

# IMPORTS AND FOREIGN AFFILIATE SALES OF LEGAL SERVICES IN THE UNITED STATES

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### **Abstract**

We analyze the effects of restrictions on trade in legal services using a partial equilibrium version of the international trade and investment model in Helpman, Melitz and Yeaple (2004). The model includes three different modes of supply: domestic sales, cross-border imports, and foreign affiliate sales. We calibrate the model to data for the U.S. market for legal services in 2012. We estimate how much higher domestic supply would have been if low U.S. trade restrictions were at higher international average levels. In the case of restrictions on foreign affiliate sales (mode 3 under the GATS classification), we estimate that foreign affiliates sales would have been \$28.1 million lower, cross-border imports would have been \$26.7 million higher, and the value of services supplied by domestic firms would have been \$1.4 million higher. In the case of restrictions on cross-border imports (mode 1, 2, and 4 under the GATS), we estimate that cross-border imports would have been \$175.4 million lower, foreign affiliates sales would have been \$0.1 million higher, and the value of services supplied by domestic firms would have been \$175.3 million higher. These effects are very small compared to the U.S. market for legal services, which totaled \$367.0 billion in 2012.

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# 1 Introduction

Restrictions on the foreign supply of legal services in the United States are currently small, yet foreign supply – both through cross-border imports and foreign affiliate sales – accounts for less than one percent of the U.S. market. This reflects the competitiveness of U.S. firms in the industry, especially in serving their home market.

Lower U.S. restrictions on trade in legal services reduce the sales of domestic suppliers and increase foreign provision in all modes of supply, but the effects are likely small relative to the total size of the market. To estimate the impact of restrictions on trade in legal services, we adapt a model of foreign direct investment and cross-border importing with firm heterogeneity. We create a partial equilibrium model that quantifies the effects of changes in services trade restrictions, represented here as fixed market entry costs for the different modes of supply of legal services. We use the OECD’s Services Trade Restrictiveness Index (STRI) for legal services as a measure of trade restrictions in the United States and other national markets.

The rest of the paper is organized in five parts. Section 2 identifies current services trade restrictions in the market. Section 3 summarizes the modeling framework. Section 4 discusses the input requirements of the model. Section 5 presents estimates of the impact of trade restrictions based on model simulations. Section 6 concludes.

## 2 Restrictions on Trade in Legal Services

Regulations governing the provision of legal services in the United States are not restrictive compared to other national markets, according to OECD’s Services Trade Restrictiveness Index (STRI). On a scale where zero is least restrictive and one is most restrictive, the 2018 average legal services STRI across all 45 countries included in the index (36 OECD countries

and nine non-OECD countries) is 0.38, while the U.S. OECD STRI for legal services is 0.21.<sup>1</sup>

Within the United States, these regulations vary by state. Foreign providers have to pass the bar exam to become an attorney providing domestic legal advice and representation in the United States.<sup>2</sup> After meeting other requirements and conditional on being admitted to practice law in certain foreign jurisdictions, foreign providers may practice international law in the United States as foreign legal consultants.

Foreign-owned law firms in the United States are subject to certain regulations that contribute to the OECD STRI score. For example, shareholders, boards of directors, and managers of domestic U.S. law firms must be licensed to practice locally. (Foreign law firms in the United States do not have the same local-license requirement and foreign legal consultants, who provide legal services related to international law, can become shareholders alongside local members of the New York bar). Policies that impact the movement of professionals across borders also weigh heavily in the legal services STRI for the United States.<sup>3</sup> These include restrictions on the form of labor market tests and quotas on contractual and independent services suppliers. Finally, nonresident attorneys must maintain a physical law office in the United States.<sup>4</sup>

Restrictions that contribute to the STRI are classified by the OECD along several dimensions: policy category, mode of supply, discriminatory status, and effect on the establishment versus the operation of service suppliers. In the United States, legal services regulations mostly encompass the "foreign entry" and "movement of people" policy categories, either pertain to modes 3 and 4 or are common across all modes, discriminate against foreign providers, and affect establishment more than ongoing operations. Table 1 shows the contri-

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<sup>1</sup>OECD (2019a) and OECD (2018). While the STRI is available from 2014-2018, the STRI reported here refers to the most recent year (2018). The U.S. score in 2018 (0.206) has remained stable since 2014 (0.219).

<sup>2</sup>All regulations discussed in this context refer to New York law.

<sup>3</sup>Exploratory estimates attribute two-thirds of the value of U.S. professional and management consulting cross-border trade to mode one and one-third to mode four. See Mann (2017).

<sup>4</sup>OECD (2019b).

bution of each element to the overall U.S. score. The category scores sum to the country's overall score.<sup>5</sup>

Table 1: Classification of OECD Legal Services STRI

Category of Trade Barriers		United States STRI	OECD STRI Average
Overall		0.206	0.384
By Policy Category	Restrictions to Movement of People	0.081	0.151
	Restrictions on Foreign Entry	0.080	0.171
	Other Discriminatory Measures	0.029	0.018
	Barriers to Competition	0.000	0.013
	Regulatory Transparency	0.016	0.030
By GATS Mode of Supply	Common to All Modes	0.066	0.112
	Specific to Mode 3	0.068	0.164
	Specific to Mode 4	0.062	0.099
	Specific to Mode 1	0.010	0.009
Discriminatory vs. Non-Discriminatory	Discriminatory	0.174	0.306
	Non-Discriminatory	0.031	0.078
Establishment vs. Ongoing Operations	Establishment	0.119	0.252
	Operations	0.087	0.132

### 3 Modeling Framework

The model is a partial equilibrium adaptation of Helpman et al. (2004) to international trade in legal services, based on Khachaturian and Riker (2017). In this section, we do not re-derive the model.<sup>6</sup> Instead, we highlight the features of the model, the modifications to earlier research, and the final equations that simulate the impact of the services trade restrictions.

<sup>5</sup>The policy categories may contain restrictions that affect multiple modes. The mode of supply classification "all modes" applies to regulations affecting modes one and two and combined with those impacting other modes of trade (mode 3 and 4). GATS classifications (market access, national treatment, domestic regulation, and other) are not presented here. Grosso, Nordas, Gonzales and Lejarraga (2014).

<sup>6</sup>Khachaturian and Riker (2016) derives the model in step-by-step detail, with slightly different notation.

We have made several modifications to the model in Khachaturian and Riker (2017). First, the revised model in this paper allows for international differences in variable costs of service provision as well as variable trade costs. Second, the model calibrates the elasticity of substitution based on mark-ups in the industry. Third, the simulated effects are based on the exact form non-linear model rather than the log-linear approximations in Khachaturian and Riker (2017).

To simplify the notation in the equations, we define two terms ( $Z_{p0}$  and  $Z_{x0}$ ) and calibrate them to initial equilibrium conditions in the U.S. legal services market.

$$Z_{p0} = \left(\frac{n_f}{n_d}\right) \left(\frac{f_p}{f_d}\right)^{\frac{-\gamma}{\sigma-1}+1} = \left(\frac{A_0}{D_0}\right) (1 - C_0^{1-\sigma})^{-\frac{\gamma}{\sigma-1}+1} \quad (1)$$

$$Z_{x0} = \left(\frac{n_f}{n_d}\right) \left(\frac{f_x}{f_d}\right)^{\frac{-\gamma}{\sigma-1}+1} = \left(\frac{M_0}{D_0}\right) C_0^\gamma + C_0^{1-\sigma+\gamma} (1 - C_0^{1-\sigma})^{\frac{\gamma}{\sigma-1}-1} Z_{p0} \quad (2)$$

The variables  $A_0$ ,  $M_0$ , and  $D_0$  represent the initial values of foreign affiliate sales, cross-border imports, and domestic sales.  $C_0$  is the initial relative variable cost of delivering foreign services supplied to the domestic market, including variable international trade costs.  $f_p$  is the incremental fixed cost of foreign affiliate supply,  $f_x$  is the fixed cost of cross-border trade, and  $f_d$  is the fixed cost of provision by domestic suppliers.  $n_d$  and  $n_f$  are the number of domestic and foreign firms that can potentially supply the domestic market.<sup>7</sup>  $\sigma$  is the elasticity of substitution, and  $\gamma$  is the shape parameter of the Pareto distribution of firm-specific productivity levels.

Changes in the fixed costs of trade affect  $Z_p$  and  $Z_x$ .

$$\frac{Z_p - Z_{p0}}{Z_{p0}} = \left(1 + \left(\frac{-\gamma}{\sigma-1} + 1\right) \left(\left(\frac{f_p - f_{p0}}{f_{p0}}\right) - \left(\frac{f_d - f_{d0}}{f_{d0}}\right)\right)\right) \quad (3)$$

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<sup>7</sup> $n_d$  and  $n_f$  are treated as exogenous variables in the partial equilibrium model.

$$\frac{Z_x - Z_{x0}}{Z_{x0}} = \left( 1 + \left( \frac{-\gamma}{\sigma - 1} + 1 \right) \left( \left( \frac{f_x - f_{x0}}{f_{x0}} \right) - \left( \frac{f_d - f_{d0}}{f_{d0}} \right) \right) \right) \quad (4)$$

Finally, the equilibrium values of foreign affiliate sales ( $A$ ), cross-border imports ( $M$ ), and domestic sales ( $D$ ) in the market are defined by (5), (6), and (7).

$$A = \frac{E Z_p (1 - C^{1-\sigma})^{\frac{\gamma}{\sigma-1}-1}}{Z_p (1 - C^{1-\sigma})^{\frac{\gamma}{\sigma-1}} + Z_x C^{-\gamma} + 1} \quad (5)$$

$$M = \frac{E C^{1-\sigma} \left( Z_x C^{-\gamma+\sigma-1} - Z_p (1 - C^{1-\sigma})^{\frac{\gamma}{\sigma-1}-1} \right)}{Z_p (1 - C^{1-\sigma})^{\frac{\gamma}{\sigma-1}} + Z_x C^{-\gamma} + 1} \quad (6)$$

$$D = \frac{E}{Z_p (1 - C^{1-\sigma})^{\frac{\gamma}{\sigma-1}} + Z_x C^{-\gamma} + 1} \quad (7)$$

These three values sum to total expenditure in the market,  $E$ , which is held constant in the simulations.

The model simulations use (3) and (4) to calculate the percent changes in  $Z_p$  and  $Z_x$ .<sup>8</sup> The updated values of  $Z_p$  and  $Z_x$  are substituted into (5), (6), and (7) to calculate updated values of  $A$ ,  $M$ , and  $D$ , and then these updated values are compared to the initial values  $A_0$ ,  $M_0$ , and  $D_0$  to calculate the percentage changes in these economic outcomes.

## 4 Inputs of the Model

The inputs of the model include the initial values of foreign affiliate sales, cross-border imports, and sales of domestic suppliers, the initial relative variable cost of providing services across borders, the elasticity of substitution, the shape parameter of the Pareto distribution of firm-specific productivity levels, and the STRI values discussed in Section 2.

Domestic sales are measured as the difference between the total sales of the domestic

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<sup>8</sup>The simulation model is available in an easy-to-operate spreadsheet format at Riker and Schreiber (2019).

industry and its cross-border exports. The model uses industry payroll as a proxy for variable costs in the calculation of the industry's mark-up of price over marginal costs of supplying the market. The value of  $\sigma$  is set equal to the reciprocal of this mark-up. The value of  $\gamma$  is based on the industry-specific estimates of  $\frac{\gamma}{\sigma-1}$  in di Giovanni, Levchenko and Ranci ere (2011). They estimate a ratio of 1.155 for professional services. The model assumes that the relative variable costs is 1.10.<sup>9</sup> The model does not require data on the fixed costs or the number of domestic and foreign firms in the industry, since the initial values of these variables can be inferred from the model inputs using (1) and (2).

According to the latest available data from the 2012 Economic Census of the United States, revenues from all establishments in NAICS code 5411 (legal services) were \$261.7 billion in 2012.<sup>10</sup> In the same year, annual payroll was \$93.4 billion. Given the global dominance of U.S. law firms, U.S. cross-border exports far exceeded imports of legal services in 2012 (\$8.3 and \$2.0 billion, respectively).<sup>11</sup> Similarly, services supplied by foreign affiliates of U.S. legal services firms abroad (\$5.1 billion) exceeded U.S.-based legal services foreign affiliates (\$134 million).<sup>12</sup> The data in Table 2 are inputs of the model.

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<sup>9</sup>The estimated effects are not particularly sensitive to this assumption.

<sup>10</sup>U.S. Census Bureau (2016).

<sup>11</sup>A majority of the largest international law firms, ranked by revenue, are U.S.-owned. See Seal (2018). Cross-border trade is largely comprised of trade conducted through modes 1, 2, and 4 as classified under the GATS. Cross-border services trade data are collected and published by the type of service provided, rather than by industry of the firm. U.S. Department of Commerce Bureau of Economic Analysis (2018a) This does not appear to pose a concordance issue in the case of legal services, according to U.S. International Trade Commission (2017).

<sup>12</sup>U.S. Department of Commerce Bureau of Economic Analysis (2018b) and U.S. Department of Commerce Bureau of Economic Analysis (2018c). Foreign affiliate sales and purchases refer to mode 3 as classified under the GATS. In U.S. trade, including according to the most recent year of comparable data (2016), the value of cross-border trade in legal services tends to be greater than foreign affiliate sales. According to an OECD database Activities of Multinational Enterprises (AMNE) that includes 32 OECD countries plus Costa Rica and Lithuania, output from cross-border trade and foreign affiliate sales in 2014 were roughly equivalent in the broad category professional & scientific services. See Andrenelli, Cadestin, Backa, Miroudot, Rigo and Ye (2018).

Table 2: United States, Legal Services in 2012, in Millions

U.S. Industry Revenues	\$261,695
U.S. Cross-Border Exports of Legal Services	\$8,380
U.S. Industry Payroll (as a Proxy for Variable Costs)	\$93,393
U.S. Cross-Border Imports of Legal Services	\$2,033
U.S. Purchases of Legal Services from U.S.-based Foreign Affiliates	\$134

## 5 Estimated Effects of the Services Trade Restrictions

The first model simulation estimates how much higher domestic supply would have been if U.S. mode three trade restrictions were at international average levels. The mode 3 restrictions on foreign affiliate sales include the local licensing issues discussed above.<sup>13</sup> The increase in the fixed cost of foreign affiliate sales increases the sales of domestic suppliers of legal services.

Table 3 reports the simulation results.

Table 3: Impact of Restrictions on Foreign Affiliate Sales

Model Inputs	
Initial Value of Domestic Shipments	\$253.4 billion
Initial Value of Cross-Border Imports	\$2.0 billion
Initial Value of Foreign Affiliate Sales	\$134.0 million
Initial Relative Delivered Cost of Foreign Supply	1.10
Economic Effects	
Change in the Dollar Value of Domestic Shipments	\$1.4 million
Change in the Dollar Value of Cross-Border Imports	\$26.7 million
Change in the Dollar Value of Foreign Affiliate Sales	-\$28.1 million

We estimate that foreign affiliates sales would have been \$28.1 million lower, cross-border

<sup>13</sup>Mode 3 restrictions contribute roughly 33 percent of the overall U.S. STRI score (not accounting for policies captured in the "all mode" share.)

imports would have been \$26.7 million higher, and the value of services supplied by domestic firms would have been \$1.4 million higher in this case. These effects are very small compared to the U.S. market for legal services, which totaled \$367.0 billion in 2012.

In the second simulation, we estimate how much higher domestic supply would have been if the combination of U.S. mode 1 and 4 trade restrictions were at international average levels.<sup>14</sup> In the United States, these policies are primarily quotas and labor market tests that affect the movement of people. Table 4 reports the simulation results.

Table 4: Impact of Restrictions on Cross-Border Imports

Model Inputs	
Initial Value of Domestic Shipments	\$253.4 billion
Initial Value of Cross-Border Imports	\$2.0 billion
Initial Value of Foreign Affiliate Sales	\$134.0 million
Initial Relative Delivered Cost of Foreign Supply	1.10
Economic Effects	
Change in the Dollar Value of Domestic Shipments	\$175.3 million
Change in the Dollar Value of Cross-Border Imports	-\$175.4 million
Change in the Dollar Value of Foreign Affiliate Sales	\$0.1 million

We estimate that cross-border imports would have been \$175.4 million lower, foreign affiliates sales would have been \$0.1 million lower, and the value of services supplied by domestic firms would have been \$175.3 million higher.

In the third and final model simulation, we estimate the combined effects of the restrictions on mode 1, 3, and 4 trade in services. Table 5 reports simulations of how much higher domestic supply would have been if the few U.S. restrictions on modes 1, 3, and 4 were increased to international average levels. We estimate that cross-border imports would have

<sup>14</sup>Mode 1 and 4 restrictions contribute to roughly 35 percent of the overall U.S. STRI score. As with mode 3, this is a conservative estimate.

been \$177.5 million lower, foreign affiliates sales would have been \$21.0 million lower, and the value of services supplied by domestic firms would have been \$198.5 million higher.

Table 5: Combined Effects of Both Types of Restrictions

Model Inputs	
Initial Value of Domestic Shipments	\$253.4 billion
Initial Value of Cross-Border Imports	\$2.0 billion
Initial Value of Foreign Affiliate Sales	\$134.0 million
Initial Relative Delivered Cost of Foreign Supply	1.10
Economic Effects	
Change in the Dollar Value of Domestic Shipments	\$198.5 million
Change in the Dollar Value of Cross-Border Imports	-\$177.5 million
Change in the Dollar Value of Foreign Affiliate Sales	-\$21.0 million

## 6 Conclusions

Despite low current restrictions on trade in legal services in the U.S. market, domestic suppliers enjoy an exceptionally high market share. The competitiveness of the domestic industry reflects quality and cost advantages rather than protection from foreign suppliers. Even significant changes in the trade restrictions in the U.S. market would not affect their position in the market. We estimate that increasing all mode 1, 3, and 4 restrictions to their international average levels would have only raised the domestic share by 0.08%, from 99.15% to 99.23%, and would have only raised the value of sales of domestic suppliers by approximately \$200 million.

Future research could focus on distilling activities that are most likely competing with foreign suppliers. In the context of legal services in the United States, although only a share of domestically supplied legal services likely compete directly with cross-border imports or

foreign affiliates, it is difficult to confine domestic revenue to a set of competed activities or geographic areas. Additionally, depending on the availability of data, the model could be applied to other countries or industries with restrictive trade policies.

## References

- Andrenelli, A., Cadestin, C., Backa, K. D., Miroudot, S., Rigo, D. and Ye, M. (2018). Multinational production and trade in services, *OECD Trade Policy Papers, No. 212*.
- di Giovanni, J., Levchenko, A. A. and Ranci ere, R. (2011). Power Laws in Firm Size and Openness to Trade: Measurement and Implications, *Journal of International Economics* **85**: 42–52.
- Grosso, M., Nordas, H., Gonzales, F. and Lejarraga, I. (2014). Services Trade Restrictiveness Index (STRI): Legal and Accounting Services.
- Helpman, E., Melitz, M. J. and Yeaple, S. R. (2004). Export Versus FDI with Heterogeneous Firms, *American Economic Review* **94**(1): 300–316.
- Khachaturian, T. and Riker, D. (2016). A Multi-Mode Partial Equilibrium Model of Trade in Professional Services. U.S. International Trade Commission Economics Working Paper No. 2016-11-A.
- Khachaturian, T. and Riker, D. (2017). The Impact of Liberalizing International Trade in Professional Services, *Journal of International Commerce and Economics*: pp. 1–14.
- Mann, M. (2017). Exploratory Estimates of U.S. International Services by Mode of Supply. U.S. Department of Commerce, Bureau of Economic Analysis Working Paper.
- OECD (2018). STRI Sector Brief: Legal Services.
- OECD (2019a). Services Trade Restrictiveness Index, <https://stats.oecd.org/>.
- OECD (2019b). Services Trade Restrictiveness Index Simulator, <https://sim.oecd.org/>.
- Riker, D. and Schreiber, S. (2019). Trade Policy PE Modeling Portal. U.S International Trade Commission. <https://www.usitc.gov/>.

Seal, B. (2018). The 2018 Global 100 Ranked by Revenue, *American Lawyer* p. September 24.

U.S. Census Bureau (2016). Professional, Scientific, and Technical Services: Geographic Area Series: Summary Statistics for the U.S., States, Metro Areas, Counties, and Places: 2012.

U.S. Department of Commerce Bureau of Economic Analysis (2018a). Table 2.3, U.S. Trade in Services, by Country or Affiliation and by Type of Service.

U.S. Department of Commerce Bureau of Economic Analysis (2018b). Table 4.1: Services Supplied to Foreign Persons by U.S. MNEs Through Their MOFAs, by Industry of Affiliate and by Country of Affiliate.

U.S. Department of Commerce Bureau of Economic Analysis (2018c). Table 5.1, Services Supplied to U.S. Persons by Foreign MNEs Through Their MOUSAs, by Industry of Affiliate and by Country of UBO.

U.S. International Trade Commission (2017). Recent Trends in U.S. Services Trade: 2017 Annual Report.