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# Tourism and economic development in a cash-in-advance economy

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**Abstract**

This paper examines the impact of tourism on welfare in a cash-in-advance economy. As a result of the expansion in tourism, the price of the non-traded good increases. This gives rise to a terms-of-trade improvement. However, the cash-in-advance constraint causes a distortion in consumption. For tourism demand, where the gain from the terms-of-trade improvement dominates (does not dominate) the loss from the consumption distortion, tourism is welfare-improving (welfare-reducing). A similar condition for welfare improvement (deterioration) holds for a model of capital inflow and endogenised tourism.


*Keywords:* Cash in advance; Economic development; Tourism

## 1. Introduction

Tourism has been promoted in many countries as part of the solution to their economic problems. Tourism is seen as an important source of foreign exchange earnings, employment of domestic labor and a contributor to economic growth. For example, tourism spending has increased in Hong Kong economy increasing from US$ 7.28 billion or 4.44% of its GDP in

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1998 to US$ 9.92 billion which is 6.09% of its GDP in 2002.[1] In the era of globalization, promoting tourism and liberalizing financial markets especially for the countries in the Asia Pacific region are seen as prerequisites to development.

In the tourism literature so far most studies only consider the effects of tourism on resource allocation, welfare and growth in a real economy.[2] Since most tourists arrive and consume the goods that are not traded internationally, an expansion of tourism is equivalent to an increase in the exports of the non-traded goods. Tourism is a demand shock that increases the prices of the non-traded goods and thus improves welfare via an improvement in the terms of trade. In a dynamic growth model, Hazari and Sgro (1995) have shown that while an increase in tourism lowers domestic capital accumulation, it nevertheless increases foreign imported capital accumulation thereby raising domestic welfare via the higher consumption of goods.

Nonetheless, in reality, money is needed for transactions. Foreign tourists buy domestic goods, but purchases of goods require cash in advance (CIA). This CIA constraint creates a demand distortion in the economy. Though an expansion of tourism improves the terms of trade, the higher prices of the non-traded goods may need more cash for transactions. This can worsen the CIA-caused distortion in consumption and thus lower welfare. We show that an increase in tourism may not necessarily benefit the welfare of the residents in a monetary economy. However, for a large tourist demand, the gain from the terms of trade turns out to be a dominant factor in determining the welfare effect of tourism.

It is generally acknowledged, amongst both theoretical and applied economists, that the presence of distortions is pervasive in most economies. In a celebrated paper, Bhagwati (1971) defines four types of distortions involving the divergences among the domestic rate of substitution (DRS), the domestic rate of transformation (DRT), and the foreign rate of transformation (FRT). There exists a large body of knowledge about production distortions on DRT and FRT, but demand or consumption distortions related to DRS have been neglected in the literature. The CIA distortion in consumption considered in this paper provides an example that the DRS may be different from the DRT. This divergence yields another channel for the study of a tourism boom on the economy.

This paper is organized as follows. Section 2 sets up the model and Section 3 examines the welfare effect of tourism. In Section 4, we endogenise the tourism activity and consider the effects of foreign capital inflows on the economy. Section 5 provides conclusions.

## 2. The model

Consider a small open economy that produces two goods with labor and capital: a traded good $X_1$ and a non-traded $X_2$. Assuming that the price of the traded good is unity, the domestic relative price of the non-traded good is $p$.[3] The production-side of the economy can be summarized by the GDP function, which is defined as: $G(1, p, K) = \max \{X_1 + pX_2$:

[1] See “Statistics on Inbound Tourism” in Hong Kong Monthly Digest of Statistics, December 2003.

[2] See Copeland, 1991 and Hazari and Ng, 1993 for detailed discussions.

[3] Money serves as the numeraire for the economy.