World Academy of Science, Engineering and Technology
International Journal of Mathematical and Computational Sciences
Vol:14, No:12, 2020

Impact of Displacements Durations and Monetary Costs on the Labour Market within a City Consisting on Four Areas a Theoretical Approach

Authors : Aboulkacem El Mehdi

Abstract : We develop a theoretical model at the crossroads of labour and urban economics, used for explaining the mechanism through which the duration of home-workplace trips and their monetary costs impact the labour demand and supply in a spatially scattered labour market and how they are impacted by a change in passenger transport infrastructures and services. The spatial disconnection between home and job opportunities is referred to as the spatial mismatch hypothesis (SMH). Its harmful impact on employment has been subject to numerous theoretical propositions. However, all the theoretical models proposed so far are patterned around the American context, which is particular as it is marked by racial discrimination against blacks in the housing and the labour markets. Therefore, it is only natural that most of these models are developed in order to reproduce a steady state characterized by agents carrying out their economic activities in a mono-centric city in which most unskilled jobs being created in the suburbs, far from the Blacks who dwell in the city-centre, generating a high unemployment rates for blacks, while the White population resides in the suburbs and has a low unemployment rate. Our model doesn't rely on any racial discrimination and doesn't aim at reproducing a steady state in which these stylized facts are replicated; it takes the main principle of the SMH -the spatial disconnection between homes and workplaces- as a starting point. One of the innovative aspects of the model consists in dealing with a SMH related issue at an aggregate level. We link the parameters of the passengers transport system to employment in the whole area of a city. We consider here a city that consists of four areas: two of them are residential areas with unemployed workers, the other two host firms looking for labour force. The workers compare the indirect utility of working in each area with the utility of unemployment and choose between submitting an application for the job that generate the highest indirect utility or not submitting. This arbitration takes account of the monetary and the time expenditures generated by the trips between the residency areas and the working areas. Each of these expenditures is clearly and explicitly formulated so that the impact of each of them can be studied separately than the impact of the other. The first findings show that the unemployed workers living in an area benefiting from good transport infrastructures and services have a better chance to prefer activity to unemployment and are more likely to supply a higher 'quantity' of labour than those who live in an area where the transport infrastructures and services are poorer. We also show that the firms located in the most accessible area receive much more applications and are more likely to hire the workers who provide the highest quantity of labour than the firms located in the less accessible area. Currently, we are working on the matching process between firms and job seekers and on how the equilibrium between the labour demand and supply occurs.

Keywords : labour market, passenger transport infrastructure, spatial mismatch hypothesis, urban economics
Conference Title : ICSRD 2020 : International Conference on Scientific Research and Development
Conference Location : Chicago, United States
Conference Dates : December 12-13, 2020