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TRADE, MIGRATION AND SORTING BY SKILL: HOW THE INTERSTATE
HIGHWAY SYSTEM POLARIZED THE US URBAN LANDSCAPE

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In 1960, less than 4% of the residents of Houma, LA had graduated from college. Meanwhile, one in five people living in Champaign-Urbana, IL had earned a degree. By the turn of the century, the gap between the two locations grew even wider. The proportion of college graduates barely exceeded 12% in Houma, while reaching 38% in Champaign-Urbana. Furthermore, at a time when the US economy was becoming increasingly integrated, with massive investments being channeled into road infrastructure, the city of Houma remained one of the few metropolitan areas not to be served by any of the newly constructed Interstate Highways. Champaign-Urbana, on the other hand, had access to three different interstates. The tale of these two cities points to a larger economic phenomenon: over the past five decades, regional inequalities have continued to intensify. The division of skilled labor among US metropolitan areas has become more and more polarized, with cities that had a relatively larger share of high-skilled workers in 1960 further expanding their share of skilled labor. At the same time, both wages and housing costs grew at a higher rate in skilled cities, reflecting a divergence in living standards as well.

Vicious and Virtuous Circles

Why did inequalities surge? One understudied, but important explanation concerns *migration* patterns, which can reinforce pre-existing regional inequalities. For instance, low-skill workers are more likely than their high-skill counterparts to remain in their hometown, even during declines in economic activity. By the same token, the latter are more likely to out-migrate when faced with better employment opportunities elsewhere. Hence, owing to different mobility rates, economic change ultimately works to increase the divergence between low and high-skill locations.

Reducing polarization is important for several reasons. Research has shown that those cities that attracted a higher share of skilled labor also experienced a significant improvement in the quality of local amenities. Once a paragon for urban development, the city of Detroit best exemplifies the opposite trend. In addition to losing many of its highly paying jobs in the manufacturing sector, its previously praised public school system also steadily deteriorated. These patterns can, on their own, further increase the comparative advantage of skilled cities, as better local amenities attract more professional workers. Consequently, high-skill workers will concentrate in cities that exhibit not only higher wage growth, but also increasing living standards. A virtuous circle is established in which skilled cities develop and attract skilled migrants from other locations. Unskilled cities find themselves trapped in a vicious circle, with poverty on the rise and declining living conditions.

Public policy can equally exacerbate regional disparities when they benefit, to a greater extent, regions that are already more developed. Consider, for instance, the construction of the Interstate Highway System. In addition to serving military purposes and facilitating exchanges with Mexico and Canada, the Highway System was drawn so as to connect major metropolitan and industrial centers. In so doing, the latter became better connected to the rest of the US economy, which allowed them to further expand and grow, sometimes at the expense of smaller cities. Moreover, a better road infrastructure may translate into lower commuting and migration costs, with the larger benefits accruing again to better-connected cities. A new virtuous circle is established, in which cities that are more integrated in the road network can both reach consumers located in more distant markets and attract labor from other locations.

Road Infrastructure and the Patterns of Trade

The existence of a good transportation infrastructure is generally regarded as an essential condition for growth, both at the regional and national level. The logic is as follows: better roads enable local firms to access distant markets and gain productivity as new ideas and better technologies become available to them. Consumers, on the other hand, enjoy a greater variety of products at cheaper prices. However, again owing to virtuous and vicious circles, the benefits of road infrastructure are not evenly distributed. Specifically, poorer regions often lack the

necessary resources to invest in road infrastructure and policy makers generally prioritize already developed industrial and metropolitan areas. Hence, those more developed locations that become better served by highways will also experience higher reductions in freight costs. This encourages firms to relocate there since, by doing so, they can reach more consumers at lower costs. In order to increase their output, firms in these locations need to attract workers from elsewhere, and the only way to achieve this is by offering higher wages. This means that better centrality in the road network will lead to higher output and wages. Peripheral locations, where most low-skill workers reside, will produce less and experience smaller wage and rent growth. The data bear this out.

“If you build it, they will come.” But who are they?

Quantitative studies show that the construction of the US Interstate Highway System has had a significant impact on the skill composition of metropolitan areas. For each new highway passing through a city, the share of college-educated workers rose by approximately three percentage points. Consistent with our previous predictions, nominal wages and housing costs rose by almost 4% for each additional highway crossing a city. The wage gap between low-skill and high-skill workers within a city slightly decreased, which suggests that the Interstate Highway System amplified disparities across and not within cities.

Breaking vicious circles

The spatial concentration of high-skill workers in a select group of cities is symptomatic of an economy that is becoming more and more polarized economy, with raising inequality and popular discontent. By their very definition, vicious circles are hard to break and low-skill cities, in particular, may find it difficult to attract investors and skilled labor. As argued in the previous paragraphs, the geographic sorting of workers by skill emerged, at least in part, as the conjunction of localized economic shocks and different mobility rates. Any attempt at reducing spatial inequalities should therefore seek to address these factors.

First, any government intervention should aim at boosting the competitiveness of low-skill cities. One such policy could consist of connecting, through better roads, peripheral locations to the existing highway network. Improvements in transportation infrastructure would render investments in these cities more profitable which would attract investors and capital. The consequent raise in demand for production workers would eventually bid up wages. In turn, this would encourage the in-migration of the more mobile high-skill workers, much in the same way the construction of the Interstates contributed to their spatial concentration. These policies, nonetheless, cannot be expected to bear fruit immediately. Not only are infrastructure works costly and lengthy, but firms and workers also need time to adapt to the new economic environment.

Second, mobility rate differentials will continue to amplify localized economic shocks to the detriment of those regions experiencing a downturn in economic activity. In order for migration responses to economic stimuli to become less skill biased, it seems reasonable to focus on policy solutions that enhance the mobility of low-skill workers. A more in-depth understanding of the underlying factors driving the relative immobility of the latter is necessary, which would then allow the development of incentive-compatible labor mobility programs. This course of action would, of course, require a pluri-disciplinary approach and entail an extended implementation calendar. Addressing the issue of raising spatial disparities remains, however, an urgent matter and increasing investments in the periphery is to be envisaged if disparities between cities like Houma and Champaign-Urbana are to be reduced.