Tourism and **unemployment**: The effects of a boom in **tourism demand** on unemployment

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Objectives | The aim of the research is to investigate if an increase in inbound tourism demand contributes to a reduction of the unemployment rate in a small economy with high unemployment and no access to international financial markets. The demand of foreign tourists may raise either due to exogenous reasons (e. g. an increase in foreigners' income) or because of advertising efforts, which, of course, have to be financed.

Methodology | We employ a dynamic two-sector model of an economy populated by a representative household, which consumes an internationally traded and domestically produced good and domestically produced tourism services, and supplies labour, and two representative firms, one producing tourism services, the other producing the internationally traded good, by using labour as the only input in production. The labour market is characterized by search unemployment of the Pissarides type. Unemployment thus results from time consuming and costly matching of job vacancies, posted by firms, with households who search for a job (see, e. g., Shi and Wen (1997)). There are two labour markets: One for the sector producing the internationally traded good, and one for the tourism sector, as it is assumed that labour cannot move instantaneously between the two sectors, implying that the sectoral wage rates do not have to be equal.

One characteristic feature of the model is the assumption that the economy has no access to the international financial markets; that is, it cannot borrow from abroad to finance domestic consumption or advertising expenditures. We think that this polar case can be justified with reference to the current environment of financial turmoil and fiscal budget crises. The current account has thus to be in balance all the time, implying that imports of the internationally traded good and advertising expenditures abroad have to be completely financed with revenues created by tourism inflows. Foreign tourism demand depends on the relative price of tourism (endogenously determined in the model), and positively on advertising expenditures, as in Schubert and Brida (2009).

To obtain first results, we concentrate on the steady-state effects of changes in foreign tourism demand. This can also be justified by taking into account that without any capital formation, the dynamics emerge only in labour markets and are quite fast (see, e. g., Schubert (2011), who shows that capital adjustment is slow, whereas labour adjusts quickly). Despite the simplicity of the model, it is impossible to derive unambiguous analytical results. Thus we resort to numerical simulations based on a reasonable calibration of the model. The baseline calibration reflects an economy which depends substantially on tourism (Share of tourism sector in GDP 12.5%) and suffers from high unemployment (Overall unemployment rate 13,4%, Unemployment rate in Tourism sector 13%, in Traded good sector 13.5%).

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Main results and contributions | Numerical simulations show that the effect of an exogenous 15.5% increase in foreign tourism demand on the economy's overall unemployment rate is negligible, as the unemployment rate in the tourism sector falls by 0.9 percentage points, but increases by 0.2 percentage points in the traded goods sector. The reason for the small and opposite effects on sectoral unemployment rates is that the increase in revenues from foreign tourists allows for higher consumption of the internationally traded good by importing more, in turn lowering thus agents' need to cut back consumption and to accept lower wage rates. As eventually labour moves from the traded goods sector into the tourism sector, keeping total labour supply roughly constant, unemployment in the former sector increases and falls in the latter.

If the increase in tourism demand is induced by higher advertising activities and expenditures abroad, the economy's overall unemployment rate substantially drops by 3.6 percentage points, as the unemployment rates in the tourism sector and in the internationally traded goods sector fall by 2.5 and 3.7 percentage points, respectively. The reason for this sharp reduction in unemployment can be found in the fact that advertising has to be financed, e. g., by increasing taxes. Thus, this type of shock can be viewed as a positive external demand shock and a tax shock, inducing domestic households to substantially cut back consumption of the internationally traded good and reducing the household's reservation wages, which translates into lower bargained wages and thus higher labour demand and more job vacancies from firms, facilitating the matching of job searching households with posted jobs. Hence, unemployment in both sectors falls.

To the best of our knowledge, this is the first model introducing search unemployment into a two-sector model where one of the economy's sectors is the tourism industry.

Limitations | The model used is a first model which abstracts from (i) capital formation and (ii) international capital flows by assuming that the current account is closed. Also, the focus is entirely on steady-state effects. Extensions are therefore obvious: capital formation can be introduced as well as some access to international financial markets, modelled by means of an upward-sloping supply curve of debt, and the dynamic transition can be analyzed.

Conclusions | An increase in inbound tourism flows (higher tourism demand) in an economy which has no access to international financial markets has almost no effects on the economy's overall unemployment rate if the increase in tourism demand is exogenous, and leads to small changes in sectoral unemployment rates in opposite direction. However, if the increase in tourism demand comes not for free but is induced by higher advertising expenditures, the economy's overall unemployment rate, as well as the sectoral unemployment rates substantially drop.

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