Spatial Mismatch, Poverty, and Vulnerable Populations

Laurent Gobillon and Harris Selod

Contents

Abstract

Spatial mismatch relates the unemployment and poverty of vulnerable population groups to their remoteness from job opportunities. Although the intuition initially applied to African Americans in US inner cities, spatial mismatch has a broader validity beyond the sole US context. In light of a detailed presentation of the mechanisms at work, we present the main results from various empirical tests of the spatial mismatch theory. Since key aspects of that theory remain to be tested, we also discuss methodological approaches and provide guidance for further research. We derive lessons for policy implications and comment on the appropriateness of related urban policies.

Keywords

Location choice · Labor market outcome · Unemployed worker · Spatial mismatch · Labor market discrimination

L. Gobillon (✉)
Paris School of Economics – CNRS, Paris, France
e-mail: laurent.gobillon@psemail.eu

H. Selod
The World Bank, Washington, DC, USA
e-mail: hselod@worldbank.org; hselod@gmail.com

M. M. Fischer, P. Nijkamp (eds.), *Handbook of Regional Science*,
https://doi.org/10.1007/978-3-642-36203-3_7-1

1 Introduction

Spatial mismatch is a topic and a theory that relates unemployment and poverty to the structure of cities. It covers a variety of situations according to which the residents of poor neighborhoods are adversely affected by their physical disconnection from places where jobs are located. The focus is thus essentially on large urban areas where such disconnections are likely to be found. Having emerged in the 1960s in the context of racially segregated US cities, the initial intuition quickly became a key topic in urban economics and remained one for more than half a century. Its relevance is now apparent in several other contexts, including for cities of European countries and sprawling metropolitan areas in Asia, Africa, and Latin America.

The spatial mismatch hypothesis was originally formulated by economist John Kain with an initial and exclusive focus on the African American poor in inner cities. The genesis of the hypothesis is rooted in the history of US cities, where, as early as in the 1940s, urban jobs that were initially concentrated in city centers had begun to decentralize to more peripheral locations. This movement went along with the rapid expansion of middle- and upper-class residential suburbs almost exclusively populated by white households. At the same time, the bulk of African Americans were maintaining their residences in city centers, a situation which the author of the spatial mismatch hypothesis attributed to housing market discrimination against blacks that prevented them from suburbanizing to the same extent as whites. The combination of these two trends caused the emergence of the typical US city structure where blacks live far away from the job offers corresponding to their skill levels and that they could apply to. Kain (1968) was the first to hypothesize that the disconnection between places of residence and places of employment could be a key contributor to the high unemployment, low wages, and poverty in the black ghettos of central cities.

A very abundant literature followed Kain's seminal paper for more than four decades and variants were expressed. One noticeable change in focus was the role of race in the "workings" of spatial mismatch. By assuming residential segregation against blacks, the initial spatial mismatch hypothesis clearly put race on the agenda but limited its role to a factor explaining residential immobility. It thus presented race only as a cause of spatial mismatch. After two decades of empirical work, however, whether blacks were really disconnected from or affected by distance to job opportunities became the center of a controversy as a study on Chicago concluded to the opposite and suggested that *race* rather than *space* was in fact the main determinant of the bad labor market outcomes of blacks in inner cities (Ellwood 1986). Following this study, whether spatial mismatch was a relevant explanation of black labor market outcomes polarized the debate for several years in spite of an increasing number of sources documenting the physical disconnection of blacks from jobs (and likely from job opportunities) and although subsequent empirical papers, including on Chicago, were finding that spatial mismatch did play a key role in black unemployment. The opposition between the race and space arguments then gradually disappeared from the literature.

Most contributions to the literature on spatial mismatch are empirical papers that try to assess a link between the disconnection from jobs and bad labor market outcomes (see Ihlanfeldt and Sjoquist 1998 and Gobillon et al. 2007 for extensive surveys). In this literature, the main challenge throughout has been to establish causality and to isolate the contribution of spatial mismatch to labor market outcomes from other spatial and nonspatial explanatory factors. Although some authors have looked at the effect on wages and labor market participation, most papers focus on unemployment so that it is probably not exaggerated to present spatial mismatch as mainly a spatial theory of unemployment. Surprisingly, however – and this is probably one of the few examples in the history of economic theory – it is only starting in the late 1990s, this is to say *after* the publication of many empirical papers on the topic, that the theoretical works on spatial mismatch began to emerge. The publication of spatial mismatch models gave the initial hypothesis the status of a fully-fledged theory rather than being just an intuition. These models typically shed light on (a) the *causes* of spatial mismatch, i.e., on why blacks in US cities live in areas that are physically distant from jobs – and in some cases proposing alternative explanations to housing market discrimination – and on (b) the *consequences* of spatial mismatch, shedding light on several competing mechanisms to explain how physical disconnection from jobs can affect the labor market outcomes of black workers. These models provided an analytical framework to think about spatial mismatch. By formalizing the diversity of potential mechanisms, they also provided a sound basis to derive the policy implications associated with the different mechanisms. Models of spatial mismatch also helped clarify several of the drawbacks and misunderstandings regarding the scope and interpretation of related empirical work. These models for instance provided interesting insights on what the counterfactual of spatial mismatch should be and implications for empirical tests: Should one compare the outcomes of black and white subgroups exposed to different levels of disconnection from jobs? Or should the test focus instead on an estimation of what the outcomes of black inner-city unemployment would be under a less intense disconnection from jobs? Theory also helped discard a number of inadequate tests, for instance, the idea that short commutes provide an interpretable indication regarding the level of spatial mismatch (as short commutes may indicate both neighborhood proximity to or remoteness from jobs if the only jobs that remain accessible are the local ones). Spatial mismatch models also paved the way for refined empirical tests of specific spatial mismatch mechanisms.

Over the past decade, new directions in the spatial mismatch literature have also emerged.

Some authors have argued that race and space, rather than being alternative explanations of black unemployment, may *combine* to explain the harmful effects of spatial mismatch. The interaction between race and space may probably reflect several mechanisms, not all of which are clearly spelled out at present. One underlying assumption is that blacks are not affected by distance to jobs in the same way as whites. Another underlying assumption is that proximity to particular types of low-skill jobs may matter. The reason why this should be the case is the subject of recent research and illustrates the tendency of the literature to move toward the

elicitation and exploration of finer and subtler mechanisms. Some works have also focused on other minority groups (e.g., Hispanics and Asians in US cities) as well as on women. These studies raise interesting research questions on whether and why different groups could be differently affected by spatial mismatch. Are some groups simply less exposed to spatial mismatch or less affected by spatial mismatch? In other words, do some groups reside closer to jobs or are they simply less affected by distance from job opportunities all things else equal? Are there particular mechanisms that are more relevant for some groups than for others – and why should this be the case? The gender approach to spatial mismatch also raises challenging questions as the location choices of women may be more constrained than those of men and given other gender specificities with regard to more complex commuting patterns, labor market participation, or time schedules (which may also depend on the life cycle of individuals, with activities such as picking up children from school being specific to relatively young individuals). There is also an increasing number of attempts to study spatial mismatch in non-US contexts, especially in European cities (which exhibit spatial structures that differ markedly from US cities) and in developing countries where lack of control over rapid urbanization often results in severe urban sprawl.

Finally, the various analyses of spatial mismatch lead to a diversity of policy implications. Depending on the context and mechanisms potentially at play, policy makers may consider options as diverse as the adoption and implementation of anti-discriminatory laws, the facilitation of residential mobility, neighborhood regeneration policies (in particular through the setup of enterprise zones designed to attract jobs), the development or subsidization of public and private transport, or the spatial dissemination of information on jobs.

In what follows, we present the main theory, empirics, and policy issues surrounding spatial mismatch.

2 The Theory of Spatial Mismatch

"Understanding" spatial mismatch requires a focus not only on the labor market mechanisms leading to unemployment, low wages, and poverty but also on what causes ethnic minorities to be physically disconnected from jobs in the first place. Several complementary explanations that can be replaced in a historical perspective have been put forward. They revolve around the (re)location of firms to the suburbs and the reasons why blacks did not move closer to suburban jobs.

The structure of US cities has evolved over the second half of the twentieth century with the emergence of faster and cheaper means of transport for people and goods. A large fraction of middle- and upper-class white workers were able to move to the suburbs to consume more land and build larger houses, as they could commute to inner-city jobs by tramway, train, bus, and, for many, by car. Lower transport costs (resulting from innovations in transportation) also allowed manufacturing firms to relocate to the suburbs to avoid high land prices in the central business district. While many white workers relocated closer to their jobs to incur shorter commutes while

able to increase their housing consumption, the vast majority of blacks did not follow.

When US cities began to decentralize, relocating to the suburbs was an option that was mainly attractive for manufacturing firms as they usually needed a fair amount of land to operate and land was cheaper in the suburbs. The usual agglomeration forces highlighted by economic geography were also at play. As suburban manufacturing activity grew, it fostered the location of firms producing intermediary inputs so as to facilitate the input–output linkage. Services firms providing services to other firms as well as to workers (e.g., convenience services for local households) also followed. More generally, the creation and relocation of firms was also facilitated by the existence of the labor pool consisting of workers located in newly created residential areas. Some firms were attracted to the suburbs by the prospect of benefiting from newly adopted innovations, while others were driven away from city centers because the intensive use of private vehicles had caused congestion problems and because the relocation of firms employing low-skilled labor out of popular neighborhoods had increased the level of unemployment, poverty, and consequently criminality in inner cities. Even firms which had chosen to remain centralized later tended to relocate when criminality reached a tipping point. This "flight from blight" further reinforced the cumulative process of suburbanization.

The explanation initially provided by Kain for blacks not relocating to the suburbs was that blacks faced racial discrimination in the housing market, causing the residential separation of blacks from whites and, indirectly, from suburban jobs. Housing discrimination was indeed certainly a powerful force that shaped US cities in the 1960s when the intuition of spatial mismatch theory emerged and has remained an important driver of segregation. The prevalence of housing discrimination in US cities was unambiguously demonstrated through controlled experiments that assessed the lower number of houses shown by real estate agents to black clients in comparison to the number of houses shown to white clients with similar socioeconomic background (see Yinger 1986). Other studies stressed that discriminatory practices may in fact occur at different stages of the residential mobility process, including during house hunting, borrowing (for those acquiring a home), and rental lease agreement or contract settlement. Mortgage and credit institutions in particular could be applying stricter lending criteria to minorities, constraining their location choices and making their suburbanization more difficult (Ross and Yinger 2002). Interestingly, there can be various motivations underpinning these discriminatory practices, ranging from sheer prejudice (which includes so-called customer discrimination by real estate agents who believe that selling houses to blacks will make the neighborhood less attractive to future white customers) to statistical discrimination from lenders (whereby minority members are expected to have a higher default rate on average).

It is important to understand that although housing market discrimination was initially presented as a key element of the spatial mismatch hypothesis, it is not needed at all to account for the physical disconnection of minorities from jobs. In fact, spatial mismatch can also occur under free location choices according to a variety of mechanisms. In standard land use models in urban economics, households

compete for land, and spatial sorting according to income is a spontaneous equilibrium outcome: As heterogeneous income groups make different trade-offs between proximity to job centers and housing consumption (land being endogenously cheaper further away from places of employment), this may cause the poor – and for historical reasons the minority groups – to live further away from jobs. Separation from jobs may also occur because of the spatial sorting of households in homogenous jurisdictions: As whites and blacks may have different preferences for public goods, they could end up segregating themselves from one another by voting with their feet. This can result in blacks living in inner cities while whites reside in the suburbs where many entry-level jobs are located. Finally, some authors have also put forward (and empirically assessed) the preferences of ethnic groups to live together. This encompasses both mechanisms of white flight (whites seceding from mixed neighborhoods) as well as ethnic clustering of minorities who may want to live together, even at a distance from jobs.

A number of policies and regulations may also have voluntarily or involuntarily contributed to the disconnection of minorities from jobs. This includes the implementation of most housing projects in city centers (where minorities already live) and in places where land prices are cheaper and that are thus likely to be distant from jobs (Kain 1992). Local zoning regulations in the suburbs may also impose stringent minimum requirements for dwellings such as minimum lot sizes, with the implicit objective to prevent an inflow of poorer households to these areas by making housing too expensive for them. For fear of crime, residents in suburban areas often oppose public transport extensions linking poor areas to their neighborhoods of residence. This further contributes to isolating inner-city minorities from suburban jobs.

There are at least five theoretical mechanisms that can make distance to job opportunities harmful, especially for ethnic minorities (see Gobillon et al. 2007 for a full description of the corresponding models).

Mechanism 1. The first mechanism relies on *commuting costs* associated with job offers. When a worker receives an offer for a job located far from his place of residence, he anticipates that he will have to incur daily commuting costs if he accepts the offer. These costs can be important enough to outweigh the benefits from even a well-paid suburban job, in which case the worker will turn down the offer. He may prefer to remain unemployed or occupy a lower-wage job which is located closer to his place of residence. This mechanism is particularly relevant for ethnic groups which are not wealthy enough to purchase a car and to pay for its insurance and maintenance and who thus have no other choice than to rely on inefficient public transport.

Mechanism 2. Distance to jobs can also be harmful to workers because it decreases their job *search efficiency*. When searching for a job, a worker may have very little information on which places have suitable job offers and may end up looking for a job in the wrong locations. For low-skill services jobs in particular, the recruiting methods of employers are often local (e.g., ads in local newspapers

and "wanted" signs), which may further reduce the information that applicants have on distant job offers.

Mechanism 3. Another mechanism revolves around the idea that *job search costs* can be large and may deter workers from looking for a job in places that are distant from their residence. Job seekers may restrict their search to their neighborhood or its vicinity even if job opportunities in those places are scarce. This is particularly true for workers who do not have a car and depend on inefficient public transports to search for a job in distant places.

Mechanism 4. Workers who reside in areas that are far from job centers and where housing is more affordable may have less incentive to actively look for a job. As a consequence, they may not exert much job *search effort*. Since their housing expenses are lower, they can afford to remain unemployed for a longer period of time than households living in less affordable areas that are closer to jobs. On the contrary, unemployed workers leaving in areas where rents are expensive may feel more pressured to intensively search for a job in order to avoid having to move out.

Mechanism 5. Finally, employers may consider that long commutes deteriorate the *productivity of workers* and may decide not to hire workers who reside too far from the workplace. The reason why productivity may be deteriorated by distance is that distant workers are more likely to be late or tired. This is particularly true for workers located in poor suburbs that do not have a car and use unreliable mass transit.

Several comments can be made about these mechanisms. Interestingly, the consequences of spatial mismatch do not percolate through mechanisms that directly involve ethnicity but rather through the residential location of ethnic minorities within metropolitan areas. In fact, these general mechanisms may in theory apply to any worker who is distant from job opportunities, irrespective of ethnicity. Of course, it does not mean that race does not play a role at all as discussed in the previous subsection on the causes of spatial mismatch. In fact, race can and does play a key role in several respects. First, spatial mismatch can add up to other mechanisms that prevent the employment of minorities in the suburbs such as customer discrimination in fast food restaurants (see Ihlanfeldt and Young 1996) and more generally in suburban services jobs that require contact between clients and employees. The idea here is that, when filling those jobs, employers discriminate against minorities to satisfy the racial preferences of their customers. In this context, residential segregation leads to labor market discrimination (although it should be noted that this involves more the *disconnection* between the neighborhoods than the actual *distance* between the neighborhoods). This in turn shuts off the access of many suburban jobs to black applicants. Second, spatial mismatch may be all the more relevant in situations of ethnic discrimination in the labor market. The idea is that when minorities are discriminated against, they become more dependent on physical proximity to job opportunities to find jobs (Selod and Zenou 2006). It is also noticeable that these spatial mismatch mechanisms can play at different stages of the job match process and involve both the workers' perspective (for the first four

mechanisms) and the firms' perspective (for the fifth mechanism). Finally, even though the spatial mismatch theory focuses on the effect of distance and not on the effect of other neighborhood or group characteristics on labor market outcomes, the above five mechanisms can also indirectly be amplified by local or group interactions. For example, distance to jobs can have a direct negative effect on workers employment through either one of the five above mechanism, but also indirectly through a feedback process involving localized social networks. When most individuals in a location are harmed by distance and are more likely to be unemployed, the local social network is of bad quality, implying that neighbors cannot be used as referrals to potential employers.

3 The Empirical Tests of Spatial Mismatch

During the first decades during which the spatial mismatch literature unfolded, most empirical studies aimed to provide some *general test* of the spatial mismatch theory for US cities by assessing whether differences in labor market outcomes between blacks and whites could be related to differences in physical disconnection from jobs. Although establishing causality was usually not done properly, more convincing empirical tests have been proposed over time. Three main strategies have emerged:

(a) The first strategy is to *instrument the disconnection from jobs with specific local variables* related to local development or industrial composition. This makes it possible to consider only exogenous sources of variations in disconnection from jobs to measure its effect on labor market outcomes. Adopting this strategy, Weinberg (2000) for instance studies the effect of the relative centralization of blacks compared to whites on the black-white employment differential for young workers in large US metropolitan areas. The centralization of blacks is instrumented with historical features of the housing stock and past black centralization. It is found after instrumentation that the larger centralization of blacks relative to whites accounts for around half of the black-white employment differential. Alternatively, Weinberg (2004) focuses on the effect of job decentralization on the black-white employment differential and instruments job decentralization with the city industry composition. Job decentralization is shown to have a negative effect on the employment of blacks relative to whites.

(b) Secondly, *natural or controled experiments* can also help address the reverse causality issue (i.e., the fact that it could be the adverse labor market outcomes that cause minority workers to live far from jobs). The idea is to find a subpopulation of workers whose place of residence was determined irrespectively of proximity to job locations. Several papers restrict their analysis to young adults residing with their parents as they have not chosen their location. However, this approach is imperfect as the unobserved characteristics of these

young adults may be correlated with those of their parents and therefore be related to residential location. Alternatively, some housing policy measures may in fact render the location of a targeted subpopulation exogenous. Some European countries provide a relatively adequate background. In France, for instance, one may choose to restrict the analysis to workers in the housing public sector considering that applicants cannot choose the precise location of their dwelling which is attributed by public authorities. However, this remains an imperfect strategy given that, in practice, applicants are given the option to decline housing offers and wait for more suitable ones, at least in the beginning of the process. This obviously makes room for some degree of residential choice as a function of local job availability. In Sweden, the spatial allocation process of political refugees in the 1990s provides an interesting and robust framework to study spatial mismatch (Aslund et al. 2010). In the Swedish context, political refugees were indeed dispatched throughout the territory based only on their observed characteristics in applications. This was done without any interaction with public officers, thus making it possible to evaluate the causal effect of job density in the refugees' areas of residence on employment. In the paper, the econometric specifications take into account the observable characteristics that are reported in applications so as to neutralize the possible effect of sorting across space. The results support the role of the disconnection from jobs on employment.

(c) A third and last approach consists in conducting a *sensitivity analysis* by simulating the extent to which the location choice may be endogenous (Dujardin et al. 2008). This makes it possible to deal with the endogeneity bias in studies that try to relate the unemployment status of an individual to a neighborhood dummy (which can capture distance from jobs). There is an endogeneity bias if some unobserved individual characteristics affect both the unemployment status and the location dummy. One way to overcome this issue is to simultaneously model the location choice and find an exclusion restriction to identify the effect of location on unemployment. This exclusion restriction consists in having one individual variable explaining the location but having no direct effect on unemployment. However, such an exclusion restriction is hard to find. This problem can be overcome in a sensitivity analysis where one can arbitrarily fix the correlation between the residuals of the unemployment and location equations to a given level and reestimate the model. The results are considered to be robust if the estimated effect of residence on unemployment remains significant for all plausible values of the correlation between residuals.

A few other empirical works have tried to *test one or several of the five specific mechanisms* whereby distance to job opportunities can affect the labor market outcomes of minorities.

The most famous empirical study is a test of Mechanism 1 above which addresses the role of changing commuting costs following the relocation of a Detroit firm from

the city center to a white suburb (Zax and Kain 1996). Whereas whites tended to move closer to the new firm location, it was less often the case of black employees, possibly because of housing discrimination. Following the relocation, the increase in African Americans' commuting distance also induced many of them to quit their job.

Other papers tried to assess the importance of search costs and of lack of information on job opportunities on the bad labor market outcomes of blacks (Mechanisms 2 and 3), although it is usually not possible to distinguish clearly between the two explanations. For instance, Holzer and Reaser (2000) investigate the application of blacks and whites to jobs in the suburbs using a survey on several metropolitan areas. They find that less-educated black workers apply less frequently for jobs in the suburbs than in the central cities. Evidence provided by Stoll (1999) further shows that increasing blacks' access to cars or decreasing their average distance to search areas would lead them to conduct a more extensive geographical job search. The most convincing pieces of evidence use randomized control trial settings to assess the impact of transport subsidies on the search behavior of unemployed workers. Phillips (2014) shows that job-seekers granted a small subsidy on a metro/bus fare card in the Washington, DC metropolitan area search more successfully than those without the stipend. Franklin (2018) implements a similar experiment and finds similar results in the case of Addis Ababa, Ethiopia.

To our knowledge, Mechanisms 4 and 5 remain largely unexplored by the empirical literature. As regards heterogeneity, several authors have started investigating whether spatial mismatch could also be of concern for other subgroups of the US urban population. Raphael and Stoll (2001) for instance show that spatial mismatch also contributes to the unemployment of Hispanics and Asians but to a lesser extent than for African Americans. Differences in the vulnerability of the different groups to spatial mismatch point to possible variations across ethnic groups in the level of housing discrimination, in residential location, in access to private and public transports, and in skills (with low-skilled workers more likely to be affected by spatial mismatch). The literature however has not explored the underlying mechanisms so that more detailed studies will be necessary to validate these potential explanations.

While most studies focus on males, recent developments in the spatial mismatch literature have also begun investigating the gender relevance of the theory. Emphasis is put on the residential and workplace location choices of women in multi-person households (which can be tied to those of males or constrained by the presence of children) and on the complexity of the commuting patterns of women which may involve trips to various places such as schools and shops (Blumenberg 2004). This adds complexity to Mechanism 1 above as it is the whole itinerary that is now taken into account in the search and acceptance of job offers, especially for single mothers without cars. To carry out further the analysis, future research could be devoted to studying female spatial mismatch taking into account intra-family decisions (possibly at different stages of the life cycle) and complex itineraries using detailed data on transport patterns.

An important opening of the spatial mismatch literature over the last decade has been to test its validity in several cities outside the US. Although the historical

context and spatial settings in these cities are very different from the US, this does not preclude a test of the mechanisms. In Europe for instance, urban spatial structure is somehow inverted: Many low-skill jobs tend to be located in relatively central parts of cities, whereas minorities are residentially concentrated in relatively peripheral areas. Evidence for these cities, however, is mixed. Among the supportive papers, we already mentioned Aslund et al. (2010) who show that, in Sweden, the job densities in the places where political refugees are exogenously assigned play a significant positive role on their employment. In greater London, Fieldhouse (1999) finds that employment is correlated with job density for a few ethnic groups, namely, the Pakistani and the Bangladeshi. For Madrid and Barcelona, Matas et al. (2010) show that low job accessibility in public transport negatively affects employment probability. For Paris and Brussels, papers show that the spatial mismatch hypothesis is not really an issue. Gobillon et al. (2011) find that job density within 45 min by public or private transport is not correlated with finding a job for unemployed workers. Surprisingly, Dujardin et al. (2008) even find a positive correlation between job density and the probability of unemployment. In fact, the evidence in these papers points to vulnerable groups not being largely disconnected from jobs and to segregation effects (in terms of nationality or skill) that are believed to be more problematic than spatial mismatch.

Besides the US and Europe, there are also many indications of vulnerable groups being physically disconnected from jobs in many other regions of the world, in Latin America, Africa, and Asia. In South Africa, this is evidenced by very long and costly commutes. In Johannesburg for instance, the average commute is around 80 min one way, and a national household survey shows that commuters in the poorest income bracket spend about 35% of their earnings on commuting. Unfortunately and probably due to lack of adequate data, very few studies exist on the effect of physical disconnection to jobs on labor market outcomes in developing countries. South African cities stand as an exception where research suggests a negative impact of distance to jobs on the employment of township residents (Rospabé and Selod 2006).

4 Local Policies to Reduce Poverty

After five decades of investigations, the abundant literature on spatial mismatch has shed convincing light on both the causes and consequences of spatial mismatch. Evidence of market failures in both housing and labor markets provides a justification for policy intervention. To categorize the diversity of policy responses in the US case, Ihlanfeldt and Sjoquist (1998) have come up with a useful typology: moving people closer to jobs (desegregation strategy), moving jobs closer to workers (inner-city development strategy), and making it easier for workers to get to existing jobs (strategy of promoting mobility and disseminating information on jobs).

Moving people to jobs is a straightforward recommendation in contexts of constrained mobility. A simple way to address housing, mortgage, and credit

markets discrimination is to enforce antidiscrimination policies through the legal system.

Existing public policies could also be modified to facilitate the access of minorities to suburban neighborhoods. In particular, public dwellings could be constructed in predominantly white suburbs with greater job densities. But the policy could prove inefficient in the long run as whites and jobs may respond to the influx of minorities by deciding to move out of these suburbs. The policy would then result in the creation of new deprived neighborhoods out of city centers that may not necessarily be better connected to jobs. Other policy measures could consist in suppressing or forbidding zoning regulations that impose minimum lot sizes in suburbs. This would not necessarily be sufficient though if the constraint is not binding, with developers still targeting rich populations in priority by constructing only large high-quality dwellings.

Another option is to subsidize residential mobility through the granting of rental vouchers (as, e.g., in the Gautreaux program in Chicago 1976–1990 and the Moving to Opportunity program in Baltimore, Chicago, Boston, Los Angeles, and New York 1994–1999). Originally, these experimental programs were meant to facilitate the moving of households out of poor and segregated areas. In particular, a condition to benefit from vouchers in the Moving to Opportunity program was to relocate to a low-poverty neighborhood. However, there has been no assessment of whether these programs helped households get closer to jobs. Whether or not this happened, assessments of the Moving to Opportunity program show that it did not lead to a significant improvement of labor market outcomes of adults (Katz et al. 2001) but had a positive long-term impact on the incomes of individuals who moved as young children (Chetty et al., 2016). If a similar program were meant to reduce the physical disconnection from jobs, it would need to grant vouchers to households under the condition that they relocate closer to jobs, and the efficiency of such a program would still have to be evaluated. Even if an experimental program had desirable effects at a small scale, it would be difficult to scale it up and a scaled-up policy would probably not be as successful given a general equilibrium effect whereby vouchers could simply end up being capitalized in the housing prices of neighborhoods located close to jobs.

Moving jobs to people has been pursued in a multiplicity of contexts. Inspired from export processing zones, enterprise zones are meant to attract firms in distressed and low job density areas through the provision of fiscal incentives (Gobillon et al., 2012). A key issue is whether jobs in the attracted firms substitute for other local jobs or if the policy is not just displacing jobs between neighboring areas. The effect of the policy may also be limited if local unemployed workers do not have the required skills or if the targeted residential areas simply do not have sufficient space for office development. It transpires from the literature that the evidence on the efficiency of such policies is rather mixed. One drawback of the related studies is that they often focus on the number of firms and gross employment creation rather than on the local level of employment and local poverty in the targeted areas. Nevertheless, there is some evidence in the US of a significant decrease in unemployment and poverty related to the introduction of the federal Empowerment Zone program. For

France, the introduction of the French enterprise zone program has been shown to have only a small positive effect on finding a job for unemployed workers located in the Paris region. Maybe the creation of jobs adapted to workers' skills could be encouraged by providing tax incentives only to firms in some specific activity branches or for specific jobs. This kind of targeting is usually not implemented in the existing enterprise zone programs. Other place-based policies designed to attract firms include measures to decrease criminality as it can affect firm productivity through vandalism and violence of which employees may be victims. Other policies also include investments in transport infrastructures such as connections to highways that can decrease the transport cost of goods.

Improving connections between people and jobs may seem easier than the above-mentioned options. Improving transport will decrease commuting and search costs and increase the search efficiency and productivity of workers (Mechanisms 1, 2, 3, and 5). This can be achieved through improvements in public transport (adding train and subway stations, increasing transport frequency, or subsidizing fares). In the USA and other places, this would effectively target minorities who tend to have a lower access to cars and use public transit. However, the extension of the public rail network from the city center to the suburbs may be hindered by the opposition of suburbanites by fear of displacement of criminality. Moreover, public transport improvements may also have some drawbacks: The creation of a new station is likely to cause a local increase in housing prices which could in turn induce renters to move away to further locations. It is also hard to improve connections throughout the city for trains and tramways as it could require massive investments. Adding bus stations and increasing bus frequencies should be less costly, but buses are affected by traffic jams. A better access to private transport could also be achieved with the provision of vouchers to purchase motor vehicles. However, increasing the access to private transport could increase the overall traffic and congestion. Moreover, improved accessibility may paradoxically provide little incentive for poor households to move to better locations and may consequently reinforce segregation.

Beyond transport policies, facilitating the circulation of information flows between firm and workers can also help overcome the information hurdles associated with physical distance. Disseminating the information on the spatial distribution of job openings can greatly help job seekers apply to right places. Improving the flow of information can be achieved by creating local employment agencies in poor neighborhoods where they are missing and by better targeting the informational needs of unemployed workers regarding job offers. In particular, local employment centers could organize meetings with suburban businesses to give an opportunity to unemployed workers to meet face to face with potential employers (Ihlanfeldt and Sjoquist 1998).

5 Conclusions

Since the end of the 1960s, a large literature has focused on the contribution of spatial mismatch to the bad labor market outcomes of ethnic minorities. The importance of this contribution can be assessed in contrast to alternative

explanations. With the benefit of hindsight, we derive three principal lessons from our review.

First, spatial mismatch refers to mechanisms that can apply in many different contexts and it should not be considered as a topic that may be valid only to explain the poverty of African Americans in US inner cities. There are many indications (and in some cases scientifically determined evidence) that vulnerable populations in the US and elsewhere are affected by similar problems of disconnection between places of residence and places of employment.

Second, although spatial mismatch is a spatial theory of local unemployment, it should be clear that other spatial mechanisms may also contribute to poor labor market outcomes in poor areas. As a matter of fact, residential segregation constitutes a competing spatial explanation to the unemployment of ethnic minorities through a variety of mechanisms (e.g., the existence of local peer effects on employability, deteriorated information networks on jobs, and discriminating employers using neighborhood composition to infer information and employability). In the current state of research, it is not clear however whether it is spatial mismatch or segregation that contributes the most. In some contexts, only one or the other may play a role. In other contexts, they probably combine and amplify one another. What is established however is that spatial factors largely contribute to and are probably among the main factors explaining the economic and social outcomes contributing to local poverty.

Third, there are also important nonspatial factors at play (e.g., sheer labor market discrimination or skill bias) that can explain the unemployment of vulnerable groups. A direct implication is that policies addressing such nonspatial factors may also have an effect by locally alleviating unemployment. Another implication is that place-based policies will, of course, not suffice to solve the unemployment problems of ethnic minorities or low-skilled groups. In this context, an important challenge for policy makers is probably to find the right policy mix that is needed between spatial and nonspatial policies.

6 Cross-References

- ▶ Commuting, Housing, and Labor Markets
- ▶ Instrumental Variables/Method of Moments Estimation
- ▶ Job Search Theory
- ▶ Labor Market Theory and Models

Acknowledgments We would like to thank all our respective coauthors on our work on spatial mismatch for the many interesting discussions that helped us better understand the topic. Readers may find additional insights on the topic by reading ▶ "Labor Market Theory and Models", ▶ "Job Search Theory", ▶ "Commuting, Housing, and Labor Markets", and ▶ "Instrumental Variables/Method of Moments Estimation" in the present edition of the Handbook of Regional Science. The findings, interpretations, and conclusions expressed in this chapter are ours and do not represent the view of our employers, including the World Bank, its executive directors, or the countries they represent.

References

Aslund O, Osth J, Zenou Y (2010) How crucial is distance to jobs for ethnic minorities? Old question – improved answer. J Econ Geogr 10(3):389–422

Blumenberg E (2004) En-gendering effective planning: transformation policy of low-income women. J Am Plan Assoc 70(3):269–281

Chetty R, Hendren N, Katz L (2016) The effects of exposure to better neighborhoods on children: new evidence from the moving to opportunity experiment. Am Econ Rev 106(4):855–902

Dujardin C, Selod H, Thomas I (2008) Residential segregation and unemployment: the case of Brussels. Urban Stud 45(1):89–113

Ellwood J (1986) The spatial mismatch hypothesis: are there teenage jobs missing in ghetto? In: Freeman R, Holzer H (eds) The black youth unemployment crisis. University Chicago Press, Chicago, pp 147–185

Fieldhouse E (1999) Ethnic minority unemployment and spatial mismatch: the case of London. Urban Stud 36(9):1569–1596

Franklin S (2018) Location, search costs and youth unemployment: a randomized trial of transport subsidies in Ethiopia. Econ J 128(614):2353–2379

Gobillon L, Selod H, Zenou Y (2007) The mechanisms of spatial mismatch. Urban Stud 44(12):2401–2427

Gobillon L, Magnac T, Selod H (2011) The effect of location on finding a job in the Paris region. J Appl Econ 26(7):1079–1112

Gobillon L, Magnac T, Selod H (2012) Do unemployed workers benefit from enterprise zones ? The French experience. J Public Econ 96(9–10):881–892

Holzer H, Reaser J (2000) Black applicants, black employees, and urban labor market policy. J Urban Econ 48(3):365–387

Ihlanfeldt K, Sjoquist D (1998) The spatial mismatch hypothesis: a review of recent studies and their implications for welfare reform. Hous Policy Debate 9(4):849–892

Ihlanfeldt K, Young M (1996) The spatial distribution of black employment between the central city and the suburbs. Econ Inq 34(4):693–707

Kain J (1968) Housing segregation, negro employment, and metropolitan decentralization. Q J Econ 82(2):175–197

Kain J (1992) The spatial mismatch hypothesis: three decades later. Hous Policy Debate 3(2):371–460

Katz L, Kling J, Liebman J (2001) Moving to opportunity in Boston: early results of a randomized mobility experiment. Q J Econ 116(2):607–654

Matas A, Raymond J-L, Roig J-L (2010) Job accessibility and female employment probability: the cases of Barcelona and Madrid. Urban Stud 47(4):769–787

Phillips D (2014) Getting to Work: Experimental Evidence on Job Search and Transportation Costs. Labour Econ 29:72–82

Raphael S, Stoll M (2001) Can boosting minority car-ownership rates narrow inter-racial employment gaps? In: Rothenberg Pack J, Gale W (eds) Brookings-Wharton papers on urban economic affairs 2001. Brooking Paper Institution Press, Washington, DC, pp 99–145

Rospabé S, Selod H (2006) Does city structure cause unemployment? The case of Cape Town. In: Bhorat H, Kanbur R (eds) Poverty and policy in post-apartheid South Africa, Chapter 7. HRSC Press, Cape Town, pp 262–287

Ross S, Yinger J (2002) Color of credit: mortgage discrimination, research methods, and fair landing enforcement. MIT Press, Cambridge

Selod H, Zenou Y (2006) City structure, job search, and labor discrimination. Theory and policy implications. Econ J 116(514):1057–1087

Stoll M (1999) Spatial job search, spatial mismatch, and the employment and wages of racial and ethnic groups in Los Angeles. J Urban Econ 46(1):129–155

Weinberg B (2000) Black residential centralization and the spatial mismatch hypothesis. J Urban Econ 48(1):110–134

Weinberg B (2004) Testing the spatial mismatch hypothesis using inter-city variations in industrial composition. Reg Sci Urban Econ 34(5):505–532
Yinger J (1986) Measuring racial discrimination with fair housing audits. Am Econ Rev 76(5):881–893
Zax J, Kain J (1996) Moving to the suburbs: do relocating companies leave their black employees behind? J Labor Econ 14(3):472–504