

WHITE PAPER

Calculating EXIM's Impact on the U.S. Economy and Jobs

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Office of Inspector General
Export-Import Bank of the United States



EXECUTIVE SUMMARY

WHITE PAPER: CALCULATING EXIM'S IMPACT ON THE U.S. ECONOMY AND JOBS

OBJECTIVES

The Export-Import Bank of the United States (EXIM) Office of Inspector General (OIG) contracted a white paper study focused on calculating EXIM's impact on the U.S. economy and jobs. This study reviewed EXIM's current jobs calculation method and identified alternative methods that could be used to quantify EXIM's impact. OIG assessed each alternative method to determine whether it would be useful (e.g., provide insights into EXIM's impact on the U.S. economy and jobs) and feasible (e.g., implementable with current EXIM resources).

RESULTS OF THE STUDY

OIG reviewed the current process EXIM uses to calculate jobs supported and found EXIM's current methodology valid and appropriate. In addition, OIG identified two alternative methods the agency could consider obtaining additional insight into EXIM's industry-specific, indirect, and small-business job effects. EXIM currently estimates jobs supported using a transaction-level methodology that combines export values with a single exports-to-jobs ratio. The alternative methodologies OIG identified—the Department of Commerce, International Trade (ITA) Industry-Specific Method and the Bureau of Economic Analysis (BEA) Cost Component Method—involve straightforward calculations using publicly available data sources and provide additional insight into EXIM's impact on the U.S. economy and jobs.

In addition, OIG identified that EXIM's current transaction-level methodology may not fully reflect the broader firm-level impacts of agency support on exporters. Specifically, EXIM's transaction-level multiplier is appropriate for quantifying the exports each authorization supports but differs from a firm-level multiplier, which is appropriate for quantifying EXIM's holistic and long-term impact on recipient export companies. Using FY 2023 as an example, the transaction-level multiplier estimates that EXIM supported approximately 40,000 U.S. jobs. Comparatively, a firm-level multiplier estimates that EXIM supported approximately 159,000 jobs in FY 2023. Academic studies suggest that firm-level multipliers become less reliable over time as economic conditions diverge from those underlying the original analysis. Although updating the underlying firm-level analysis would require additional effort, it could provide a more comprehensive assessment of EXIM's contribution to the U.S. economy.

OIG provided a draft of this white paper to EXIM stakeholders for their review and comment. The agency's complete response can be found in [Appendix C](#).

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PURPOSE OF WHITE PAPER

The Export-Import Bank of the United States (EXIM) Office of Inspector General (OIG) contracted a white paper study focused on calculating EXIM's impact on the U.S. economy and jobs. Specifically, the objectives of the white paper study were to:

1. Review EXIM's methods for estimating total jobs supported by its programs; and
2. Perform an environmental scan of alternative prospective methods that can be used to supplement EXIM's current jobs calculation.

This white paper serves as an exploratory analysis of methodologies and does not make any recommendations or assessments on the current processes EXIM uses to calculate the total number of U.S. jobs supported through its financing programs. The information presented is intended to be a tool for EXIM senior leaders and stakeholders as they assess the impact of EXIM's financing programs on the U.S. economy and jobs. See [Appendix A](#) for more information.

EXIM'S MANDATE TO SUPPORT U.S. JOBS

As required by the Export-Import Bank Act of 1945 (Charter), EXIM's mission is "to aid in financing and to facilitate exports of goods and services ... and in so doing to contribute to the employment of United States workers."¹ The Charter also focuses on supporting different industries and small businesses in its efforts to facilitate exports and support U.S. jobs. Specifically, the Charter directs EXIM "[t]o foster expansion of exports of manufactured goods, agricultural products, and other goods and services...". The Charter further "encourage[s] the participation of small business[es] ... and start-up businesses in international commerce." EXIM's recently updated Strategic Plan for FY 2026–2030 (Strategic Plan)² emphasizes its focus on supporting the energy sector, revitalizing manufacturing, and prioritizing small businesses.

Across the goals outlined by EXIM, the ability to identify and describe U.S. jobs supported within these specific sectors, in the supply chain, and at various business sizes will enable EXIM to clearly communicate respective achievements, ultimately reflecting EXIM's support of American industries and jobs for American workers.

HOW EXIM CALCULATES ITS IMPACT ON U.S. JOBS

EXIM quantifies its support of American employment by calculating the total estimated U.S. jobs supported by its authorizations and publishing the total U.S. jobs supported each year in its

¹ Public Law 79–173. As amended through P.L. 117–286, Enacted December 27, 2022.

² EXIM's Strategic Plan for FY 2026–2030, see img.exim.gov/s3fs-public/reports/exim-fy-2026-strategic-plan.pdf

annual report. For example, EXIM's 2023 Annual Report states that EXIM's \$8.77 billion in FY 2023 authorizations supported an estimated 40,000 U.S. jobs. Most recently, in its 2025 Annual Report, EXIM expanded its reporting to include the total number of U.S. jobs supported by China and Transformational Exports Program transactions.

EXIM USES A TWO-STEP PROCESS TO ESTIMATE THE NUMBER OF JOBS SUPPORTED

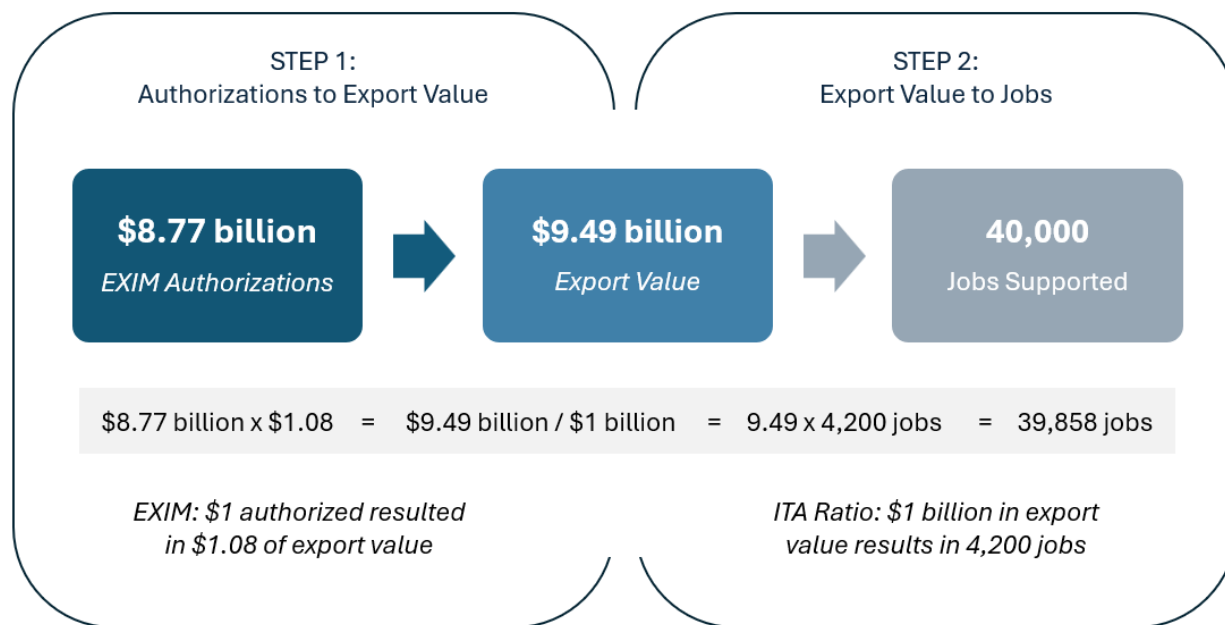
EXIM estimates the number of U.S. jobs it supports based on the total dollar value of the transactions it authorizes. This process consists of two steps. In the first step, the total export value is estimated for each transaction during the underwriting process; then, EXIM calculates the total export value for all transactions within a fiscal year. In the second step, the total export value for a fiscal year is converted into total U.S. jobs supported using the International Trade Administration (ITA) exports-to-jobs ratio. Figure 1 illustrates EXIM's jobs calculation for FY 2023.

This exports-to-jobs ratio is also used by other federal agencies. For example, the Office of the U.S. Trade Representative uses ITA's exports-to-jobs ratio to illustrate the importance of U.S. exports.³



³ For more information about the Office of the U.S. Trade Representative calculation, see <https://ustr.gov/about-us/policy-offices/press-office/fact-sheets/2011/october/trade-agreements-and-jobs>.

Figure 1: EXIM's Job Calculation Process Illustration, FY 2023



Source: OIG display of the two-step jobs calculation process used by EXIM. EXIM authorization data from the EXIM Bank Reporting System (ERS), ITA exports-to-jobs ratios. See <https://www.trade.gov/jobs-supported-exports-home-page>.

Step 1: Converting Authorizations to Export Value

EXIM determines the export value supported for each transaction during underwriting. For a given transaction, EXIM staff estimate the portion of the authorization that supports export value. For each transaction, the ratio between the authorized value and the export value is a *multiplier* that quantifies how much export value is leveraged by \$1 of authorizations. Authorization-to-export multipliers vary by transaction and may be less than 100 percent, equal to 100 percent, or greater than 100 percent.

In FY 2023, EXIM authorized \$8.77 billion in financing transactions, which generated \$9.49 billion in supported exports.^a This implies that, on average in FY 2023, the authorization-to-export multiplier was 108 percent. That is, on average in FY 2023, each dollar authorized by EXIM resulted in \$1.08 in export value.

Step 2: Converting Export Value to Jobs

To calculate the total number of jobs supported by the export value calculated in the previous step, EXIM multiplies the export value by an exports-to-jobs ratio published annually by ITA. Specifically, EXIM uses the generic goods and services ratio.

For example, in FY 2023, EXIM applied ITA's goods and services ratio of approximately 4,200 jobs per \$1 billion of exports.^b Using this goods and services ratio, EXIM estimated 39,858 U.S. jobs supported. Rounded to the nearest thousand, EXIM reported 40,000 export jobs supported in the FY 2023 annual report.

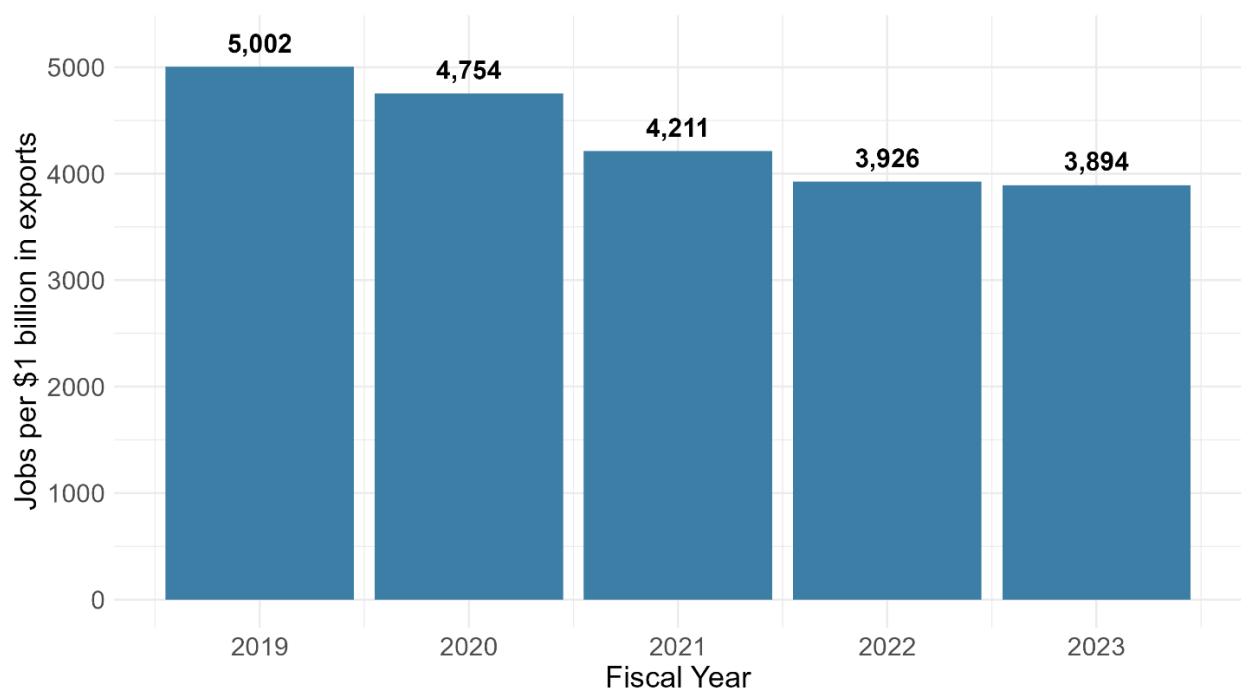
^a **Source:** EXIM authorization data from EXIM Bank Reporting System (ERS).

^b **Source:** Jobs supported by U.S. Exports. Available at <https://www.trade.gov/data-visualization/jobs-supported-us-exports>.

ITA Exports-to-Jobs Ratio Lags Authorization Data by About Two Years

The ITA exports-to-jobs ratio has a two-year lag. As a result, when calculating FY 2023 job estimates, EXIM used a ratio from FY 2021, the most recent available at the time of reporting. While EXIM is using the most recently available exports-to-jobs ratio, the delay could lead to an overestimation of the total number of jobs supported. Because of productivity gains, fewer jobs have been needed to support \$1 billion in exports in recent years; as a result, the exports-to-jobs ratio has trended downward (see Figure 2). When calculating the total number of U.S. jobs supported in FY 2023 using the FY 2021 exports-to-jobs ratio, EXIM estimated that it supported 40,000 jobs. Instead, if EXIM recalculates using the FY 2023 exports-to-jobs ratio, the total estimated jobs supported would be approximately 37,000—a decrease of 3,000 jobs. To alleviate these issues, EXIM could consider periodically re-estimating and publishing the number of U.S. jobs supported by previous projects once the exports-to-jobs ratio for that year has been issued by ITA.

Figure 2: ITA Jobs Supported by \$1 Billion of U.S. Goods and Services Exports, FY 2019-2023



Source: ITA jobs supported by U.S. Exports. Available at <https://www.trade.gov/data-visualization/jobs-supported-us-exports>.

ADDITIONAL JOBS CALCULATION METHODS IDENTIFIED

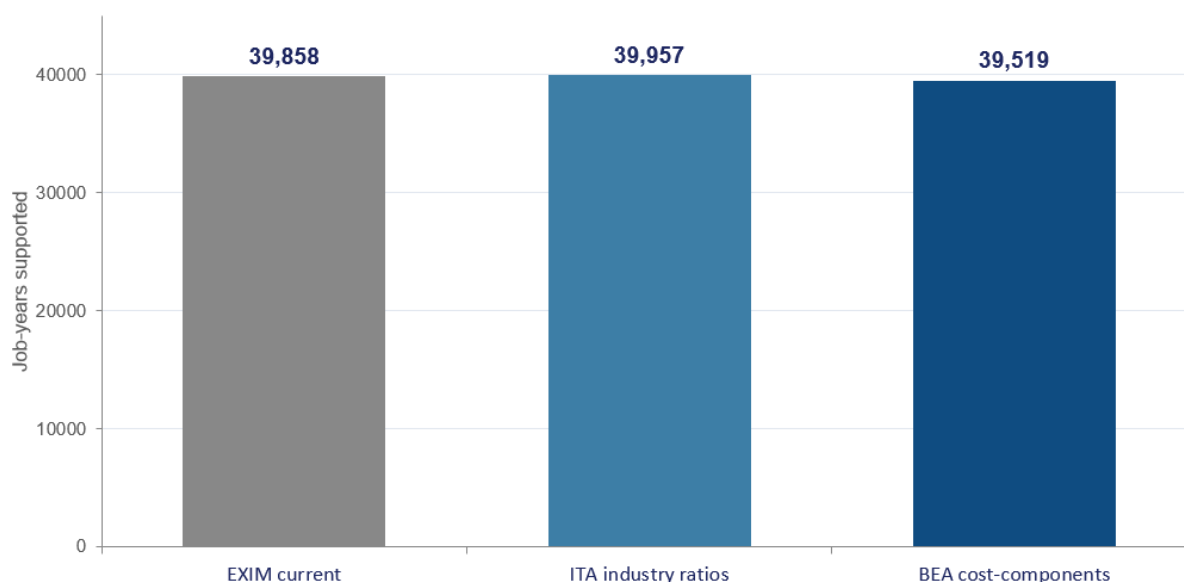
OIG completed an environmental scan of potential jobs calculation methods used by the federal government, academia, and international governments or institutions. OIG then evaluated the methodologies for *feasibility* (e.g., whether EXIM could execute the calculations given its

current resources and capabilities) and *usability* (e.g., whether these calculations provide additional metrics that quantify EXIM’s impact on the U.S. economy in accordance with the Charter and Strategic Plan). OIG is not making a recommendation or determination about which method should be used. These alternatives provide additional information to EXIM senior leaders and stakeholders about the available methodologies for calculating EXIM’s overall impact on U.S. jobs and the economy.

OIG identified two alternative jobs calculation methods. Alternative 1 (ITA Industry-Specific Method) uses the ITA exports-to-jobs ratios but employs industry-specific ratios instead of a single ratio for generic goods and services. This method produces additional industry-specific jobs information, such as the total number of manufacturing jobs. Alternative 2 (BEA Cost Component Method) uses data published by the Bureau of Economic Analysis (BEA) and produces industry-specific jobs data, along with information about direct and indirect jobs and about small business jobs.

All three methods use the same underlying data from BEA. As such, when calculating the total number of jobs supported, the results are generally similar, as shown in Figure 3.⁴ There is a small difference of about 400 to 500 jobs between these methods.⁵

Figure 3: Total Jobs Supported for FY 2023



Source: OIG jobs calculations using EXIM authorization data from ERS and exports-to-jobs ratio data published by ITA; alternative calculations incorporate additional data sources published by BEA and ITA.

⁴ Jobs are both full- and part-time employment. ITA methodology document states: “... calculate the Employment Requirements Table using information on employment by industry from the National Income and Product Accounts (NIPA). The measure of employment used is full-time part-time.” See ITA, *Jobs Supported by Exports Methodology*, <https://www.trade.gov/sites/default/files/2026-03/Jobs%20Supported%20by%20Exports%20Methodology.pdf>.

⁵ A direct job is a job created by the actual export activities and the compensations are paid as a result of these activities. An indirect job is a job created by the expenditures the exporters make to obtain the energy, materials, and services used for the export.

The key difference between the methodologies is the additional information about EXIM’s impact across different industries and business sizes.⁶ The ITA Industry-Specific Method provides details about jobs supported in specific industry sectors, such as manufacturing, mining, and agriculture. The BEA Cost Component Method also provides more details about indirect and supply chain jobs, as well as small business jobs. Both alternative methods provide greater detail about EXIM’s impact and progress against its strategic goals and objectives beyond the current jobs calculation EXIM uses for its annual reporting. A complete comparison of the two alternative methods against EXIM’s strategic goals and objectives can be found in Table 1.

Table 1: Strategic Objectives Supported by ITA Industry-Specific Method and BEA Cost Component Method

EXIM Strategic Objective	ITA Industry-Specific Method ^a	BEA Cost Component Method ^a
Support American jobs	● Jobs by industry	● Direct and indirect jobs by industry
Revitalize U.S. Manufacturing	◐ Manufacturing’s share of total jobs	● Direct and indirect manufacturing jobs needed for the exports
Achieve Energy Dominance	◐ Jobs in energy-related industries	● Direct and indirect energy jobs needed for the exports
Strengthen U.S. Supply Chains	◑ Industry classification only	● Supply chain effects
Support Industries of the Future	◐ Jobs in targeted sectors	◐ Activity generated by strategic industries ^b
Support Small Businesses	◐ Small business impact by industry	● Impact by firm size and industry
Communicate Economic Impact	◐ Detail behind the headline	● Multidimensional: industry, firm size, supply chain effects
Implementation Effort	<i>Modest—different cut of existing ITA data</i>	<i>Moderate—calculations involving BEA data tables</i>

Source: OIG assessment of alternative methods using EXIM’s FY 2026–2030 Strategic Plan (<https://img.exim.gov/s3fs-public/reports/exim-fy-2026-strategic-plan.pdf>).

^a Scale – The results of the method: ● fully address, ◐ partially address, or ◑ minimally address the strategic objective.

^b The completeness of the results related to this goal depends on which industries are defined as strategic; some industries are captured directly, and others are only captured as induced activity.

ALTERNATIVE METHOD #1: ITA INDUSTRY-SPECIFIC EXPORTS-TO-JOBS RATIOS (ITA INDUSTRY-SPECIFIC METHOD)

Method

The first alternative replaces the ITA generic goods and services exports-to-jobs ratio currently used by EXIM, with a list of industry-specific exports-to-jobs ratios also published by ITA. ITA

⁶ These three methods share the same lineage. Using BEA data, ITA uses an input-output calculation to estimate the number of U.S. jobs supported by \$1 billion exports. The resultant exports-to-jobs ratios are by industry (i.e., ITA Industry-Specific Method). EXIM’s current practice uses one of these ratios (i.e., goods and services exports-to-jobs ratio) applying to the entire portfolio of authorizations. As such, these two methods use precalculated outcomes from ITA input-output calculation. Methodologically, the BEA Cost Component Method takes one step back. Instead of using a precalculated outcome, it performs a simplified four-sector ITA input-output calculation tailored to EXIM’s authorizations. Therefore, the BEA Cost Component Method provides more details about the jobs supported.

provides these industry-specific ratios at the two-digit North American Industry Classification System (NAICS) level.⁷ For example, the two-digit NAICS codes for manufacturing are 31–33, and for utilities is 22. Each two-digit NAICS code is associated with a different exports-to-jobs ratio. For example, \$1 billion in manufacturing exports supports 4,028 U.S. jobs; utilities supports 3,188 U.S. jobs.

This method uses the two-digit NAICS industry-specific exports-to-jobs ratio to calculate the number of U.S. jobs supported. The method is illustrated in Figure 4 below.

Usability

The results of this method provide useful, detailed information about the industries in which the jobs were supported and show whether these jobs are concentrated in a few industries or distributed across many, as shown in Table 2 below. For example, in FY 2023, EXIM supported the largest number of jobs in the U.S. manufacturing industry. The manufacturing industry accounted for about \$5.11 billion in financing authorizations, \$5.17 billion in export value, and 20,815 jobs supported—more than half of the total jobs supported by EXIM financing in FY 2023. The wholesale and retail trade industries, along with the goods and services industries, together add roughly 14,500 jobs. The remaining industries account for fewer than 5,000 jobs combined.

Industries differ in the number of jobs they support per \$1 billion of export value. ITA exports-to-jobs ratios range from as low as 2,410 mining jobs per \$1 billion in exports to as high as 5,508 transportation and warehouse jobs per \$1 billion in exports as shown in Table 2 below. Given the variability in the exports-to-jobs ratios, using industry-specific ratios is likely to result in a more accurate estimate of EXIM’s impact. EXIM’s current jobs calculation is accurate to the extent the industry composition of its authorizations mirrors that of ITA’s goods and services composite sector. If EXIM authorizations disproportionately favor one industry with a higher or lower exports-to-jobs ratio (e.g., mining, quarrying, and oil and gas extraction), EXIM’s current jobs calculation, which relies on the generic goods and services exports-to-jobs ratio, could overstate or understate the number of jobs supported.⁸

Feasibility

ITA publishes publicly available industry-specific exports-to-jobs ratios, and EXIM has access to transaction-level industry classifications, which makes this method feasible. The only data preparation required is a crosswalk to match EXIM’s abbreviated industry sector names with the expanded versions used by ITA. All calculations can be executed in a spreadsheet.

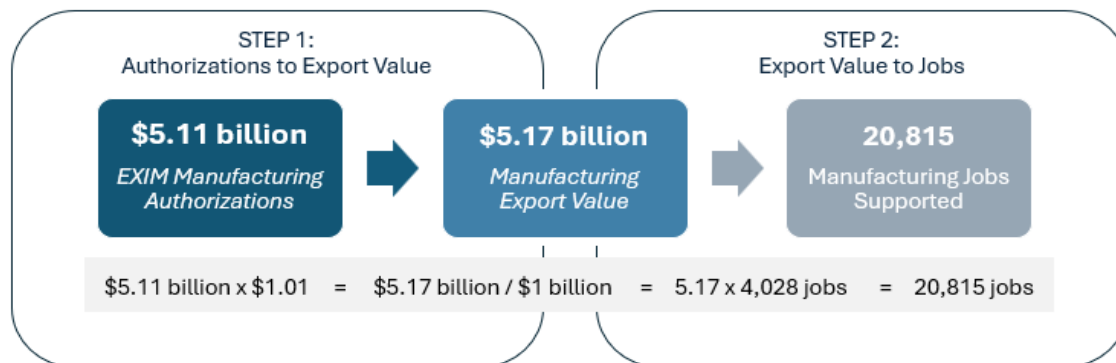
⁷ There are 18 different industries included in EXIM’s authorization data based on the NAICS code for each transaction. These include Agriculture, Forestry, Fishing & Hunting (11); Mining, Quarrying and Oil & Gas Extraction (21); Utilities (22); Construction (23); Manufacturing (31-33); and Wholesale & Retail Trade (42, 44-45).

⁸ In FY 2023, the portfolio weighted average of exports-to-jobs ratio is 4,212, which happens to be similar to the goods and services ratio of 4,211. This coincidence leads to similar conclusions between EXIM’s current calculation and the ITA Industry-Specific method. If the industry composition of EXIM’s authorizations changes, there is no reason to assume the portfolio weighted average would be similar to the generic goods and services ratio.

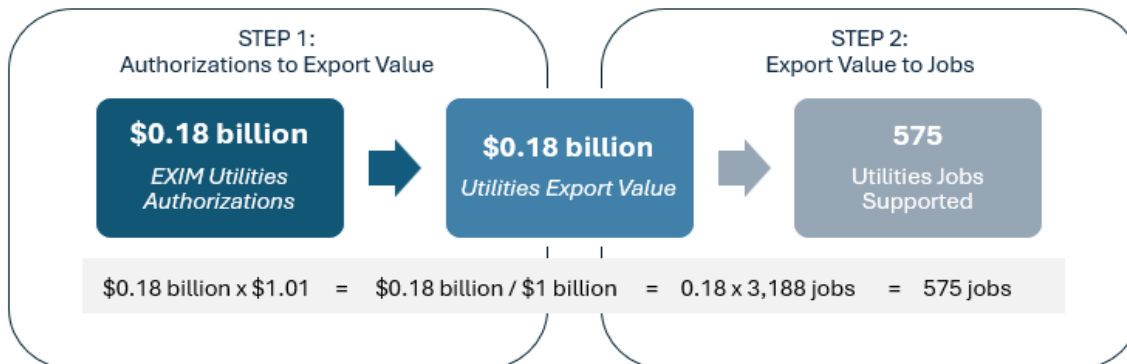
Interviews with EXIM staff indicate that calculations similar to this method were executed in the past before EXIM started using the generic goods and services exports-to-jobs ratio.

Figure 4: Industry-Specific Method Illustration, FY 2023

Example 1: Manufacturing Jobs Calculation



Example 2: Utilities Jobs Calculation



Source: OIG display of the two-step process used for the industry-specific method, using EXIM authorization data from ERS and Data.gov, and the ITA exports-to-jobs ratios. See <https://www.trade.gov/jobs-supported-exports-home-page>.

Step 1: Converting Industry-Specific Authorizations to Export Value

The ITA industry-specific method uses the export values estimated by the underwriting team as EXIM's current calculation method. The total export value for each industry is calculated by adding the individual export values for all transactions supporting that industry.

The ratio between the total authorized value and the total export value for each industry yields a multiplier that quantifies how much export value is leveraged by each \$1 of authorizations. This average multiplier varies from industry to industry.

For example, in FY 2023, \$1 of manufacturing authorizations, on average, generated \$1.01 of manufacturing exports, whereas, \$1 of utilities authorization generated \$1 of utilities exports, on average.

Step 2: Converting Export Value to Industry-Specific Jobs

The total export value for each industry, in billions of dollars, is then multiplied by the corresponding industry-specific ITA exports-to-jobs ratio.

For example, in FY 2023, multiplying the \$5.17 billion in manufacturing exports supported by ITA's manufacturing ratio of approximately 4,028 jobs per \$1 billion of exports^a yields 20,815 manufacturing jobs.

As shown in Table 2, the total jobs supported across all industries are added together for the total jobs supported by EXIM financing.

^a **Source:** Jobs supported by U.S. Exports. Available at <https://www.trade.gov/data-visualization/jobs-supported-us-exports>.

Results: Using FY 2023 as a Case Study

This method shows that manufacturing exports dominated the U.S. jobs supported in FY 2023. In total, the method calculates that EXIM supported about 40,000 jobs in FY 2023 as shown in Table 2, which aligns with EXIM’s published jobs supported estimate.

Table 2: Industry-Specific Impact and Jobs Supported Numbers, FY 2023

Industry (Two-Digit NAICS Code)	Total Authorization	Authorization- to-Export Multiplier	Total Export Value	ITA Exports-to- Jobs Ratio ^a	Total Jobs
Manufacturing (31–33)	\$5.11 billion	1.01	\$5.17 billion	4,028	20,815
Wholesale & Retail Trade (42, 44–45)	\$0.54 billion	3.05	\$1.66 billion	4,682	7,779
Goods and Services (Unclassified) (99)	\$2.17 billion	0.73	\$1.6 billion	4,211	6,718
Transportation and Warehousing (48–49)	\$0.43 billion	1.11	\$0.48 billion	5,508	2,643
Utilities (22)	\$0.18 billion	1.00	\$0.18 billion	3,188	575
Mining, Quarrying and Oil & Gas Extraction (21)	\$0.23 billion	1.02	\$0.23 billion	2,410	558
Agriculture, Forestry, Fishing & Hunting (11)	\$0.04 billion	2.40	\$0.09 billion	5,136	449
Other (multiple) ^b	\$0.06 billion	1.30	\$0.08 billion	5,024	420
TOTAL	\$8.77 billion	1.08	\$9.49 billion	4,212^c	39,957

Source: OIG jobs calculation by industry using an industry-specific method. Details may not add up exactly due to rounding.

^a FY 2021 ITA \$1B exports-to-jobs ratio.

^b “Other” includes, in order of jobs supported, Professional & Technical Services (54), Construction (23), Finance & Insurance (52), Managerial, Administrative, & Waste Management Services (56), Information (51), Other Private Services (81), Real Estate & Rental & Leasing (53), and Accommodations and Food Services (72).

^c This ratio is a weighted average of all industries.

Assumptions

About 25 percent of EXIM’s authorizations originated from an “unclassified” industry. This method assigns them to the generic goods and services industry and the corresponding ITA exports-to-jobs ratio.

ALTERNATIVE METHOD #2: BEA COST COMPONENT METHOD

Method

Every export requires inputs to be produced—employee compensation, energy, materials, and purchased services.⁹ In turn, energy, materials, and purchased services require their own labor.

⁹ Four inputs matter to this calculation. Employee compensation inputs consists of the wages and salaries and supplements to wages and salaries accruing to labor as remuneration for domestic production. Materials inputs include raw materials and semi-finished goods. Energy inputs include purchased energy (electricity, fuels). Purchased services inputs include services purchased from other industries (e.g., legal, accounting, advertising,

The second jobs calculation alternative adds the jobs needed for these inputs. Using the cost shares provided by BEA for each two-digit NAICS industry, this method calculates the number of U.S. jobs supported by following these steps:

1. By industry, calculate input requirements in dollars necessary to support exports.
2. Calculate the number of direct jobs supported by employee compensation.
3. Calculate the number of indirect jobs that produce energy, materials, and professional services to support exports.
4. Use the total number of U.S. jobs supported to determine the sum of the direct and indirect jobs.

Figure 5 below illustrates this process. A detailed step-by-step description of the process, including the mathematical derivation of indirect jobs, can be found in [Appendix B](#).

Usability

Using the BEA Cost Component Method allows EXIM to quantify its comprehensive contributions to the U.S. economy beyond the number of direct jobs supported. In addition to providing industry-specific job counts, the BEA method enables further categorization by firm size (mid-to-large or small business) and by direct and indirect jobs as shown by Table 3 below. The categorization of direct and indirect jobs provides EXIM with insights into indirect jobs in the energy and material industries, which are central to EXIM's Strategic Plan.

Similar to the ITA methods discussed above, BEA data has a two-year delay, which may also cause estimation imprecisions owing to this reporting lag.

Feasibility

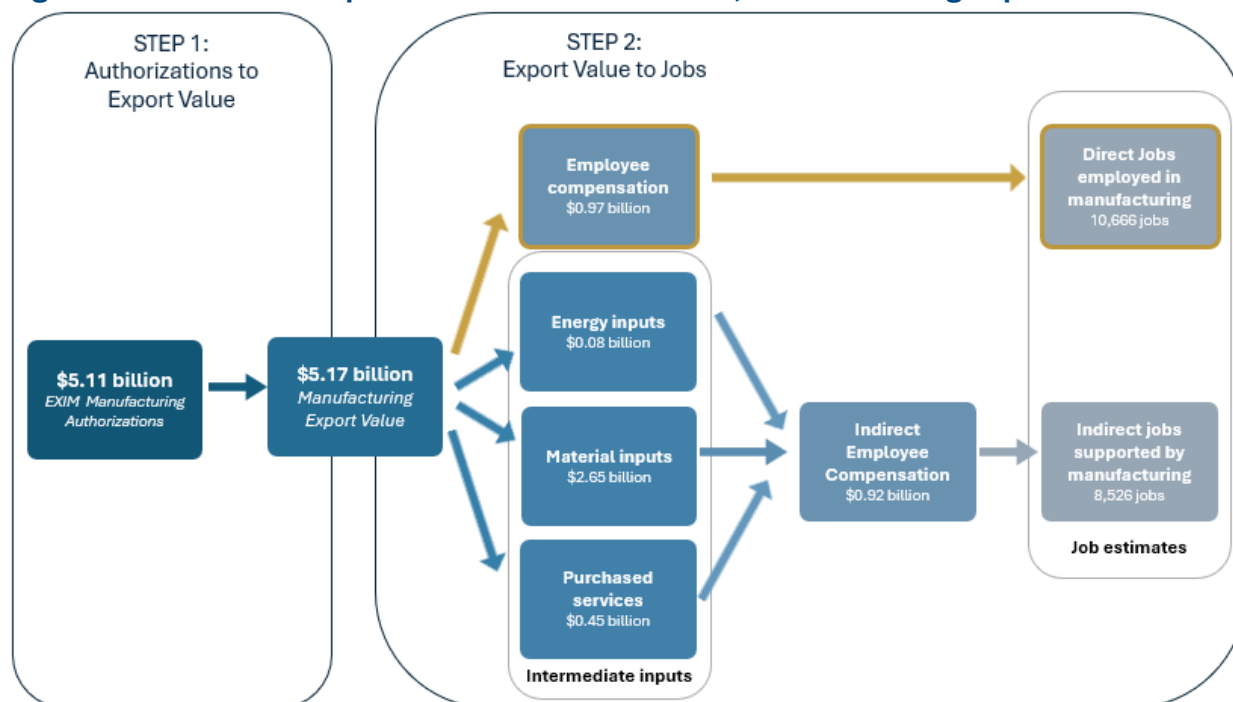
As with the ITA Industry-Specific Method, this method relies on publicly available data sources published by BEA and ITA. While the calculations require more steps than the ITA Industry-Specific Method, they can be executed with a standard programming language.¹⁰

Given the additional level of effort required by this method, EXIM could consider performing this analysis periodically to derive additional insights into its impact on the U.S. economy and jobs supported, depending on available resources and how EXIM wants to calculate its impact across the U.S. economy, industries, and business sizes.

transportation services). BEA identifies additional input components that are not included in the calculation, such as taxes. See <https://www.bea.gov/resources/guide-interactive-gdp-industry-accounts-tables>.

¹⁰ The calculation of indirect jobs solves a system of equations, which can be achieved using standard software programs (e.g., R or Stata).

Figure 5: BEA Cost Component Method Illustration, Manufacturing Exports in FY 2023



Source: OIG display of the two-step process used for the BEA Cost Component Method using EXIM authorization data from ERS and BEA cost shares data. See <https://www.bea.gov/resources/guide-interactive-gdp-industry-accounts-tables>.

Step 1: Converting Authorizations to Export Value

The total export value for each industry is calculated by adding the individual export values, estimated at underwriting, for all transactions supporting that industry.

Step 2A: Converting Export Value to Direct Jobs

The total export value for each industry is then decomposed into four components: (1) employee compensation, (2) energy inputs, (3) material inputs, and (4) purchased services using industry-specific cost shares published annually by BEA.

The number of jobs directly supported by the exports is calculated by dividing the total employee compensation by the BEA industry-specific average compensation and benefits published annually by BEA.

Step 2B: Converting Export Value to Indirect Jobs

Intermediate inputs—energy, materials, and purchased services—require labor to produce. This method treats each intermediate input as its own industry: energy as utilities; materials as manufacturing; and purchased services as professional services. It then applies BEA cost shares specific to each industry. The number of jobs needed to produce these intermediate inputs equals total employee compensation divided by the industry-specific average compensation and benefits.

These intermediate inputs in turn require their own intermediate inputs, and so on recursively. Each round requires labor. The total number of indirect jobs is the sum of all U.S. labor required to produce every round of intermediate inputs tied to the exports, however remotely.

See [Appendix B](#) for full calculation details.

Results: Using FY 2023 as a Case Study

When applied to EXIM’s financing in FY 2023, the BEA Cost Component Method identifies additional details about the jobs supported. As shown in Table 3, workers directly employed by small businesses accounted for roughly 20 percent of the total jobs supported. The results also include the indirect jobs supported through EXIM financing (jobs that provide energy, materials, and purchased services to EXIM-financed exporters). Indirect jobs account for almost 44 percent of the total jobs supported. Among the indirect jobs, more than half come from purchased services.

Table 3: Job Totals by Type and Industry, FY 2023

Industry	Direct Jobs (Mid/Large)	Direct Jobs (Small)	Energy Jobs ^a	Material Jobs ^a	Purchased Services Jobs ^a	Total Jobs
Manufacturing (31–33)	7,722	2,944	117	5,395	3,014	19,192
Unclassified (99)	4,406	1,314	34	557	1,909	8,218
Wholesale trade (42)	606	3,870	23	236	2,766	7,501
Transportation and warehousing (48–49)	2,002	17	36	71	732	2,857
Mining (21)	134	74	9	110	214	541
Agriculture, forestry, fishing, and hunting (11)	51	216	3	77	56	404
Utilities (22)	120	56	29	13	126	344
Other (multiple)	54	278	1	24	106	464
Total	15,095	8,769	252	6,483	8,923	39,521

Source: OIG jobs calculation by type and industry using the BEA Cost Component Method.

^a These are indirect jobs.

Assumptions

This method relies on several assumptions. First, the intermediate inputs are treated as the output of a single industry sector. Specifically, energy is treated as the output of the utilities sector (NAICS 22); materials as the output of the manufacturing sector (NAICS 31–33); and purchased services as the output of the professional services sector (NAICS 54). Second, this method applies a 19 percent discount to small business compensation because small businesses pay less than large businesses do.¹¹ Third, this calculation focuses on U.S. jobs supported. As such, it excludes the imported portions of energy, materials, and purchased services.¹² Finally, unclassified transactions are mapped to a generic Private Industry category

¹¹ Bloom et al. (2018) documents the percentage wage gap at 20 percent in 2010–2013. The extrapolated percentage difference in FY 2021 is about 19 percent. See for example: <https://static1.squarespace.com/static/6246570e617f1d3daf55e1c1/t/62911952acf1f85f93275a8f/1653676371236/aea-pp-2018-largefirmpremium.pdf>.

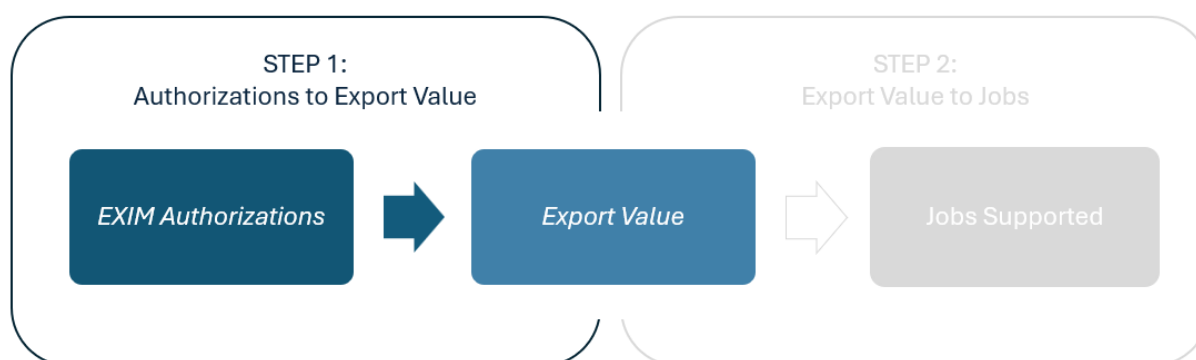
¹² Domestic and imported splits of intermediate inputs apply uniform import shares: 17 percent for energy (<https://www.eia.gov/todayinenergy/detail.php?id=65664>), 33 percent for materials (<https://www.federalreserve.gov/econres/notes/feds-notes/a-sourcing-risk-index-for-u-s-manufacturing-industries-20230908.html>), and 10 percent for services. EXIM requires exporters to meet certain content

in BEA data. See [Appendix B](#) for more information on these assumptions and the methodological description.

UNDERSTANDING EXIM'S IMPACT: FROM TRANSACTION TO FIRM-LEVEL

Although the previous alternative methodologies for estimating jobs supported are valid and appropriate, they may not fully capture the broader economic impact of the agency's financing programs. The two alternatives in the preceding sections examine the second step of EXIM's jobs calculation, namely, how export value converts to jobs, while keeping the first step unchanged from EXIM's current method. This section examines the first step: how EXIM authorizations convert to export value (see Figure 6).

Figure 6: Step 1 - Converting EXIM Authorizations to Export Value



Source: OIG presentation of EXIM authorization and export value calculation process.

EXIM's current approach can be characterized as a transaction-level view of EXIM's impact. Jobs are calculated based solely on the export values assigned to each individual authorized transaction. This approach focuses on authorized transactions and excludes impacts on recipient companies' exporting activity beyond the transaction. The ratio of authorizations to exports, which we term the authorization-to-export multiplier, provides a helpful measure of EXIM's relative impact. This multiplier was about 1.08 in FY 2023, meaning that each \$1 authorized, on average, resulted in approximately \$1.08 in export value.

Academic studies¹³ offer another perspective to quantify the impact of export credit agencies, namely, a firm-level approach. Rather than considering individual transactions, a firm-level approach estimates the company-wide contraction in exporting activity that a recipient company would experience if EXIM's financing were removed. Thus, a firm-level approach measures the impact of receiving EXIM financing on the entire recipient exporter, rather than considering only the impact of individual authorized transactions. Many of these studies used

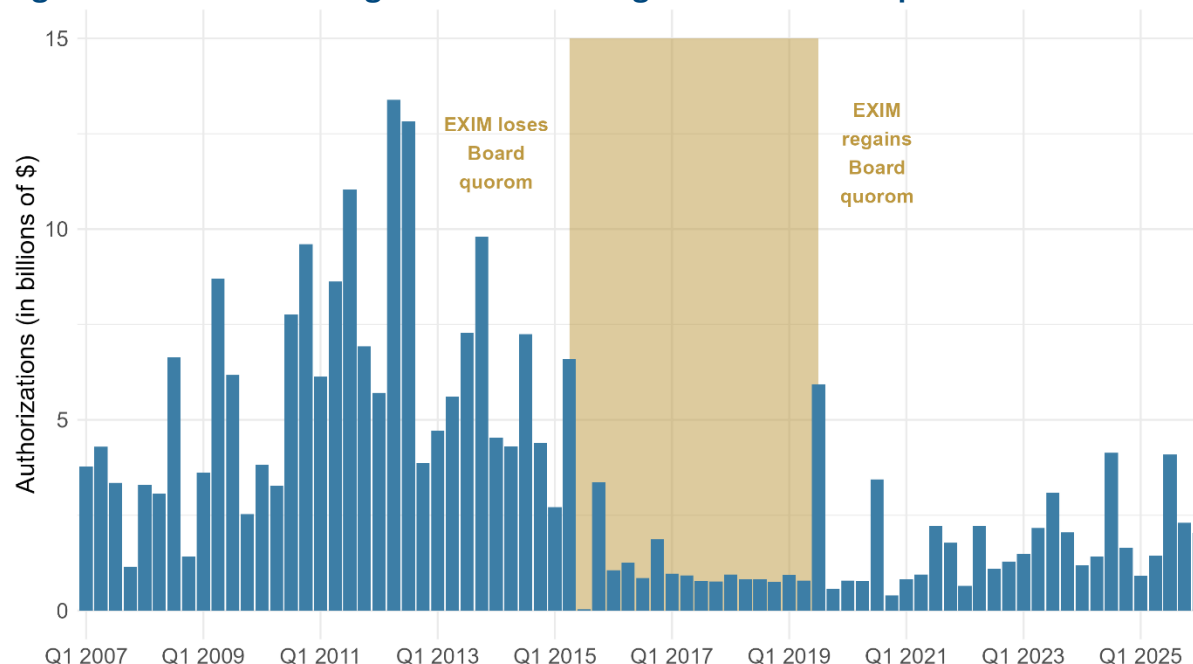
requirements to be eligible for financing (<https://www.exim.gov/policies/content>). This policy is not incorporated into the analysis, but a sensitivity analysis suggests a maximum change to the jobs numbers of no more than 10 percent of the jobs supported.

¹³ See [Appendix C](#) for a list of academic studies reviewed for this whitepaper.

EXIM’s 2015 to 2019 lapse in a quorum of the Board of Directors as a natural experiment. During the lapse, EXIM could not authorize transactions over \$10 million and the total financing provided during that time significantly decreased (see Figure 7).

Using a firm-level approach, a recent academic study estimated an authorization-to-export multiplier of approximately 4.5, meaning that for every dollar of EXIM financing that was withdrawn, exports declined by about \$4.50.¹⁴ Because exporting typically requires firms to maintain cash reserves equal to roughly 20 to 25 percent of foreign sales, each dollar of trade finance can support approximately \$4 to \$5 in export revenue. The study further found that the effects of reduced EXIM financing extend beyond exports. When EXIM lending was unavailable, affected firms experienced significant declines in overseas sales, which in turn reduced revenues, investment, and employment. For example, firm-level data analyses found that the loss of each \$1 of EXIM financing corresponded to approximately a \$5 reduction in export sales of revenue for both maritime export shipments and exporting firm revenues.¹⁵

Figure 7: EXIM's Financing Decreased During the 2015-2019 Lapse



Source: OIG presentation of EXIM authorization data available from Data.gov.

¹⁴ Matray, Adrien, Karsten Müller, Chenzi Xu, and Poorya Kabir. 2025. “EXIM’s Exit: The Real Effects of Trade Financing by Export Credit Agencies.” NBER Working Paper no. 32019, National Bureau of Economic Research. Available at https://www.nber.org/system/files/working_papers/w32019/w32019.pdf.

¹⁵ Matray et al. (2025) documents “sizable real effects of the shutdown: a \$1 reduction in EXIM trade financing reduces exports by approximately \$4.5,” with EXIM-dependent firms also contracting in “total revenues, investment, and employment.” The magnitude follows the working-capital multiplier: “[e]xporting typically generates working capital needs of 20-25% of foreign revenues. ... Therefore, \$1 contract of financing impacts export revenue by \$4-5.” Maritime-export regressions imply “an average impact of -5.0 on export sales,” and exporting firm-revenue regressions find “\$1 of EXIM financing translates into approximately \$4.9 of additional revenue.”

Usability

Using a firm-level multiplier enables EXIM to more fully quantify its impact on the economy and on recipient firms. Despite the difference in magnitude when compared with the transaction-level multiplier, these multipliers are not inconsistent with each other but rather capture two different concepts of impact. At the lower end is EXIM's transaction-level multiplier, which is appropriate for quantifying the exports each authorization supports. At the higher end is the firm-level multiplier, which is appropriate for quantifying EXIM's holistic and long-term impact on recipient export companies. The appropriateness of either multiplier depends on its intended use. Either one of the multipliers is compatible with the ITA and BEA job calculations.

Feasibility

The multiplier of 4.5 estimated by Matray et al. (2025) can easily be applied by EXIM to estimate an upper bound for the jobs calculation. However, as academic studies have observed, the firm-level multiplier has a limited shelf life and becomes increasingly attenuated as the analysis moves further from the 2015-2019 lapse period.

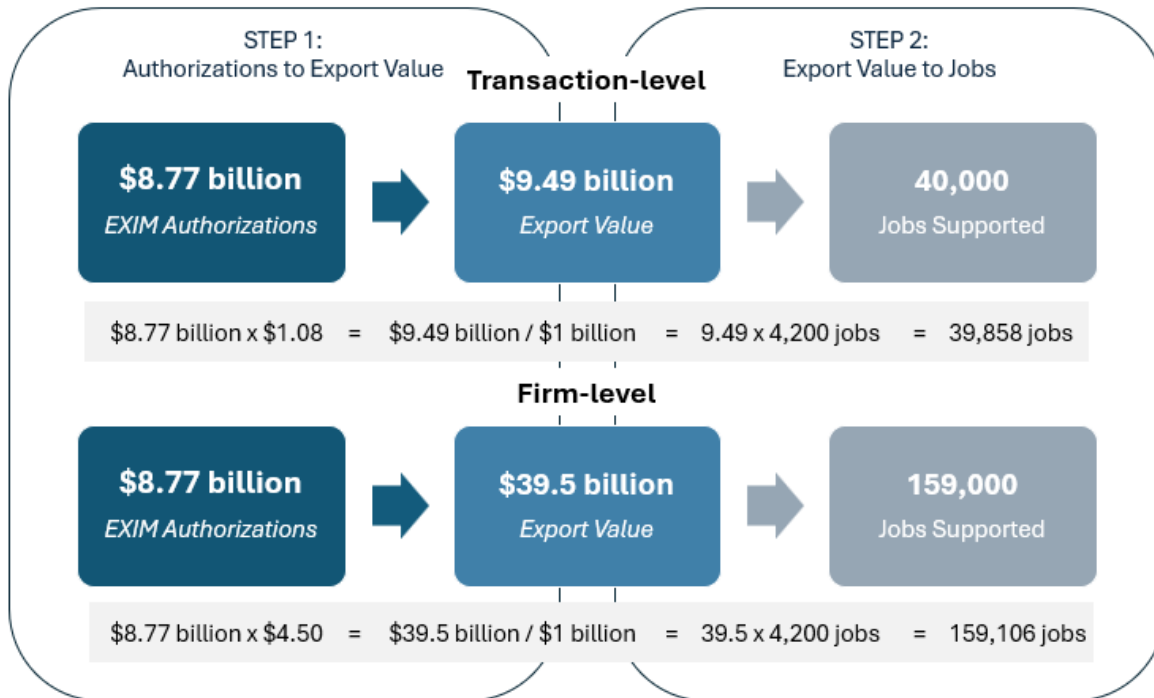
Accordingly, EXIM would eventually need to refresh the firm-level analysis in the future. This may be challenging for EXIM with their current resources for two reasons. First, because it requires substantial data management and econometric expertise to update the analysis. Secondly, instead of a natural experiment (e.g., another quorum lapse), EXIM may need to consider other program evaluation designs, which require technical expertise beyond EXIM's current capability.

RESULTS: USING FY 2023 AS A CASE STUDY

Using FY 2023 as a case study helps to explain the difference in the multipliers and how they impact the total jobs supported calculations. As previously discussed, the transaction-level multiplier estimates that EXIM supported approximately 40,000 U.S. jobs in FY 2023. Comparatively, the firm-level multiplier estimates that EXIM supported approximately 159,000 jobs in FY 2023. This larger number quantifies EXIM's holistic and structural impact on the number of U.S. jobs supported—not just those directly supported by EXIM's financing.

Figure 8 illustrates the impact of the two multipliers and their numerical implications for the number of U.S. jobs supported in FY 2023. The firm-level multiplier could also be coupled with the other two alternative jobs calculations, and thereby provide additional details about industries, business size, and direct and indirect jobs discussed in this white paper.

Figure 8: Transaction-level and Firm-level Method Comparison, FY 2023



Source: OIG calculation of the multipliers and their impact on total number of jobs supported.



APPENDIX A: OBJECTIVES, SCOPE, AND METHODOLOGY

Through a contract monitored by OIG, an independent third-party contractor performed work from December 2025 to July 2026 to produce a white paper focused on calculating EXIM's impact on the U.S. economy and jobs. The work supporting this white paper was completed in accordance with the *Quality Standards for Inspection and Evaluation*, issued in 2020 by the Council of the Inspectors General on Integrity and Efficiency.

OBJECTIVES

The objectives of this white paper are to:

- Review EXIM's methods for estimating total jobs supported by its programs; and
- Perform an environmental scan of alternative prospective methods that can be used to supplement EXIM's current calculations.

SCOPE

The white paper focused on job numbers from 2021 to 2025, surveyed academic literature primarily from 2010 to the present, and used FY 2023 for example calculations.

METHODOLOGY

OIG and the independent third-party contractor reviewed and assessed EXIM's current jobs calculation framework through interviews with EXIM staff, a review of EXIM documents and academic literature, and a replication of EXIM's numbers using their jobs calculation process. OIG and the contractor also evaluated alternative jobs calculations by identifying alternative methods through surveys of academic, government, and industry literature, and by reviewing available public data and possible data sources. Those alternative methods were then assessed by: (1) feasibility—whether EXIM can implement these alternatives with current resources; and (2) usability—do these alternatives produce additional information quantifying EXIM's impact. The results of this alternative methods analysis are presented in this white paper. More information about the methodology and calculations for the BEA Cost Component Method can be found in [Appendix B](#).

APPENDIX B: FULL CALCULATION DETAILS FOR BEA COST COMPONENT METHOD

This appendix breaks down the BEA Cost Component Method (Alternative Method #2) into steps, including a section providing the mathematical details behind the indirect jobs calculation. This appendix uses manufacturing exports as a case study. In FY 2023, EXIM authorizations supporting manufacturing exports represent more than half of the export value (\$5.17 billion) and total jobs supported (19,192). This appendix also uses BEA cost component data for 2021 to calculate the estimated jobs supported in 2023 because 2021 was the most recent data available to EXIM when it calculated its 2023 estimates. Similar to the ITA exports-to-jobs ratio data, there is a lag between real-time and when the data is available from BEA, although this may not be quite as long as the lag for the ITA jobs per \$1 billion data. For example, at the time of writing in mid-2026 ITA provides data through 2023, while BEA provides data through 2024.

The calculation of both direct and indirect jobs starts with the export value, which EXIM estimates during the underwriting process for each transaction, as discussed in this white paper.

CALCULATING DIRECT JOBS

Direct jobs are those that provide employee compensation. These jobs exclude labor inputs necessary for producing intermediate products required by manufacturing exports. The calculation of direct jobs involves the following steps: (1) dividing export value into cost share totals; (2) calculating industry-specific average salaries using data published by BEA and adjusting for business size; and (3) calculating the number of jobs supported by direct employee compensation.

Step 1: Dividing Export Value into Cost Share Totals

BEA provides annual cost share estimates for U.S. industries. These estimates break down industry output into the cost shares associated with six cost components. Using the 2021 values for manufacturing, employee compensation comprises 18.7 percent of industry output (roughly \$0.97 billion of the \$5.17 billion in manufacturing exports supported by EXIM). Table B1 lists the cost components in percentage and dollars for FY 2023 manufacturing exports.

Table B1: EXIM Manufacturing Export Cost Component, FY 2023

Cost Component	Cost Share (%)	Cost Share (\$)
Employee Compensation	18.7	0.97 billion
Energy Inputs	1.6	0.08 billion
Material Inputs	51.3	2.65 billion
Purchased Services	8.8	0.45 billion
Net Taxes	0.9	0.05 billion
Gross Operating Surplus	18.8	0.97 billion
Total	100.0^a	5.17 billion

Source: OIG analysis of FY 2021 data reported by the U.S. Bureau of Economic Analysis. Values are based on EXIM authorization data from ERS.

^a Cost shares do not sum to 100 percent due to rounding.

Step 2: Calculating Industry-Specific and Business Size-Specific Average Salaries

Total employee compensation divided by the average compensation gives the number of direct jobs. The average compensation is derived from the National Income and Product Accounts (NIPA) data published by BEA.¹⁶ Small business jobs pay roughly 19 percent less than large business jobs in the same industry, so a 19 percent discount is applied to the NIPA compensation when computing jobs for transactions involving small businesses.¹⁷ The results are shown in Table B2.

Table B2: Manufacturing Jobs by Business Size, FY 2023

Business Size	Authorizations	Export Value	Employee Compensation	Average Compensation with Benefits	Direct Jobs
Large Business	\$4.0 billion	\$3.9 billion	\$0.74 billion	\$95,610	7,722
Small Business	\$1.1 billion	\$1.2 billion	\$0.23 billion	\$77,444	2,944
Total	\$5.1 billion	\$5.2 billion	\$0.97 billion	\$90,596	10,666

Source: FY 2021 NIPA tables 6.2 and 6.5 and EXIM Authorization Data from ERS.

CALCULATING INDIRECT JOBS

Direct jobs capture only the labor used to assemble the final export. A large share of every manufacturing export dollar is spent upstream—on energy, materials, and purchased services—and that upstream spending supports additional U.S. jobs. The calculation of indirect jobs involves the following steps: (1) breaking the export dollar into cost shares; (2) adjusting cost shares to account for imported intermediate inputs; (3) representing the upstream production it triggers as a system of equations; (4) solving the system using the matrix algebra; and (5) converting the resulting production into compensation and jobs.

¹⁶ Specifically, table 6.2D—Compensation of Employees by Industry (current dollars, annual) and table 6.5D—Full-Time Equivalent Employees by Industry.

¹⁷ EXIM uses the U.S. Small Business Administration's definition of a small business, which means it depends on the industry. See [Executive Summary Presentation](#).

Step 1: Determining BEA Cost Shares for Each Export Dollar

Three of the BEA cost components are intermediate inputs: energy (\$0.08 billion), materials (\$2.65 billion), and purchased services (\$0.45 billion). These intermediate inputs require labor for their production.

Each intermediate input is assigned to an industry. Energy is assigned to utilities (NAICS 22); materials to manufacturing (NAICS 31–33); and purchased services to professional, scientific, and technical services—PST (NAICS 54). Each industry has its own cost components, including employee compensation. Table B3 restates the cost components for export manufacturing (cells with darker shading), juxtaposes the cost components for energy, materials, and purchased services (cells with lighter shading) and includes the additional categories of taxes and gross operating surplus not used in this analysis (light gray cells).

Table B3: Cost Shares for Manufacturing and Its Intermediate Inputs

Cost Component	Export Manufacturing	Intermediate Input: Energy (Utility)	Intermediate Input: Materials (Manufacturing)	Intermediate Input: Purchased Services (PST)
Employee Compensation	18.7%	15.9%	18.7%	46.6%
Energy Inputs	1.6%	18.1%	1.6%	0.5%
Materials Inputs	51.3%	2.1%	51.3%	5.7%
Purchased Services	8.8%	13.8%	8.8%	26.9%
Taxes and Gross Operating Surplus	19.7%	50.2%	19.7%	20.3%
Total^a	100.0%	100.0%	100.0%	100.0%

Source: BEA, Shares of Gross Output by Industry (April 9, 2026 release), FY 2021. PST = professional, scientific, and technical services.

^aTotals may differ slightly from 100 percent due to rounding within categories.

Step 2: Adjusting Cost Shares to Account for Imported Intermediate Inputs

Because the focus is on U.S. jobs, this calculation isolates domestic intermediate input production by applying import discount factors for each intermediate input. Table B4 identifies the domestic intermediate input components.

Table B4: Domestic Intermediate Input Cost Shares for Manufacturing and Its Intermediate Inputs

Cost Component	Export Manufacturing	Energy (Utility)	Materials (Manufacturing)	Purchased Services (PST)
Domestic Energy Inputs	1.33%	15.02%	1.33%	0.42%
Domestic Materials Inputs	34.37%	1.41%	34.37%	3.82%
Domestic Purchased Services	7.92%	12.42%	7.92%	24.21%

Source: OIG analysis of FY 2021 data reported by the U.S. Bureau of Economic Analysis.

Step 3: Writing Upstream Production as A System of Equations

The next step is to calculate each intermediate input's total cost share including all rounds of upstream production (termed "total embodied cost share" in this report). Table B5 represents a system of three equations with three unknowns, E_* , M_* , and S_* (energy, materials, and purchased services) representing the total embodied cost share for each intermediate input:

$$E_* = 0.013 + 0.150E_* + 0.013M_* + 0.004S_*$$

$$M_* = 0.344 + 0.014E_* + 0.344M_* + 0.038S_*$$

$$S_* = 0.079 + 0.124E_* + 0.079M_* + 0.242S_*$$

Step 4: Solving the System in Matrix Notation

Rearranging the three unknowns on the left of the equation and every constant on the right gives the matrix equation:

$$(I - A') \cdot x = d$$

where $x = [E_*, M_*, S_*]$, $d = [0.013, 0.344, 0.079]$, and the coefficient matrix $(I - A')$ is:

0.850	-0.013	-0.004
-0.014	0.656	-0.038
-0.124	-0.079	0.758

The solution is given by:

$$x = (I - A')^{-1} \cdot d$$

which yields the following total embodied cost shares for each component:

$$\text{Solution: } E_* = 0.026; M_* = 0.507; S_* = 0.167$$

Step 5: Converting Export Dollars to Jobs

The total embodied cost shares calculated in the previous step provide the share of export value allocated to each intermediate input industry. The next step is to multiply each

intermediate input's total embodied cost shares by its respective employee compensation share to determine its total embodied employee compensation share. For example, the previous step showed that 50.7 percent of every manufacturing export dollar goes toward material inputs across all rounds of production. This next step calculates the percentage of every manufacturing export dollar that goes toward employee compensation to produce those material inputs. See "Total Embodied Employee Compensation Share" in Table B5.

Finally, these percentages can be multiplied by the total manufacturing export value supported by EXIM in FY 2023 (\$5.17 billion) to calculate the total employee compensation. Note that Table B5 includes both the direct employee compensation from the production of exports and the indirect employee compensation.

Table B5: Total Employee Compensation Shares Factoring in Upstream Employment for Manufacturing Exports, FY 2023

Cost Component	Total Embodied Cost Share (A)	Direct Employee Compensation Share ^a (B)	Total Embodied Employee Compensation Share ^b (A x B = C)	FY 2023 Total Employee Compensation ^c (C x \$5.17 = D)
(Direct) Employee Compensation	1	0.187	0.187	\$0.97 billion
Energy Inputs (E_*)	0.026	0.159	0.004	\$0.02 billion
Materials Inputs (M_*)	0.507	0.187	0.095	\$0.52 billion
Purchased Services (S_*)	0.167	0.466	0.078	\$0.40 billion
Total			0.364	\$1.90 billion

Source: OIG analysis of FY 2021 data reported by the U.S. Bureau of Economic Analysis. Values are based on EXIM authorization data from ERS.

^a This is the employee compensation share for a single round of production, without factoring in upstream employment.

^b This is the total employee compensation share across all rounds of production, factoring in upstream employment.

^c This can be separated into total small business employee compensation (\$0.23 billion) and total mid-to-large business compensation (\$0.74 billion) which will be used in Table B6 below.

The last step is to divide each component's total employee compensation by the FY 2021 BEA NIPA compensation per jobs for the relevant sector to obtain the total number of jobs supported as shown in Table B6.

Table B6: Jobs Created Across All Channels by Manufacturing Exports Supported by EXIM, FY 2023

Channel	FY 2023 Total Employee Compensation (D)	Average Compensation (E)	Jobs (D ÷ E = F)
Direct Manufacturing Jobs, Mid-to-Large Businesses	\$0.74 billion	\$95,610	7,722
Direct Manufacturing Jobs, Small Businesses	\$0.23 billion	\$77,444	2,944
Indirect Jobs, Energy Supply Chain	\$0.02 billion	\$173,789	117
Indirect Jobs, Materials Supply Chain	\$0.52 billion	\$95,610	5,395
Indirect Jobs, Services Supply Chain	\$0.40 billion	\$131,304	3,014
Total	\$1.90 billion		19,192

Source: OIG jobs calculation by type and industry using BEA cost component method.

APPENDIX C: MANAGEMENT RESPONSE



DATE: Wednesday, August 26, 2026

TO: Ami Schaefer, Assistant Inspector General for Special Reviews

FROM: Ravi Singh, Chief Financial Officer RAVI SINGH
Digitally signed by RAVI SINGH
Date: 2026.08.26
07:16:39 -04'00'

SUBJECT: EXIM Management Response to the draft *White Paper Calculating EXIM's Impact on the U.S. Economy and Jobs* (Report No. OIG-O-26-06)

Dear Mrs. Schaefer,

Thank you for providing the Export-Import Bank of the United States ("EXIM") management with the Office of Inspector General's ("OIG") draft report for *White Paper Calculating EXIM's Impact on the U.S. Economy and Jobs* (Report No. OIG-O-26-06) on August 13, 2026 (the "Report").

EXIM's leadership and management continue to fully support the OIG's work, which we believe complements and enhances EXIM's efforts to continually improve its processes. EXIM is proud of the strong and cooperative relationship it has with the OIG and shares the OIG's commitment to improving EXIM's policies, procedures and operations.

EXIM places significant emphasis on ensuring that the methodology used to estimate its impact on the U.S. economy and jobs is appropriate, reliable, and transparent. EXIM is encouraged that the OIG found EXIM's current methodology to be valid and appropriate.

As part of its ongoing efforts to assess and communicate the economic impact of its programs, EXIM will consider the information and perspectives presented in the white paper, including the potential benefits and limitations of the alternative methodologies discussed. While assessing these methodologies, EXIM will take into account relevant analytical developments, available data sources, resource constraints, and the feasibility and practicality of implementing the highlighted approaches.

We appreciate the collaborative nature of this engagement. The OIG's efforts to protect EXIM resources from fraud, waste, and abuse align with our core mission. We look forward to our continued partnership as we consider the observations presented in this report and continue our efforts to further EXIM's mission and enhance transparency regarding the impact of its programs.

CC:

The Honorable John Jovanovic, President and Chairman of EXIM Board of Directors

Alyssa Pettus, Senior Vice President and Chief of Staff, Office of the President and Chairman

David Slade, Lead and Senior Counselor, Office of the President and Chairman

Tony Onorato, Senior Vice President and General Counsel

Victoria Coleman, Senior Vice President and Deputy General Counsel

Paxton Stephan, Vice President, Banking and Financial Products Division

Michaela Smith, Director of Audit and Internal Controls Program, Office of the Chief Financial Officer

APPENDIX D: ADDITIONAL RESOURCES

This appendix lists selected academic literature reviewed during the development of this white paper. The list includes sources used in the analysis as well as additional resources that provide context on alternative methodologies for assessing the economic impacts of export financing programs.

List of Academic Literature Reviewed to Support the White Paper

- Agarwal, Natasha, and Zheng Wang. 2018. “Does the U.S. EXIM Bank Really Promote U.S. Exports?” *The World Economy* 41, no. 5: 1378–1414. <https://doi.org/10.1111/twec.12537>.
- Anderson, James E., and Eric van Wincoop. 2003. “Gravity with Gravitas: A Solution to the Border Puzzle.” *American Economic Review* 93 (1): 170–192. <https://doi.org/10.1257/000282803321455214>.
- Fitzpatrick, Brian D., Michael M. Tansey, and Sudhakar Raju. 2003. “A study of instability in the gravity of trade: The U.S. export import bank.” *International Journal of Management and Economics* 5 (1): 1–10. <https://www.managementjournals.net/assets/archives/2023/vol5issue1/4-2-22-743.pdf>.
- Matray, Adrien, Karsten Müller, Chenzi Xu, and Poorya Kabir. 2025. “EXIM’s Exit: The Real Effects of Trade Financing by Export Credit Agencies.” NBER Working Paper no. 32019, National Bureau of Economic Research. <https://doi.org/10.3386/w32019>.
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- Kurban, Danny. 2021. “Does Public Financing Support Increase Exports? Evidence from a Quasi-Experiment at the U.S. Export-Import Bank.” Discussion Papers in Economics Working Paper No. 21-04, Department of Economics, University of Colorado Boulder. https://www.colorado.edu/economics/sites/default/files/attached-files/21-04_-_kurban.pdf.
- Juliansyah, Hijri, Yudha Ganesha, Ichsan Ichsan, Fanny Nailufar, and Sari Yulis Terfiadi. 2022. “Effect of Export, Import, and Investment on Economic Growth in Indonesia (VECM Analysis Method).” *Journal of Malikussaleh Public Economics (JOMPE)* 5 (1): 16–32. <https://ojs.unimal.ac.id/jompe/article/view/8153>.
- Yilmaz, Dr. Alper. 2021. “The Role of Eximbank Credit Programs on Exports Performance of Turkish Economy.”

ABBREVIATIONS

BEA	Bureau of Economic Analysis
Board	Board of Directors
ERS	EXIM Bank Reporting System
EXIM	Export-Import Bank of the United States
ITA	International Trade Administration
NAICS	North American Industry Classification System
NIPA	National Income and Product Accounts
OIG	Office of Inspector General
PST	professional, scientific, and technical services (NAICS 54)
Strategic Plan	EXIM’s Strategic Plan for FY 2026–2030

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If you fear reprisal, contact EXIM OIG's Whistleblower Protection Coordinator at
OIG.Whistleblower@exim.gov.

For additional resources and information about whistleblower protections and unlawful retaliation, please visit [the whistleblower's resource page](#) at [Oversight.gov](https://www.oversight.gov).

Under The James M. Inhofe National Defense Authorization Act for Fiscal Year 2023 Pub. L. No. 117-263, § 5274, if your organization has been mentioned in this report, and you would like to provide a written response for inclusion in the report, please reach out to us at OIG.Notices@exim.gov within 30 days.



DISCLAIMER

The following two pages contain a response by the National Bureau of Economic Research, which it provided in response to OIG notification pursuant to Section 5274 of the James M. Inhofe National Defense Authorization Act for Fiscal Year 2023, Pub. L. No. 117-263. The National Bureau of Economic Research's response is distinct from OIG's report and does not represent OIG's views. OIG has not amended the report as a result of the National Bureau of Economic Research's comments. OIG's report remains unchanged.

September 18, 2026

Office of Inspector General
Export-Import Bank of the United States
811 Vermont Avenue, NW
Washington, DC 20571
OIGNotifications@exim.gov

Re: Response submitted under Pub. L. No. 117-263 § 5274 concerning *White Paper: Calculating EXIM's Impact on the U.S. Economy and Jobs* (OIG-O-26-06, August 28, 2026)

To the Office of Inspector General:

This response clarifies the report's references to NBER Working Paper No. 32019 and to the July 2026 version of the same study. The main clarification is that the report's body text describes the 4.49 estimate as a firm-level multiplier. That characterization is incorrect. The 4.49 estimate is an aggregate product-level estimate of the effect of EXIM financing on total U.S. exports. However, this correction makes the 4.49 estimate more directly suited to the report's national jobs calculation because it is designed to measure net additional U.S. exports.

1. The 4.5 multiplier is an aggregate product-level estimate, not a firm-level one. On page 14 the report states that “[u]sing a firm-level approach, a recent academic study estimated an authorization-to-export multiplier of approximately 4.5.” The correction is that the 4.49 coefficient is estimated at the product level rather than the firm level. It comes from bilateral trade data (BACI) and is identified by comparing different origin countries exporting the same finely classified product to the same destination in the same year. In the paper, the coefficient means that a \$1 change in EXIM trade financing generates a change of $-\$4.49$ in total U.S. exports at the product level (Table 2, column 1). A more accurate description would be that the study estimates an aggregate product-level authorization-to-export multiplier of approximately 4.5.

The paper also reports firm-level estimates, but those estimates are separate empirical objects: an average impact of -5.0 on export sales, estimated on firm-level shipment records, and approximately \$4.9 of total firm revenue per \$1 of EXIM financing. Footnote 15 of the report reproduces both of these correctly, so the distinction is preserved in the footnote and lost in the body text. The issue is therefore not whether the numbers are close in magnitude, but that the report's body text labels a product-level estimate as though it were a firm-level estimate.

2. The product-level estimate nets out reallocation among U.S. exporters. Firm-level estimates are informative about the effect of EXIM financing on recipient companies, but firm-level comparisons, by themselves, do not show whether gains to EXIM-backed firms reflect net additional U.S. exports (and therefore net employment gains) or reallocation from other U.S. exporters (which would imply job reallocation rather than job creation). Since the report's stated objective is a national jobs calculation, this distinction is fundamental.

At the firm level, it is impossible to separate net job creation from reallocation cleanly because we compare EXIM-backed firms relative to other firms, so any difference in job trajectories could be due to reallocation.

The product-level estimate does not face this problem because it is designed to measure the net

effect on U.S. exports after accounting for within-market reallocation among U.S. exporters. Since the outcome sums exports by EXIM-backed and non-backed U.S. firms of the same goods being exported to the same destinations, reallocation of market share between U.S. exporters nets out by construction.¹ For that reason, the fact that the 4.49 estimate is product-level rather than firm-level makes it more directly relevant for the national export and employment calculation discussed in the report.

This distinction also matters for the report’s discussion under “Feasibility.” The concern that a firm-level multiplier has a limited shelf life, and that refreshing it would require firm-level data and econometric capacity the Bank may not hold, applies with less force to a product-level estimate built from bilateral trade statistics. The product-level estimate also has a practical advantage for the report’s “Feasibility” discussion: it is constructed from bilateral trade statistics rather than confidential firm-level records. The report’s caveat about the difficulty of refreshing a firm-level multiplier therefore does not apply in the same way to the 4.49 estimate.

3. Additional context on heterogeneity. We add one additional point of context. The 4.49 estimate is an average effect. The paper also documents heterogeneity along two dimensions that help to explain why EXIM can generate net trade and employment: the effect of EXIM financing is larger where trade-finance frictions are more likely to bind, and among firms that are more likely to be financially constrained.

1. *Financially constrained transactions:* Using proxies for the contracting and financial environment in destination markets, firm-level shipment effects are 30 to 55 percent more negative in high-friction destinations than in low-friction destinations (Appendix D.6).
2. *Financially constrained firms:* The paper also finds that investment responses are larger among firms that appear more financially constrained ex ante (Appendix D.5). These findings do not change the average 4.49 estimate, but they indicate that a single average multiplier masks economically meaningful heterogeneity.

4. Current version of the cited work. The working paper cited in footnote 14 has been updated and is now titled “Industrial Policy and Capital Misallocation in Exporting” (July 2026), by the same authors. The estimates referenced above are unchanged from the cited version.

Any opinions expressed are those of the author(s) and do not represent the views of the Federal Reserve Bank of Atlanta or the Federal Reserve System.

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¹We test this directly by re-estimating at progressively coarser levels of aggregation, from HS-6 to HS-2, which nets out more across-firm reallocation at each step. The coefficient is virtually unchanged across all levels (Appendix Table A.1), indicating that EXIM was mostly creating net additional trade for the United States rather than redistributing it among U.S. exporters.