

The positive and negative effects of offshoring on domestic employment

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The impact of offshoring on domestic employment is hotly debated as the US looks to renegotiate trade treaties, but the existing literature is conflicting in its conclusions. This column employs the variation in the timing of US treaties to infer the causal effect of tax treaty-induced changes in foreign affiliate employment on changes in US domestic employment. Employment declines at some firms are offset by expanded employment at others, yielding a modest positive net effect of offshoring on US employment, albeit with substantial employment dislocation and reallocation of workers.

The question of how offshoring affects domestic employment is perennially at the forefront of political and popular discussions of international economic policy. The US is confronting this question currently as it is renegotiating NAFTA with Mexico and Canada, and recent legislation has changed the way the US taxes foreign-earned income of multinational firms. Academic economists have responded with analyses that offer a panoply of conclusions about the effects of offshoring, sometimes with contradictory views. While some estimates suggest benefits to domestic employment, others find that offshore hiring is a drag on domestic hiring. Rather than positive or negative effects, several studies including Slaughter (2000, 2001) find null impacts of offshoring on domestic labour market outcomes.

Although the question of how offshoring affects domestic hiring is seemingly straightforward to ask, several difficulties arise when trying to provide an answer. First of all, the term 'offshoring' is used to describe a variety of distinct economic activities, from the hiring of workers by foreign affiliates of multinational enterprises, to hiring by foreign suppliers that sell inputs to domestic firms at arms-length, or more restrictively, offshoring sometimes describes the instance when a domestic plant is relocated abroad. For example, Desai et al. (2009) focus solely on activity within foreign affiliates of US multinational firms, while Autor et al. (2013) and Hummels et al. (2014) consider the implications of imports from both arms-length and owned-and-operated facilities. These distinct economic activities each can affect domestic workers in different ways, and they will respond to different sets of economic policies. As a result, estimates of how these different types of offshoring affect domestic hiring can yield widely different results. Confirming this point, Harrison and McMillan (2011) provide evidence that domestic hiring by US multinational firms in the manufacturing sector has different relationships with offshore hiring activity depending on the primary activities that take place within foreign affiliates.

Another important difficulty in understanding the consequences of offshoring is the multitude of channels through which it influences domestic hiring. Like any change in price, a reduction in the cost of offshoring activity leads to both substitution effects that reduce the demand for some domestic workers, and offsetting scale effects that lead to more hiring at home. The substitution for domestic workers can arise as entire production facilities are relocated abroad, as firms change the set of products that are produced domestically, or as firms change the set of tasks performed by domestic workers. Scale effects reflect the fact

that production becomes cheaper as offshoring costs fall, inducing firms to scale up their level of production. As firms expand, they hire more workers both at home and abroad. And while scale effects lead to greater hiring by offshoring firms, as discussed in Groizard et al. (2015), the cost advantages afforded to these firms may induce job losses at competitors within domestic industries. Researchers are often constrained because they can observe only one, or perhaps an amalgam, of these different margins, making it difficult to understand precisely how foreign hiring activity affects domestic employment.

Regardless of the type of offshoring being considered, or the particular channel through which it affects domestic employment, economists must also contend with the fact that foreign and domestic hiring both reflect choices made by firms, making it extremely difficult to disentangle the causal relationship between the two. As an example, if a firm experiences an increase in demand for its products, it is likely that both domestic employment and employment at offshore affiliates will increase, yet this correlation teaches us little about the causal effects of offshoring on domestic employment.

To overcome this inherent simultaneity between domestic and offshore employment, in a recent paper we exploit declines in the costs of offshore activity that are exogenous to firm choices (Kovak et al. 2017). In particular, we identify changes in the relative costs of offshore activity resulting from new bilateral tax treaties (BTTs). These treaties allow US firms to avoid double-taxation, in which the same income is taxed in two jurisdictions due to constraints on the size of the foreign tax credit available to parent firms. BTTs make this constraint less likely to bind, lowering the average effective tax rate on income from foreign affiliates, hence lowering the overall cost of offshore activity.

Previous research by Blonigen et al. (2014) has shown that BTTs significantly increase the foreign affiliate activity of US multinational firms. In Kovak et al. (2017), we leverage variation in the timing of treaties, the pre-existing country mix of multinational firms' affiliates, and the incidence of double taxation across industries to infer the causal effect of BTT-induced changes in foreign affiliate employment on changes in US domestic employment. To capture some of the various margins by which offshore hiring affects national employment we examine the effects on employment within US multinational firms, for all workers in a given US industry, and for all US workers in a given region.¹

We find that, within US multinationals, the positive scale effects resulting from a fall in offshoring costs just outweigh the negative substitution effects on average. Increased foreign affiliate employment drives economically modest but statistically significant positive effects on domestic employment at multinational parent firms. Specifically, a 10% BTT-induced increase in affiliate employment leads to a 1.8% increase in employment at the US parent firm. Simple estimates of the correlation between offshore and domestic hiring that do not take our approach of isolating the exogenous cost shock resulting from BTTs are almost twice as large, demonstrating the importance of addressing the simultaneity between domestic and offshore employment.

The positive effects of BTT-induced offshore hiring indicate that the scale effects of lower offshoring costs at foreign affiliates are slightly larger than the substitution effects on average. However, this average effect masks substantial heterogeneity. For example, multinational firms that open a new foreign affiliate following a new BTT entering into force

exhibit no change in domestic hiring, suggesting that the new foreign facility allows for relatively more substitution for domestic workers than observed at the typical US multinational firm.

We also estimate industry-wide responses of domestic employment to BTT-induced changes in offshore employment. The industry-wide responses capture the fact that some US multinational firms may respond to changes in offshoring costs by switching from domestic suppliers to foreign ones, and the fact that domestic firms may face competitive pressures if multinational firms in their industry realize lower costs. Our results reveal important heterogeneity in the industry-wide effects of offshoring, depending on the type of offshoring activity. On average, greater offshoring by US multinational firms has no discernible effect on industry employment levels, suggesting that the positive and negative effects offset each other. However, for vertically oriented multinational firms, those that exhibit direct sales from foreign affiliates to their US parents, increases in offshore hiring due to BTTs leads to statistically significant reduction in industry-level employment. Our estimates suggest that a 10% increase in foreign affiliate hiring among vertically-oriented multinational firms lowers industry employment by approximately 0.4%. The different results for different types of multinationals is not surprising, as multinationals whose primary focus is on sourcing inputs may be more likely to substitute between production at home and abroad than those multinationals that open foreign affiliates, for example, to be close to customers in a foreign country.

The consequences of changes in domestic hiring are not limited just to the firms or industries exposed to greater offshoring. The addition or loss of jobs in a particular region can have spillover effects to nearby businesses in different industries. These spillovers can arise as the additional workers the multinationals hire spend their earnings at nearby businesses in other industries. To capture this margin, we measure the domestic employment effects of offshoring within US metropolitan areas. Our results indicate that those metro areas whose industries experience on average a 10% increase in foreign affiliate employment exhibit a 0.67% increase in total metro area employment. While this is a modest positive effect, it is larger in magnitude than the industry-level results, suggesting the possibility of cross-industry spillovers.

The consequences of ever-rising levels of offshoring activity by US multinational firms are consistently a source of debate for both the public and policymakers, a debate that faces renewed vigour as the US alters the way it taxes the income earned by foreign affiliates. Altogether, our results suggest that employment declines at some firms are offset by expanded employment at others, yielding a modest positive net effect of offshoring on US employment, albeit with substantial employment dislocation and reallocation of workers.

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Endnotes

[1] For technical details on our empirical approach, including evidence on exogeneity and the necessary exclusion restriction needed to infer causality, please see Kovak et al. (2017).