



The recent invasion of Ukraine by Russia is generating questions regarding how important Russia is to the Texas economy, particularly as policies restricting trade and investment interactions are implemented or contemplated. While no area can escape the near-term disruptive effects related to the supply chain and inflation, the specific effects on business activity within the state are relatively minor. The Perryman Group recently analyzed patterns in Texas-Russia trade and investment to assess the extent of the linkages and related economic effects.

Key findings from the analysis include the fact that Russia comprised less than 1% of Texas total import and export volume in 2021 and a very small percentage of overall business activity in the state. Moreover, there are neither substantive Texas exports to Russia for which other sources of demand are not readily available nor imports for which other suppliers are difficult to obtain. According to The Perryman Group’s estimates, exports, imports, and

all related multiplier effects comprised only an estimated 0.38% of gross state product, 0.35% of earnings, and 0.63% of employment (at 2021 levels). Based on the information available, Russia also appears to be a minimal source of capital and accounts for only small amounts of Texas public sector investments.

Although it is normally preferable to let markets determine where goods are produced and purchased, which assets are acquired, and many other patterns in the economy, there are circumstances where compelling public or humanitarian interests override normal optimal patterns. In this case, curtailing trade and investment activities with Russia may well be a desirable policy, and potential effects on the Texas economy are minimal.

OVERVIEW OF TEXAS-RUSSIA TRADE

Texas trade with Russia (both imports and exports) was just over \$6.0 billion in

Summary of 2021 Volume and Importance of Texas-Russia Trade

	Texas Trade with Russia	Texas Trade with World	Russia Percentage
Imports	\$657.399 m	\$375,323.631 m	0.18%
Exports	\$5,351.621 m	\$312,683.117 m	1.71%
TOTAL	\$6,009.020 m	\$688,006.748 m	0.87%

Source: US Bureau of the Census USA Trade Online, The Perryman Group

Notes: Monetary values given in millions of 2021 US dollars. Components may not sum due to rounding.

2021, only 0.87% of the Texas global trade total of \$688.0 billion. Of the \$657.4 million in Texas exports to Russia in 2021, the largest categories were machinery (except electrical), transportation equipment, computer and electronic products, and chemicals. Texas imported nearly \$5.4 billion in commodities, with over 90% being petroleum & coal products or oil & gas. The machinery category, which represents more than 25% of the total export value, stems largely from oilfield equipment supplies to Russia from Texas. As production escalates both domestically and in other parts of the world, such goods can easily be marketed elsewhere (including in Texas).

TOTAL ECONOMIC BENEFITS OF TEXAS-RUSSIA TRADE

Any economic stimulus leads to dynamic responses across the economy. For trade

activity, exports involve production activity in Texas to produce and transport the exports commodities. Imports generate downstream effects as they are transported and sold in retail stores or used in additional production activity in Texas. There are also indirect effects through the supply chain and consumer/induced effects as wages earned throughout the production chain are spent.

The Perryman Group has developed complex and comprehensive models over the past four decades to measure these dynamic responses. Total economic effects are quantified for key measures of business activity. Total expenditures (or total spending) measure the dollars changing hands as a result of the economic stimulus. Gross product (or output) is production of goods and services that will come about

Largest Export/Import Categories for Texas-Russia Trade

TEXAS EXPORTS TO RUSSIA		TEXAS IMPORTS FROM RUSSIA	
Commodity	Volume	Commodity	Volume
All Commodities	\$657.399 m	All Commodities	\$5,351.621 m
Machinery, Except Electrical	\$167.012 m	Petroleum & Coal Products	\$4,093.698 m
Transportation Equipment	\$125.045 m	Oil & Gas	\$759.892 m
Computer & Electronic Products	\$115.796 m	Primary Metal Manufacturing	\$230.138 m
Chemicals	\$91.855 m	Chemicals	\$72.974 m
Fabricated Metal Products	\$39.073 m	Wood Products	\$68.342 m
Electrical Equip., Appliances, Components	\$34.244 m	Fabricated Metal Products	\$35.139 m
Miscellaneous Manufactured Commodities	\$25.933 m	Fish & other Marine Products	\$13.521 m
Other Special Classification Provisions	\$13.980 m	Electrical Equip., Appliances, Components	\$12.185 m

Source: US Bureau of the Census USA Trade Online, The Perryman Group
Notes: Monetary values given in millions of 2021 US dollars.

in the area as a result of the activity; this measure is parallel to the gross domestic product numbers commonly reported by various media outlets and is a subset of total expenditures. Personal income is dollars that end up in the hands of people in the area; the vast majority of this aggregate derives from the earnings of employees, but payments such as interest and rents are also included. Jobs for an ongoing stimulus are quantified on a full-time equivalent basis.

When multiplier effects are considered, 2021 Texas-Russia trade generated an estimated \$6.9 billion in annual gross product and 81,348 jobs. Imports comprised the bulk of these benefits, with \$6.1 billion in gross product and 74,281 jobs.

To put these economic effects in perspective, exports, imports, and related

multiplier effects comprised only 0.38% of gross state product, 0.35% of earnings, and 0.63% of employment in 2021. The larger percentage of employment reflects the fact that most of the jobs are in retail establishments and are the result of selling finished product imports. It is also worth noting that for any product that is imported that could be either sold at retail or further processed, we assumed that the commodities entered the manufacturing stream in Texas, thus maximizing the potential impact. As a result, these estimates are overstated (yet still minimal).

Looking more specifically at the manufacturing sector, 2021 Texas trade with Russia generated an estimated total of 6,840 jobs, with 2,403 from exports and 4,437 from imports. The Texas manufacturing sector includes an estimated 902,600 jobs

Economic Impact of Texas-Russia Trade

Industry	Total Expenditures	Gross Product	Personal Income	Jobs
Imports	\$1,796.4 m	\$760.8 m	\$475.2 m	7,067
Exports	\$11,020.9 m	\$6,118.9 m	\$3,691.9 m	74,281
Total, All Industries	\$12,817.3 m	\$6,879.8 m	\$4,167.0 m	81,348

Source: US Multi-Regional Impact Assessment System, The Perryman Group

Notes: Monetary values given in millions of 2021 US dollars. Based on 2021 import and export levels and The Perryman Group's estimates of associated upstream and downstream business activity as well as related multiplier effects. Components may not sum to totals due to rounding.

The Potential Annual Impact if Oil and Gas and Refined Petroleum Imported from Russia is Replaced with Texas Production

Industry	Total Expenditures	Gross Product	Personal Income	Jobs
Total, All Industries	\$7,273.2 m	\$1,790.1 m	\$1,003.8 m	13,789

Source: US Multi-Regional Impact Assessment System, The Perryman Group

Notes: Monetary values given in millions of 2021 US dollars. Economic benefits to Texas assuming 2021 import volumes and The Perryman Group's estimates of the increase in business activity from incremental production in Texas as well as related multiplier effects.

(as of March 2022), which means trade with Russia accounted for just 0.75% of the overall total. Moreover, it should be noted that these exports would likely be sold and imports would be acquired elsewhere to the extent that trade with Russia is curtailed, thus generating approximately the same levels of manufacturing activity.

OIL AND NATURAL GAS

As noted, petroleum products and oil and gas comprised over 90% of 2021 imports. The oil imports likely stem from the fact that refineries are designed to take specific types of crude and Russian products are used to meet these needs. However, the types of oil used will likely change in the future as refineries adapt to the higher levels of US production. In addition, reaching climate goals will support the conversion to use of the lower carbon crude options available from the Permian Basin and Gulf of Mexico. Moreover, the refined products obtained from Russia, which alone reflect over 76% of total imports, could easily be supplied by producers within the state using Texas natural resources.

The Perryman Group analyzed the potential economic effects of such a transition on business activity in Texas and found total benefits to the state of nearly \$1.8 billion in annual gross product and 13,789 jobs. Note that this potential benefit is almost twice the TOTAL stimulus that Texas receives from exports to Russia.

In considering the effects of Texas-Russia trade, it is also worthy of note that

the continued emergence of the global market for liquified natural gas (LNG) also has significant geopolitical implications. As the recent Russian invasion of Ukraine has clearly illustrated, it is essential to global energy security that natural gas supplies be mobilized as needed to fill market needs. In fact, if this avenue were presently available at sufficient scale to supply the needs of Europe, the ability of Russia to impact global markets and, thus, its leverage to wage conflict, would be significantly diminished (the Russian economy is approximately 85% the size of Texas and generates less than 1.5% of global output; without the ability to control natural gas supplies to Europe, its role in the world is notably diminished). Four of the seven operational LNG plants in the US are based in Texas, as well as the majority of those presently under development (my firm has been involved in the permitting of virtually all of these facilities). As this emerging segment of the global energy complex continues to expand, Texas will be an important source of the needed inputs and the liquefaction process.

INVESTMENT CONSIDERATIONS

Public data related to investments is limited. However, US foreign direct investment in Russia is miniscule, comprising only 0.2% of the total in 2020 according to data maintained by the US Bureau of Economic Analysis.

In Texas, the available information indicates that investment in Russia is also very limited. For example, the Teachers

Retirement System of Texas has some \$204 billion in assets under management and reportedly holds about 0.3% in Russia public equity. Other large Texas public pension funds have also indicated that well under 1% of their investments are linked to Russia.

During normal times, maintaining diverse portfolios is, of course, a prudent strategy. Such funds often accept a reasonable amount of risk in order to generate the levels of returns required to meet their obligations. In the current situation, the risk profile for Russian assets has clearly moved in a direction that makes them more problematic for any investor, including those in the public sector. Thus, while the exigent circumstances might well dictate that these assets be divested even if market patterns suggested otherwise, it is likely that the environment

has shifted sufficiently to dictate such asset reallocations in any case. The bottom line is that divesting should not have any material impact on the long-term returns of the funds.

CONCLUSION

In the scope of the Texas economy and import-export activity, Russia plays a small role. While economists typically prefer that markets allocate capital and production activity, there are circumstances where other political and humanitarian considerations justify interference with normal patterns. The Perryman Group's analysis indicates that policies restricting trade and investment interactions with Russia would have minimal fallout for the Texas economy.

The Potential Annual Impact Associated with Replacing Oil and Gas and Refined Petroleum Imported from Russia with Texas Production on Business Activity in Texas

Results by industry

Industry	Total Expenditures	Gross Product	Personal Income	Job-Years
Agriculture	+\$46.0 m	+\$13.7 m	+\$9.0 m	+130
Mining	+\$1,450.4 m	+\$318.9 m	+\$148.4 m	+706
Utilities	+\$245.5 m	+\$51.7 m	+\$22.5 m	+90
Construction	+\$164.5 m	+\$89.6 m	+\$73.9 m	+954
Manufacturing	+\$3,626.6 m	+\$395.8 m	+\$201.3 m	+1,979
Wholesale Trade	+\$140.6 m	+\$95.1 m	+\$54.8 m	+573
Retail Trade*	+\$395.8 m	+\$295.2 m	+\$171.4 m	+4,866
Transportation & Warehousing	+\$198.8 m	+\$94.0 m	+\$62.2 m	+780
Information	+\$67.6 m	+\$41.9 m	+\$17.9 m	+147
Financial Activities*	+\$542.8 m	+\$165.5 m	+\$55.1 m	+512
Business Services	+\$139.5 m	+\$81.8 m	+\$66.7 m	+746
Health Services	+\$88.4 m	+\$61.9 m	+\$52.4 m	+795
Other Services	+\$166.7 m	+\$85.0 m	+\$68.3 m	+1,511
Total, All Industries	+\$7,273.2 m	+\$1,790.1 m	+\$1,003.8 m	+13,789

Source: US Multi-Regional Impact Assessment System, The Perryman Group

Notes: Monetary values given in millions of 2021 US dollars per year. Components may not sum due to rounding. Retail Trade includes Restaurants, Financial Activities includes Real Estate.

The Estimated Annual Impact (2021) Associated with Trade with Russia on Business Activity in Texas

Results by Industry

Industry	Total Expenditures	Gross Product	Personal Income	Jobs
Economic Impact of Imports				
Agriculture	+\$158.4 m	+\$45.1 m	+\$29.7 m	+430
Mining	+\$244.1 m	+\$55.4 m	+\$28.7 m	+149
Utilities	+\$481.8 m	+\$109.8 m	+\$47.9 m	+192
Construction	+\$197.5 m	+\$104.5 m	+\$86.1 m	+1,113
Manufacturing	+\$1,876.8 m	+\$555.4 m	+\$316.0 m	+4,437
Wholesale Trade	+\$315.9 m	+\$213.8 m	+\$123.3 m	+1,288
Retail Trade*	+\$4,330.7 m	+\$3,482.5 m	+\$2,065.6 m	+52,340
Transportation & Warehousing	+\$298.4 m	+\$202.3 m	+\$133.8 m	+1,677
Information	+\$248.1 m	+\$152.4 m	+\$65.1 m	+536
Financial Activities*	+\$1,547.1 m	+\$409.5 m	+\$150.0 m	+1,438
Business Services	+\$400.7 m	+\$255.3 m	+\$208.2 m	+2,330
Health Services	+\$325.3 m	+\$227.8 m	+\$192.6 m	+2,925
Other Services	+\$596.2 m	+\$305.2 m	+\$244.9 m	+5,426
Total, All Industries	+\$11,020.9 m	+\$6,118.9 m	+\$3,691.9 m	+74,281
Economic Impact of Exports				
Agriculture	+\$23.3 m	+\$6.5 m	+\$4.3 m	+62
Mining	+\$30.3 m	+\$7.4 m	+\$4.1 m	+24
Utilities	+\$70.1 m	+\$15.6 m	+\$6.8 m	+27
Construction	+\$26.3 m	+\$14.1 m	+\$11.7 m	+151
Manufacturing	+\$962.7 m	+\$336.3 m	+\$211.8 m	+2,403
Wholesale Trade	+\$72.2 m	+\$48.8 m	+\$28.2 m	+294
Retail Trade*	+\$181.8 m	+\$136.3 m	+\$79.2 m	+2,237
Transportation & Warehousing	+\$48.5 m	+\$31.8 m	+\$21.1 m	+264
Information	+\$29.7 m	+\$18.3 m	+\$7.8 m	+64
Financial Activities*	+\$179.9 m	+\$44.8 m	+\$17.7 m	+170
Business Services	+\$53.0 m	+\$32.0 m	+\$26.1 m	+292
Health Services	+\$41.9 m	+\$29.3 m	+\$24.8 m	+376
Other Services	+\$76.7 m	+\$39.6 m	+\$31.7 m	+702
Total, All Industries	+\$1,796.4 m	+\$760.8 m	+\$475.2 m	+7,067
Total Economic Impact (Imports + Exports)				
Agriculture	+\$181.7 m	+\$51.6 m	+\$34.0 m	+492
Mining	+\$274.4 m	+\$62.8 m	+\$32.8 m	+173
Utilities	+\$551.9 m	+\$125.4 m	+\$54.7 m	+219
Construction	+\$223.8 m	+\$118.7 m	+\$97.8 m	+1,263
Manufacturing	+\$2,839.5 m	+\$891.6 m	+\$527.8 m	+6,840
Wholesale Trade	+\$388.0 m	+\$262.6 m	+\$151.4 m	+1,582
Retail Trade*	+\$4,512.5 m	+\$3,618.8 m	+\$2,144.8 m	+54,577
Transportation & Warehousing	+\$346.9 m	+\$234.1 m	+\$154.8 m	+1,941
Information	+\$277.7 m	+\$170.7 m	+\$72.9 m	+601
Financial Activities*	+\$1,727.1 m	+\$454.2 m	+\$167.7 m	+1,608
Business Services	+\$453.7 m	+\$287.3 m	+\$234.4 m	+2,622
Health Services	+\$367.1 m	+\$257.1 m	+\$217.4 m	+3,302
Other Services	+\$672.9 m	+\$344.8 m	+\$276.5 m	+6,128
Total, All Industries	+\$12,817.3 m	+\$6,879.8 m	+\$4,167.0 m	+81,348

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