

THE REAL ECONOMY

VOLUME 54



COUNTING THE
COSTS OF TRADE

FINANCIAL CRISIS MONITOR:
AGRICULTURE SECTOR AT RISK

A PIVOT POINT FOR AGRICULTURE:
CAN AGRITECH SAVE FARMING?

INDUSTRY SPOTLIGHT:
WHY HEALTH CARE SYSTEMS ARE BUYING
SCHOOLS TO OFFSET LABOR SHORTAGES

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COUNTING THE COSTS OF TRADE

Who's truly paying for the tariffs?

By Joseph Brusuelas

Recent scholarly research has validated concerns about the comprehensive absorption of costs associated with the number of trade disputes in which the United States is now engaged. That research implies that American firms and households are paying a \$3 billion-per-month increase in costs caused by trade policy, in addition to absorbing roughly \$1.4 billion in welfare losses associated with the policy shift on trade. In addition, if these policies are sustained or expanded, an expected \$165 billion in investment will be redirected away from the United States and China, imposing large costs on companies that have constructed related supply chains over the past two generations.

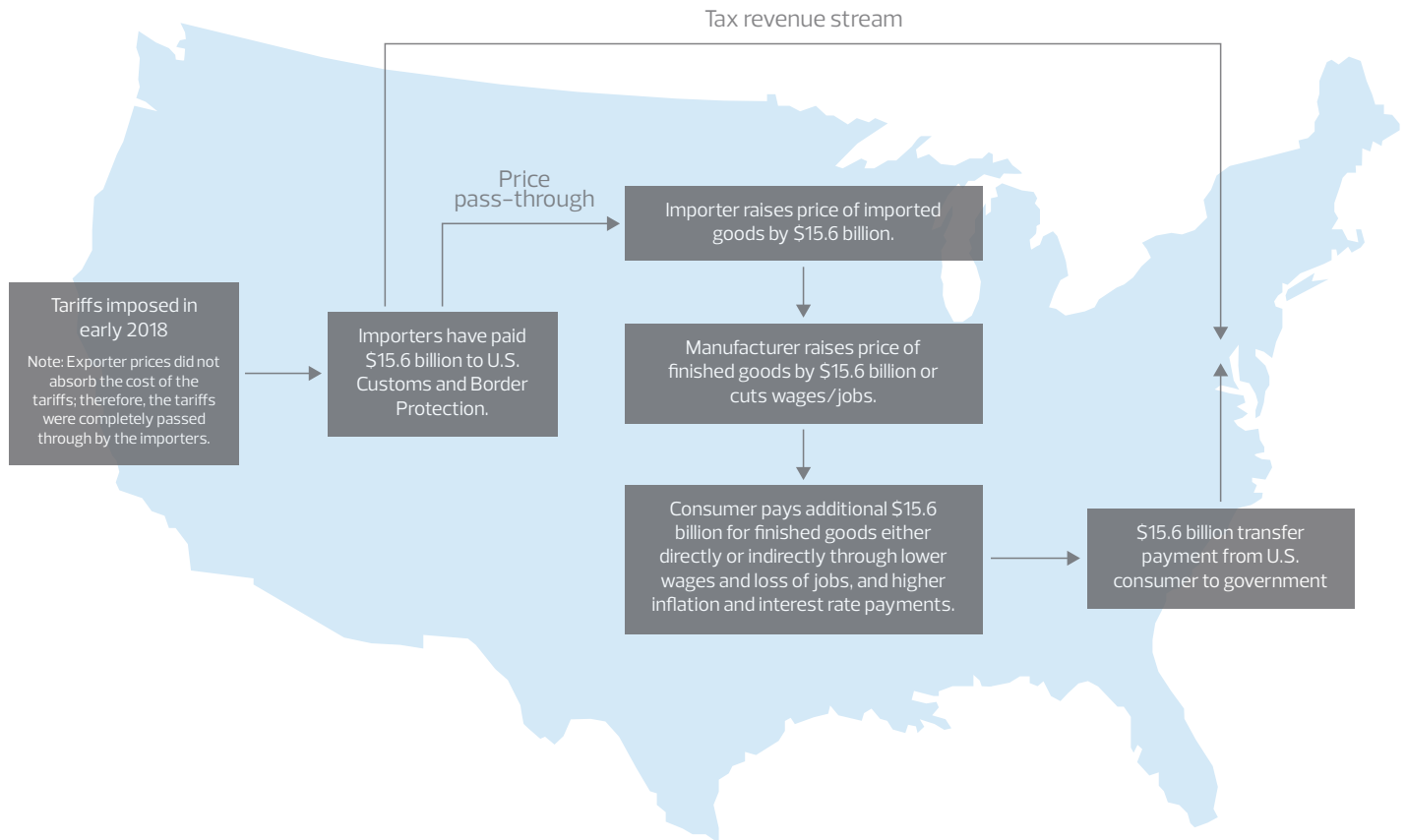
It has become clear that the probability of a near-term deal to roll back the impact of trade conflicts is falling. In May, President Donald Trump increased tariffs on \$200

billion worth of Chinese imports to 25 percent. China responded saying it would raise tariffs on \$60 billion on U.S. imports. In addition, the White House announced that the administration will shortly release a document containing an additional \$300 billion worth of tariff lines on Chinese imports. If the administration follows through on its intent, we anticipate that this would be equivalent to a \$137.5 billion tax hike on the commercial sector and domestic households. The United States Trade Representative has planned a public hearing on the issue for June 17. Meanwhile, just last week the administration threatened a series of graduated tariffs against Mexican imports, a move designed to push Mexico to curtail the flow of undocumented immigrants into the United States. Tariffs begin at 5 percent on June 10 and could escalate to 25 percent by October.

Q: Who pays for the tariffs?

A: There is no evidence that Chinese exporters have absorbed the tariffs by lowering their prices since the imposition of the tariffs.

Therefore, foreign corporations have paid zero; U.S. manufacturers and consumers have paid for tariffs.



Section 232 and auto import tariffs

Since mid-May, the administration can legally announce the use of power under section 232 of the Trade Expansion Act of 1962 to slap tariffs on imports of all foreign vehicles and auto parts. That represents a possible set of import taxes on an additional \$350 billion worth of goods at 25 percent, or roughly \$87.5 billion in new taxes on the domestic economy.

Once one accounts for the direct impact outlined above and estimates the indirect impact ensuing symmetrical retaliation from China, at a minimum, there could be an increase of \$200 billion to \$225 billion in taxes. Should

the administration move on these auto import tariffs, it is possible that during the second half of 2019, the domestic economy will have to absorb \$335.8 billion in tax increases once one accounts for retaliation by Japan, the United Kingdom and the European Union. The more benign scenario would include shaving two-tenths of a percent off the gross domestic product in 2019, whereas the expanded trade conflict would shave 0.5 percent. At this time, since we did not assume that the trade spat with China would be resolved, we are holding to our 2019 GDP forecast of 1.8 percent. Should the administration widen the conflict to include the aforementioned economies and industrial ecosystem, we will revise our estimate.



COUNTING THE COSTS OF TRADE (CONTINUED)

Who pays the costs of protectionist trade policy?

For the past year, we have made the case that the current series of trade conflicts, in which the United States is ensnared, are lose-lose propositions. Our primary concern was the disruption of global supply chains that have been constructed over the past 25 years and the transmission mechanism of financial markets. We now have the numbers to prove it.

According to a new study published by the Centre for Economic Policy Research, the “U.S. experienced substantial increases in the prices of intermediates and final goods, large changes to its supply chain network, reductions in availability of imported varieties, and complete pass-through of the tariffs into domestic prices of imported goods.” Elasticities and currency volatility did not mitigate the costs for firms and U.S. households. Let us be clear here; a “complete pass-through” indicates that the costs of the tariffs were not absorbed by the exporters through reduced export prices. The Chinese have not borne the direct cost of the tariffs.

Instead, U.S. consumers bear the brunt of the impact in the form of higher product prices, creating a transfer of wealth directly from U.S. consumers to the government. Having absorbed the \$75 billion of tariffs collected at the ports of entry in the first three months of 2019, that's roughly equal to 3.6 percent of all federal revenue taken in during that time. As those tariffs increase, one should expect that tax to affect spending decisions of U.S. households, leading to a slowdown in consumption and reduced economic output and opportunity.

REALITY CHECK: REAL CONSUMER COSTS

Consider the case of the import tax on washing machines. A recent Federal Reserve study found that the 2018 imposed tariffs resulted in significant increases in the retail price of washers and dryers. While the federal government collected more revenues from importers, those costs were passed along to consumers; the economic estimate found that consumers paid an additional \$1.5 billion via higher prices, or roughly 20 times more than was collected in revenues from higher import taxes.

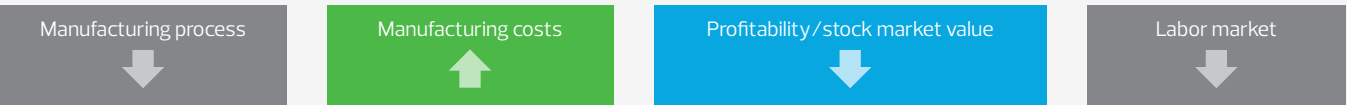
The U.S. experienced substantial increases in the prices of intermediates and final goods, large changes to its supply chain network, reductions in availability of imported varieties and complete pass-through of the tariffs into domestic prices of imported goods.

"The Impact of the 2018 Trade War on U.S. Prices and... Welfare", Mary Amiti, Federal Reserve Bank of New York; Stephen J. Redding, Princeton University, NBER and CEPR; David E. Weinstein, Columbia University and NBER; March 1, 2019.

Impact of tariffs on protected intermediate goods industry (e.g., steel and aluminum)



Impact of tariffs



We estimate the likely impact on U.S. consumers and find that by the end of 2018, two import tariffs were costing U.S. consumers and the firms that import foreign goods an additional \$3 billion per month in added tax costs and another \$1.4 billion dollars per month in deadweight welfare (efficiency) losses. Tariffs have also changed the pricing behavior of U.S. producers by protecting them from foreign competition and enabling them to raise prices and markups.

If we assume that the 2018 tariffs have not affected prices in sectors that do not use or compete with targeted imports, we estimate that the combined effect of input and output tariffs have raised the average price of U.S. manufacturing by 1 percentage point, which compares with an annual average rate of producer price inflation from 1990–2018 of just over 2 percentage points. We also see evidence of large impacts of the U.S. tariffs and the foreign retaliatory tariffs on supply chains. We estimate that if the tariffs that were in place by the end of 2018 were to continue, approximately \$165 billion dollars of trade per year will continue to be redirected in order to avoid the tariffs. Given the fixed costs associated with the current supply chains, this reorganization of global value chains is likely to impose large costs on firms that have made investments in the United States and China, as they have to move their facilities to other locations or find alternative sources of import and export destinations.

"The Impact of the 2018 Trade War on U.S. Prices and... Welfare", Mary Amiti, Federal Reserve Bank of New York; Stephen J. Redding, Princeton University, NBER and CEPR; David E. Weinstein, Columbia University and NBER; March 1, 2019.

Direct costs for manufacturing

Estimated direct costs	Increased cost of imports of foreign goods \$3.0 billion/month	Efficiency losses \$1.4 billion/month	Cost of manufacturing Increase in producer price inflation of 1 percentage point (compared with 1990–2018 average rate of PPI of 2 percentage points)
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Potential costs

Estimated potential costs	Potential increase in prices by protected domestic producers	Cost of reorganization of supply chains—redirection \$165 billion of trade per year will be redirected to avoid tariffs (if tariffs were continued)	Cost of reorganization of supply chains—relocation of facilities Imposition of large costs on existing investments in United States and China (if tariffs were continued)
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FINANCIAL CRISIS MONITOR: AGRICULTURE SECTOR AT RISK

From climate change to retaliatory tariffs

By Joseph Brusuelas

A little over a year ago we sat down with a senior administration official to discuss a looming trade spat with a variety of U.S. trade partners. The discussion included a frank exchange about the flawed logic of a policy pathway that included tariffs and quotas, optimal tariff theory by industry and, ultimately, the need to assist distressed firms across American industrial ecosystems. One year later, the domestic stress caused by the trade policy is nowhere more evident than in the agricultural sector. If the current policy pathway cannot be changed, the farm sector is going to experience the greatest downturn since the late 1980s, driven by widespread bankruptcies and consolidation.

To put this in perspective, according to the U.S. Commerce Department, the personal income of farmers declined by \$11.8 billion during the first three months of 2019. This is not a function of market-derived pricing, or a sudden exogenous shock. Rather, it is mostly a function of a discrete policy choice, amid a longer-term shift in global demand that can be altered.

IF THE CURRENT POLICY PATHWAY CANNOT BE CHANGED, THE FARM SECTOR IS GOING TO EXPERIENCE THE GREATEST DOWNTURN SINCE THE LATE 1980s, DRIVEN BY WIDESPREAD BANKRUPTCIES AND CONSOLIDATION.

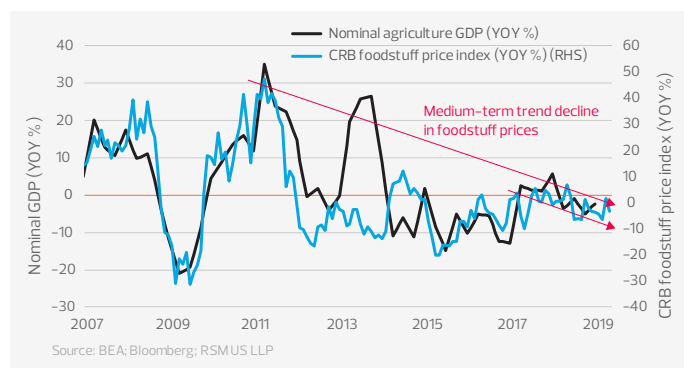
Collateral factors

A looming risk for community banking, linked to trade policy, lies in the nature of the agricultural sector. Farmers are both depositors and borrowers, depositing profits when commodity prices are high and borrowing when production costs are higher than market prices. Bank liquidity can therefore be excessive when times are good and loans aren't needed, and insufficient when agricultural clients need it the most.

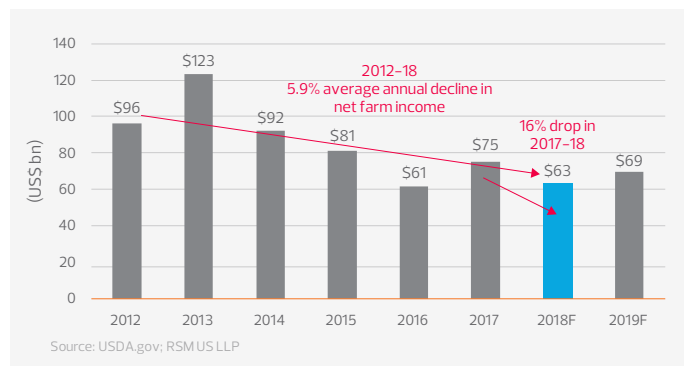
Collateral factors (continued)

Commodity prices—which are determined in a global marketplace and have been in a medium-term trend decline since 2011—have been declining for two and a half years with a concurrent decline in nominal gross domestic product attributed to the agriculture sector (which also includes forestry, fishing and hunting). So it's not surprising that U.S. net farm income has been declining at an average pace of nearly 6 percent per annum since 2012.

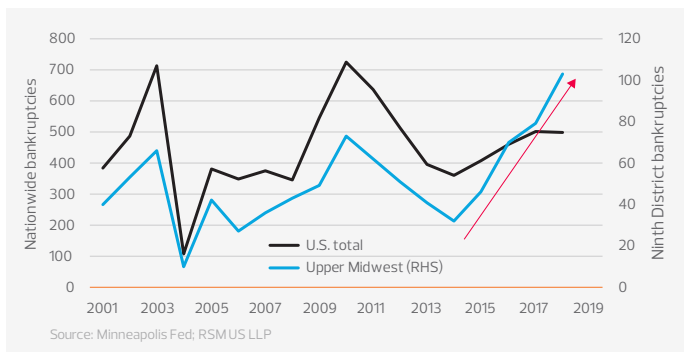
The impact of commodity prices on nominal GDP attributed to the agriculture sector



U.S. net farm income



Chapter 12 farm bankruptcies in the United States and Upper Midwest



Pressure from climate change

In addition, climate change is putting additional pressure on farm-sector finances amid a federal government that is not responding fast enough, or in force, to mitigate the impact of changing nature. Excessive rainfall in 2018 and 2019 destroyed crops in the field, while flooding ruined storage facilities and destroyed livestock. A [recent report from Cornell University](#) outlined the risks that climate change holds for agricultural production. The report suggests that "the area of greatest concern is the Midwest, where rain-fed field crops like corn and soybeans have become increasingly vulnerable to warmer summers." According to the analysis, as temperatures have moved higher, only a small increase in temperature can lead to a proportionally larger drop in agricultural production. So between falling commodity prices, rising temperatures, increased rainfall and China's retaliatory tariffs, the USDA reported a 16 percent single-year drop in net farm income in 2018. The Federal Reserve Bank of Minneapolis [reports](#) a sharp increase in Chapter 12 farm bankruptcies since 2015, both nationwide and in the upper Midwest.

Risk level and current period trend			
Risk	Current 12/31/2018	6/30/2018	12/31/2017
Credit risk	Acceptable ◀▶	Acceptable	
Agricultural risk	Elevated ▲	Elevated	Elevated
Market and liquidity risk	Elevated ▲	Acceptable	
Liquidity risk	Elevated ▲	Acceptable	Acceptable
Operational risk	Elevated ◀▶	Elevated	
Cybersecurity risk	High ◀▶	High	High
Legal and compliance risk	Acceptable ◀▶	Acceptable	

FEDERAL RESERVE BANK OF MINNEAPOLIS HIGH AND EMERGING RISK LIST, <https://www.minneapolisfed.org/-/media/files/banking/risk%20list/mpls-high-and-emerging-risk-list-12-31-2018.pdf?la=en>

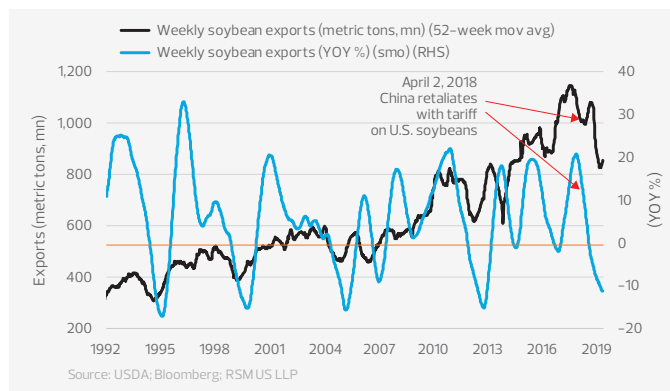
FINANCIAL CRISIS MONITOR: AGRICULTURE SECTOR AT RISK (CONTINUED)

Unintended consequence of a trade war — China's soybean tariffs

In retaliation for U.S. tariffs on Chinese-produced solar panels, washing machines, aluminum and steel that were imposed in early 2018, China targeted the Midwest's support for President Donald Trump and imposed tariffs on imports of U.S. soybeans and pork April 2, 2018. It didn't take long for the tariffs to have an effect; one soybean producer in Idaho reported a half-million dollar loss within months. Indeed, soybean exports have been trending lower ever since, with the latest reports indicating that soybean exports are down by 15 percent relative to April. A March 2019 report from the [Federal Reserve Bank of Minneapolis](#) says, "Soybean exports to China since September are down by more than 80 percent."

Soybean exports

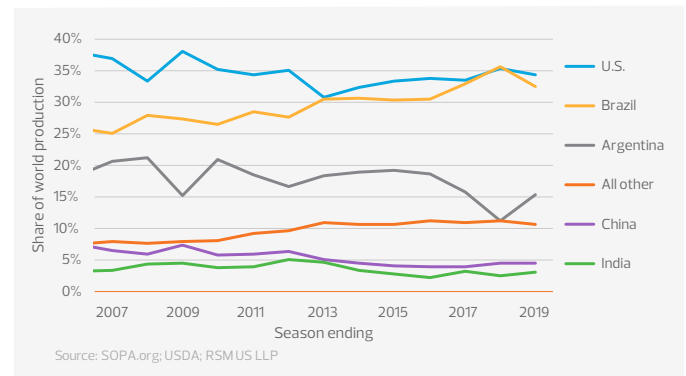
52-WEEK MOVING AVERAGE AND YOY% CHANGE



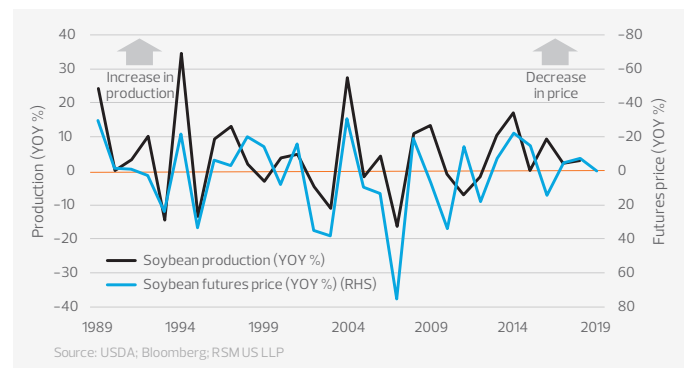
No matter how long the tariffs remain in effect, it may be difficult to repair damaged trade connections. Soybean production in Brazil has been increasing since 2007, with the United States and Brazil each now holding one-third shares of global soybean production. Brazil is already the largest exporter of soybeans, according to a recent

[Reuters report](#), and is expected to expand production capabilities in the coming season. So all things remaining the same, and with soybean prices determined in a global marketplace, it seems unlikely that the supply of soybeans will significantly decrease or that soybean prices will jump higher even if fields in the Midwest were to dry out or if China were to drop its tariffs.

Share of global soybean production



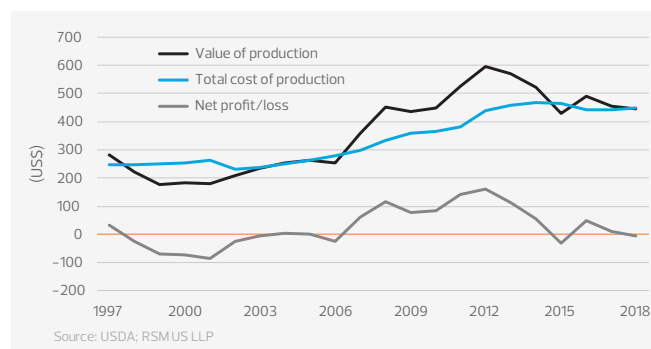
U.S. soybean production and market price



According to analysis by the USDA, soybean farming is done in conjunction with other crops, with alternating plantings of corn and soybeans the usual cycle. So although corn production has remained profitable, soybean values have declined since 2012, even as costs of production have increased slightly.

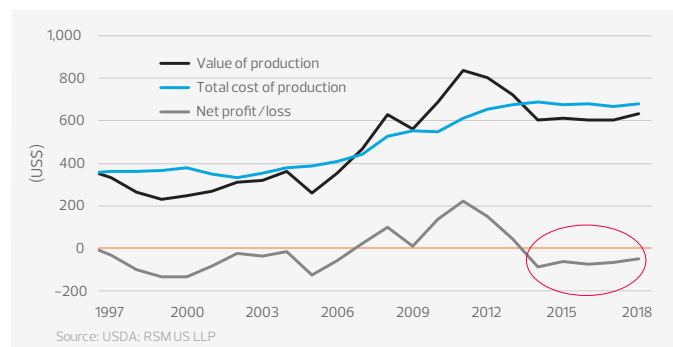
Net profitability of soybean farming

VALUE AND TOTAL COST OF PRODUCTION PER PLANTED ACRE



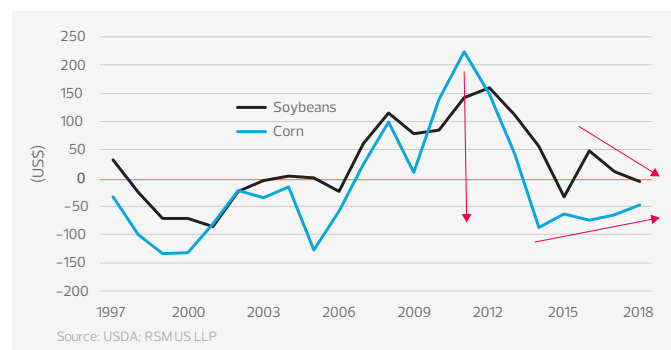
Profitability of corn farming

VALUE AND TOTAL COST OF PRODUCTION PER PLANTED ACRE



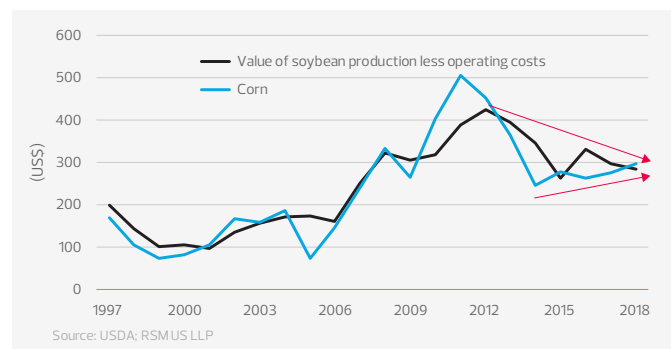
Net profitability of soybean and corn farming

RELATIVE TO TOTAL COST OF PRODUCTION PER PLANTED ACRE



Profitability of soybean and corn farming

RELATIVE TO TOTAL COST OF PRODUCTION PER PLANTED ACRE





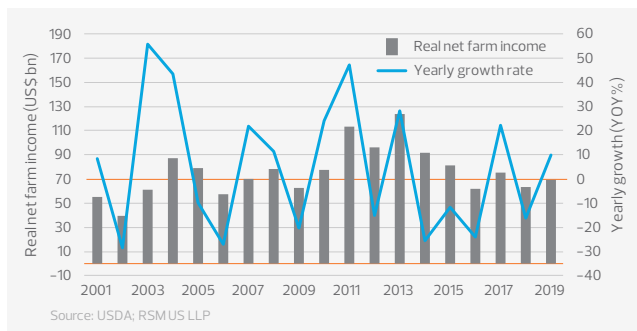
A PIVOT POINT FOR AGRICULTURE: CAN AGRITECH SAVE FARMING?

By Joseph Brusuelas

The U.S. agriculture sector has been hard hit in recent years due to changing global demand and the onset of the Trump administration's trade conflicts. Growth of real net farm income in 2019 dollars has been negative in nine of the past 19 years. Since 2011, the major agriculture states in the Midwest have experienced negative growth, while California—the largest producer of agriculture income by a factor of four—Florida, Georgia and North Carolina have all been positive.

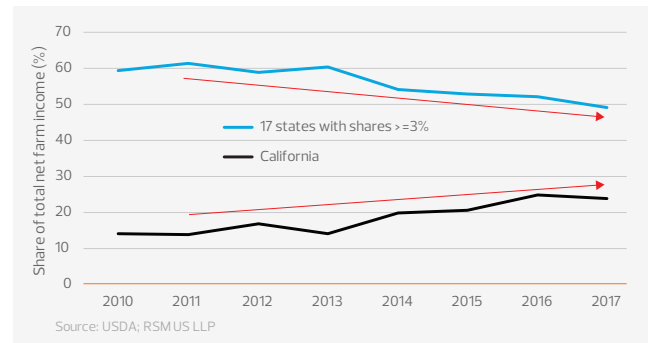
U.S. net farm income—level and yearly growth

2018 ESTIMATE AND 2019 FORECAST



California's increasing share of total U.S. farm net income—(2010–17)

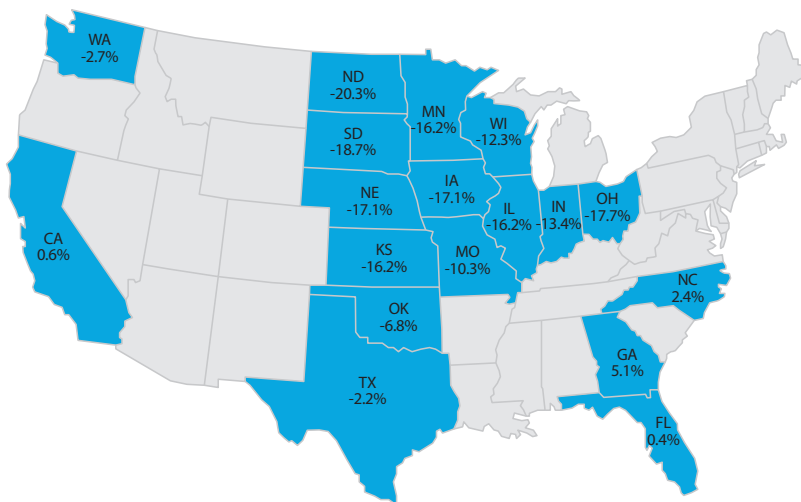
CALIFORNIA VS. 17 OTHER MAJOR PRODUCING STATES



To say these are trying times for the agricultural sector is an understatement. Producers must simultaneously deal with policy-driven dislocation, climate change, the emergence of a global network of producers and consumers, and the impact of growing supply and demand on pricing of agricultural products. Finally, they must also contend with the impact of an aging demographic and the emergence of nationalism in developed economies, and its effect on the availability of labor.

2011–19 average annual growth rate of net farm income

IN STATES THAT HAVE AT LEAST A 3% SHARE OF TOTAL U.S. FARM INCOME



Why is farming more profitable in California than in the Midwest?

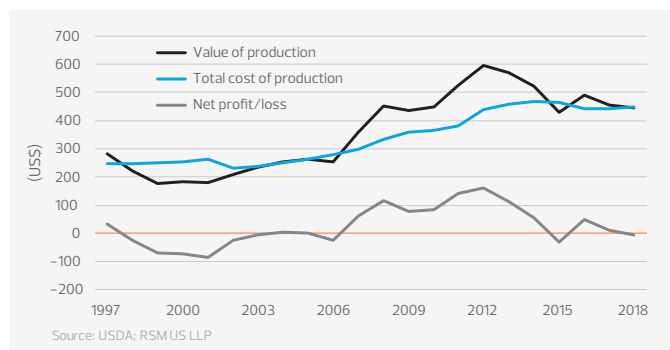
California's agriculture is diversified and centered on tree crops (nuts and fruits), vegetables and dairy products. In particular, the expansion of exports of milk products to Asia and Mexico and investment in efficient production practices provided a partial buffer to falling prices. But the recent failure of U.S. trade negotiations and the imposition of retaliatory tariffs became disruptive to the supply chain.



The Midwest—the largest producer of corn and soybeans—finds itself facing rising production costs and plummeting market prices. Soybean profitability has been mostly in decline since 2012; the crop was a money loser in 2018 after the imposition of China's tariffs. It's the same story for corn plantings, although corn began an upward trend in 2014.

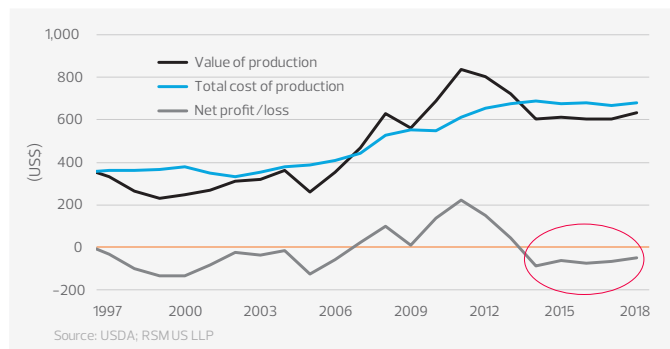
Net profitability of soybean farming

VALUE AND TOTAL COST OF PRODUCTION PER PLANTED ACRE



Profitability of corn farming

VALUE AND TOTAL COST OF PRODUCTION PER PLANTED ACRE



The lessons from our quick California–Midwest comparison might be that diversity, technology and the export market could make the difference between profitability or the demise of small, accountable and clean local farming. Smart, forward-looking public policy would nurture farming; it would not necessarily center on promotion of outgoing technologies (i.e., ethanol and the combustion engine). Rather, it would focus on providing the means to use technology to safely extract the most food products from the least amount of space with the smallest amount of labor.

Agriculture policies might therefore:

- Provide funds to allow smaller farms to benefit from precision farming techniques
- Provide the knowledge base (via state university systems) for farmers to adopt agritech methods of efficient farming
- Facilitate collaboration among business sectors (e.g., partnership of producers and transporters to get crops to the market faster and more efficiently)
- Provide incentives for development of robotic crop harvesting (to alleviate labor shortages)
- Provide incentives for and adoption of greenhouse gas reducing techniques (e.g., turning manure into compost, precision tractor use, efficient use of water and fertilizers)
- Provide federal incentives and support to facilitate the financing necessary for a gradual and orderly transition

Lose-lose propositions

Some of these issues are clearly above our pay grade to change. For example, recent events have shown that trade conflicts are inherently lose-lose propositions. They are easy to start, difficult to end and everyone loses. Yet, we find ourselves ensnared in an expanding trade spat that carries deleterious implications for the agricultural sector and the broader economy. As a consequence, one could expect Midwest soybean producers and California milk producers to have at least some difficulty re-establishing their supply chains to Asian and Mexican markets once the current period of trade tensions end. Prices now set within a global marketplace, which is impossible to regulate, augers for a different set of policies with respect to domestic agriculture than has been the case over the past generation.

So while the Midwest is suffering from the effects of climate change, including spring floods and other extreme weather patterns, California will be held hostage by the lack of snow mass and a dwindling supply of water. Estimates posit that agriculture accounts for anywhere from less than 10 percent to 25 percent of greenhouse gas emissions. Regardless of one's normative preferences, it might be in everyone's best interest to think about producing a sufficient amount of foodstuff in the most efficient and clean manner.



HEALTH CARE Industry SPOTLIGHT

WHY HEALTH CARE SYSTEMS ARE BUYING SCHOOLS TO OFFSET LABOR SHORTAGES

Owning a piece of the talent pipeline

By Rick Kes

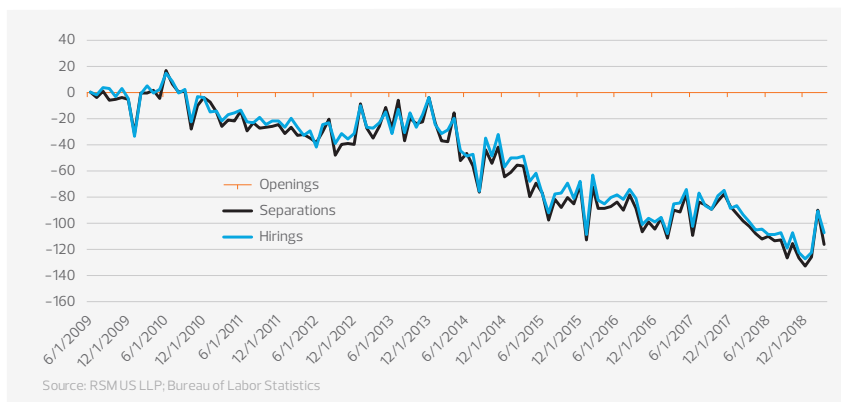
Some health care systems are using acquisitions to install their own talent pipelines in response to a shortage of skilled labor.

In March, HCA Healthcare Inc., the large, publicly traded national hospital system, acquired a majority stake in Galen College of Nursing, a for-profit nursing school. In April, another large health care system, nonprofit Atrium Health, announced it was merging with Wake Forest Baptist Health and Wake Forest University, which includes a well-respected medical school. These recent tie-ups may signal the beginning of a trend within the health care ecosystem: to remain competitive, health care systems must boost their access to skilled labor by owning a piece of the talent pipeline or building programs that get them closer to it.

Health care systems have completed acquisitions of academic medical centers in the past, with varying degrees of success. Banner Health acquired University of Arizona Health Network in 2015. Atrium tried unsuccessfully to merge with UNC Health Care in a transaction that was expected to close in 2017. What makes the latest deals unique is that they give the health care systems direct relationships to the schools that are training doctors, nurses, technicians, administrators and other skilled labor.

Undeniably, skilled labor remains an important component in the current health care system business model, and it is getting scarcer to find. Consistently, we see data from the federal jobs report that suggests the supply of skilled medical workers is being outpaced by demand; doctors and nurses, particularly, are highly sought.

Health care labor supply deficit



Staying competitive

What can health care systems do in response? One option is to deploy technology to augment the existing labor force, providing platforms for employees to become more efficient. Technology solutions to promote efficiency range from the automation of routine administrative functions to more futuristic concepts such as virtual health care in the form of telemedicine. Existing regulations, however, make some technology slow to gain traction; telemedicine, for one, has challenges related to reimbursement.

WHAT MAKES THE LATEST DEALS UNIQUE IS THAT THEY GIVE THE HEALTH CARE SYSTEMS DIRECT RELATIONSHIPS TO THE SCHOOLS THAT ARE TRAINING DOCTORS, NURSES, TECHNICIANS, ADMINISTRATORS AND OTHER SKILLED LABOR.

Given that medical practitioners are not going to be replaced by technology any time soon, a second and complementary option, is to build stronger relationships to the talent pipeline through alliances such as those underscored by the recent mergers. Together, these strategies can enhance the health care systems' business model.

Here are some tips for how midsize health care systems can strengthen their flanks on technology and skilled labor.

On the technology front:

- Continue to determine how to advance the organization's reach in virtual health care delivery by developing relationships with technology companies

that provide the infrastructure for this type of care. This should go beyond just simply providing a digital front door to the health care system.

- Evaluate the use of automation in workflow of all the organization's skilled labor. We continue to see excitement around robotic process automation, especially in back-office functions. RPA can also be used in other areas, especially if paired with a digital platform for patient experience to continue to increase the efficiency of processes.

Related to talent pipeline:

- If you're a health care system smaller than Atrium and HCA, building a pipeline to a larger university may not be in the organization's wheelhouse. Look instead to community colleges and state universities in your service area. Instead of acquisitions, consider developing paid learning programs such as internships, externships and scholarship programs with work requirements.

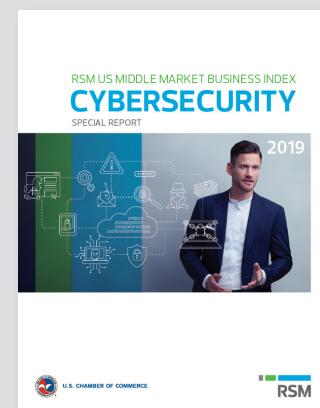
The health care provider business model is being challenged. While the future of health care delivery could eventually curb the demand for skilled labor, it is uncertain when, or if that will happen. In the meantime, maintaining access to qualified labor will be critical to remain competitive.

RESEARCH SHOWS MIDDLE MARKET CYBER RISK

Nearly 50 percent of midsize companies expect they will face unauthorized users attempting to breach their data or systems this year, according to executives RSM surveyed. Despite incidents of rising cybercrime, just half of the businesses surveyed carry cyber insurance policies to protect against internet-based risk. Our study shows that many of those policies may fall short of comprehensive coverage.

Meanwhile, the C-level executives we surveyed may be overly confident in their firms' internal abilities to thwart an attack. Some 93 percent of respondents were confident in their organizations' ability to safeguard customer data. The reality—based on actual incident reports—is proving that confidence may be misguided.

Learn more in the [full report](#).



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