

Trends in U.S. Architectural and Engineering Services Exports

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In recent years, U.S. cross-border exports of architecture and engineering (AE) services and sales by foreign affiliates of U.S. AE services firms have decreased substantially. These decreases were likely a product of declines in global AE services revenues and earnings during roughly the same period. Weak oil and gas prices and economic and political instability are among the factors that may have led to these declines.

U.S. exports and affiliate sales of AE services decreased substantially in recent years

During 2012–16, U.S. exports of AE services decreased at an average annual rate of 9.4% from \$17.0 billion to \$11.7 billion, in sharp contrast to the 7.7% average annual export growth recorded during 2006–12 (figure 1). Among the top ten country markets for U.S. AE services exports in 2016, particularly large rates of decline were posted for U.S. exports to Canada (24.8% during 2012–16) and Mexico (22.0% during 2013–16).¹

U.S. sales of services through foreign AE affiliates exhibited a similar trend, increasing in most years during 2006–12 (and more than doubling from \$15.9 billion in 2006 to \$35.8 billion in 2012), before decreasing in both 2014 and 2015.² Among those regions for which discrete data are available, U.S. sales through foreign affiliates in the Asia/Pacific and the Middle East declined during 2012–15, while sales in Europe increased. U.S. sales in NAFTA partner economies—which accounted for more than one-quarter of total sales by U.S. AE services affiliates in 2015—exhibited diverging trends. Sales to Mexico increased in every year during 2012–15, while sales to Canada increased in 2013 and decreased in both 2014 and 2015.

Figure 1: U.S. Exports and Affiliate Sales of AE Services, 2006–16 (\$billion)



Source: USDOC, BEA

¹ Data on U.S. AE exports to Mexico in 2012 are unavailable. Other countries that ranked among the top ten U.S. AE export markets in 2016 were the UK, China, France, Germany, Korea, South Africa, Japan, and Singapore.

² BEA data on affiliate transactions lag cross-border trade data by 1 year, and as such, are not available for 2016. Additionally, data on sales by foreign AE affiliates of U.S. firms are not available for 2013.

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Recent decreases in global AE-related revenues suggest that declines in U.S. AE exports and affiliate sales may be a product of a global downturn rather than shifts in U.S. competitiveness

Revenues in the global engineering services industry increased at an average annual rate of 2.3% during 2008–14 to \$729.2 billion, then decreased in both of the following years, falling to \$683.7 billion by 2016. The global architecture services market—which is less than one-third as large as the global engineering market—did not experience this recent decline, posting increases in most years during 2008–16³ and reaching \$213.2 billion.

Revenues earned by the world’s leading 225 international design firms⁴ outside of their home markets also fell in recent years, decreasing at an average annual rate of 2.8 percent from \$71.8 billion in 2012 to \$64.1 billion in 2016 before increasing slightly to \$64.6 billion in 2017.⁵ International design revenues earned from projects in Latin America and the Caribbean and Canada posted particularly large average annual decreases during 2012–16 (15.6% and 11.8%, respectively).⁶ By contrast, international design revenues earned in the United States⁷ and the Middle East increased at average annual rates of 8.6%, and 5.4%, respectively.

Low oil prices have been a leading cause of recent declines in worldwide industry revenues

Industry sources identify decreasing commodity prices—particularly oil prices—as the primary cause of recent decreases in global engineering and design revenues, particularly in the petroleum and industrial segments of the market and in those countries that rely heavily on oil income. Among other effects, low oil prices led to a decline in the number of construction contracts awarded in the UAE, deprived African customers of foreign currency with which to pay for design services, and led to smaller budgets in Gabon, Nigeria, and other oil-dependent markets. Other factors behind the recent decrease in global AE services revenues include economic slowdowns in China and other emerging markets and economic and political instability in several world regions. For example, construction activity in Europe has been weak due to a lack of strong investor confidence and employment and income growth.

The slight rebound in revenues observed among top international design firms in 2017 may be due, in part, to recovering oil prices. Other trends that have recently created market demand—particularly in Asia, where project earnings among top firms experienced the largest increase in 2017—include urbanization, interest in sustainable design, and China’s Belt and Road Initiative. It is not yet clear whether this upturn in international revenues will lead to increases in U.S. exports and affiliate sales in AE services.

Sources: U.S. Department of Commerce, Bureau of Economic Analysis; IBISWorld, Engineering News Record (ENR), and PricewaterhouseCoopers; Eltyeb et al., 2017.

³ Revenues in both the global engineering and architectural services industries declined in 2009, immediately following the global financial crisis of 2007–08.

⁴ International design firms include firms that provide architecture and construction–related engineering services.

⁵ For the years prior to 2012, ENR published data for only the top 200 international design firms. Among this group, revenues earned outside of the firms’ home markets increased at an average annual rate of 8.0% during 2008–12, then fell at rate of 2.8% during 2012–16.

⁶ Average annual decreases in revenues were also recorded for projects in Africa (7.8%), Asia (6.6%), and Europe (0.4%) during 2012–16.

⁷ International design revenues earned in the United States consist of the U.S. revenues of foreign-based firms.