International Review of Economics and Finance xxx (2016) xxx–xxx

Contents lists available at ScienceDirect

International Review of Economics and Finance

journal homepage: www.elsevier.com/locate/iref

Welfare effects of tourism-driven Dutch disease: The roles of international borrowings and factor intensity

Ping-ho Chen [a,*], Ching-chong Lai [a,b,c], Hsun Chu [d]

[a] Department of Economics, National Cheng Chi University, Taiwan, ROC
[b] Institute of Economics, Academia Sinica, Taiwan, ROC
[c] Institute of Economics, National Sun Yat-Sen University, Taiwan, ROC
[d] Department of Economics, Tunghai University, Taiwan, ROC

ARTICLE INFO

Article history:
Received 24 May 2015
Received in revised form 2 February 2016
Accepted 3 February 2016
Available online xxxx

JEL classification:
F11
F41
R13

Keywords:
Dutch disease
International borrowings
Factor intensity
Tourism expansion

ABSTRACT

This paper develops a two-sector dynamic general equilibrium model to analyze the welfare implications of the Dutch disease induced by the demand shock arising from a tourism boom. Compared with the existing literature, we introduce two new elements, namely, international borrowings and the relative factor-intensiveness, and examine their interplay with the welfare effects of the Dutch disease. We show that (i) when the household can freely borrow from the world financial market, the Dutch disease will not affect welfare; (ii) when the economy is closed to the world financial market, the Dutch disease is beneficial (harmful) to the residents' welfare if the tourism good sector is capital-intensive (labor-intensive). Moreover, this paper provides a simulation analysis to examine the welfare effect of both the steady-state and the transitional responses arising from a tourism boom.

1. Introduction

International tourism is undoubtedly a flourishing industry the world over. According to a report by the World Tourism Organization (UNWTO), receipts from international tourism in destinations around the world recorded growth of 4% in 2012, reaching a value of US$ 1075 billion. International tourist arrivals also exhibited 4% growth, amounting to 1.035 billion in 2012. Fig. 1 shows the receipts from international tourism during the period 1995–2011. In view of the ongoing globalization, it would be reasonable to expect that the upward trend will continue in the future. For a country dedicated to promoting tourism, such an expansion in tourism is naturally welcomed because more visitors can bring income to the local economy. However, as documented by many studies (e.g., Chang et al., 2011, Gooroochurn and Thea Sinclair, 2005, Schubert, 2009), a tourism boom may also generate undesirable consequences to residents of the host country, such as congestion in regard to tourism-related consumption and infrastructure, and the degradation of environmental quality.

* Corresponding author at: Department of Economics, National Cheng Chi University, 64, Sec. 2, Tzu-nan Rd., Taipei 116, Taiwan, ROC. Tel.: +886 2 27822791#665.
E-mail address: 97258503@nccu.edu.tw (P. Chen).

http://dx.doi.org/10.1016/j.iref.2016.02.004
1059-0560/

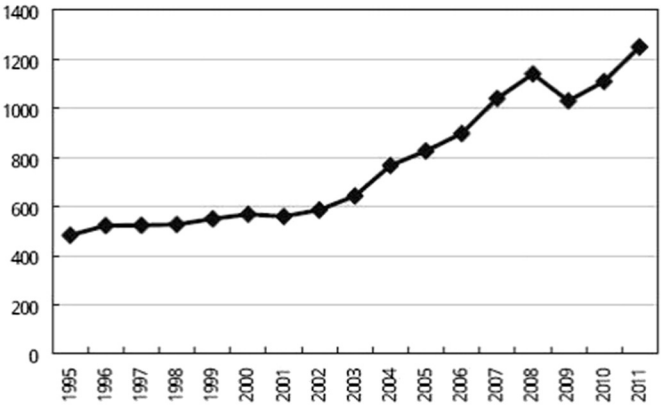

Fig. 1. International tourism receipts (unit: US$ billion). Data Source: The World Bank http://data.worldbank.org/indicator/ST.INT.RCPT.CD/countries?display=graph.

Among those negative consequences caused by the expansion in tourism, the problem of a "Dutch disease" is quite intriguing but has as yet received relatively little attention.[1] Copeland (1991) is the first study to discuss the possibility of the tourism-driven Dutch disease. He emphasizes that tourists normally consume local non-traded goods such as restaurant meals, hotel services, and heritage. With this understanding, a tourism boom tends to boost the demand for these non-traded goods and thus moves the productive factors away from the traded (manufacturing) sector to the non-traded sector. An expansion in the non-traded sector is coupled with a contraction in the traded sector, thereby leading to the emergence of the Dutch disease.

In the previous literature, the results regarding the welfare consequences of the tourism-driven Dutch disease are not conclusive. In his static trade model, Copeland (1991) shows that welfare is improved by a boom in tourism even if the Dutch disease can occur. By developing a two-sector dynamic specific-factor model, Chao et al. (2006) investigate the effects of an expansion in tourism on capital accumulation and welfare. They conclude that the change in welfare following a tourism boom is ambiguous, and the welfare effect could be negative if the loss from the Dutch disease is sufficiently large. Chang et al. (2011) introduce congestion externalities of tourism in a two-sector dynamic model similar to Chao et al. (2006). They show that the presence of congestion will lower the possibility of the Dutch disease. Moreover, the optimal taxation for correcting the externalities of tourism is discussed in their normative analysis.[2]

The aforementioned contributions have some common simplifications. First, as to examining the effect of international tourism, the role of international loans is ignored in these studies. Second, these studies adopt a specific-factor model; particularly, a physical capital input is not needed to produce the tourism goods. In this paper, we drop these two assumptions and study how they interactively affect the welfare implications of the tourism-driven Dutch disease. We show that, when the country is closed to the world financial market, the welfare effect of the Dutch disease depends on the relative factor-intensity in the tourism sector. This welfare effect, however, will be neutralized if the country can borrow from a perfect world financial market.

There are several reasons to justify why it is relevant to introduce international borrowings in the tourism economy. First, the globalization leads not only to the rapid growth of international tourism, but also to the formation of a global financial market, in which international borrowings become easier. Second, the flow of international capital to developing countries follows an upward trend, which displays an increasingly important capital account (Vegh, 2013, p. 672). Third, the empirical evidence shows that FDI in tourism services tends to be sensitive to international borrowing conditions (e.g., Dabla-Norris et al., 2010). Based on these observations, it seems reasonable to bring the role of international financial markets into the picture when we deal with the tourism economy. Accordingly, this paper considers a small open economy model featuring international borrowings, and studies the role played by international borrowings in the welfare effects of the Dutch disease upon experiencing a boom in tourism. We find that, under a small open economy setting, the Dutch disease is welfare neutral in the presence of a perfect capital market. Intuitively speaking, a tourism boom directs resources to the tourism sector. This affects the incentives for capital accumulation, and hence affects consumption and welfare in an economy with no international borrowings. By contrast, in a small open economy with a perfect world capital market, such a linkage is absent because households can borrow from the international capital market (at a fixed cost, i.e., the world interest rate) to offset the change in capital accumulation, so that the level of

[1] The Dutch disease originally refers to the adverse effects on Dutch manufacturing of the natural gas discoveries in the 1960s. The wealth increases following the resource discoveries had a systematic impact on the sectoral allocation of resources, and led to a shift in productive resources from the traded good sector to the non-traded good sector. Previous studies dealing with the possibility of the emergence of the Dutch disease include Corden and Neary (1982); Corden (1984); Torvik (2001), and Matsen and Torvik (2005).

[2] There are some other contributions in this field that are not so directly related to our present paper. Hazari et al. (2003); Nowak et al. (2003) and Nowak and Sahli (2007) use static models to examine the welfare effect of a tourism boom. Chao et al., (2010a) consider a three-good static model and use it to examine the optimal import quotas in an economy with tourism. Chao et al. (2010b) focus on the effects of foreign aid on the welfare and wage inequality in a small open economy with tourism. Hazari and Sgro (1995) and Schubert (2009) adopt general equilibrium dynamic models, but they only consider a single commodity sector and hence cannot deal with the issue of the Dutch disease.

Please cite this article as: Chen, P., et al., Welfare effects of tourism-driven Dutch disease: The roles of international borrowings and factor intensity, *International Review of Economics and Finance* (2016), http://dx.doi.org/10.1016/j.iref.2016.02.004