Quality and endogenous tourism: An empirical approach☆

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H I G H L I G H T S

- A theoretical model of endogenous growth and tourism is presented with data from Spain (1970—2010).
- Both, theoretical and empirical analysis, highlight the role of quality of tourism services in long-run economic growth.
- The TLG hypothesis is examined including quality of accommodations as an additional factor.
- We conclude that quality of accommodations had a positive long-run effect on Spanish economic growth in 1970—2010.

A R T I C L E   I N F O

A B S T R A C T

We propose a theoretical model and an empirical study that highlight the role of quality of tourism services and endogenous tourism in long-run economic growth. We study a theoretical growth model of international trade where tourism is the growth engine and quality of tourism services has a positive impact on long-term growth. We also provide an empirical analysis to test the relation between tourism, quality and economic growth in Spain over the period 1970—2010. Our results show that in the long run, tourist arrivals, quality of tourism accommodations, and foreign GDP have a positive effect on Spanish GDP. In the short term, changes in economic growth appear to lead to growth in tourist arrivals. Our findings support a two-way causal relationship between real GDP growth and tourism growth in Spain.

1. Introduction

The belief that international tourism can promote economic growth is known as the tourism-led growth (TLG) hypothesis. Several studies have analyzed the relationship between tourism and economic growth both from a theoretical and an empirical perspective. Both research lines, however, have experienced different development levels and have not always evolved in the same direction. Empirical studies have grown in profusion during the past ten years and have focused on the causality relationship between tourism and economic growth (Brida and Pulina (2010), Ivanov and Webster (2013) and Pablo-Romero and Molina (2013) provide reviews of published literature). Theoretical research has relied on Ramsey type models and study the impact of tourism on long-run growth (see Lozano, Gómez, and Rey-Maquieira (2008) and Albaladejo and Martínez-García (2013) and references therein). With few exceptions, theoretical models assume that the tourist attraction of countries is an exogenous characteristic given by their cultural, historical or natural endowment, where nothing can be changed. However, the spread of the tourist industry all over the world leads us to think that tourist attraction of countries is ceasing to be an exogenous characteristic. The tourist appeal is, on the contrary, being endogenously improved by the economy itself.

In this paper we ask about the endogeneity of tourism and about those factors that boost tourism and economic growth. We propose a theoretical model of endogenous growth and tourism which is checked with real data. Following Albaladejo and Martínez-García

(2013), we assume that tourism arrivals and the quality of tourism services can be endogenously enhanced, with the result that the long-run economic growth rate in the host economy is positively affected. The theoretical model inspires an empirical study to examine the question on the TLG hypothesis in Spain, over the period 1970–2010, taking into account the quality of tourism services. This allows us to test whether higher quality of tourism services can have a positive impact on long-term growth, as is suggested in our theoretical model.

The quality of tourism services is one of the main factors positively affecting the success of tourism destinations and many countries are adopting a policy of quality service in order to consolidate themselves as an alternative in these highly competitive markets (Go & Govers, 2000). For example, Aguiló, Alegre and Sard (2005) shows that the Balearic Islands is a competitive destination given that they have undergone a considerable restructuring process directed at offering improved quality. There exits an increasing interest in having knowledge about the mechanisms that boost the appeal of one country versus others and how this appeal will eventually promote economic growth in the host countries.

Quality of tourism services is a broad concept. It is remarkable the efforts devoted by academics to develops instruments to measure the quality of tourism services as perceived by the consumers. The most used instruments are SERVQUAL (Parasuraman, Zeithaml, and Berry 1988, 1991) and SERVPERF (Brown, Churchill, & Peter, 1993; Cronin & Taylor, 1992, 1994). However, in our empirical study we have focused on the supply of tourism services, specifically on the quality of tourism accommodations. Nicolau and Sellers (2010), and the references therein, highlight that quality of accommodations is strategic for increasing tourism competitiveness. We have followed this idea in the empirical part of this paper.

Our paper contributes to the literature in two ways. First, building on the paper by Albaladejo and Martínez-García (2013), it provides a simplified theoretical model of endogenous growth and tourism which can be contrasted with real data. Secondly, on the empirical side, it is the first attempt to examine the role of international tourism in economic growth, including quality of tourism accommodations as an additional factor. The paper is organized as follows. Section 2 presents the theoretical model where three different agents in the economic interact simultaneously: firms, consumers and tourists. The quality of tourism services and tourism arrivals promote the imports of foreign capital and economic growth. In Section 3 we contrast this model with real data. We use the cointegration test by Johansen, and the multivariate Granger causality tests based on an error correction model (ECM). Section 4 concludes.

2. A theoretical framework

One of the first attempts to provide a theoretical model of growth and tourism was the paper by Hazari and Sgro (1995), who provide a dynamic model of trade where the aggregate demand for non-traded goods by tourists and domestic residents is taken into account. Following this seminal paper, Hazari and Sgro (2004, ch. 12), Chao, Hazari, and Sgro (2005), Nowak, Sahli, and Cortés-Jiménez (2007) and Schubert and Brida (2011) have also developed Ramsey type models providing a theoretical link between tourism and growth. Other papers like Cerina (2007), Giannoni (2009), Rigall-i-Torrent (2008), Gómez, Lozano, and Rey-Maquieira (2008), Lozano et al. (2008) and Rey-Maquiera, Lozano, and Gómez (2009) study the connection between environment and tourism led economic growth.

The mainstream in this literature have considered that tourists arrive in the host country at a given exogenous rate, which is a parameter that is independent of the country's characteristics. In

contrast, Albaladejo and Martínez-García (2013) endogenize the rate at which tourists arrive. They assume that tourists arrive at a rate which depends on the quality of the tourist services, which can be endogenously improved by the country. To our knowledge this was the first attempt to link quality and endogenous growth of tourism countries in the literature. In this section we present a simplified version of this model which can be used as inspiration for the empirical study.

Let us assume a market economy with three different types of agents: domestic consumers; tourists and producers of a tradable good which can be used either by domestic consumption or investment and as tourism services.[1] Production of this good, *Y*, requires labor, domestic and foreign capital. Since foreign capital is a necessary input for production, it must be imported by trading domestic production with nonresidents, that is, tourists.

2.1. Output production and firms' behavior

Technology is described by a Cobb-Douglas production function with constant returns to scale and, in per capita terms, it can be written as

$$y = k_d^{\alpha} k_f^{\beta}, \quad 0 < \alpha + \beta < 1, \tag{1}$$

where k_d and k_f are the total per capita domestic and imported capital in the economy.

Assuming perfect competition, instantaneous profit maximization leads to the following demand functions for inputs:

$$(1 - \alpha - \beta)y = w, \tag{2}$$

$$\alpha \frac{y}{k_d} = r, \tag{3}$$

$$\beta \frac{y}{k_f} = \frac{rr}{p}. \tag{4}$$

where *w* is wage paid to labor and *r* and *rr* are respectively the net rate of return to households that own both domestic and imported capitals. The price *p* denotes the terms of trade.

2.2. Domestic consumers

Households own financial assets and labor. They hold assets in the form of ownership claims on domestic and imported capital. Thus per capita households' assets reads

$$\text{assets} = k_d + \frac{k_f}{p}. \tag{5}$$

Assets deliver a rate of return and labor is paid a wage. The total income received by households is the sum of asset and labor incomes. Households use the income that they do not consume to accumulate more assets, that is,

$$\frac{d(\text{assets})}{dt} = rk_d + \left(rr - \frac{\dot{p}}{p}\right)\frac{k_f}{p} + w - c - n \cdot \text{assets}, \tag{6}$$

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[1] In Albaladejo and Martínez-García (2013) a more complex model with two kinds of productions (for domestic consumption/investment and for tourism) is analyzed. However, assuming different goods do not change the model's insights in this paper. Thus, the simplification of a sole good is justified on the basis of a clearer exposition.