

Global Spending & Silver Demand

During a given year, silver demand is driven by industrial applications (including electrical components such as photovoltaics and electronic devices) and consumer demand (which we define as investment in bars, coins and medals, jewelry and silverware). Together, these two segments represent over 95% of demand over the last decade¹. This month's article digs into these important demand sources and finds while the majorities of global consumer spending and value from manufacturing generally occurs in more wealthy western countries including the U.S., Canada and Europe, silver demand is weighted toward Asian countries (China, India, Japan and others).

Consumer Spending on Silver

Household spending is the amount of spending made by residential households to meet daily needs, such as food, clothing, housing (rent), energy, transport, durable goods (cars, appliances), health costs, leisure and other services. Table 1 displays the top 10 countries for household spending. Nearly \$50 trillion dollars spent by consumers globally in 2019 (~5% lower in 2020 with slightly over \$47T)². Consumers in the U.S. dominated spending with nearly \$14.5T in collective spending, followed by Chinese whose spending totaled ~\$5.6T. Indian consumers ranked 6th in total spending in 2019, with the Canadian total rounding out the top 10 countries with slightly over \$1T in spending.

Table 1: Global Consumer Spending (Top Countries)

Country	2019 Household Consumption Spending (\$B)	Cumulative Percent of World Total (%)
United States	\$14,429	29%
China	5,605	41%
Japan	2,804	46%
Germany	2,018	50%
United Kingdom	1,850	54%
India	1,736	58%
France	1,463	61%
Brazil	1,216	63%
Italy	1,203	66%
Canada	1,006	68%
World	\$49,315	

Source: World Bank National Accounts Data, Capitalight Research

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Consumer Spending on Silver

Manufacturing and Industrial Silver Demand

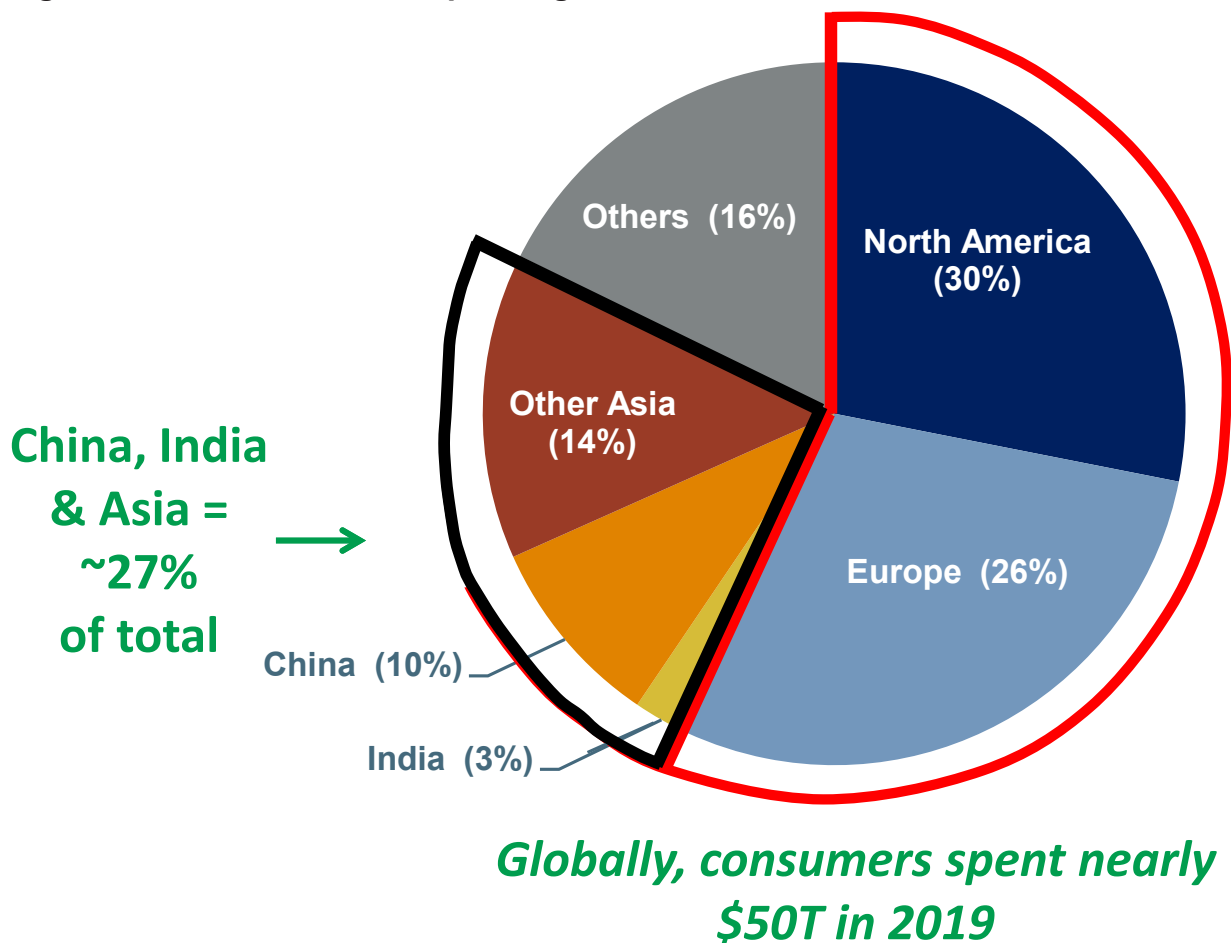
¹ Silver demand data is based on World Silver Surveys, published by the Silver Institute. We have limited our analysis to 2011 and onward to align with the Silver Institute reporting of data collected by Metals Focus. Prior year's data was collected and reported by GFMS.

² This analysis is based on 2019 data so as not to include the impact from the Covid-19 Pandemic.

Figure 1 provides a geographic breakdown for global household spending. As shown, 56% of total spending occurs in the U.S., Canada and Europe, totaling nearly \$28T in 2019. Collectively, Chinese, Indian and Other Asian household spending represents 27% of the total (~\$14.5T or equivalent to U.S. consumer spending). Of note on Figure 1 are the relatively low levels of consumer spending in China (which constitutes 10% of the global total) and India (with 3%). The relatively low level in China may be surprising given that the country's gross domestic product (GDP) is second only to the U.S. This analysis only uses the personal consumption component of GDP as this measures the amount of money in consumers' hands to spend. China and India's economies have and continue to be heavily influenced by investment with personal consumption only contributing ~55% of GDP as compared to 75 to 85% for the world's developed economies.

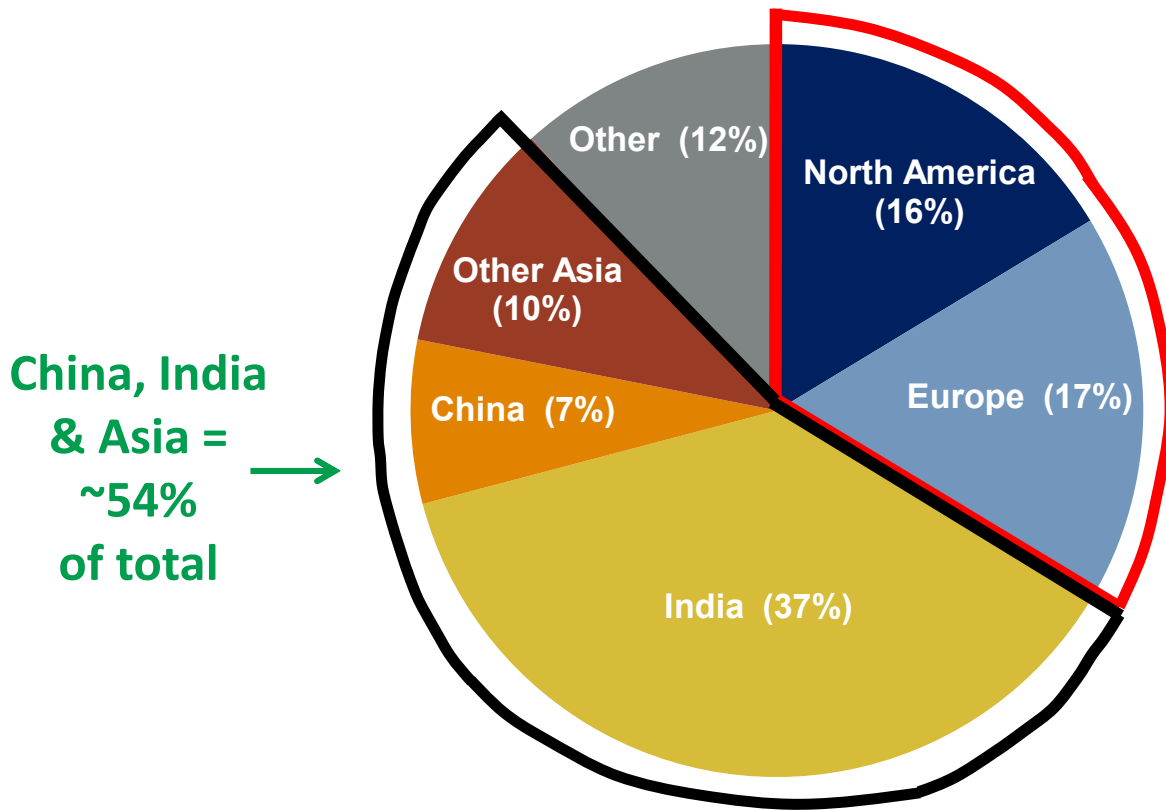
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Figure 1: Global Consumer Spending Centered in the West



Source: World Bank National Accounts Data, Capitalight Research

Figure 2: Global Consumer Silver Demand Centered in the East



Globally, consumers spent over \$7.8B on silver in 2019

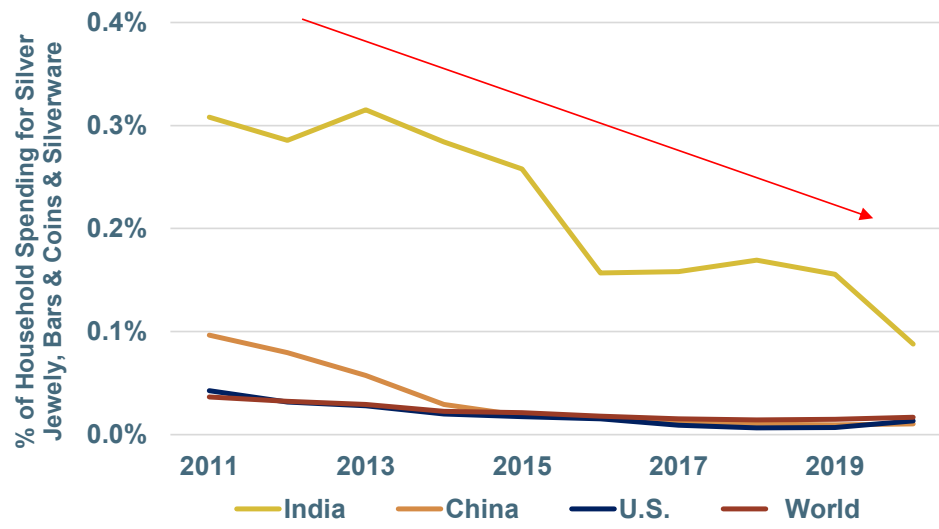
Source: Silver Institute, Capitalight Research

In contrast, Figure 2 displays the regional breakdown for silver consumer demand with the aforementioned Western countries collectively accounting for only a third (33%). India, whose consumers' collectively account for only 3% percent of global spending, use these relatively paltry funds to buy ~37% of global silver physical bars, coins, medals, jewelry and silverware. Consumers in India, China and Other Asian countries constitute 54% of global consumer silver demand. In total, global consumers spent ~7.8B on silver in 2019.

Figure 3 displays the percentage of consumer spending allocated to silver for India, China, the U.S. and globally. While consumer spending on silver is relatively low (less than 1% of a typical consumer's overall spending over a given year), the average Indian consumer allocates relatively more of their spending on silver compared to those in China and the U.S. As shown in the figure,

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Figure 3: Trends with Consumer Spending & Silver Purchases



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Source: Silver Institute, World Bank, Capitalight Research

consumer spending on silver has generally declined over the last decade for consumers in these key demand countries. For example, the average household in India allocated ~0.3% of their annual spending on silver in 2011³.

This declined to ~0.1% of total spending in 2019. While less severe, declines are also shown to occur in China, the U.S. and globally.

Manufacturing and Industrial Silver Demand

Manufacturing value add for a given country is the total value of revenue received from manufacturing activity less related input costs. In other words, this is the difference in value between what a company sells its products relative to the costs to produce them. Manufacturing value add is another component of a country's overall gross domestic product (GDP). Table 2 displays the top 10 countries for manufacturing value add.

Table 2: Global Manufacturing Value Added (Top Countries)

Country	2019 Manufacturing Value Add (\$B)	Cumulative Percent of World Total (%)
China	\$3,823	27%
United States	2,342	44%
Japan	1,046	52%
Germany	756	57%
S. Korea	417	60%
India	383	63%
Italy	299	65%
France	273	67%
United Kingdom	256	69%
Indonesia	221	70%
World	\$13,949	

Source: World Bank, Capitalight Research

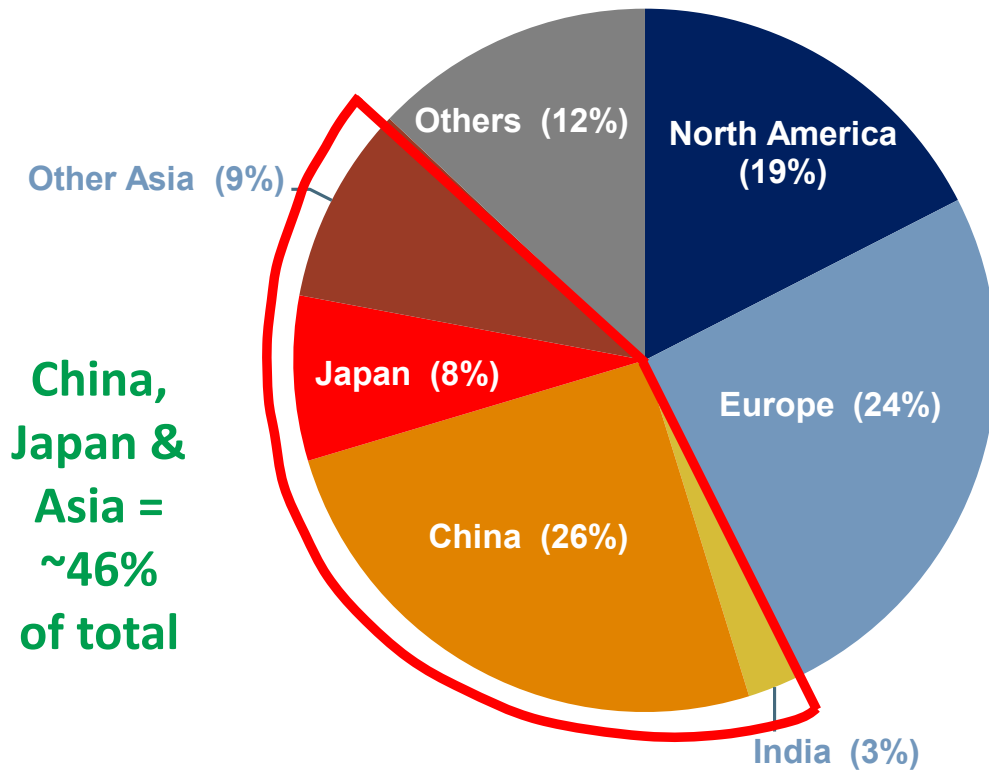
³ To note, Indian consumer purchases of silver climbed from ~90M ounces in 2011 to ~166M in 2019 (an increase of ~85%). The analysis in Figure 3, however, analyzes the dollar value of spending on silver. For India the actual value households spent on silver declined from nearly \$3.2B in 2011 to ~\$2.7B in 2019. The decline in silver prices over this period offset the actual increase in the number of ounces.

As displayed on Table 2, ~\$14T were generated by manufacturing companies globally in 2019 (~3% lower in 2020 with ~\$13.5T). Not surprisingly, manufacturing firms in China dominated in total value add with over \$3.8T, followed by U.S. firms with ~\$2.4T and followed by Japanese with over \$1T⁴. Manufacturers in these top 10 countries collectively accounted for 70% of all value added in 2019.

Figure 4 provides a geographic breakdown for global manufacturing value added. As shown, 43% of total spending occurs in the U.S., Canada and Europe, totalling nearly \$3.4T in 2019. Collectively, Chinese, Japanese, Indian and Other Asian manufacturers generated 46% of total manufacturing value (or nearly \$4.7T).

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Figure 4: 2019 Manufacturing Value Added (% of Total)



China, Japan & Asia = ~46% of total

Globally, manufacturers generated ~\$14T in value in 2019

Source: World Bank National Accounts Data, Capitalight Research

⁴ As an interesting side observation, while the much noted "...hollowing out of the U.S. manufacturing sector..." rings true when examining employment (with the U.S. losing over 5M jobs in the sector since the late 1990s), the value generated by U.S. manufacturing has actually increased from less than \$1.5T to over \$2.3T over the same period.

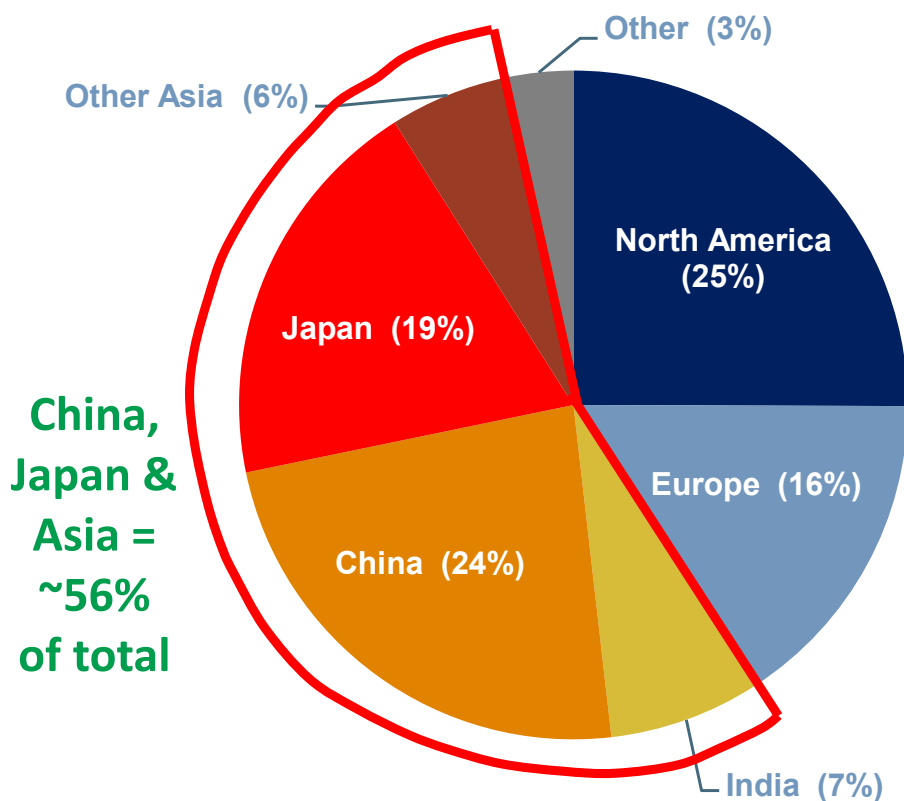
Figure 5 displays the regional breakdown for silver industrial demand. A similar, but not to the same degree as silver consumer demand, relationship occurs with industrial demand for the metal. Asian countries (including China, Japan, India and others) account for ~46% of global manufacturing value add (Figure 4). These firms account for well over half (~56%) of the world total for industrial silver demand (Figure 5).

While not to the same degree as with consumer demand, industrial demand for silver is dominated by Asian manufacturing firms (56% of the global total: Figure 5) who generate only 46% of manufacturing value (Figure 4).

In summary, consumer and industrial sources contribute over 95% of annual silver demand (other sources include negligible photography and hedging). While the majority of consumer spending and manufacturing value occurs outside of Asia, the majority of global silver demand occurs in these countries (over

While the majority of consumer spending and manufacturing value occurs outside of Asia, the majority of global silver demand occurs in these countries (over 50% of the total occurs in China, India, Japan and other Asian countries, with only 40% collectively coming from the U.S., Canada and Europe).

Figure 5: 2019 Silver Industrial Demand (% of Total)



China, Japan & Asia = ~56% of total

Globally, manufacturers spent ~\$8.3B in silver in 2019

Source: Silver Institute, Capitalight Research

50% of the total occurs in China, India, Japan and other Asian countries, with only 40% collectively coming from the U.S., Canada and Europe).

An important contributor to Asia continuing to dominate silver demand will be photovoltaics. According to the International Energy Agency, Chinese firms manufacture nearly two-thirds of all solar panels. In 2022, it is anticipated that over 225 GW of solar capacity will be added globally (an increase of nearly 25% from 2021 additions)⁵. This in turn will require ~3M solar panels and we expect ~140 – ~150M ounces of silver demand⁶.

On the consumer demand for silver, based on population, labor and education trends, household spending in China and India are expected to increase by 4 and 5% annually through 2032, respectively. This added consumer wealth could be beneficial to silver jewelry and in particular, investment in bars and coins. The benefit will continue despite demonstrated silver spend per income unit falling.

⁵ Bloomberg New Energy Finance, “Solar – 10 Predictions for 2022”, Jan. 2022.

⁶ This assumes: 1) 3.125M solar panels per 1 GW (per “How Much Power is 1 Gigawatt?”, U.S. Dept of Energy, August, 2019); 2) ~111 milligrams of silver per solar cell (per S&P, Solar-driven silver demand set to dim as sector innovates, September, 2020), with 60 solar cells in a 300MW panel). Note, with continued innovation the silver intensity per solar cell may decline in the future.

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