relative endowments of natural resources play a traditional role in determining the comparative advantage of individual countries. Countries with a high relative endowment of the natural resource allocate more workers in the tourism sector and a obtain a comparative advantage in tourism.[9]

As for the growth-maximizing specialization, it depends on the combination of two contrasting effects. On the one hand, physical output grows faster in manufacturing, because of the stronger learning-by-doing effect in the sector. On the other hand, the relative value of tourism services tend to increase over time, since they expand at a lower rate. The sum of these two components can be both positive or negative for tourism specialization, mainly depending on the degree of substitutability between tourism services and manufacturing commodities in consumers' preferences.

In this way –according to what we can label '*the optimistic interpretation*'– this highlights an important mechanism that allows tourism to maximize overall growth in spite of its lower potential for productivity growth. A sufficiently low (less than one) elasticity of substitution,[10] generates a strong 'terms of trade effect', consequently moving the international terms of trade in favors of tourism fast enough to more than offset the advantage in productivity growth enjoyed by manufacturing. This can reasonably happen if consumer preferences are such that tourism specialization (in particular, some types of tourism specialization) is highly valued in the international marketplace, i.e. if for the representative

consumer it is not easy to substitute holidays with cheaper and cheaper manufacturing goods, included non tourist recreational services.[11] This is the optimistic interpretation of our current evidence, in that the underlying mechanism implies tourism-led high steady-state growth of a sustainable nature. Indeed, growth is driven by continuous appreciation of tourism services rather than by physical expansion.

However, the same dynamic framework can also lead to a *'pessimistic interpretation'*. Consider an international marketplace where consumers are relatively willing to exchange holidays for cheaper goods, so that the demand elasticity of substitution is high (equal or larger than one), and the terms of trade effect cannot outweigh the productivity differential. In this case, *other things being constant*, the index of tourism specialization should play no role (or a negative one) in our regressions. Therefore, if high tourism-led growth is detected, its source must be the dynamics of output expansion, and not the dynamics of the terms of trade. In particular, a rapid enough increase in the rate of utilization of the natural endowment during the period under analysis can make a tourism country grow fast. This is the pessimistic interpretation of our current evidence, in that the underlying mechanism implies that tourism-led high growth is of an *un*sustainable nature. Once a further increase in the utilization of the natural resource is no longer possible, steady-state growth will be reached in which the terms of trade effect is weak and tourism countries grow slower than countries specialized in manufacturing. Clearly, according to this interpretation, our evidence would be reflecting a short-run phenomenon.

Concluding remarks

To obtain a quantitative assessment of the role played by tourism in growth, we have compared the relative growth performance of 15 "small tourism countries" in a sample of 143 countries, during the 1980-2003 period.

Our main finding is that STCs grew significantly faster than some other sub-groups usually considered (OECD, Oil, LDC, Small). Moreover, we document that in our sample the degree of tourism specialization we chose is strongly and positively related to economic growth. We also show that the positive performance of tourism countries is not significantly accounted for by traditional growth factors *à la* Mankiw, Romer and Weil. On the whole, tourism specialization appears to be an independent determinant.

A corollary of our findings is that the role played by the tourism sector should not be ignored by the debate about whether smallness is harmful for growth, given that half of the 29 countries classified as microstate are heavily dependent on tourism. Once this distinction is adopted, it can be seen that STCs perform significantly better than the remaining small countries. Therefore, in contrast with previous results in the literature, we suggest a more prudent conclusion – namely, smallness *per se* can be good for growth as long as it is combined with tourism specialization.

Of course, the simple 'stylized facts' we have presented cannot tell us whether the above-described performance is an isolated episode or whether are we dealing with something of a more persistent nature. Two interpretations have been discussed in the previous section, which are both compatible with the current positive economic performance of countries specialized in tourism. The first describes how tourism specialization can allow for fast growth in the long-run by means of favorable dynamics of the terms of trade. The second, far less optimistic,

reminds us that the high growth observed in our data can be an episode reflecting an unsustainable resource-consuming pattern of development.

To obtain reliable information on the policy implications for developing countries, future research should concentrate on identifying the relative importance of these two different mechanisms in explaining the positive performance of STCs. This aim can be pursued with the help of both structural econometric modeling of the role of tourism in economic growth, and possibly a more detailed cross-country dataset than the one from which we have derived our results, where new countries and other possible growth enhancing factors traditionally used in the 'growth literature' are accounted for. Also a robustness check where additional indicators of tourism specialization are used could be helpful in deepening the knowledge of the phenomenon.

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Endnotes

[1] See Sinclair (1998).

[2] On the relationship between smallness and tourism specialization, see Liu and Jenkins (1996), and Candela and Cellini (1997).

[3] See Read (2004) for a recent survey.

[4] This is clearly an *ad hoc* threshold. Armstrong *et al.* (1998) use a threshold of 3 million inhabitants. In other cases, a valued of 1,5 million is adopted. More on this issue in Srinivisan (1986); Armstrong and Read (1998).

[5] As an anonymous referee has remarked, tourism specialization would be more carefully measured by indexes of comparative advantage typically used in the industrial economics literature. This extention is left to further developments of our research.

[6] The continental dummies included in Easterly (2001) are sub-Saharan Africa, Asia, Europe and Central Asia, Middle East and North Africa, Southern-Central America, Northern America.

[7] We were not able to test for other traditional 'growth factors' such as human capital due to the lack of adequate information for the whole sample.

[8] Models such as Feenstra (1996) are also compatible with this approach. See also Valente (2005).

[9] The details of the role played by resource endowments in relative terms in generating the comparative advantage depends on the demand elasticity of substitution.

[10] For evidence favorable to this hypothesis, see Lanza (1997) and Lanza, Urga and Temple (2003).

[11] Adding non-homothetic preferences with tourism as the luxury good would yield further analytical support to this possibility. See Pigliaru (2002).