Comments

Juliano Assunção: The Mexican *maquiladora* industry constitutes an interesting economic environment in which to study the impact of migration on the labor market. Because most of the *maquiladora* employees are interstate migrants, migration flows can arguably be directly associated with the shift in the labor supply curve. Moreover, the relocation of U.S. firms to China has changed the configuration of the *maquiladora* industry. The impact of migration on the labor market, however, is still a matter for debate in the migration literature. Atkinson and Ibarra contribute to this literature by investigating the effects of internal interstate migration and international return migration on the wages and employment of skilled and unskilled workers in the textile *maquiladora* industry.

The results are derived in two steps. First, the authors use the 2000 Mexican census to estimate the effect of interstate migration and international return migration on wages. From this analysis, the authors compute the effect of migration on the wages of skilled and unskilled workers from 1990 to 2000. The two main right-hand-side variables regarding migration are considered endogenous and are thus instrumented with the corresponding network effect measures. The authors' concern about the endogeneity of migration is appropriate and consistent with the literature on the determinants of migration. Indeed, table 1 shows that natives and immigrants are different. Solving this problem is a much harder issue, however. The use of networking effects as a source of exogenous variation is interesting and finds support in the literature, but it also has its limitations. The hypothesis here is that wages are affected by networking effects only through the migration channel. In particular, Atkinson and Ibarra assume that the existence of immigrant groups does not affect the balance of power between firms and workers, which could, in principle, increase or decrease wages. Unfortunately, the analysis is restricted to this set of instruments, so the robustness of the results under different assumptions cannot be checked.

A really surprising result, reported in table 5, is that the effects of interstate migration and international return migration point in opposite directions. While the negative coefficient for interstate immigration suggests an increase in the labor supply, the only way to explain the positive and quantitatively high coefficient for return migration is through an increase in the average turnover rate or a change on the demand side. This result is even more puzzling given the extremely low percentage of returning international immigrants in the population: this type of immigrant accounts for less than 1 percent of the population in thirteen out of twenty states (see table 3).

The second step is based on the state-level panel data for 1998–2001 and studies the effect of wages on the employment of skilled and unskilled workers in the *maquiladora* industry. The authors derive structural cost and share equations from which they compute the own-price and cross-price elasticities of demand for skilled and unskilled workers. Results indicate that the demand for skilled labor is more elastic (to wage) than the demand for unskilled workers, as found in similar studies for other countries in the region.

The impact of total (interstate and international) immigration on employment is obtained by combining the two steps described above. This combination, in turn, involves matching the two data sets, which is not directly feasible. The census identifies laborers working in the manufacturing sector, without specifying whether their employer is a *maquiladora.* A similar problem arises with the immigration measures, which come from the same source. As a consequence, the results comprise the effect of international return and interstate migration on the wages of skilled and unskilled workers in the manufacturing sector; and the effect of wage changes on employment in the *maquiladora* sector. In other words, the estimated effects of migration on wages apply to the whole manufacturing sector, such that only the estimated effects of wages on employment are clearly specific to the *maquiladora* industry. The underlying hypothesis behind the authors' interpretation is that wage responses do not differ substantially in the manufacturing and *maquiladora* industries. Without this assumption, it is not possible to combine the two steps.

In summary, the authors have documented a number of relevant effects, and explored some new and interesting aspects of Mexican migration flows and the *maquiladora* industry. The issues described above are important for contextualizing the analysis within the limits imposed by the empirical environment.

Eric Verhoogen: This is a welcome contribution on a topic—internal migration—that is both important and underresearched. I begin my comments with a few words about the motivation of the paper and then turn to my main

comment about the three-stage methodology used to estimate the effects of migration.

Part of the reason that internal migration is underresearched, despite its importance in terms of sheer numbers, is that it is often unclear what the stakes are. To put it another way, what is the policy issue that research on internal migration informs? International migration raises an obvious issue: how large a fence, literal or figurative, to put at the border. Governments are not typically in the business of putting up barriers to internal migration, so there is no natural policy "hook." Nevertheless, governments do many things that affect the costs and benefits of internal migration—from offering training for new migrants in occupations facing high demand, to implementing reforms to make social security benefits more portable, or even to providing disparate levels and quality of public services in rural areas versus urban areas or small towns versus cities. It is appropriate, then, to ask whether internal migration is a good thing and thus whether governments should actively try to facilitate or impede it. The set of winners from internal migration seems pretty clear: by revealed preference, one can infer that the migrants themselves are better off migrating. Internal migration has also played an important role in facilitating the growth of the *maquiladora* sector in Mexico, as Atkinson and Ibarra discuss. But are there losers? If so, how severe are their losses? Economic logic suggests that workers already present in a particular region are likely to lose, but convincing evidence of such negative effects has been elusive in the United States as well as other countries. Answering this question is a crucial step in addressing the larger policy issue of whether internal mobility is a desirable thing to promote. I take it that this is part of the motivation of the current paper; this point could have been brought out more explicitly.

My main comment about the empirical exercise in the paper is that it seems to be unnecessarily complicated and indirect. The authors implement a three-step procedure. First, they use a translog cost-function approach to estimate the elasticity of labor demand with respect to wages. Second, they use an instrumental variables procedure to estimate the effect of internal migration on wages. Third, they plug the estimated effect of migration on wages back into their estimated labor demand function to estimate the effect of internal migration on employment. In my view, the strongest part of this procedure is the second step. The instruments—namely, interactions of the number of emigrants or returning international migrants from a particular state in a particular period with the pre-existing distribution of emigrants from that state in receiving states—are plausibly uncorrelated with labor demand shocks in receiving states and yet correlated with migration flows. (A small but important

point: the authors should report the first-stage regression of actual migration flows on the instruments.) The issue is whether, once one has found such instruments, the first and third steps are necessary. If the instruments are valid, then it should be possible to estimate the effect of internal migration on employment (*maquiladora* or otherwise) in receiving states by a straightforward two-stage least squares procedure in which receiving-state employment is regressed on migration inflows instrumented by the network-effect instruments described above. This simpler procedure would seem to be more robust and less susceptible to endogeneity concerns than the procedure the authors implement, which is open to several objections. For instance, if, as the authors argue, the weak effect of international return migration on wages stems from its tendency to boost labor demand, shouldn't the migration itself be taken into account in the labor demand estimation? Another issue is precision: although the authors do not report standard errors on their final estimates of the effect of migration on employment in receiving states, I suspect that the estimates are quite a bit less precise than would be obtained from the simpler two-stage least squares procedure. This issue leads me to think the jury is still out on the magnitude of the true effect of internal migration on *maquiladora* wages and employment. Nonetheless, this paper is a useful step in investigating the important broader question of who wins and who loses from internal migration.

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