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Bilateral mobility in dualistic models ☆

Ana Paula Martins *

Faculdade de Ciências Económicas e Empresariais, Universidade Católica Portuguesa, Cam. Palma de Cima, 1649-023 Lisboa, Portugal

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Abstract

In the standard Harris–Todaro framework, migration flows arise as disequilibrium driven movements of the population. It is the purpose of this research to modify the simple dualistic model in order to account for the existence of permanent migrants, i.e., of individuals who work in another country without changing their original nationality. Or, in the rural–urban interpretation of the model, of people who live in an area but work in another — ultimately, commuters.

The framework is applicable to study differences in industry (or occupation) unemployment rates and sensitivity of such rates to easier (multiple) job access of certain sub-groups. It may also be seen as an attempt to study theoretically what is the long-run impact of partial integration of labor markets on macroeconomic equilibrium aggregates.

JEL classification: O15; O18; R23; J38; J42; J61; J62; F22

Keywords: Migration; Mobility; Minimum wages; Segmented labor markets; Regional labor markets; Commuting; Immigration quotas

1. Introduction

This paper enlarges the Todaro (1969) and Harris-Todaro (1970) model of a dualistic economy.[1] The philosophy behind this model has had a wide range applications — it sheds light on issues concerning migration,[2] inter-sector mobility, dualistic and segmented (labor) markets,[3] and even implications of minimum wage[4] laws with partial coverage. International and development economics literature[5] dealt with the welfare implications and optimal policies to achieve efficiency.

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* Tel.: +351 217214248; fax: +351 217270252.
E-mail address: apm@europa.fcee.ucp.pt.

[1] See Bhattacharya (1993) for a recent survey of the theoretical literature.

[2] See Stark (1991) for recent applications. Also Bhattacharya (1993) and Borjas (1999).

[3] See Taubman and Wachter (1986) and McNabb and Ryan (1990) for recent surveys. Literature on segmented labor markets, in which Doeringer and Piore (1971) is a reference mark, seems to have followed an independent path of international economics. In a more distant but related field, we find the dual scenario in efficiency wage models – surveyed in Weiss (1990) –, as in Shapiro and Stiglitz (1984) or Bulow and Summers (1986).

[4] See, for example, Mincer (1976) and McDonald and Solow (1985). See also Brown et al. (1982) for a survey, and, more recently, Brown (1999).

[5] See, for example, Bhagwati and Srinivasan (1974), Srinivasan and Bhagwati (1975), Todaro (1976).

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In the standard Harris–Todaro framework, migration flows arise as a short-run response to disequilibrium. It is the purpose of this research to modify a simple version of the dualistic model in order to represent the long-run existence of a pool of migrants, i.e., of individuals who work in another country without changing their own country nationality. Or, in the rural–urban- or rather, regional-interpretation of the model, of people who live in an area but work in another — ultimately, commuters.

The H.–T. model has been criticized for generating a too high urban unemployment rate. What generates unemployment in the dualistic model is the fact that people in the rural sector do not have access to the urban higher wage jobs without actually moving to the "city" — and face the possibility of unemployment. That is, short-run across sector mobility is impossible. Releasing this feature of the model, the long-run equilibrium exhibits a lower level of high-wage sector unemployment rate.

The Harris–Todaro framework has been previously modified in order to include the possibility of people in one sector to be able to search for the other sector jobs. This was considered in models such as Fields (1989) or McDonald and Solow (1985): in their models, people in the secondary- the lower wage-sector(s) may search for or have access to primary sector employment. Mobility was also introduced in the framework by Mincer (1976) by means of a turnover or separation parameter in the primary sector employment dynamics[6]. Our present research also studies the impact of the access to another region or sector employment, but considers it explicitly and more generally: there is an exogenous number of people in each region or country employed in the other. Mobility is assumed to be bilateral, i.e., not only can people of the lower wage sector apply for the high wage sector jobs, as unemployed people in the primary sector can hope for secondary sector employment. The two quotas are allowed to move independently.

The approach we follow may have applications in the understanding of several economic phenomena. In an international sense, we can consider that we reproduce the existence of immigration and/or emigration quotas[7] — but with free national affiliation in the long-run. In this context, we distinguish two labor movement categories: migration cum change in nationality – and, in the long-run, these migrants are or become indistinguishable from native workers[8]; and migrants who keep their original nationality – these being constrained exogenously as by a quota, the change of which we also consider. Notice that this distinction brings realism to the model: migrants are, in fact, distinguishable – legally – from natives in every country of the world; and there is always, in any country, a proportion of the resident population in this category, which changes with economic policy regulation. (Moreover, immigration requests are sometimes associated to an employer justification, characterized in the model by an absence of temporary migrants unemployment.)

We may look at the dualism as sector specific and as if there are two types of labor – as in Bhagwati and Hamada (1974), and many labor economics applications – that cannot immediately switch from one sector to the other. Then, the introduction of the possibility employment in another sector allows for the analysis of the consequences of multiple job specialization. For instance, an increase in the quotas may be seen as a more flexible or less specialized educational system. In as far as union affiliation is concerned – as in Calvo (1978) and McDonald and Solow (1985) –, we introduce the possibility of workers of a certain union to apply for jobs usually available to other union members (in B.–H. framework), or nonunionized jobs (H.–T. type) and vice-versa.

The possibility of switching also suggests the need for different unemployment definitions. Consider the existence of commuters. If we look at local (or regional) unemployment measures, we must distinguish between unemployment of people who live in a particular area from unemployment of people who apply for jobs of that area. The difference between people that live in the area and those that are employed in that same area – apparent local unemployment – is an aggregate which, in general, will differ from the previous two.

The dualistic scenario is considered in two varieties: we take the H.–T. case where the rural or secondary sector wage is market determined; and we consider the B.–H. structure where in both sectors the wage is institutionally fixed — but higher in one of the sectors.[9] In the first case, the increase of commuting possibilities (by means, for example, of better

[6] His model also generates a lower level of high wage unemployment rate than the H.–T. case but due to the fact that some primary sector vacancies are "reserved", i.e., job rotation in each period in the primary sector is not complete. Mincer's framework can be seen as an attempt to bring short-run considerations to the model.

[7] Nowadays, immigration restrictions seem to be a more current practice in the developed world. However, emigration restrictions – or encouragement – are also known in history; for instance, they were used by Portuguese sovereigns in an attempt to control the outflow of people to the colonies — see Engerman and das Neves (1996) for a historical appraisal.

[8] These are the migration flows studied in the traditional dual model.

[9] See Martins (1996) for a synthesis of the hypothesis, analogies and differences, underlying both cases and corresponding corner solutions. Also Martins (1995a,b) for intermediate scenarios.