

Urban Labor Economics

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Introduction to Part 1

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There is a vast literature on search and matching theory that emphasizes the importance of flows in the labor markets (Mortensen and Pissarides, 1999, Pissarides, 2000). These models, now widely used in labor economics and macroeconomics, have highly enriched research on unemployment as an equilibrium phenomenon, on labor market dynamics and cyclical adjustment. The starting point of the analysis is to recognize that labor markets are characterized by search frictions. This means that it takes time for workers to find a job and for firms to fill up a vacancy so that unemployed workers and vacant jobs can coexist in equilibrium, a feature not possible in a standard Walrasian world (i.e. a frictionless world in which workers and firms can move costlessly and instantaneously between working and non-working). Because of these search frictions, the contacts between workers and firms depend on the market variables and the arrival rate of contacts for workers increases with the number of unemployed searchers while the arrival rate of contacts for firms increases with the number of vacant firms. A constant-return to scale function is a convenient way of capturing these properties, which is referred to as the “matching function” (Pissarides, 1979). Indeed, the matching function relates job creation to the number of unemployed, the number of job vacancies and the intensities with which workers search and firms recruit. It successfully captures the key implications of frictions that prevent an instantaneous encounter of trading partners.

However, in all these models the spatial dimension is absent. However, it has been recognized for a long time that distance interacts with the diffusion of information. In his seminal contribution to search, Stigler (1961) puts geographical dispersion as one of the four immediate determinants of price ignorance. The reason is simply that distance affects various costs associated with search. In most search models, say for example Diamond (1982), distance between agents or units implies a fixed cost of making another draw in the distribution. In other words, a spatial dispersion of agents creates more frictions and thus more unemployment.

This is a weakness of the analysis since empirical evidence support the idea of a clear *spatial dimension of the labor markets* (see for example the survey of Crampton, 1999). In this first part of the book, we explicitly deal with the urban aspects of search-matching models. We will first present the simple

models of urban search-matching in chapter 1. The benchmark model is when search is exogenous but affects the matching function. However, a crucial channel through which space affects the labor market is through distance to jobs. Indeed, workers who live further away from jobs may have poorer labor market information and be less productive than those living closer to jobs (Seater, 1979). This is particularly true for younger and/or less-skilled workers who rely heavily on informal search methods for obtaining employment (Holzer, 1987).¹ The reliance on these informal methods of job search suggests that information on available job opportunities may decay rapidly with the distance from home (Ihlanfeldt and Sjoquist, 1990). We thus relax the assumption of fixed and exogenous search effort and develop a model in which distance to jobs affects workers' search efficiency. We study its impact on land and labor market outcomes. In chapter 2, we further extend the basic urban search-matching models in the case when training costs matter and when workers' relocation costs are not anymore equal to zero. Finally, in chapter 3, we study the case of non-monocentric cities. An interesting case is when there are a finite number of job centers and a continuum of jobs as in Marimon and Zilibotti (1999). In that case, workers will have different productivities while firms will have different job requirements. Some jobs will be matched even though both workers and firms could do better in terms of surplus.

The interaction between space and labor markets is thus complex. The aim of this part is to capture some of the phenomenons at work and, in particular, to account for the spatial dimension of search. In particular, two questions will be investigated in this part. Does the efficiency results of decentralized search equilibria (Lucas and Prescott 1974, Moen 1997) still hold when the spatial dispersion of agents creates frictions? And does the search equilibrium strongly depends on these spatial terms?

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¹We will investigate the issue of social networks in more details in the last chapter of this book.

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