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Comment Susan M. Collins

I enjoyed reading this installment in Brad Jensen and Lori Kletzer's research to understand implications of offshoring service activities for U.S. labor markets. This chapter builds on their earlier work that introduced a creative new approach for measuring tradability in services. They use domestic geographic concentration by industry and occupation to identify which service activities are traded domestically, inferring that these activities also have the potential to be traded internationally—that is, to be vulnerable to offshoring. In this chapter, they take a sensible step toward addressing some of the criticisms of their initial indicators by combining the geographic concentration metrics with indicators about the task content of service activities. Although still subject to shortcomings, some of which I will discuss later, this innovative and informative research makes a valuable contribution to the services offshoring literature. In my comments, I will briefly describe the broader context so as to highlight their contribution, discuss some concerns with the methodology, and outline some additional issues I hope the authors will consider in future work.

A few years ago there was a surge of fear about service jobs moving abroad. Widely publicized stories suggested that a substantial share of the American workers in services, who had not previously considered their jobs to be tradable, may be swimming in the same sea of competition as their counterparts in manufacturing, with low-wage foreign workers. While these fears abated somewhat as unemployment rates declined, the recent deterioration in U.S. economic performance has brought them back to center stage.

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Certainly it is true that services are increasingly traded. But how important is this phenomenon, what are its characteristics, and what are the likely implications for American workers? The relevant magnitudes are difficult to establish for a number of reasons. First, there are many challenges associated with constructing accurate measures of services trade. Unlike goods trade, it is not grounded in the movement of something physical across a border. Services are also often bundled together or with goods. Significant differences in data definitions used by different countries limit the information content from cross-checking U.S. services exports (and imports) with trade-partner imports (exports).¹ Furthermore, constructing an estimate of the offshorability of services jobs calls for forecasts of what future services trade might be, not simply indicators of the historical trade flows. Finally, there is no simple link between U.S. services trade and U.S. jobs. While factor-content ratios provide useful information, applying them in this context requires questionable assumptions about the extent to which available ratios are relevant for hypothetical scenarios involving a future with extensive services offshoring. There is rarely much discussion of the appropriate counterfactual, which may not be an historical status quo, but instead involve domestic production with very different factor content ratios.

Jensen and Kletzer, like other recent authors discussed in their chapter, do not try to link their estimates directly to actual trade in services. They focus instead on classifying service activities based on characteristics assumed related to tradability. While avoiding the significant challenges associated with directly measuring trade in services, these approaches raise other concerns—in particular, that the classifications are subjective. Jensen and Kletzer's geographical concentration index fares well in this context. It is objective, comprehensive, and applicable to industries as well as occupations. While it is easy to quibble with how particular occupations or industries are classified, the results are promising. However, it remains unclear to me why, in the initial paper as well as this chapter, the authors divide activities into three tradability classes, which then become the focus for most of their analysis, instead of using the more nuanced information in the continuous geographic concentration index.

As Jensen and Kletzer recognize, some activities are unlikely to be tradable even though their production is geographically concentrated,² some activities are likely to be tradable even though they are not geographically concentrated, and some activities that are traded domestically may be unlikely to be traded internationally. To address these concerns, they draw from the somewhat more subjective approaches postulating a priori charac-

1. Robert E. Lipsey (2006) describes many of the problems associated with measuring trade in services internationally.

2. Their modified Gini coefficient methodology is intended to adjust for production concentration to reflect concentration in domestic demand that may not be indicative of tradability.

teristics of activities that make them tradable. Specifically, they use O*Net data from surveying job incumbents about the task requirements for 457 service occupations. Jensen and Kletzer have chosen to focus on eleven of the myriad available measures. Five of these are assumed to be positively associated with tradability (related to information content and whether the task is Internet enabled) while the other six are assumed to be negatively associated with tradability (requiring face-to-face contact, on-site work, and routine or creative work content). These are then aggregated to form a single index, and the activities are (again) divided into three general classes to reflect high, medium, and low degrees of tradability. Using the O*Net data enables them to be relatively systematic and comprehensive, and I see this as a sensible and promising next step. I hope they will continue addressing the remaining shortcomings, as discussed later.

Much of the chapter then focuses on comparing the geographic concentration and the task-content indicators of tradability, and the results are quite interesting. As the authors note, there is considerable overlap between the two. Further, combining them does seem to provide a means for omitting some “misfits” such as manicurists (concentrated because they tend to be in urban areas) that the geography indicator by itself classified as tradable. I fully agree with them that it will be useful to develop a portfolio of measures of the complex offshoring phenomenon, and that they have contributed two assets to this portfolio.

Let me turn next to my concerns—many of which I hope will be addressed in future installments. First, for both indicators, as noted before, I believe it would be more informative to work directly with the continuous indices, instead of using arbitrary thresholds to construct three classes for each of the tradability indicators. The charts the authors provide do not suggest that either of these indicators naturally clusters into three groups, but instead that there are many activities at or near the selected thresholds.

Second, there is much more the authors could do to explore and exploit the relevant information in the O*Net data and I found their current usage of these data only somewhat convincing. For instance, their a priori classification of which characteristics are positively (negatively) associated with tradability would benefit from additional justification. In particular, it is not obvious to me what “getting information” means. Tasks that require seeking information that can be gathered on-line are arguably more tradable, but those requiring an employee to get certain other types of information would require direct contact. While the authors do some robustness checks, they would need independent information about services trade to explore how well their weighting scheme does in identifying the task characteristics that are associated with offshoring (or inshoring). In my view, relating these O*Net indicators to existing services trade data (as imperfect as they may be) will provide a very important perspective for drawing implications. Indeed,

I would encourage the authors to consider multifactor analysis, instead of trying to add univariate indicators.

Third, I will be very interested in further exploration of the implications and interpretation of domestic concentration for international tradability. Transportation and transaction costs may be quite different domestically versus internationally. For some activities, domestic concentration reflects U.S.-specific regulations, such as state-specific insurance provisions. State bar exams and medical licensing rules have all influenced U.S. services concentration but with very different implications globally. When is concentration in domestic production indicative of vulnerability to offshoring, and when is it indicative of relative strength? Domestic concentration in some activities may reflect agglomeration externalities that would facilitate the United States becoming an export powerhouse with growing domestic employment opportunities. If there are strong increasing returns, concentration may reflect agglomeration strength, such that the activity is less (not more) likely to move abroad. The authors are well aware that tradability may imply inshoring as well as offshoring. Trade implies potential flows in either (or both) directions. However, much (though not all) of the discussion in the chapter implicitly seems to treat services tradability as synonymous with vulnerability to U.S. jobs being relocated abroad.

A related point is that it is not clear whether scale economies are as relevant for production of services as for production of goods. We also know little about whether service activity becomes more concentrated as economies develop and become more open to trade. What determines the (clearly endogenous over time) location of service activity in a global economy? There is much interesting work to be done here. Theory is likely to provide valuable insights and help steer empirical analyses. Case studies could enrich our understanding in many dimensions.

The authors raise the important issue of timing and time-frame in their conclusion. If they are correct in identifying the service activities that are (or could become) tradable, it certainly does matter whether any changes occur over the next few years or gradually over decades. In this context, it is worth highlighting that the data they present represent snapshots, with no information about trends. The geographic concentration index uses 2000 Census data, while the O*Net index uses surveys published in 2006. It will be interesting to know whether these snapshots show pictures that have been relatively constant over time, or which have changed considerably as global trade has surged in the past decade.

Finally, trade data distinguishes four different types (or modes) of services trade: Mode 1 (cross-border trade) involves flows between countries, such as when a customer in China purchases U.S. architectural services over the Internet. Mode 2 (consumption abroad) involves movement of the consumer, such as when a Chinese student travels to enroll in a U.S. university. Mode 3 (commercial presence) involves transactions with multinational

corporations (MNCs) or their affiliates, such as services provided by an international hotel chain. Mode 4 (presence of natural persons) involves movement of the supplier, such as when a U.S. physician practices medicine in China. Geographic concentration and task-related constraints are very different when the consumer or producer can move to trade the service, than when trade requires arms-length transactions with the consumer and producer of the services physically separated. I am glad to see that Jensen and Kletzer now acknowledge that their indicators are most applicable to Mode 1 services trade. They state in a footnote that this type of services trade is the most important for assessing the labor market impact of potential services tradability. However, other modes are of growing importance, and ignoring them may be quite misleading. A full understanding of trade in services and its potential implications for domestic labor markets will require an analytic toolkit that includes tools aimed at understanding all four modes.

In sum, this chapter documents an interesting next step in an innovative and valuable line of research. By using information about task requirements for service activities from O*Net data, Jensen and Kletzer have added to the portfolio of indicators for the tradability of service activities. I look forward to reading the next installments.

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