



Analyzing the Value Chain for Apparel Designed in the United States and Manufactured Overseas

Executive Summary

Millions of American Workers Rely on and Contribute to Apparel Global Value Chains

It is widely known that most apparel sold in the United States is assembled overseas. What is less well known is the fact that millions of American jobs are included in the global value chains (GVCs) that design, produce, and market clothing sold in the United States. American consumers and policymakers tend to look at the finished apparel product and put it into one of two categories: imported or made in the United States. But the reality is that GVCs have made this simplistic judgment usually outdated and inaccurate.

Today's GVCs utilized by U.S. apparel brands, manufacturers, and retailers, include the full range of activities that firms and workers do to bring a product from its conception to the final consumer. This study analyzed where and how American workers contribute to the apparel GVCs, and quantified the value-added that these U.S. workers bring to apparel manufactured abroad. As policymakers look to enact policies to promote U.S. jobs and economic activity in the textile, apparel, and retail sector, this study will provide factual information to educate policymakers on how millions of American workers rely on and contribute to GVCs.

The total value-added to apparel presented below has many U.S. components and represents jobs in a myriad of occupations and includes part-time or hourly employees as well as salaried professionals. U.S. workers are employed to design and manage

the production of apparel overseas; U.S. carriers are sometimes involved in the transport of goods by air, sea or land; and a variety of U.S. professionals are employed to handle Customs clearance and compliance issues related to GVCs for apparel products. Once the garment is landed in the United States, numerous U.S. workers manage warehousing and distribution; still more U.S.

Findings:

U.S. Value-Added = 70.3% of Retail Price

- Men's cotton knit shirts..... 69.5%
- Women's cotton knit shirts..... 75.4%
- Men's woven cotton trousers..... 71.2%
- Women's woven cotton trousers..... 72.1%
- Women's man-made fiber outerwear... 65.8%

professionals market apparel products on television, in print media, online, and through social media. Finally, there are many American workers employed in retail and customer service activities whether the apparel products are sold in stores, through catalogues, or online. As found in the study, the total value-added by these U.S. workers far exceeds the value-added overseas in manufacturing activities even when the yarn and/or fabric is acquired abroad. Moreover, the level of U.S. value-added varies little regardless of the kind of apparel product or the company involved.

Introduction

Although today's global value chains utilized by U.S. apparel brands, retailers and manufacturers include the full range of activities that firms and workers do to bring a product from its conception to the final customer, the consumer tends to look at the finished apparel product and put it into one of two categories: imported or made in the United States. Few consumers understand that globalization has made this simplistic judgment usually outdated and inaccurate.

This use of a global value chain is not unique to apparel products. Indeed, there are numerous examples from a wide variety of industries that shed light on the importance of global value chains. Recent studies by Dedrick, Kraemer, and Linden¹ addressed the question of who benefits financially from the sales of iPods and certain notebook PCs, which like garments, are often manufactured or assembled abroad with components sourced in numerous countries. Who benefits has become an increasingly relevant question, as there has been a shift by firms in many globally competitive industries to focus on core competencies and outsource other activities. This has created global production networks or value chains that cross corporate and national boundaries.²

The answer to the question of who benefits financially includes both jobs and profits. Consumers often focus on the assembly or manufacture of products in industries that utilize global value chains and are not aware of the myriad professionals working in the United States both before and after the product is manufactured. Not only are there

TPP Apparel Coalition

The TPP Apparel Coalition is comprised of American retailers, apparel brands, apparel manufacturers, and importers, and the millions of American workers they employ. The TPP Apparel Coalition comprises U.S.-headquartered companies that together employ three million workers globally and two million people in the United States. Their combined sales totaled \$548 billion in 2011. Coalition companies design, market, and sell products on every continent and throughout the Trans-Pacific Partnership (TPP) countries.

¹ *Who Profits from Innovation in Global Value Chains? A Study of the i-Pod and notebook PCs*, http://web.mit.edu/is08/pdf/Dedrick_Kraemer_Linden.pdf, May 2008.

² Dedrick, J., & Kraemer, K. L. (1998). *Asia's Computer Challenge: Threat or Opportunity for the United States and the World?* New York: Oxford University Press; Gereffi, G., Humphrey, J. & Sturgeon, T. (2005). The Governance of Global Value Chains. *Review of International Political Economy*, 12 (1), 78-104.

many U.S. jobs from design to distribution that support the sale of apparel manufactured abroad, but the U.S. jobs tend to be higher skilled and better paid than the jobs overseas. Indeed, in the iPod study cited above, the U.S. had one-third of the total jobs and two-thirds of the professional jobs, as well as twice the total wages of the non-U.S. workers. Global value chains also benefit consumers by offering the best value at different price points for the retail product.

This study was commissioned by the TPP Apparel Coalition to determine, based on data provided by certain U.S.-headquartered apparel and retail companies, what share of value-added occurred in the United States for apparel products manufactured overseas.

Methodology

The goal of this study was to capture the actual experience of American companies to determine the U.S. value captured for specific apparel products. Other studies looking at global value chains, including the iPod study cited above, made use of publicly available data and estimates by those knowledgeable of the industry being studied. In contrast, this study used proprietary company data for calendar year 2011. This eliminated the need for multiple assumptions and allowed us to capture what actually happened. The global supply chain for specific products designed and sold by American-headquartered apparel companies was broken down into multiple steps so that data could be gathered and correctly assessed. These data were supplemented by public data from the Bureau of Labor Statistics to identify jobs and estimate salaries and from the USITC DataWeb to look at imports in these product categories.

A questionnaire was developed to gather information at each step of the global value chain from the first stage, design and product development, through to the last stage, purchase by the consumer. Data were gathered on five specific products: men's and women's cotton knit shirts, men's and women's woven cotton trousers (including denim and non-denim), and women's man-made fiber outerwear (including water-resistant and non-water-resistant).

Background information as well as detailed instructions accompanied the questionnaire sent to the seven participating companies. Phone calls were scheduled to clarify the methodology and the information requested. After receipt

This analysis was based on proprietary company 2011 sales data for the following products and HTS numbers:

- Men's cotton knit shirts..... 6110.20.2069
- Women's cotton knit shirts..... 6110.20.2079
- Men's woven cotton trousers..... 6203.42
- Women's woven cotton trousers..... 6204.62
- Women's man-made fiber outerwear.... 6202.93.4500/5011

of the data from each participant, conference calls were held with the people who had provided the data to review and discuss, and when necessary, correct the data for each product's value chain. The

proprietary information was examined in the context of public data sources to guide necessary assumptions or verify representativeness of the data.

The data were aggregated across companies to arrive at the value-added for each of the identified products, and then for the 20 company-product combinations. Not all companies provided information on all products.

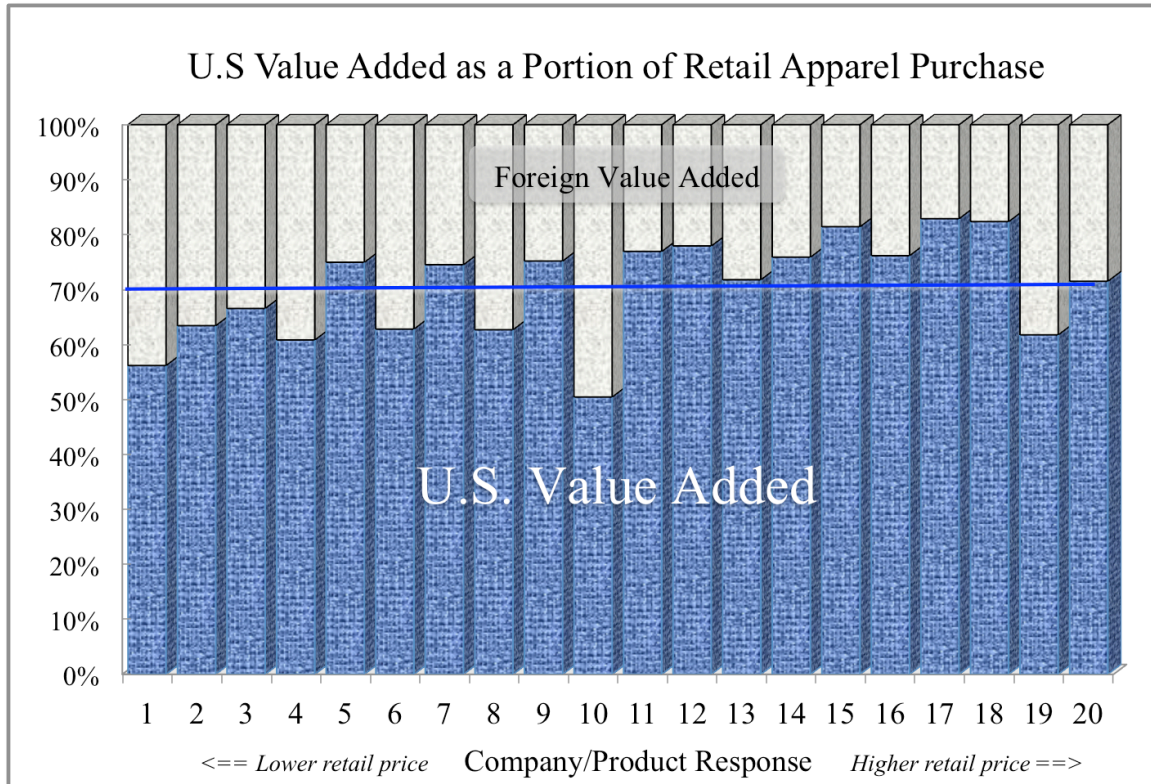
Results

The findings of this study are consistent with recent academic studies and OECD and WTO Reports as well as reports by research institutions and presentations made at TPP negotiations.³ Moreover, the results are consistent across seven companies and five products (20 total company-product combinations) with only small variances.

This study found that the U.S. value-added as a percent of the final retail price for the 20 products combined was 70.3%. The average value-added by product ranged from a low of 65.8% for women's man-made fiber outerwear to a high of 75.4% for women's cotton knit shirts. The value-added for men's cotton knit shirts was 69.5%, for men's woven cotton trousers 71.2%, and for women's woven cotton trousers, the value-added was 72.1%.

The chart below presents the value-added for each of the 20 company-product combinations analyzed. The blue line across the chart shows the combined average of 70.3%. An examination of the data on a product-by-product level suggests that the value-added is influenced by the discount eventually taken on the final sales. All garments begin with a suggested retail price, but many are eventually discounted to arrive at the final selling price that was used in this analysis to determine value-added. Because this discount affects the profit margin, and the higher the profit, the greater the U.S. value-added, a steep discount reduces the value-added, in some instances significantly. This was the case with the lowest U.S. value-added products in the chart on the next page.

³ See for example, *The Global Textile and Garments Industry: The Role of Information and Communication Technologies (ICTs) in Exploiting the Value Chain*, Enlightenment Economics, June, 2008, www.infoDev.org; Apparel Value Chains and Opportunities to Create Jobs in the TPP, on behalf of the TPP Apparel Coalition, September 2011.



This study included seven companies that sell at a variety of price points exclusive of the very highest and very lowest. In spite of that range, the standard deviation across products for all companies was only 3.5 percentage points, suggesting a competitive market for these apparel products. The standard deviation for products within an individual company was 4.4 percentage points, implying a narrow range but also reflecting the fact that some products are more profitable than others for a particular company.

The determination of the value-added for U.S. and foreign components was done on a stage-by-stage basis. In a few instances, where a specific company failed to provide an element of the value-added calculation, proxy data were used based on the responses of the other companies.

For most companies determining foreign value-added was relatively straightforward. The first component was manufacturing costs because by definition all manufacturing was done abroad. The next most common component was material input costs. For most of the responding companies, the majority of the value-added was foreign including fiber, yarn, fabric, trims, and finishing; for some companies there was U.S. value-added in this category, and this was assigned accordingly.

The other foreign value-added varied from company to company according to their business practices and sourcing systems. Depending on the company responding there were minor amounts of foreign value-added in design and product development, management, logistics (primarily freight to the United States), and compliance and security to support the supply chain. In cases where information was not explicit or where U.S. versus foreign freight could not be broken out, a conservative approach was taken, and the value-added was assigned to the foreign share. Nonetheless, these components are small and would not affect overall results significantly.

Once the foreign value-added was determined, the U.S. value-added was the residual of the final retail garment price. The components and weights varied company by company depending again on their structure and organization. For some companies there was considerable value-added at the first stage of design and product development. This varied by the sophistication of the product and the material inputs. The cost of logistics, including air, sea, land transportation and port clearance were minor and varied little across companies or products.

More U.S. value-added occurred in the compliance and security stage including testing costs, certification costs, monitoring of quality, social, environmental and labor compliance, Customs and C-TPAT compliance as well as corporate costs for



legal support. After the garments were landed in the United States, there was significant value-added in a myriad of activities. The first step involved U.S. transportation to distribution centers for processing and re-shipping.⁴

U.S. apparel companies sell to consumers through a multitude of channels, as do the companies participating in this study. Some sell through stores that bear their names; some act as wholesalers and sell to third parties, some sell through stores operated under franchise agreements; while others sell apparel in specialty stores, through catalogs or online. More often than not, apparel companies sell through multiple channels to final consumers. This selling activity, supported by brand marketing on television, in print media, and through social networks, represents significant U.S. value-added and millions of U.S. jobs. The retail apparel sector employed 2.6 million workers in 2011; total U.S. apparel employment from the beginning of the value chain through sales to the consumer totaled 2.9 million employees during the same year.⁵

“When a shipment of your products arrives in America, an army of workers goes into motion....”

– Ambassador Ron Kirk

The final stage calculated for U.S. value-added was profit. This return to capital ultimately supports millions of U.S. jobs across all 50 states. An analysis of publicly available data for the respondent companies revealed single digit profit margins for all companies and a group average of 4% in 2011, suggesting a highly competitive industry. When branded apparel companies were examined as a subset, the margin was somewhat higher reflecting the additional value of a brand.

Many of these U.S.-headquartered American apparel companies are also major exporters as their American brands have international recognition and demand. Moreover, this study does not take into account the value captured in the U.S. for these products when they are both manufactured and ultimately sold abroad. Considering both the survey data received and public reports, this value-added is substantial. Ambassador Ron Kirk made this point in his remarks on March 12, 2010 to the American Apparel & Footwear Association Annual Executive Summit:

*“When a shipment of your products arrives in America, an army of workers goes into motion. There’s the port worker who unloads your container, the truck driver that carries it to a distribution center or a store, the marketing executive that trumpets its arrival, and the retailer who rings up each individual sale. And that’s just domestic sales – **every foreign sale you make supports American designers, customs and logistics professionals, and financing and transportation experts.**”⁶*

⁴ A systematic comparison of some components was not possible because of the differences in the way the companies reported their cost data.

⁵ Retail Employment, Apparel Wholesale Employment, Apparel Manufacturing Employment, *Current Employment Statistics*, Bureau of Labor Statistics (BLS), www.bls.gov.

⁶ <http://www.ustr.gov/about-us/press-office/speeches/transcripts/2010/march/remarks-united-states-trade-representative-ro-0>. Emphasis added.

U.S. Value-Added: What does it mean for U.S. jobs?

The components of the apparel global value chain described above that contribute to the 70% of U.S. value-added are all supported by American workers. For example, according to the Bureau of Labor Statistics, the U.S retail industry has approximately:

- 240,000 management jobs
- 97,000 business and financial jobs
- 96,000 designers, and
- 51,000 computer and math/science jobs.⁷

Under Secretary of International Trade Francisco Sanchez acknowledged these workers when he spoke in March 2012 at a Customs, Sourcing, and Logistics Conference:

“Good things happen when packages of your products arrive from overseas into domestic stores....”

– Under Secretary of International Trade Francisco Sanchez

“Good things happen when packages of your products arrive from overseas into domestic stores. Those products are unpacked and put on sale. And when consumers purchase them, it benefits the American workers who design your clothes and shoes; who handle production; who transport and distribute the merchandise; who market the products; who work in the stores and so many more.”⁸

The job categories that support the value chain represent high-quality American jobs. Most of the lowest skilled jobs are done overseas, leaving the more highly skilled professional employment concentrated in the United States. These jobs are spread throughout the stages of U.S. value-added beginning with fashion designers (average salary \$73,640), and fabric and apparel patternmakers (\$48,110), and continuing with transportation, storage, and distribution managers (\$82,923), compliance officers (\$66,620), software developers (\$95,283), and sales managers (\$111,283). Moreover, there are high-quality blue-collar jobs throughout the chain; for example, cargo and freight agents (\$45,100), production, planning, and expediting clerks (\$41,060), industrial machinery mechanics (\$45,740)⁹, railroad employees (\$76,574)¹⁰, and longshore workers (\$124,138)¹¹.

⁷ May 2011 BLS data for NAICS 44-45 (Retail Trade) minus figures for auto dealers and gas stations, available at www.bls.gov/oes_dl.htm.

⁸ <http://www.trade.gov/press/speeches/2012/sanchez-032212.asp>

⁹ Id.; note that salaries are often the average of NAICS 31-33 manufacturing, NAICS 42 wholesale trade, and NAICS 44-45 retail trade, consistent with the company activities in this study.

¹⁰ Railroad Facts 2012 Edition, Association of American Railroads, p. 56.

¹¹ www.usmxlaborupdates.com.



Representativeness of the Results

The firms participating in this study are large companies whose brands are familiar to American consumers, as well as to those in many other countries. Although they are headquartered in the United States, their operations span the globe. Like many members of the apparel global value chain, they are following the pattern of various industries to focus on core competencies in the United States and to outsource lower skilled activities in an effort to offer consumers the best value and the widest variety of products.

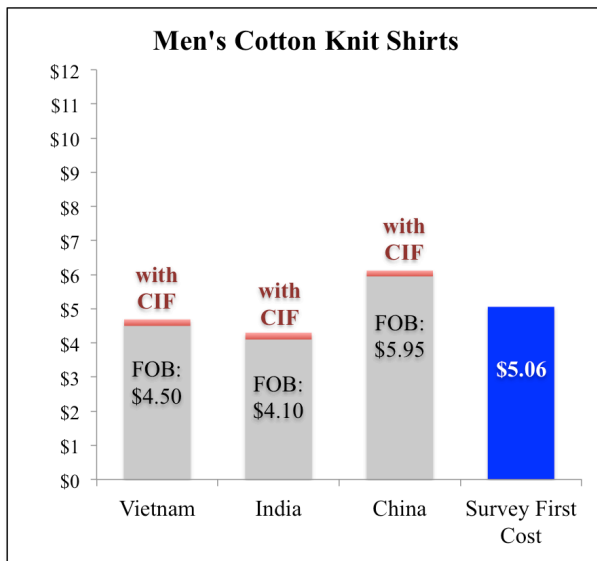
This research design more closely resembles a case study strategy than a statistical sampling. Respondent companies offered their proprietary data in order to allow the TPP Apparel Coalition to quantify the U.S. value-added of apparel designed in the United States and manufactured overseas.

In an effort to validate the results of the survey, the average first costs (the cost the foreign vendor charges to produce a product) of men's cotton knit shirts, for example, were compared to the Customs value of men's cotton knit shirts (6110.20.2069) imported into the United States

Study Respondents

Respondents include seven U.S.-headquartered apparel and retail companies that together employ more than 500,000 people globally and more than 350,000 in the United States. Their combined sales in 2011 totaled \$92 billion.

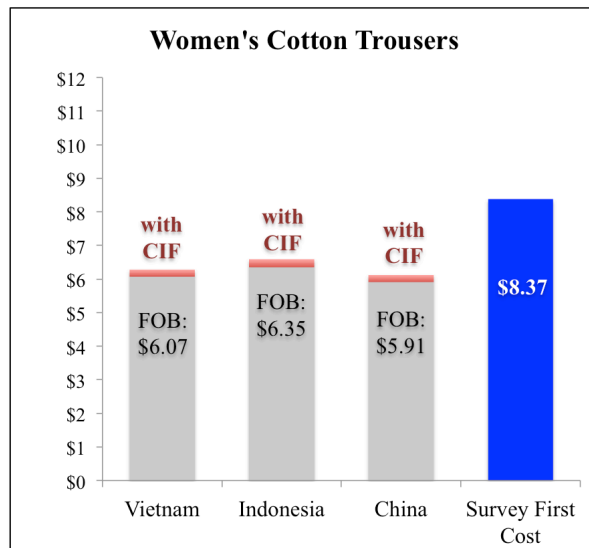
from China, India, and Vietnam during 2011.¹² As seen in the chart below, the average unit value from China was \$5.95, from India, \$4.10, from Vietnam, \$4.50, and from the companies in this survey, \$5.06. The range seems reasonable given the brands and price points represented by the responding companies. Note also that similar to our survey results, the additional cost attributed to insurance and freight is very low: \$.19 for Vietnam, \$.20 for India, and \$.17 for China.



This finding is consistent across other products as well. In the case of women's cotton trousers (6204.62) the average unit value from Vietnam was \$6.07, from Indonesia, \$6.35, from China \$5.91 and from the companies in this survey, \$8.37. Similarly, given the brand status and price points of the responding companies, this range seems credible.

The apparel products analyzed in this study included both men's and women's apparel, cotton and man-made fiber inputs, and woven and knit categories, and yet the standard deviation across products for all companies was only 3.5 percentage points and for products within an individual company only 4.4 percentage points. This suggests the result found here does not depend heavily on the brands or products chosen.

Even if this study were enlarged to include companies whose price points were both higher and lower than the companies in this survey, we might find a slightly wider range of U.S. value-added, with less value-added at the lower price points balanced by higher value-added at the most expensive price points. In the end it is likely we would arrive at a similar average as the one found in this study and in other reports that used non-proprietary data.



¹² Data from USITC DataWeb at www.usitc.gov.

Conclusion

Using proprietary company data to document the dollars associated with each stage of the global value chain for apparel, this study found that the U.S. value-added exceeded 70% for the 20 product-company garments studied. Apparel, like electronics, is often manufactured or assembled abroad with components sourced in numerous countries. Similarly, the research, product design, and other U.S. based activities of American apparel companies represent the same kind of value-added as found in the electronics industry.

Other papers have attempted to calculate the U.S. value-added figure using publicly available data, but this study went a step further to capture the actual experience of companies utilizing global value chains in their sourcing strategies. Gathering the kind of data necessary for this analysis was challenging for the respondent companies particularly on a product-specific basis. Each company has its own system to track costs, and these systems involve multiple managers and staff. Every effort was made to understand the data and to be certain they were being interpreted and used correctly. Nonetheless there are certain to be small errors in one direction or another.

However, stepping back and looking at the value captured at each stage of the value chain, it is clear across all companies that the activities carried on in the United States in support of manufacturing abroad dwarf the value-added in foreign countries. These “commercial” components (*i.e.*, excluding material inputs, manufacturing, and shipping), all necessary to design and sell garments manufactured abroad, include U.S. activities in design and product development, marketing retail sales and customer service, management, and profit. These commercial components were as high as three times the value-added abroad, but in all cases, these components were far greater than the value of manufacturing and associated material input costs and other small amounts of foreign value-added activities.

This ratio of U.S. value-added to foreign value-added translates directly into U.S. jobs. These jobs are primarily medium- to high-skilled positions, and many are professional and managerial. Making use of the global marketplace for the 98 percent of the apparel sold in the United States¹³ enables American companies to offer consumers the widest variety of apparel at the best prices. However, tariffs routinely applied to apparel imports result in higher prices for consumers.¹⁴ It is quite possible that removing these tariffs under a trade agreement would lower prices to consumers and thus increase demand and therefore jobs and profits all along the apparel global value chain including in the United States. Efforts to

¹³American Apparel and Footwear Association:
<https://www.wewear.org/assets/1/16/WeWear.pdf>

¹⁴ Tariffs on the products analyzed for this study ranged from 7.1% to 27.7% with an average rate of 16.8% for the five products investigated.

support these global strategies by American apparel companies will contribute to their success and growth, and these will in turn lead to a more competitive marketplace for apparel consumers and new high-quality U.S. jobs throughout the global value chain.



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With extensive experience in the formulation and analysis of international trade policy and practice, Susan Hester's career has encompassed work in the public and private sectors, as well as education and training in more than a dozen countries. Her public sector experience includes working as an international trade specialist in the Office of Textiles and Apparel in the Department of Commerce, as well as an international economist in DOC's Trade Policy Information Division. After teaching and doing research at Cornell University, Dr. Hester returned to Washington to join the international trade practice of Dewey Ballantine where she analyzed trade issues in a variety of industries, including textiles and apparel, for more than 15 years.

As the Managing Partner of Moongate Associates, her policy work in developing countries includes trade, finance, labor, agriculture, ICT, and energy sectors. Dr. Hester has provided technical support in the analysis of trade agreements such as the European Partnership Agreement (EPA). Her private sector experience with small, medium, and large enterprises includes competitiveness assessment and training. Her marketing and product development expertise spans both developed and developing economies.

Dr. Hester has an established record of research, writing and publication. She has written on such topics as the impact of trade agreements, textile protection in the United States, and balancing U.S. trade interests, in journals such as the *International Marketing Review*, *International Trade Journal*, and *Business Economics*. Jointly published research includes: *Semiconductors in China*, *The Limits of the GATT: Private Practices in Restraint of Trade*, *A Study on the Appropriate Exchange Rate Regime for a Competitive Export-Led Growth Strategy for Ghana*, and *The Microstructure of Ghana's Foreign Exchange Market*.

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