DEPARTMENT OF COMMERCE

Office of Manufacturing and Services Could Better Measure and Communicate Its Contributions to Trade Policy
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Why GAO Did This Study

Declining U.S. manufacturing has been an issue of continuing concern for policymakers; this was reflected in the Obama Administration’s (Administration) 2010 announcement of the National Export Initiative. The Administration has also shown interest in improving the efficiency of the federal support of trade operations. In 2004, the Office of Manufacturing and Services (MAS) was established within the Department of Commerce’s (Commerce) International Trade Administration (ITA) to enhance the global competitiveness of U.S. industry.

GAO was asked to examine (1) MAS’s goals and activities and how they compare with those of other government entities; (2) how MAS prioritizes its activities and targets its resources; and (3) the extent to which MAS tracks and reports its efforts. GAO reviewed agency documents and interviewed officials from MAS, other parts of ITA, and Commerce, and other agencies.

What GAO Found

MAS’s primary goal is to support the competitiveness of U.S. industry, which it does largely through combining its industry and trade expertise to support other parts of Commerce, including other parts of the ITA (see figure below) and external U.S. government clients, such as the Office of the U.S. Trade Representative (USTR). The major activities of MAS’s offices include: collection and dissemination of data on U.S. industry and trade, production of analyses on policies that can affect competitiveness, and identification and resolution of overseas trade barriers. While some activities may seem similar to those of other agencies, such as USTR, officials from MAS’s client agencies stated that MAS’s combination of industry and trade expertise is not readily available to them elsewhere in the government.

MAS has undertaken an internal review to update its mission and priorities regarding activities and clients and has proposed changes currently under departmental review. MAS does not have a mechanism to systematically monitor analysts’ workload or the amount of time spent on requests for different clients. The absence of workload data may hinder its ability to effectively allocate its resources to address the needs of the trade policy process. Further, MAS’s role has not been clearly communicated, and ITA’s Web site provides limited information about MAS. Consequently, the public and Congress have limited information about MAS’s activities and contributions to policy making.

MAS’s ability to meet its performance targets largely depends on actions from other government agencies and other parties, making isolating its contributions difficult. MAS developed a series of steps, or milestones, to help isolate its contributions to trade policy outcomes, although officials acknowledged continuing challenges. Further, MAS does not systematically obtain feedback on its performance from the agencies to which it provides analysis, nor does it track its contributions to major policy decisions that fall outside its externally reported performance targets. This makes it difficult to assess the extent to which MAS’s work adds value to the trade policy process.

View GAO-11-583 or key components. For more information, contact Loren Yager at (202) 512-4347 or yagerl@gao.gov.
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<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>Administration</td>
<td>Obama Administration</td>
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<tr>
<td>APEC</td>
<td>Asia-Pacific Economic Cooperation</td>
</tr>
<tr>
<td>BEA</td>
<td>Bureau of Economic Analysis</td>
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<tr>
<td>Board</td>
<td>ITA's Web Governance Board</td>
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<tr>
<td>Commerce</td>
<td>Department of Commerce</td>
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<tr>
<td>Committee</td>
<td>Committee on Foreign Investment in the United States</td>
</tr>
<tr>
<td>DFO</td>
<td>designated federal officers</td>
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<tr>
<td>EU</td>
<td>European Union</td>
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<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
</tr>
<tr>
<td>IT</td>
<td>Information Technology</td>
</tr>
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<td>ITA</td>
<td>International Trade Administration</td>
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<td>MAS</td>
<td>Office of Manufacturing and Services</td>
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<tr>
<td>MDCP</td>
<td>Market Development Cooperator Program</td>
</tr>
<tr>
<td>MRA</td>
<td>Mutual Recognition Agreement</td>
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<tr>
<td>OMB</td>
<td>Office of Management and Budget</td>
</tr>
<tr>
<td>PART</td>
<td>Program Assessment Rating Tool</td>
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<tr>
<td>State</td>
<td>Department of State</td>
</tr>
<tr>
<td>TPCC</td>
<td>Trade Promotion Coordination Cabinet</td>
</tr>
<tr>
<td>TPIS</td>
<td>Trade Policy Information System</td>
</tr>
<tr>
<td>USITC</td>
<td>U.S. International Trade Commission</td>
</tr>
<tr>
<td>USTR</td>
<td>Office of the U.S. Trade Representative</td>
</tr>
</tbody>
</table>

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June 7, 2011

The Honorable Sherrod Brown
Chairman
Subcommittee on Financial Institutions and Consumer Protection
Committee on Banking, Housing, and Urban Development
United States Senate

The Honorable Jeff Merkley
United States Senate

Declining U.S. manufacturing, particularly manufacturing jobs, has been an issue of continuing concern for policymakers. This concern was reflected in the Obama Administration’s (Administration) 2010 announcement of the National Export Initiative, which brought new emphasis to one proposed government response to manufacturing declines—a renewed federal focus on increasing U.S. exports.1 In addition, the Administration has demonstrated increased interest in improving the efficiency of the multiple federal agencies that support trade operations, with President Obama requesting that the Office of Management and Budget (OMB) prepare a reorganization proposal by June 2011. Recently, Congress expressed interest in the activities and achievements of the Office of Manufacturing and Services (MAS) within the Department of Commerce (Commerce), which was established to enhance the global competitiveness of U.S. industry, expand market access, and increase exports.

In response to your request, we examined: (1) the goals and activities of MAS and how the types of analysis and expertise MAS provides compare with those provided by other government entities; (2) how MAS prioritizes its activities and targets its resources; and (3) the extent to which MAS tracks and reports its contributions to increasing U.S. competitiveness and trade. In addition, you asked us to provide information on U.S. and global manufacturing trends (see app. II).

To address these objectives, we reviewed relevant documents, including legislative authority and budget and staffing information; documents related to MAS’s performance measurement system; and examples of how

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MAS's work has been used by parts of Commerce and other U.S.
government agencies over the last 5 years. In addition, we discussed
MAS's efforts with its officials, its government clients, and others who are
knowledgeable about MAS. We interviewed Commerce officials from the
Offices of the Secretary, Commercial Service, Market Access and
Compliance, Import Administration, and the National Institute of
Standards and Technology. We also interviewed officials from other U.S.
government agencies, including the U.S. International Trade Commission
(USITC), the Office of the United States Trade Representative (USTR),
Departments of State (State), Energy, Transportation, and Treasury, the
Environmental Protection Agency, and OMB. Appendix I provides more
information on our scope and methodology.

We conducted this performance audit from August 2010 to June 2011 in
accordance with generally accepted government auditing standards. Those
standards require that we plan and perform the audit to obtain sufficient,
appropriate evidence to provide a reasonable basis for our findings and
conclusions based on our audit objectives. We believe that the evidence
obtained provides a reasonable basis for our findings and conclusions
based on our audit objectives.

Background

MAS is a 207-person unit within Commerce’s International Trade
Administration (ITA), as shown in table 1. ITA’s stated mission is to
strengthen the competitiveness of U.S. industry by promoting trade and
investment and by monitoring and enforcing U.S. trade laws and
agreements.¹ MAS is one of four distinct, but interrelated, business units
within ITA, each led by an Assistant Secretary.

¹ITA has six long-term performance goals to which its business units contribute: (1)
advance U.S. international and commercial strategic interests; (2) enhance U.S.
competitiveness in domestic and international markets; (3) broaden and deepen the U.S.
exporter base; (4) identify and resolve unfair trade practices; (5) foster excellent
relationships with customers and stakeholders; and (6) achieve organizational and
management excellence.
Table 1: International Trade Administration Offices—Budget, Staffing, and Activities

<table>
<thead>
<tr>
<th>ITA business unit</th>
<th>Fiscal year 2010 budget</th>
<th>Full-time equivalents</th>
<th>Activities summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing and Services</td>
<td>$49.5</td>
<td>207</td>
<td>MAS industry experts and economists perform research and analysis for internal government clients on trade policy and competitiveness issues. MAS also provides support to the private sector when there is a wider industry focus.</td>
</tr>
<tr>
<td>U.S. and Foreign Commercial Service</td>
<td>260.4</td>
<td>1,041</td>
<td>Commercial Service promotes and protects U.S. commercial interests abroad and advises individual businesses to enhance firms’ global competitiveness.</td>
</tr>
<tr>
<td>Market Access and Compliance</td>
<td>44.7</td>
<td>204</td>
<td>Market Access and Compliance uses its regional expertise to assist U.S. companies facing trade barriers in foreign markets by working to remove those barriers and contributes regional and country expertise to trade policy making.</td>
</tr>
<tr>
<td>Import Administration</td>
<td>69.1</td>
<td>331</td>
<td>Import Administration is the lead unit on enforcing trade laws and agreements to prevent unfairly traded imports and to safeguard jobs and the competitive strength of U.S. industry.</td>
</tr>
</tbody>
</table>

Source: GAO analysis of ITA information and data.

MAS was created in 2004, after the publication of Commerce’s *Manufacturing in America* report which called for its creation to support the Secretary of Commerce in his role as the federal government’s chief advocate for the manufacturing sector. The report grew out of a 2003 review of the U.S. manufacturing sector initiated by former Secretary of Commerce Donald Evans in response to “unprecedented challenges” facing U.S. manufacturers. Commerce received input from industry associations and large and small manufacturers from critical sectors, and the report summarized manufacturers’ concerns, which included the government’s limited focus on manufacturing and its ability to compete globally. In addition to other recommendations, the report called for the creation of an Assistant Secretary of Commerce for Manufacturing and Services.

Congress made recommendations in a 2003 House of Representatives Appropriations Committee Report to realign ITA’s structure and clarify the mission of each business unit to better address an increasingly competitive global economy and growing U.S. trade deficit. The report called for the creation of a better analytic basis for U.S. trade policies and negotiations. It contained several specific actions, including ones targeting U.S.

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manufacturers. For example, Congress expected the proposed MAS unit to develop tools and expertise to assess industry trends and evaluate the impact of trade agreements, and to identify and address challenges facing manufacturers through an interdepartmental advisory committee. Subsequent legislative and agency activity established the reorganization proposed in the committee report and transferred functions and staff across ITA business units, with one result being the reorganization of the Trade Development unit into MAS.  

Congressional concerns leading to the reorganization of ITA stemmed, to a large degree, from continuing trends in manufacturing and trade. Although the United States remains the world’s largest producer of manufactured products, there have been steep declines in manufacturing employment as measured by share of hours worked, and manufacturing’s share of gross domestic product (GDP) (see fig.1). Manufacturing employment fell from about 28 percent of total U.S. employment in 1969 to about 10 percent in 2009. As a share of nominal GDP, the drop has been similar. However, even with declines, almost 10 percent of the U.S. economy is in manufacturing—roughly 11 million workers. In addition, manufacturing continues to account for a large share of U.S trade. In 2009, manufactured goods accounted for about 60 percent of U.S. exports.

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Figure 1: GDP and Employment in the Manufacturing Sector Relative to the Overall U.S. Economy, 1969 - 2009

Note: Manufacturing’s share of GDP is calculated as the ratio of the value added in manufacturing to nominal GDP. Correcting for inflation would not change the share if the same inflation factor were applied to the numerator (manufacturing GDP) and the denominator (total GDP). However, analysts sometimes adjust manufacturing output by a different inflation factor that reflects slower rises in the prices of manufacturing goods and productivity gains. Using that inflation factor, manufacturing’s share of real output would have remained roughly constant over this period.

The National Export Initiative brought new emphasis to the federal government’s role in promoting exports.\(^5\) Commerce, with ITA as the lead entity within Commerce, works with other federal government agencies on the Export Promotion Cabinet, which, in collaboration with the Trade Promotion Coordinating Committee (TPCC), is charged with carrying out the initiative and spurring job growth through the doubling of U.S. exports by 2015. ITA also works through the USTR-led interagency structure used to formulate trade policy and represent U.S. trade interests in multilateral and bilateral forums such as the World Trade Organization. MAS analysts cover essentially all nonagricultural sectors of the economy.

\(^5\)Executive Order 13534.
MAS's primary goal is to support the competitiveness of U.S. industry in domestic and international markets, which it does largely through providing policy advice, research, and analytical support to other parts of Commerce and the U.S. government. MAS has distributed 182 of its 207 staff across three suboffices, with the largest share in its Office of Manufacturing. As shown in figure 2, analysts in the Office of Manufacturing and the Office of Services cover a number of industry sectors, serving as sources of industry information from a trade perspective. Analysts and economists in the Office of Industry Analysis conduct economic and policy analysis to support U.S. industry and evaluate industry recommendations for trade negotiations and U.S. competitiveness.

6MAS's primary goal aligns with ITA's second long-term goal—enhancing U.S. competitiveness in domestic and international markets.
Figure 2: Distribution of Staff (Full-Time Equivalents) Across MAS Offices, as of January 2011

Source: GAO analysis of MAS data.
MAS supports trade policy efforts of both internal clients in Commerce and external government clients, such as USTR. MAS’s major activities include:

- Collection and dissemination of data on U.S. industry and trade;
- Production of analyses on domestic and international trade and investment policies that can affect competitiveness;
- Identification and resolution of overseas market and trade barriers; and
- Management of the Industry Trade Advisory Committees (see tables 2 and 3 for more detailed descriptions of MAS's activities; see app. III for examples of industry-specific trade barriers that MAS addressed in fiscal year 2010).

The 2004 reorganization of Trade Development into MAS transferred day-to-day servicing of private sector requests to the Commercial Service offices in the field. The portion of MAS’s research and analysis that is used primarily by internal government clients (including Commerce and ITA business units, as well as other executive branch agencies such as USTR and the Department of the Treasury) for sensitive negotiations and policy making is not publicly available. However, some of the industry-specific information and data produced by the Office of Industry Analysis is made publicly available.

MAS provides other parts of ITA and Commerce with industry sector analyses, which contain background information on the specific industry; evaluation of its competitive strengths and weaknesses both domestically and internationally; and proposed strategic direction for industry sectors (see app. IV for more information on MAS’s sector analyses). According to agency officials, other ITA units use these analyses to address specific trade issues that affect industries and regions. Table 2 shows examples of the types of support MAS provides to its internal Commerce clients.

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7MAS contributes to some ITA trade promotion efforts by, for example, managing the programmatic aspects of ITA’s Market Development Cooperator Program (MDCP), which awards funds annually to industry associations and nonprofit organizations, rather than individual companies. Additionally, in response to the expectation expressed in a House of Representatives report that MAS would redirect industry experts to the field to focus on the needs of local industries, MAS initiated a pilot Field Assignment program in June 2004. MAS sent multiple industry specialists to the field temporarily to cover numerous industries. The program ended in March 2005, and, according to agency officials, was not continued due to competing priorities and resource constraints.
Table 2: Examples of MAS Activities that Support Internal Commerce Clients, Including Other ITA Business Units

<table>
<thead>
<tr>
<th>MAS Works with Other ITA Business Units to Address Specific Trade Issues that Affect Industries and Regions</th>
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<tbody>
<tr>
<td>• Market Access and Compliance. MAS provides information about a particular industry as a whole to Market Access and Compliance analysts who focus on market access issues in specific regions. MAS provides industry-wide information and analysis on broader trade barriers that affect more than one company. A Market Access and Compliance official stated that its Trade Compliance Center involves MAS industry experts on every case.</td>
</tr>
<tr>
<td>• Commercial Service. MAS responds to the needs of Commercial Service officers who are advising companies in the field by providing industry-specific information. For example, a Commercial Service official stated that she contacted MAS industry analysts who had knowledge of the agricultural machinery sector to obtain information for a U.S. company interested in exporting irrigation equipment to Eastern Europe.</td>
</tr>
<tr>
<td>• Import Administration. MAS provides industry information to Import Administration in its review of overseas companies’ applications for foreign trade zone designation. For example, an Import Administration official said that her office relies on MAS to ensure that its review of applications for special customs treatment is consistent with U.S. trade policy and will not adversely affect other companies.</td>
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<tr>
<th>MAS Provides Senior Commerce Officials with Briefing Materials</th>
</tr>
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<tbody>
<tr>
<td>• MAS provided export and trade data to the Secretary of Commerce for the President’s trip to India.</td>
</tr>
<tr>
<td>• MAS worked with Commerce’s Economic Development Administration, National Oceanic and Atmospheric Administration, and Minority Business Development Administration to provide the Secretary of Commerce and White House officials with an analysis of the economic impact of the Deepwater Horizon Gulf oil spill and, more specifically, the impact on the Gulf’s travel and tourism industry.</td>
</tr>
</tbody>
</table>

Source: GAO analysis of MAS information and data.

MAS also supports the efforts of other executive agencies, including USTR, through activities that include review and analysis of trade agreements, tariffs, and domestic regulations; involvement in the interagency trade policy-making process; and serving as a source of trade data to the government and public. USTR officials noted the contribution of MAS’s expertise and analysis to the U.S. trade policy process. According to USTR officials, MAS’s position in government, its insight into industry, and its analysis through a trade focused viewpoint are utilized by USTR in the trade negotiating process. A USTR official further stated that, in addition to MAS’s role in supporting the trade policy process, it also engages directly in trade promotion activities that benefit U.S. companies. USTR noted that MAS can play an important role in providing insight into industry’s concerns and potential reactions to policy changes. USTR officials also commented that MAS provided useful information to them during the U.S.-Korea free trade agreement negotiations. For example, MAS provided detailed trade data on autos traded according to engine sizes, which could affect the application of certain tariffs. According to USTR officials, other government or private sector entities do not generally have the capacity for the specialized trade and tariff data that MAS can produce.
USTR officials stated they were unable to provide the actual documents MAS provided to USTR because they were part of the internal deliberative process used to develop U.S. negotiating positions. However, they did state that the type of analyses are not unlike MAS state and sector analyses, which are available to the public. That analysis is developed in collaboration with other ITA units for each free trade agreement and are posted on USTR’s Web site, as well as ITA’s. These analyses highlight the new market opportunities that a particular trade agreement provides to U.S. exporters and the effects of international trade on all 50 states’ economies.

In addition to supporting USTR, MAS plays a key role within Commerce in providing support to other government agencies in areas such as supporting trade negotiations and providing data on travel and tourism, a leading U.S. services export. According to MAS officials, MAS provides analysis of and policy advice to Commerce on transactions seeking official financing from U.S. government agencies and multilateral development banks in which the U.S. government has a vote, as well as on key official finance issues under discussion in multilateral forums. These include, for example, the U.S. Export-Import Bank, Overseas Private Investment Corporation, and the Organisation of Economic Cooperation and Development Exports Credits Group. Table 3 provides specific examples of the types of MAS activities that support other executive branch agencies.
Table 3: Examples of MAS Activities that Support the Efforts of Other Executive Agencies

MAS Supports USTR’s Trade Negotiations by Helping to Develop U.S. Positions on Tariffs, Government Procurement, and Rules of Origin

- MAS recommends the tariff treatment for industrial products in trade negotiations and compiles tariff offers and requests for U.S. trading partners.
- MAS develops recommendations for USTR on U.S. government procurement offers and requests for improvement based on industry input, assessments from MAS industry analysts, and research of the trading partners’ government procurement market.
- MAS ensures that U.S. industry positions on product-specific rules of origin are considered during negotiation of trade agreements.

MAS Analysis Supports Government Efforts to Implement and Enforce U.S. Trade Laws

- MAS analyzes product petitions submitted under the Generalized System of Preferences program and provides recommendations for Commerce’s positions on these petitions.
- MAS creates lists for the interagency process identifying imports from countries to which the U.S. government potentially will apply additional duties in retaliation for unfair trade practices, pursuant to Section 301 of the U.S. Trade Act of 1974.
- MAS reviews and analyzes the Miscellaneous Tariff and Trade bills and coordinates the interagency process for developing Administration recommendations for consideration by Congress.

MAS Provides Industry’s Perspective to the Interagency Policy-making Process

- MAS provides support to the Industry Trade Advisory Committee system, which Commerce jointly administers with USTR. The advisory committees allow representatives from private business and other groups who are cleared advisors, and whose companies engage in trade to provide input with respect to ongoing trade negotiations and trade policy.
- MAS provided guidance on the renegotiation of the OECD Aircraft Sector Understanding, the special set of rules governing support for civil-aircraft exports.

MAS Provides Analysis on Certain Domestic Industry Issues

- MAS analyzes the impact of regulations and legislation on U.S. industry and provides recommendations to regulatory agencies such as the Environmental Protection Agency.
- MAS provides industry analysis to the Department of the Treasury on cases before the Committee on Foreign Investment in the United States, which considers the national-security implications of certain foreign mergers, takeovers, and acquisitions in the United States.

MAS Is a Source for Data and Statistics on Exporters, Trade, and Industry that Are Used by the Government and Private Sector

- MAS is responsible for the management of the travel and tourism statistical system for assessing the economic contribution of the industry. As part of this work, MAS collects, analyzes, and disseminates international travel and tourism statistics.
- MAS is one source of accessible and comprehensive trade data for government (Trade Policy Information System (TPIS)) and general public (TradeStats Express) users. The trade data that MAS provides includes the Metropolitan Export Series and the Exporter Database, which contain subnational export data.

Source: GAO analysis of MAS information and data.

MAS’s Clients Report that MAS Provides Analysis Not Readily Available Elsewhere in Government

While MAS conducts activities that have similarities to activities of other agencies, officials from MAS’s client agencies stated that MAS can provide analysis that combines industry and trade expertise that is not readily available elsewhere in government. For example, government officials we interviewed stated that some other agencies may have technical expertise in particular disciplines but have less of a focus on developing trade
policy. Table 4 provides examples of how MAS differs from other ITA units, the U.S. International Trade Commission, and other government agencies.

<table>
<thead>
<tr>
<th>Table 4: Differences between MAS’s Activities and Clients and Those of Other Executive Agencies</th>
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<tr>
<td><strong>MAS Focuses on Industry and Trade Policy, while Other ITA Units Have Regional Expertise and Counsel Individual Businesses</strong></td>
</tr>
<tr>
<td>• MAS’s counsel of individual businesses is limited to sector-specific policy and promotional issues. In contrast, U.S. and Foreign Commerce Service officers are placed in domestic and foreign field offices to work directly with individual businesses to help them expand their exporting capacity and access foreign markets.</td>
</tr>
<tr>
<td>• MAS analysts are organized by industry and sector and work to address industry-wide trade policy barriers, rather than those affecting individual firms. In contrast, Market Access and Compliance analysts work by geographic region and respond to specific market-access issues faced by a particular U.S. firm.</td>
</tr>
<tr>
<td>• Import Administration is responsible for enforcing U.S. trade laws and responds to complaints and petitions from individual firms. MAS’s involvement in trade enforcement includes providing industry and sectoral analysis as it pertains to resolving certain trade disputes.</td>
</tr>
<tr>
<td><strong>Like MAS, USITC Has Industry Offices, but It Acts Principally as a Technical Advisor to the Interagency Policy-making Process and Provides Its Formal Reports and Advice in Response to Official Requests</strong></td>
</tr>
<tr>
<td>• USITC is an independent, quasi-judicial federal agency. As such, it serves as a nonvoting member of the Trade Policy Staff Committee.</td>
</tr>
<tr>
<td>• USITC prepares reports under Section 332 of the Tariff Act only at the request of the President (who has delegated that authority to USTR), the House of Representatives Committee on Ways and Means, the Senate Finance Committee, the full House of Representatives, or full Senate.</td>
</tr>
<tr>
<td>• USITC provides information and analysis, but, unlike MAS, does not provide policy recommendations. USITC reports are made available to the public, except those that are classified as national security information by USTR. USITC redacts confidential business information from all public reports.</td>
</tr>
<tr>
<td><strong>MAS’s Trade Specific Industry Expertise Differs from the Technical Expertise Found in other Government Agencies</strong></td>
</tr>
<tr>
<td>• The Department of Energy employs engineers and scientists with specific expertise in the relevant technologies utilized in the energy sectors, not expertise in trade or the industry as a whole. Department of Energy officials noted that in contrast, MAS analysts typically have international business backgrounds, not scientific ones.</td>
</tr>
<tr>
<td>• Officials from the Department of Transportation stated that MAS’s knowledge of trade policy complements their technical understanding of engineering and infrastructure, allowing them to better serve industry and move their issues to a more prominent position in the National Export Initiative.</td>
</tr>
</tbody>
</table>

Source: GAO analysis of Commerce and other agency information.
MAS Faces Challenges in Prioritizing Activities, Monitoring its Workload, and Communicating its Role and Contributions

MAS Has Undertaken an Internal Review, but Has Not Had a Clear System to Prioritize Activities or a Clear Mission Statement

MAS has undertaken an internal review to update its mission and priorities regarding activities and clients and has proposed changes which are currently under departmental review. Since the 2004 reorganization of ITA, MAS’s broad mission statement has not clearly defined its role in government. MAS’s stated mission has been to strengthen the competitiveness of U.S. manufacturing and services by addressing commercial and economic impediments that disadvantage U.S. companies overseas. However, ensuring the competitiveness of U.S. industry requires policies and actions from many government agencies, not just Commerce. For example, U.S. corporate tax policy affects the competitiveness of U.S. industry, but Commerce does not have decision-making authority to regulate tax policy.

MAS officials have acknowledged the need for having clearer priorities and mission alignment with the Administration’s National Export Initiative’s goals to successfully serve its clients. A MAS official stated that MAS cannot be “all things to all people,” which has been a consistent concern raised by staff. To address this need, in early summer 2010, MAS officials began an internal review of its mission and activities. As a result, MAS revised its mission statement: to advance the competitiveness of U.S. industries by leveraging its in-depth sector expertise in the development of trade policy and promotion strategies. MAS officials stated that the changes made as a result of the internal review are still in process and must be approved at the departmental level.

MAS has an annual planning process to identify industry issues and determine actions to address them, but MAS officials acknowledged that these plans do not capture the numerous day-to-day unanticipated requests that come from sources such as the Secretary of Commerce,
Executive Office of the President, other Executive Branch agencies, and the Congress. Every year, each industry office develops an assessment of the industry sectors it covers which, MAS guidance states, should present an analysis of the competitive strengths and weaknesses of the industry and an assessment of the industry’s needs. Each office then uses these industry assessments to develop business plans, which describe activities the office plans to undertake during the year, and links business plan activities to objectives, performance measures, and targets. For example, the fiscal year 2010 business plan for MAS’s Office of Energy and Environment included identifying market access opportunities and barriers, as part of its energy-efficiency initiative. The plan linked this activity to MAS’s performance measure to identify the percentage of industry-specific trade barriers that were removed or prevented. MAS officials told us that its management reviews the plans and uses them in making decisions throughout the year. However, MAS managers told us they prioritize the unanticipated requests based on resource availability and importance of the activity.

As part of its internal review, MAS has developed decision criteria to assist analysts in prioritizing their work demands. According to the proposed criteria, which is in process awaiting departmental approval, MAS will primarily support sectors that have a direct connection to exports or that strategically impact trade. Such a sector must be a high-volume exporter, with $10 billion or more in exports or be a high potential-growth sector such as renewable energy. MAS management has set the goal of having 75 percent of MAS’s resources working toward National Export Initiative objectives of doubling exports by 2015. However, MAS officials noted that they currently conduct work that is important for U.S. global competitiveness but not directly related to exports. For example, MAS provides the business perspective on cases that go before the Committee on Foreign Investment in the United States (Committee), and coordinates Commerce participation in these cases. The Committee is an interagency panel authorized to review transactions that could result in control of a U.S. business by a foreign person. The review is to determine the effect of such transactions on the national security of the United States and is not directly related to exports. To align with its new approach for prioritizing analysis related to exports, MAS management plans to streamline resources devoted to working on those cases that are not of strategic importance. In addition, MAS plans to reduce its effort in analyzing domestic regulations that do not have a significant impact on exports.
MAS’s System to Monitor Its Workload is Used Unevenly

MAS does not have a mechanism to systematically monitor analysts’ workload or the amount of time spent on requests for different clients. MAS officials identified several top-priority clients, but the many unanticipated daily requests can pose difficulties for MAS analysts. Some requests for the Offices of Services and Manufacturing come to analysts through ITA’s formal “tasker” system and are delegated by senior management to analysts. The “tasker” system is an electronic system through which tasks are assigned to staff and signed off on by management. MAS officials stated that it is useful for tasking out assignments to multiple offices; however, they noted that it does not cover all the work undertaken within MAS. They noted that for the Office of Industry Analysis, most requests are directly communicated to managers and analysts by a colleague in ITA or another government agency. They stated that entering Office of Industry Analysis workload data into the tasker system is not current practice. Moreover, according to MAS officials, many of the requests involve sensitive documents which cannot be entered into the system in order to comply with security protocols. MAS managers said that the proportion of work captured by the tasker system varies greatly among its program areas, ranging from 85-90 percent for the Offices of Manufacturing and Services to less than 5 percent for the Office of Industry Analysis. Without a way to systematically monitor staff’s workload, it is difficult for management to determine how to most efficiently allocate resources.

In prior work, we found that for an entity to run and control its operations, management must have relevant, reliable, and timely information.\(^8\) However, MAS did not systematically track the time spent on tasks by different types of clients. After our inquiries, the Deputy Assistant Secretary of MAS’s Office of Industry Analysis began monitoring short-term (2 to 3 days) requests by different types of clients and found that approximately 70-75 percent of short-term requests for analysis came from within ITA, 5-10 percent were generated from the rest of Commerce, and the remaining 15-20 percent were from other agencies in the Executive Branch and the Congress. However, these data reflect only the requests—which average 5,400 annually, according to MAS officials—submitted to the 41 staff in Office of Industry Analysis, not MAS offices overall, and they do not include information that involves security protocols or longer-term projects. According to agency officials, these short-term requests are

ad hoc and often time sensitive and must be balanced with the broader long-term activities MAS analysts undertake. Given that management does not have reliable and timely information about staff’s workload, it may be difficult for management to ensure staff are working on the highest-priority efforts.

Officials from agencies that work with MAS told us they understand MAS’s role and contributions to trade policy and competitiveness issues, but these contributions are not readily apparent to Congress or the general public. This is partly because MAS’s policy-development work is not publicly available. Although ITA’s Web site does provide public access to industry, trade, and economic data and analysis produced in MAS, it provides limited information about MAS’s role and activities. Consequently, the public and Congress may have limited information about MAS’s contributions to policy making. This lack of transparency may hinder Congress’s ability to provide effective oversight of MAS’s activities.

There is little publicly available information about MAS’s priorities and contributions to policy making. As noted above, MAS’s work is largely intended for use by internal government clients, and much of that output is not in the form of products that are externally available. Previously, we found that, in addition to adequate internal communications, management should ensure there are adequate means of communicating with external stakeholders, which can include Congress.9

An organization’s Web site is typically a readily accessible source of information to the public about the organization’s mission and activities. A MAS official stated that when she worked in the private sector, she relied on the Web site to get the analysis and information they needed and that its Web sites were organized in a manner useful for industry users. In addition, officials from agencies that rely on MAS for analytical support stated they generally communicate with MAS via phone or e-mail and do not rely on the Web site. Further, MAS and other officials stated that ITA’s internal Web site, or intranet, provides a primary means of communication among ITA units and, thus, a public ITA Web site is less important for that purpose.

9GAO/AIMD-00-21.3.1.
For the general public, ITA’s Web sites provide limited information about MAS’s priorities and activities. According to a 2007 Commerce Inspector General report, ITA’s Web sites have duplicative, confusing, disorganized, and outdated pages. In a December 2010 meeting, members of ITA’s Web Governance Board (Board) told us that the issues raised in the report are still relevant. The board observed that Web sites are important tools to increase public awareness of ITA programs and expertise, not only for the business community, but also for external stakeholders who may have difficulty finding useful information about MAS as an organization and its role in trade policy.

The board members told us that because ITA does not have a centrally directed web management office, each business unit is responsible for managing its own web presence, but there is great variation among the offices’ ability and technical expertise. A MAS official stated that, MAS, like some of the other ITA business units, does not have dedicated full-time staff focused on maintaining MAS’s web presence. Instead there are several MAS analysts who have the auxiliary duty of working on MAS’s Web site in addition to their other duties. Consequently, MAS and ITA as a whole lack cohesive, transparent, and consistent Web sites. This may also hinder MAS’s ability to effectively communicate its priorities and contributions to stakeholders, Congress, and the public.

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Due to its policy-support role, MAS’s ability to meet its performance targets, such as breaking down trade barriers faced by U.S. firms, depends on actions from other agencies, Congress, businesses, and foreign governments. MAS has three main objectives linked to five outcome-based performance measures\(^1\) that it reports on externally in assessing its performance.\(^2\) One objective—to ensure appropriate industry and other stakeholder input into trade policy development, negotiations, and implementation—covers much of what MAS does, including addressing industry-specific trade barriers and working with USTR on trade agreements. MAS has also developed internal measures that are used to track activities and for planning, but are not reported externally (see tables 5 and 6).

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\(^1\) In 2006, OMB found that MAS’s annual strategic planning process links its budget process to goals, objectives, and results.

\(^2\) MAS has both Government Performance and Results Act measures, which it reports externally, and performance measures that it uses internally but does not report externally. These objectives and performance measures were initially laid out in MAS’s strategic plan for fiscal years 2007-2012, created in preparation for the OMB Program Assessment Rating Tool (PART) review in 2006.
Table 5: MAS Objectives and External Performance Measures Used to Enhance U.S. Competitiveness in International Markets

<table>
<thead>
<tr>
<th>Objective</th>
<th>Performance measure (external—for Government Performance and Results Act)</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ensure industry and other stakeholder input into trade policy development, negotiations, and implementation</td>
<td>Percentage of industry-specific trade barriers addressed that were removed or prevented&lt;sup&gt;a&lt;/sup&gt;</td>
<td>An example of a trade barrier MAS addressed that was removed is an Indian tariff on general-aviation aircraft.</td>
</tr>
<tr>
<td></td>
<td>Percentage of industry-specific trade barrier milestones completed</td>
<td>An example of a trade barrier milestone for removing Indian tariffs on general-aviation aircraft is identifying market-access issues of interest to U.S. industry.</td>
</tr>
<tr>
<td></td>
<td>Percentage of trade agreement milestones completed</td>
<td>An example of a trade agreement milestone is to identify industry-specific opportunities resulting from a particular trade agreement, such as the opportunities for the automotive industry resulting from the Korea-U.S. free trade agreement.</td>
</tr>
<tr>
<td>Improve efficiency in the distribution of information and data</td>
<td>Percentage of reduction in per-unit costs of data distribution</td>
<td>Changes in per-minute cost of use of TradeStats Express compared to a baseline.</td>
</tr>
<tr>
<td>Conduct studies and analysis to promote U.S. competitiveness</td>
<td>Total annual cost savings resulting from the adoption of MAS recommendations contained in its studies and analysis</td>
<td>MAS estimated that its recommendations on restriction levels for a certain health and safety rule resulted in a savings of $287 million to industry over what had been originally proposed.&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

Source: GAO analysis of MAS information and data.

<sup>a</sup>See appendix III.

<sup>b</sup>Generally, MAS uses data on costs before and after its contribution, based on the agency's Regulatory Impact Analysis. It uses the decrease in costs after MAS's suggested change to measure the value of its impact on the regulation.

Table 6: MAS Objectives and Internal Performance Measures to Enhance U.S. Competitiveness in International Markets

<table>
<thead>
<tr>
<th>Objective</th>
<th>Performance measure</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enhance public and private partnerships</td>
<td>Total annual exports generated by the Market Development Cooperator Program public/private partnerships</td>
<td>The measure includes, among other things, the estimated exports attributable to the partnership’s activities.</td>
</tr>
<tr>
<td></td>
<td>Exports generated annually by export-trading companies</td>
<td>Each export-trading company submits an annual report that includes data on the exports it generated.</td>
</tr>
</tbody>
</table>

Source: GAO analysis of MAS information and data.

MAS's fiscal year 2011 budget justification stated that one limitation to its meeting its performance targets is that many factors—including U.S. business cooperation, global trade trends, political developments, and the extent to which foreign governments create barriers or act inconsistently with trade obligations—affect the number of barriers removed. MAS's
performance-measurement process attempts to address this challenge by breaking its outcome-based measures into specific milestones, according to officials. The specific milestones—such as identifying market-access issues of interest to U.S. industry or industry-specific opportunities resulting from a trade agreement—are analyses or industry-outreach steps that MAS itself can undertake and complete, even though MAS cannot control the ultimate impact of those actions. MAS sets targets for its performance measures annually. These milestones, while more specific than the overall performance measures, are nonetheless qualitative measures.

In Commerce’s fiscal year 2010 Performance and Accountability report, MAS reported that it had met or exceeded all of its targets for its four performance measures. For example, MAS reported that it had met its target of removing or preventing 30 percent of the industry-specific trade barriers it addressed. In both 2008 and 2009, Commerce’s Performance and Accountability reports stated that MAS exceeded three of its targets and did not meet its target for its work on trade agreements, because the Administration suspended work on two trade agreements MAS was working on.

MAS does not systematically obtain feedback on its performance from all its clients on whether or not it is meeting their individual needs. In previous work, we stated that it is important for agency managers to collect performance data that are sufficient to support decision making. A MAS official stated it does not have the resources to systematically survey its clients about their satisfaction with MAS’s activities. In addition, MAS officials stated they do not view administering a survey to obtain feedback as feasible since many of their clients are senior policy makers. MAS officials said that if their clients were not satisfied with their work, the clients would not continue to request analysis and information.

Although, as previously noted, MAS has five performance measures related to the Government Performance and Accountability Act, Commerce’s Performance and Accountability report does not always include results for all five measures. While the reports for fiscal years 2006 and 2007 included the measure on reduction in costs of data distribution, it has not been included in subsequent Performance and Accountability reports, although MAS officials stated they continue to track this measure and report on it to OMB.

Officials stated they do obtain feedback from its ITA clients through periodic meetings with managers in the other ITA business units. Although MAS does not obtain systematic feedback from all its clients, officials from other government agencies told us that while there is a great deal of industry expertise in critical areas within MAS, the level of expertise varies by sector, and some gaps do exist. Officials from the Departments of State and Treasury stated that MAS provided valuable analysis on export financing for airplanes for the Organisation for Economic Cooperation and Development interagency delegation on export financing. In addition, officials from the Department of Transportation stated that MAS's knowledge of trade policy complemented its transportation-policy expertise and its technical understanding of engineering and infrastructure, allowing it to better serve industry. However, officials from State and USTR noted that the level of expertise in MAS is not consistent across all sectors and, consequently, the usefulness and relevance of MAS input can be uneven. In addition, an Import Administration official stated that while it relies on MAS to assist with industry analysis of foreign trade zone applicants, the coverage of some sectors is uneven. MAS officials recognized there is unevenness in the level of expertise across sectors and said they are trying to address the issue as part of its internal-review process and by providing better training for analysts.

Some of MAS's activities fall outside its external and internal measures. For example, MAS officials stated it is difficult to measure some of the economic analysis work that does not contribute directly to breaking down trade barriers or toward developing a trade agreement. Some of this work is used by senior government officials in Commerce and other parts of the Executive Branch. Further, MAS activities that contribute to the performance measures of other parts of ITA are reported not by MAS, but by the unit with primary responsibility for each specific performance measure. MAS's strategic plan includes performance measures related to the goals and objectives that other ITA units have primary responsibility for and on which it does not report. As a result, the performance measures MAS reports on do not include its contributions to the other ITA units’ goals. For example, MAS's contributions to antidumping and countervailing duty proceedings are reported by Import Administration.

Responding to our request, MAS officials compiled two large volumes of examples (i.e., analysis documents, information used in trade negotiations, and regulatory cost analyses) illustrating MAS activities over the past few years. MAS officials told us this was not an exercise the office conducts on a regular basis, and that it was very useful. The officials said that it
provided a way for staff to link their activities to broad outcomes separately from the overall performance measures. However, they added that the exercise was resource intensive, and they do not have plans to regularly repeat this type of effort.

At a time of heightened interest in both expanding U.S. exports and streamlining government operations to lower costs and avoid inefficiencies, the role and effectiveness of MAS within ITA is of particular interest. Created out of an existing Commerce unit in 2004 to more explicitly focus on U.S. competitiveness, MAS’s services are primarily provided to government clients. Unlike other Commerce offices such as Commercial Service and the Import Administration, or independent agencies such as USITC, MAS functions largely as an internal consulting group for government trade policy. MAS’s clients report that MAS provides analysis not readily available elsewhere in the government.

Because of the reduced visibility that accompanies this role, it is important for MAS to clearly define its contribution to the Administration’s trade and economic policy. We found that MAS continues to refine its mission and develop decision criteria to prioritize its activities, and enhancements are still undergoing departmental review. Given that MAS does not face a market test for its services, a clear set of priorities could help it meet its clients’ needs.

MAS faces challenges in measuring its contributions to trade policy, because as a policy support organization, MAS may have difficulty isolating its specific contributions to the trade policy process. MAS has established a detailed process to measure its performance, but the office does not systematically obtain feedback from all its clients or track its contributions to major policy decisions that fall outside its performance measures. This makes it difficult for MAS to accurately determine the extent to which it adds value or to identify opportunities for improvement.

In terms of communication, MAS also faces challenges in creating transparency because of the nature of its activities. Because MAS provides industry and trade policy expertise, seldom through products that are publicly attributable to MAS, there is limited visibility of MAS’s contributions in key work areas. Its Web site could be a useful communication tool, but as part of ITA, MAS relies on ITA-level support for management of the Web site. Nonetheless, since its support functions are central to its contributions, presenting them more clearly would be useful for congressional and stakeholder oversight of its activities.

Conclusions
MAS is in the process of finalizing its mission statement and decision criteria and is taking steps to more clearly prioritize its activities and better align its resources to meet the goals of the Administration’s National Export Initiative. Moving this initiative forward within Commerce will be an important step.

**Recommendations for Executive Action**

To better assure MAS is meeting the needs of its clients, we recommend that the Secretary of Commerce, in concert with MAS management, take the following four actions:

1. To facilitate MAS’s efforts to prioritize its activities, establish time frames to finalize the clarification of MAS’s mission and decision criteria.

2. To better enable MAS to target its resources, ensure MAS has a way to more systematically monitor how staff time is allocated across various efforts.

3. To improve transparency and ensure that priorities are consistent with those of key stakeholders, explore methods for MAS to more clearly communicate its mission, priorities, and activities to clients, stakeholders, the public, and Congress. These methods could include, among others, working with ITA leadership to develop a strategic plan with associated time frames to improve ITA’s web presence and management.

4. In order to ascertain whether MAS is meeting the needs of its government clients involved in the trade policy process, explore ways to more systematically obtain information on the value it is adding. This could include collecting feedback from its clients on its activities more systematically and tracking the outcomes of the analyses it provides for major trade policy decisions.

**Agency Comments and Our Evaluation**

We requested comments on a draft of this report from Commerce. In its comment letter, Commerce stated that it fully concurred with our findings and recommendations. The letter also said that MAS’s current redefinition plan is expected to be completed by October 2011. Commerce’s complete letter is reprinted in appendix V.
As agreed with your offices, unless you publicly release the contents of the report earlier, we plan no further distribution until 30 days from the report date. At that time, we will send copies of this report to interested congressional committees and the Secretary of Commerce. In addition, this report will be available at no charge on the GAO Web site at http://www.gao.gov.

If you or your staffs have any questions about this report, please contact me at (202) 512-4347 or yagerl@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. Other GAO contact and staff acknowledgements are listed in appendix VI.

Loren Yager
Director, International Affairs and Trade
The objectives of this report were to examine (1) the Office of Manufacturing and Services’s (MAS) goals and activities, and how the types of analysis and expertise it provides compare with those provided by other government entities; (2) how MAS prioritizes its activities and targets its resources; and (3) the extent to which MAS tracks and reports its contributions to increasing U.S. competitiveness and trade.

To assess MAS’s activities and how they compare with the types of analysis and expertise provided by other government entities, we reviewed relevant documents, including legislative authority, Department of Commerce’s (Commerce) 2004 Manufacturing in America report, National Export Initiative documents, and budget and staffing information. We reviewed the International Trade Administration’s (ITA) strategic plan and Web site to evaluate how the type of work MAS undertakes compares to that conducted by the other ITA business units. Additionally, we reviewed information on other agencies’ Web sites to obtain information on the types of analysis and expertise they offer and initiatives the agencies participated in with MAS. We discussed similarities and differences in the types of work that MAS’s government clients conduct with officials with knowledge of the unit. We interviewed Commerce officials from the Office of the Secretary and National Institute of Standards and Technology and representatives from the other ITA business units—Commercial Service, Market Access and Compliance, and Import Administration. We also interviewed officials from other U.S. government agencies, including International Trade Commission, Office of the United States Trade Representative, the Departments of State, Energy, Transportation, Treasury, Environmental Protection Agency, and Office of Management and Budget (OMB). Additionally, we interviewed the Industry Trade Advisory Committees’ designated federal officers (DFO), representatives from two industry associations, and the chairman of one of the committees. To gain additional information on MAS’s activities, we also attended multiple MAS events, including its Manufacture America conferences in Pittsburgh, Pennsylvania, and Chicago, Illinois; a meeting of the U.S. government’s Manufacturing Council; and a congressional event in Washington D.C., for ITA’s Market Development Cooperator Program. We also reviewed documents provided by MAS containing examples of how its work has been used by other parts of Commerce and other U.S. government agencies over the last 5 years.

To obtain information on how MAS prioritizes its activities and targets its resources, we reviewed documents related to MAS’s proposed decision-making criteria and revised mission and discussed them with MAS officials. Additionally, to assess the availability of information to the
public about MAS's role in the U.S. government, we reviewed the Commerce Inspector General’s 2007 report on trade coordination efforts and met with ITA’s Web Governance Board. In order to understand any past and current issues related to MAS’s priorities, we reviewed OMB’s 2006 Program Assessment Rating Tool (PART) report and National Export Initiative documents. We also interviewed MAS leadership from the offices of the Assistant Secretary and Planning, Coordination, and Management; officials from its offices of Manufacturing, Services, and Industry Analysis; the administrators of MAS’s assignment tasker system; and ITA’s Deputy chief financial officer.

To assess the extent to which MAS tracks and reports its contributions to increasing U.S. competitiveness and trade, we reviewed documents related to its performance measurement system, including MAS’s industry assessments, business plans, performance targets, and Commerce’s fiscal year 2010 Performance and Accountability Report. We also reviewed past GAO work on the principles of effective performance measurement. In order to ensure consideration of any past issues concerning MAS’s performance measurement, we reviewed OMB’s 2006 PART report. We also discussed MAS’s performance measurement with knowledgeable officials from MAS, ITA, and OMB.

In order to present information on manufacturing’s share of U.S. gross domestic product (GDP), employment, and exports, we relied on data from Commerce. Information on GDP and employment was obtained from the Bureau of Economic Analysis (BEA). We used calculations of hours worked to report shares of employment. To report the numbers of employees in the U.S. economy, we computed full-time equivalents, assuming 2,080 hours worked in each calendar year. Information on manufacturing exports was obtained from MAS’s TradeStats Express. To compute the U.S. share of world-wide production and exports in manufacturing data, we relied on the World Bank’s Data Bank. To assess the reliability of the World Bank and Commerce data, we interviewed knowledgeable agency officials. To the extent possible, we compared values against alternative sources. We found that the data were sufficiently reliable for the purposes of presenting historic trends on manufacturing production, exports, and employment.

We conducted this performance audit from August 2010 to June 2011 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.
Appendix II: Manufacturing’s Role in the U.S. Economy and Exports

Manufacturing’s Share of U.S. GDP Has Declined, but the United States Remains a Leading Manufacturer

Over the past two decades, manufacturing’s share of the output of the U.S. economy has fallen.¹ In 1989, manufacturing’s output expressed in constant 2009 dollars to correct for inflation was approximately $1.5 trillion, while total output was approximately $8.6 trillion.² By 2009, while manufacturing output had grown to $1.6 trillion, total output had grown to more than $14 trillion. Using data from BEA, figure 3 shows manufacturing’s share of total U.S. output, measured by GDP. As the figure shows, from 1989 to 2009, U.S. manufacturing as a share of GDP declined from a peak of about 17 percent to about 11 percent, and has generally displayed a steady decline.³

¹According to the North American Industrial Classification System, the manufacturing sector comprises establishments engaged in the mechanical, physical, or chemical transformation of materials, substances, or components into new products. Establishments in the manufacturing sector are generally plants, factories, or mills that characteristically use power-driven machines and materials-handling equipment.

²The trend of the past 20 years is consistent with a larger trend. In 1969, the total value of manufacturing output was about $1.1 trillion, or about 24 percent of the entire economy’s $4.7 trillion. Manufacturing output has been adjusted to reflect 2009 prices, using BEA’s GDP price deflator.

³Declining shares of manufacturing in GDP are not unique to the United States. According to data from the World Bank, manufacturing’s share of world GDP was about 20 percent in 1993, and about 16 percent in 2009. For calculating manufacturing GDP, the World Bank uses industries belonging to International System of Industrial Classification codes 15-37.
Figure 3: U.S. Share of Nominal GDP Represented by Manufacturing, 1989 - 2009

Note: Figure shows the ratio of the value added in Manufacturing over nominal GDP. Correcting for inflation would not change the share if the same inflation factor were applied to the numerator (manufacturing GDP) and the denominator (total GDP). However, analysts sometimes adjust manufacturing output by a different inflation factor that reflects slower rises in the prices of manufacturing goods and productivity gains. Using that inflation factor, manufacturing’s share of real output would have remained roughly constant over this period.

While the share of U.S. economic output devoted to manufacturing has fallen, the United States remains a leading producer of manufactured goods. Table 7 uses data from the World Bank to compare selected countries’ proportions of world production in manufacturing in 2000 and 2008. These four countries collectively represent more than 50 percent of world manufacturing. As the table shows, the U.S. share of world production in manufacturing fell from about 26 percent to about 18 percent. During the same period, China’s share increased from about 7 percent to about 15 percent.
Table 7: Value of Manufacturing GDP and Percentage of World Manufacturing GDP for Selected Countries, 2000 and 2008

<table>
<thead>
<tr>
<th>Country</th>
<th>2000</th>
<th></th>
<th>2008</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Value of</td>
<td>Percentage of</td>
<td>Value of</td>
<td>Percentage of</td>
</tr>
<tr>
<td></td>
<td>manufacturing output</td>
<td>world manufacturing output</td>
<td>manufacturing output</td>
<td>world manufacturing output</td>
</tr>
<tr>
<td>United States</td>
<td>$1,815.4</td>
<td>26%</td>
<td>$1,768.0</td>
<td>18%</td>
</tr>
<tr>
<td>Germany</td>
<td>485.3</td>
<td>6.8</td>
<td>745.5</td>
<td>7.6</td>
</tr>
<tr>
<td>Japan</td>
<td>1,278.7</td>
<td>18</td>
<td>979.3</td>
<td>10</td>
</tr>
<tr>
<td>China</td>
<td>476.0</td>
<td>6.7</td>
<td>1,502.2</td>
<td>15</td>
</tr>
<tr>
<td>World</td>
<td>$7,089.8</td>
<td>100%</td>
<td>$9,840.0</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: GAO analysis of World Bank data.

Note: Dollar values have been adjusted using the U.S. GDP price deflator, with 2009 as the base year.

Over the past 20 years, the percentage of U.S. exports represented by manufacturing has remained largely unchanged. In 1989, correcting for inflation, the United States exported approximately $800 billion of goods and services, of which about $450 billion were manufactured goods, according to BEA and MAS data. In 2009, the United States exported approximately $1.6 trillion, of which about $917 billion were manufactured goods. Figure 4 shows the share of total exports that were in manufacturing. Over this time manufacturing’s share of exported goods and services has stayed between 58 and 65 percent.

Figure 4 shows the share of total exports that were in manufacturing. Over this time manufacturing’s share of exported goods and services has stayed between 58 and 65 percent.

Manufacturing Exports Remain a Chief Component of Total U.S. Exports

\[^{4}\text{Figures have been adjusted for inflation using BEA’s GDP price deflator with 2009 as the base year.}\]
The U.S. share of world-wide exported manufactured goods has remained consistent over the past decade. Table 8 shows manufacturing exports for selected countries in 2000 and in 2009 using World Bank data. In 2000, the United States represented about 13 percent of manufactured merchandise exported, which declined to about 8 percent in 2009. During this period, China’s contribution to world manufacturing rose from about 5 percent in 2000 to about 13 percent in 2009.

The World Bank defines manufacturing using the Standard International Trade Classification system. According to MAS officials, the World Bank data is more limited, as it excludes processed food and petroleum products.
Table 8: Value of Manufacturing Exports and Percentage of World Manufacturing
Exports for Selected Countries, 2000 and 2009

<table>
<thead>
<tr>
<th>Country</th>
<th>Value of manufacturing exports</th>
<th>Percentage of world manufacturing exports</th>
<th>Value of manufacturing exports</th>
<th>Percentage of world manufacturing exports</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>$800.0</td>
<td>13%</td>
<td>$705.3</td>
<td>8.1%</td>
</tr>
<tr>
<td>Germany</td>
<td>570.9</td>
<td>9.6</td>
<td>918.5</td>
<td>11</td>
</tr>
<tr>
<td>Japan</td>
<td>556.3</td>
<td>9.3</td>
<td>511.2</td>
<td>5.9</td>
</tr>
<tr>
<td>China</td>
<td>271.8</td>
<td>4.6</td>
<td>1,124.3</td>
<td>13</td>
</tr>
<tr>
<td>World</td>
<td>$4,817.5</td>
<td>100%</td>
<td>$ 8,731.6</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: GAO analysis of World Bank Data.
Note: Dollar values have been adjusted using the U.S. GDP price deflator, with 2009 as the base year.

Over the Past Two
Decades, Manufacturing’s
Share of Employment Has Fallen

From 1989 to 2009, manufacturing’s share of employment has fallen. In 1989, measured by hours worked by full- and part-time employees, there were approximately 18 million U.S. workers in manufacturing and approximately 94 million in the entire U.S. economy.\(^6\) In 2009, the number employed in manufacturing had fallen to approximately 11 million, while the number employed in the United States had grown to about 107 million. Figure 5 shows the share of hours worked in manufacturing, which fell from almost 20 percent in 1989 to about 10 percent in 2009.\(^7\)

\(^6\)Figures are full-time equivalents that assume a work year of 2,080 hours.

\(^7\)In 1969, manufacturing’s share of U.S. employment was approximately 28 percent.
Over the past 10 years, the drop in manufacturing employment has been matched by an increase in the share of employment in services. Table 9 shows employment in the United States by sector for 2000 and 2009. As the table shows, over this period manufacturing’s share has fallen by about 5 percentage points, while the service industry’s share has increased by about 4 percentage points.
### Table 9: Number and Percentage of U.S. Workers Employed in Various Sectors, 2000 and 2009

(Numbers in millions)

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>16.3</td>
<td>15%</td>
<td>10.9</td>
<td>10%</td>
</tr>
<tr>
<td>Services</td>
<td>70.1</td>
<td>63.2</td>
<td>72.1</td>
<td>67.2</td>
</tr>
<tr>
<td>Other goods</td>
<td>8.4</td>
<td>8</td>
<td>7.6</td>
<td>7</td>
</tr>
<tr>
<td>Government</td>
<td>16.5</td>
<td>15%</td>
<td>17.6</td>
<td>16.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>110.9</strong></td>
<td><strong>100%</strong></td>
<td><strong>107.2</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Source: GAO analysis of BEA data.

Note: Other goods-producing industries are agriculture, forestry, fishing, and hunting; mining; and construction. Services-producing industries consist of utilities; wholesale trade; retail trade; transportation and warehousing; information; finance and insurance; real estate and rental and leasing; professional, scientific, and technical services; management of companies and enterprises; administrative and waste management services; educational services; health care and social assistance; arts, entertainment, and recreation; accommodation and food services; and other services, except government.
## Appendix III: Industry-specific Trade Barriers
### MAS Addressed in Fiscal Year 2010

<table>
<thead>
<tr>
<th>Manufacturing</th>
<th>Services</th>
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</thead>
<tbody>
<tr>
<td>Access to China’s electronics recycling market</td>
<td>China insurance branching and licensing</td>
</tr>
<tr>
<td>Anticounterfeit medical products</td>
<td>Japan postal insurance (new)</td>
</tr>
<tr>
<td>Asia-Pacific Economic Cooperation (APEC) automotive customs transactions cost reduction</td>
<td>Universal postal union postal financial services</td>
</tr>
<tr>
<td>APEC cross-border privacy</td>
<td>U.S.-Japan air services agreement</td>
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<tr>
<td>APEC life sciences innovation forum</td>
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<tr>
<td>Automotive standards harmonization</td>
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<tr>
<td>Canada and Mexico CITEL Mutual Recognition Agreement implementation</td>
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<tr>
<td>Cement Asia-Pacific</td>
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<tr>
<td>China automotive trade barriers</td>
<td></td>
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<tr>
<td>China general aviation tariffs</td>
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<tr>
<td>China illegal logging</td>
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<tr>
<td>China Joint Commission on Commerce and Trade health</td>
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<tr>
<td>China large motorcycle restrictions</td>
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<tr>
<td>China raw materials</td>
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<tr>
<td>Environmental trade liberalization World Trade Organization</td>
<td></td>
</tr>
<tr>
<td>European Union (EU) access for U.S. wine (Phase II)</td>
<td></td>
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<tr>
<td>India general aviation tariffs</td>
<td></td>
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<tr>
<td>India motorcycle tariffs</td>
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<tr>
<td>Japan boats</td>
<td></td>
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<tr>
<td>Japan market access for information technology (IT) and E-Commerce</td>
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<tr>
<td>Japan mobile competition</td>
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<tr>
<td>Korea automotive trade barriers</td>
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<tr>
<td>Medical device global harmonization</td>
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<tr>
<td>Nuclear industry-specific trade barriers</td>
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<tr>
<td>Privacy framework standard International Organization for Standardization 29100</td>
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<tr>
<td>Russia import duty on large civil aircraft</td>
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<tr>
<td>Trans-Pacific Partnership—telecom services and E-Commerce</td>
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<tr>
<td>U.S. cybersecurity policy</td>
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<td>U.S. Internet policy on privacy and innovation</td>
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<tr>
<td>U.S.-EU safe harbor</td>
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<tr>
<td>U.S.-EU World Trade Organization IT agreement tariff dispute</td>
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<tr>
<td>Vietnam telecom and e-Commerce</td>
<td></td>
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<tr>
<td>World wine group (Phase II)</td>
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</tbody>
</table>

Appendix IV: MAS Created a New Sector Strategy Document in Response to the National Export Initiative

Recently, in response to the National Export Initiative, MAS began to prepare “global sector strategies,” which, according to MAS officials, identify and provide information on potential export markets for high-priority sectors; identify obstacles and risks associated with the sector; and provide policy recommendations for decision makers. Agency officials stated that the global sector strategies are based on a common template and will be MAS's signature product, with portions available to the public.

Currently, one strategy, for aerospace, has been completed. An excerpt is reproduced in figure 6. The other 14 strategies that are listed below are in various stages of completion:

- Automotive;
- Basic chemicals;
- Civil nuclear;
- Travel and tourism;
- Professional services;
- Digital content;
- Medical technologies;
- Building products;
- Semiconductor industry;
- Franchising/distribution;
- Renewable energy;
- Supply chain and logistics;
- Architecture, engineering, and construction; and
- Insurance and asset management.
Appendix IV: MAS Created a New Sector Strategy Document in Response to the National Export Initiative

Figure 6: MAS Sector Strategy Example—Excerpt from Aerospace Sector Strategy

**Overview**

**High Level Description:**
Manufacturing of civil and military aircraft, missiles, space vehicles, and parts of all of the foregoing

**Overview:**
1. **Opportunities:** Largest trade surplus of all manufacturing sectors
2. **Challenges:** Transition from duopoly (Boeing/Airbus) to global market with multiple new entrants (Canada, Brazil, China, Russia, India, Japan) and global supply chains.
3. **Top Target Markets:** India, Brazil, China, Canada, Korea, EU, Middle East/N. Africa (MENA)

**Important statistics:**
- Size of Global Import Market (2009) excluding US $188.7 billion ¹
- Growth: CAGR 2000-2009 8.0% ²
- World Imports from U.S. / U.S. imports from World (2009): $85.8B/$33.3B = 2.6x
- Job Intensity: $178.9B of production (domestic shipments and exports) that directly support roughly 500K U.S. jobs. ³

**U.S. Industry**

**U.S. Competitiveness:**
- **U.S. Share of World Import Market excluding US, UN data, 2009 = 45.3%, in most major markets, US share >50%**
- **Top Importer Countries and U.S. share (2009):** US (NA), Germany (21.4%), France (43.9%), China (49.5%), Singapore (48.0%),
- **Current JS Aerospace (NAICS 3364) production for 2009:** $178.9B

**Jobs:**
- Wages: Aero production workers earn 80% more than manufacturing workers generally

**Other characteristics:**
- **Supply chain:** Includes thousands of SMEs, many of which also supply foreign aerospace manufacturers.
- **SME Share of Export Value (2008): 15.9%**. Number of Exporters of aerospace products in NAICS 3364 = 1,754 companies, 91% of which are SMEs.³
- **Major U.S. companies:** Boeing (large jetliners); Cessna, Gulfstream, Hawker Beechcraft and Piper (general aviation aircraft); GE Aviation and United Technologies/Patt & Whitney (aircraft engines); Boeing, Lockheed Martin and Textron (military aircraft).
- **Buyers/Other information:** U.S. defense industrial base increasingly reliant on civil aero manufacturing (e.g., Air Force procurement of in-flight refueling tanker)

**Marketing**

**Major Markets and Growth Factors:**
- **Growth factors:** Airline traffic (passengers and cargo volumes) and GDP growth; new model innovation (increased fuel efficiencies); government policy (Open Skies Agreements); business/private usage; airline fleet replacement. ⁴

**Historic Global Import Market, billions $**

**Import Growth of Leading Importing Countries, billions $**

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Source: Reprint of MAS product.
Appendix V: Comments from the Department of Commerce

May 25, 2011

Dr. Loren Yager
Director, International Affairs and Trade
U.S. Government Accountability Office
Washington, DC 20548

Dear Dr. Yager:

Thank you for providing us with the draft report, “Office of Manufacturing and Services Could Better Measure and Communicate its Contributions to Trade Policy” (GAO-11-583). In this report, the Government Accountability Office (GAO) assessed the objectives, goals, and activities of the Department of Commerce’s Office of Manufacturing and Services (MAS).

Specifically, the GAO examined (1) how MAS targets its resources and measures its progress, (2) what challenges it faces, and (3) how the goals and activities of MAS relate to other manufacturing-related efforts within the Department and the Executive Branch.

The Department fully concurs with the overall findings and recommendations of your report. I support MAS’ plan to refocus its mission and priorities, including enhanced monitoring of its workload, and to more systematically obtain and communicate the value MAS adds to the trade policy process, as the GAO suggests. The Department has been making every effort to implement the MAS redefinition plan, and I expect your recommended changes to be fully implemented by October 1, 2011.

Thank you for producing a balanced and comprehensive assessment of this complex organization. The Department of Commerce plays a critical role in executing President Obama’s National Export Initiative. Your report validates that the strategic and analytical work of one of our leading units is a valuable contribution to this and other policymaking efforts.

Sincerely,

Gary Locke

[Signature]
Appendix VI: GAO Contact and Staff
Acknowledgments

<table>
<thead>
<tr>
<th>GAO Contact</th>
<th>Loren Yager, (202) 512-4347, <a href="mailto:yagerl@gao.gov">yagerl@gao.gov</a></th>
</tr>
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<tbody>
<tr>
<td>Staff Acknowledgments</td>
<td>In addition to the individual named above, Celia Thomas, Assistant Director; Christina Werth; Benjamin Bolitzer; Jacob Beier; Gezu Bekele; and Margaret McKenna made key contributions to this report. Other contributors include Karen Deans, Ernie Jackson, David Dornisch, Elizabeth Curda, Kim Frankena, Etana Finkler, Rob Ball, and Joe Carney.</td>
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</tbody>
</table>
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