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THE BORDER ADJUSTMENT TAX IMPACT BY INDUSTRY

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INTRODUCTION

On April 26th, President Donald Trump unveiled his long-awaited plan to reform our nation's tax code. Like the plan previously released by Republicans in the U.S. House of Representatives, the president outlines a number of specific policy proposals that would reduce rates and complexity, eliminate special-interest loopholes, grow our economy, and create jobs and opportunity for the American people.

Notably absent from the president's plan is a controversial provision that was included in the House Republican plan and threatens the livelihood of many U.S. businesses: the border adjustment tax (BAT). Though the BAT is not mentioned in the president's outline of tax principles, House Ways and Means Chairman Kevin Brady has reiterated that it remains a key provision that he'll bring to the table in tax reform discussions,[1] while President Trump's budget chief clarified that "just because it's not in the first round of 'principles' doesn't mean it won't be in the final version of the bill."[2] The BAT, therefore, still looms large.

The BAT effectively slaps a 20 percent tax on everything that companies import into the United States. This 20 percent import tax would cause tax bills to skyrocket for businesses that rely heavily on imported goods and would hurt ordinary Americans as businesses pass the new tax on to consumers in the form of higher prices.

At first glance, a tax on imports might seem like it would serve to boost American-made products. If foreign goods are more expensive, people would be more willing to buy domestic goods, right? Unfortunately, what seems sound in theory isn't always the case in practice. In today's highly integrated global economy, nearly every industry in the United States relies in some way on imported goods — whether they be finished products, component parts, or raw materials. Therefore, a tax on imported goods would have significant negative consequences for American businesses, workers, and consumers.

The purpose of this report is to highlight those consequences on industries that weigh heavily in the U.S. economy and stand to be heavily impacted by the BAT: the manufacturing, energy, retail, financial services, and agricultural sectors. The wide variety and heavy weight of these industries will highlight the BAT's potentially disastrous impact on the economy and employment in the United States.

CURRENCY ADJUSTMENT AND THE BAT

It is worth noting at the outset that supporters of the BAT proposal argue that U.S. businesses and consumers will not ultimately feel the tax's burden because the BAT would increase the value of the U.S. dollar and offset the increased cost of imports. This is based on textbook economic theory that says a border adjustment, when implemented perfectly, will not affect trade balances due to currency adjustment. In reality, this outcome is far from certain. A number of economists, including Federal Reserve Chairwoman Janet Yellen, have expressed serious concerns that the dollar would not increase in value to fully offset the cost of the tax. In testimony to Congress earlier this year, Yellen said that, "[t]he problem is there's great uncertainty about how in reality markets would really respond to these changes."[3] And more recently, Paul Chen, an economist at the Joint Committee on Taxation, said that he was skeptical of the currency appreciation argument because "there is a lack of empirical research on the question."[4]

In addition to influential economists, Wall Street has expressed serious doubts that currency markets would respond the way that BAT supporters suggest. Foreign exchange market traders and analysts, who make their living dealing in currency markets, have challenged the notion that the U.S. dollar would perfectly offset the tax, dismissing the idea of having a tax reform plan depend on such an assumption "laughable."[5]

BAT supporters have pointed to a recent study released by the Peterson Institute that examined the impact of value-added taxes (VAT)[6] on currency valuation as evidence that our currency would adjust to offset a new import tax.[7] However, a complete reading of that study reveals the clear problems with comparing its results with potential outcomes under a BAT. The study looks at a few examples of VAT implementation and the impact on currency in those cases, finding that it took as much as three years for the currency to adjust to offset the new tax. It is important to point out that this is far from the "full and immediate" currency adjustment that supporters are promising, and more than enough time for businesses to sink under the weight of the tax hike. What's more, the study itself points out that the BAT proposal "differs in important ways from consumption taxes" examined by the study, and that those differences raise the possibility that the currency adjustment would be even slower and messier than the results of their study.[8] Supporters are standing on shaky ground if this is the best they have to offer supporting their theory that currency will respond quickly and completely enough to offset the tax.

The fact is, there is no way of predicting how currency markets would react to the implementation of a BAT. The one thing that is clear, though, is that the dollar is unlikely to adjust in the ways that supporters suggest, which means that American businesses and consumers will, in fact, feel the pain of a trillion-dollar tax hike on everyday goods.

MANUFACTURING

During a press conference in February, Speaker Paul Ryan attempted to explain his support for the border adjustment tax provision by highlighting its intended impact on American manufacturing. "We are putting a bias against making things in America in the tax code," he argued. "That is why we think this is very important. This is good manufacturing policy."[9] A 20 percent tax on imports, however, would threaten the very industry it's intended to bolster.

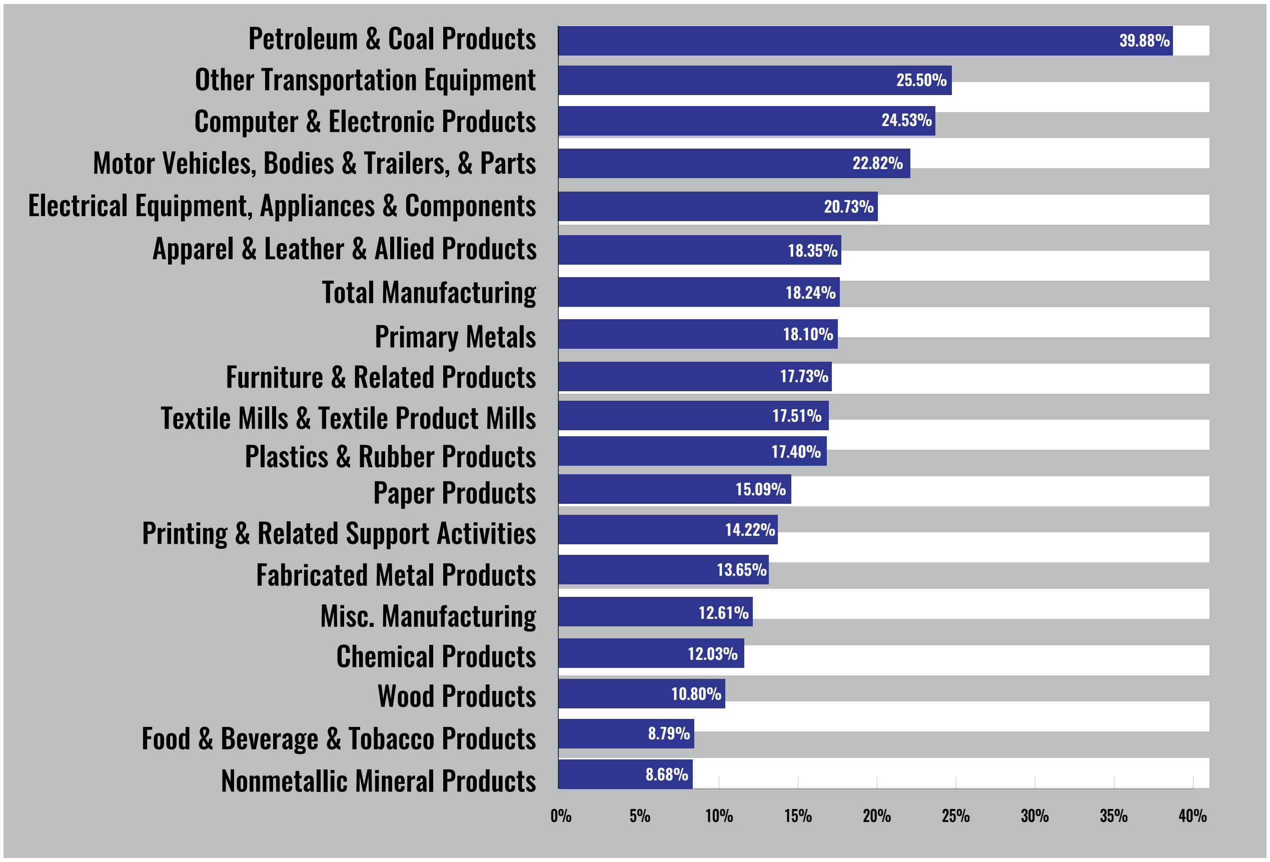
Much has been said about the danger that a 20 percent tax on imports poses to American auto manufacturing,[10] and manufacturing groups recognize the very real cost that they face under this tax.[11] Other manufacturing sectors face a similarly grave threat. At the most basic level, proponents of the tax fail to consider that an enormous quantity of what we import into the United States is used to produce American goods.

> ***American manufacturers could still face an additional $67 billion tax burden from the importation of intermediate goods under the border adjustment tax.***

Fully one-quarter of imports for 2016, for example, were capital goods — things like computers, industrial machines, or metalworking tools that enable U.S. companies to produce their own goods and services.[12] American manufacturers are also dependent on the importation of raw and semi-finished materials as critical components of the goods they produce.[13] Of 50 separate non-fuel mineral commodities critical to U.S. industry, businesses imported more than half the total supply and were 100 percent reliant on imports for 20 of those minerals.[14] All told, U.S. mineral commodity imports totaled $131 billion in 2016.[15]

Beyond just capital goods and minerals, American manufacturers are likewise heavily reliant on intermediate materials of all types that are imported from around the world and used to produce their own goods domestically. Across all manufacturing sectors, imported intermediate goods accounted for over 18 percent of goods and commodities used in production and totaled $667.6 billion in 2015.[16] Even assuming a partial currency adjustment that offsets half of the 20 percent tax on imports, American manufacturers could still face an additional $67 billion tax burden from the importation of intermediate goods under the border adjustment tax.

FIGURE 1: PERCENTAGE OF IMPORTED INTERMEDIATE GOODS BY MANUFACTURING SECTOR IN 2015[18]



In parsing which manufacturing sectors stand to lose the most, Peterson Institute president Adam Posen — noting that higher-paying sectors like computer manufacturing are generally more dependent on imports — observed that "[i]f you do a tax that's fundamentally biased against import content, you are taxing the most advanced, highest value added sectors in the U.S. manufacturing sphere."[17] Though a 20 percent tax on imports would burden every manufacturing sector, it would unduly threaten high-end manufacturing jobs in the U.S.

Imports of intermediate goods are an essential component of American manufacturing. Writing for the Federal Reserve Bank of St. Louis *Review*, business economist Kevin L. Kliesen and former Tax Foundation Senior Fellow John A. Tatom argued that these imports are a major driver of the industry's productivity growth, exerting a positive influence that outweighs the effect of manufacturing exports.[19] Finding a strong positive correlation between imports and domestic manufacturing output and little to no correlation between the growth of exports and the growth of industrial production, the authors concluded that:

> ***[m]any … political leaders believe that boosting manufacturing growth will require limiting imports through favorable preferences for domestic purchasing and raw material and capital goods sourcing, perhaps through quotas, tariffs, domestic content legislation, or simply discriminatory preferences. However, reliance on imports has been a strong positive influence on manufacturing output and productivity. Moreover, there is no discernible gain to manufacturing growth that could arise from new policies proposed to boost exports.***[20]

Recognizing the strong impulse by politicians to score political points by protecting American exports, they presciently warned that “any attempts to bolster exports at the expense of imports ... would significantly harm the U.S. manufacturing sector, the nation’s productivity, and ultimately, long-term living standards.”[21]

Though proponents of a BAT tout a revitalization of U.S. manufacturing, ultimately domestic manufacturers depend on international trade even for American-made goods. Small business owner Brandi Archer, for instance, whose company manufactures women’s apparel in the United States, sources her materials from overseas. Says Archer of the 20 percent tax: “It could put us out of business.”[22]

ENERGY

President Trump has made it clear that one of the primary goals of his administration is to lift the burdens on the energy sector that were put in place under President Barack Obama in order to allow our energy industry to flourish and to deliver affordable, reliable energy to all Americans. Implementing a border adjustment tax, however, would undermine that goal by further burdening particular sectors of the U.S. energy industry with new taxes. Because the BAT would apply to all imports — including raw materials — it would apply to imported energy sources like crude oil and natural gas.

Looking at crude oil markets can highlight the adverse effects a BAT could have on businesses in the energy industry that rely heavily on imports. The United States is a major consumer of crude oil, consuming one in every five barrels of crude produced worldwide.[23] U.S. refiners rely on imported crude to meet about half of our energy needs, even after accounting for increased domestic production due to the recent shale boom.[24] These domestic refiners that rely on imported crude to meet demand would see a major tax increase under a BAT.

In 2016, the United States imported 10.1 million barrels of petroleum products per day, with a total annual dollar value of over $100 billion.[25, 26] Under a border adjustment tax, every imported barrel of oil would be taxed at 20 percent. If the tax had been in place in 2016, importers of crude and other related products would have been on the hook for $20 billion in import taxes. As discussed earlier, there is significant doubt concerning the theory that the U.S. dollar would adjust sufficiently to offset these increased costs. In our opinion, therefore, it would be generous to assume a partial currency adjustment scenario in which the dollar increases in value to offset half of the cost of the tax. Even assuming this partial adjustment scenario, importers of petroleum products would still have felt the additional $10 billion in taxes if the BAT were in place in 2016.

The impacts of the BAT on crude imports and other petroleum products would not be felt uniformly throughout the country. The impact would fall disproportionately on refiners in the Midwest and on the East and West Coasts. That is because these regions tend to rely more heavily on imported crude to meet their energy demands. For example, in 2015, imported crude constituted about 65 percent of all crude inputs at Midwest refineries.[27] On the East Coast, imported crude made up 55 percent of all inputs, and on the West Coast it was 47 percent.[28] It is worth noting that even though the Gulf Coast is able to rely heavily on domestic crude due to the oil-rich Permian Basin, imported crude still amounted to 35 percent of all crude inputs at Gulf Coast refineries.[29] A 20 percent tax on 35 percent of their inventory would certainly not be a small cost increase for refiners on the Gulf Coast, even if it might not be as large as the tax bills at refineries in other parts of the country.

> ***Estimates show that gas prices could increase by 30 to 40 cents a gallon as a result.***

By one estimate, implementing the BAT would result in a 25 percent "wedge" between domestic and foreign crude prices, meaning that crude oil prices would be 25 percent higher in the United States than the rest of the world.[30] These increased costs would almost certainly need to be partially passed on to consumers in the form of higher prices at the pump, if oil refiners want to stay in businesses. Estimates show that gas prices could increase by 30[31] to 40 cents[32] a gallon as a result. So, not only would refiners face substantially higher costs of operating, but Americans would also see higher prices not only at the gas station but throughout the economy. Since fuel is essential for the movement of goods, an increase in fuel and thereby transportation costs could have a significant ripple effect. One estimate showed that the increase in fuel prices would lead to a 0.4 percent reduction in nominal GDP.[33] That negative impact on the economy would grow if the price of oil were to rise above its currently low price of around $50 a barrel.

These are the kinds of negative consequences of a border adjustment tax that have importing businesses in the energy sector rightfully worried, and these worries should not be ignored by lawmakers as they work to develop a final plan for comprehensive tax reform.

RETAIL

The retail industry has been perhaps the most vocal industry since the proposed border adjustment tax first began receiving attention. And it is not difficult to see why. The retail industry relies heavily on imported goods. According to the U.S. Census Bureau and Bureau of Economic Analysis, in 2016, the United States imported $583.8 billion worth of consumer goods.[34] It is worth noting at this point that a 20 percent tax on the total value of imported consumer goods would amount to over $116 billion. Again, even if we allow for a partial currency adjustment where the dollar appreciated to offset half of the cost of the BAT, the tax bill would still be more than $58 billion.

Additionally, retailers typically have low profit margins — meaning that they do not markup the price of the goods they sell much more than the price they pay their suppliers. Instead, retailers rely on high sales volume with slim profit margins in order to stay in businesses. This model works well for both the retailer and consumer, since retailers are still able to turn a profit while consumers are able to get the best prices for the goods they purchase.

An example of this high volume, thin margin model is helpful to illustrate how the border adjustment tax could wreak havoc on the retail industry. Consider a shoe retailer that imports the shoes it sells from a manufacturer in China. It buys a pair of shoes from the manufacturer for $50 and pays $10 in shipping costs. The retailer sells the shoes for $70, earning a $10 profit. Under the current tax system, the retailer would owe 35 percent in taxes on the $10 profit, because it would be able to deduct the $60 it paid in business costs to acquire the shoes. The total tax bill would be $3.50.

Under the proposed tax reform plan with a border adjustment tax, the retailer would pay a 20 percent (the proposed corporate rate in the House Republican proposal) tax on the $10 profit, or $2. However, the retailer would also pay a 20 percent BAT on the $50 cost of the imported shoes, bringing the total tax bill to $12 — which is more than the retailer's profit from the sale.[35]

> ***Consider the fact that more than 15 million Americans are employed in the retail industry. That's 12 percent of all private industry jobs in the United States. A tax that threatens to wipe out retailers also threatens to wipe out a significant number of jobs on which Americans rely.***

It is not difficult to see how this tax would potentially harm retailers when applied to each and every item imported to their inventory. And these impacts could have a dramatic effect on the broader economy. Consider the fact that more than 15 million Americans are employed in the retail industry.[36] That's 12 percent of all private industry jobs in the United States.[37] A tax that threatens to wipe out retailers also threatens to wipe out a significant number of jobs on which Americans rely.

Consider also that the retail industry has recently experienced a decline in jobs without the added burden of this proposed tax increase. According to recent data, retail jobs have been "plummeting" since the beginning of 2017.[38] 61,000 retail jobs have been lost since January.[39] At a time when the retail sector is already seemingly in a shaky economic position, lawmakers should be wary of implementing a tax that would be a threat to the industry and the jobs it supports.

Retailers have been coming out in droves to oppose the BAT, warning lawmakers and consumers of the dangers the tax poses to their industry. A spokeswoman for the National Retail Federation said earlier this year that "because the [border adjustment tax] would raise federal taxes on many retailers to three or more times their profits, they see the BAT as a threat to their very existence."[40] And the CEO of Kohl's department store, Kevin Mansell, told CNBC that the store's tax rate could skyrocket to as much as 85 percent under the proposed tax scheme.[41] Similarly, Target CEO Brian Cornell said that the retailer could easily see a 75 percent tax rate if the new tax were implemented, causing consumer prices to increase by as much as 25 percent.

FINANCIAL SERVICES

Since the border adjustment tax is just a proposal, rather than a fully developed tax plan, few details exist to fully explain how it would apply to services (rather than goods) that "cross the border." Many countries that border adjust their consumption taxes have an exemption for financial transactions because of the complex nature of the industry and the problems that would arise from attempting to treat financial transactions the same as goods crossing the border.[43] The House Blueprint plan, however, makes clear that "products, ***services and intangibles*** that are imported into the United States will be subject to U.S. tax regardless of where they are produced"[44] (emphasis added). Ways and Means Committee Chairman Kevin Brady has hinted that the committee is exploring ways to deal with the complexities of the financial services industry,[45] but the proposal in its current form makes no mention of an exemption for the financial services industry. So, for the purposes of this report, we will assume that the border adjustment tax would apply to financial transactions the same way that it applies to goods.

> ***U.S. insurance consumers (for example, homeowners and businesses) would end up paying $5 billion more each year to get the same coverage.***

A scenario in which the border adjustment tax applies uniformly to financial services as well as tangible goods is exactly the kind of scenario that has many in the financial industry concerned. Like all of the industries explored in this report, the financial services industry would have specific sectors that are hit harder than others. For example, the U.S. market for reinsurance relies heavily on overseas insurers.[46] According to a recent study, the United States uses about half of the total global reinsurance market, because of the unique risks associated with our natural disasters and our legal liability system.[47] These risks require U.S. insurers to seek out global diversification in order to lower the risk of catastrophic losses.[48] According to research, the proposed border adjustment tax would hinder the ability of U.S. insurance companies to seek out reinsurance for high-loss risks like earthquakes, hurricanes, and terrorists attacks.[49] In fact, the tax would raise the price of reinsurance and also reduce its supply — by one-eighth of the market, or $18.3 billion.[50] This, in turn, would have a ripple effect throughout the entire insurance market, and research estimates that the insurance supply more generally would drop by $9.3 billion and that U.S. insurance consumers (for example, homeowners and businesses) would end up paying $5 billion more each year to get the same coverage. [51]

This is just one example of some of the unintended consequences of the BAT, and perhaps the financial services industry isn't one that many Americans are thinking about when it comes to the implications of such a tax. But the consequences could be massive, given the size of the market.

AGRICULTURE

Proponents of a border adjustment tax argue it would encourage Americans to buy more locally produced goods because the 20 percent tax would raise the price of imported products.[52] It's worth noting, however, that much of the food the United States imports "cannot be produced domestically due to climate conditions and crop seasonality."[53] For much of the food that the country imports, therefore, there are no American producers that could provide the same products.

Though U.S. agriculture is largely export-oriented, the industry is still vulnerable to the effects of a 20 percent tax on imports because many of the materials they rely on are purchased from abroad.

TABLE 1: 2015 U.S. AGRICULTURE OPERATING COSTS PER PLANTED ACRE (DOLLARS)[58]

	FERTILIZER	CHEMICALS	FUEL, LUBE, AND ELECTRICITY	TOTAL OPERATING COSTS	SELECT COSTS AS A PERCENTAGE OF TOTAL OPERATING COSTS
Corn	137.33	27.95	21.28	333.8	55.9%
Soybeans	34.22	27.58	14.08	170.80	44.4%
Wheat	40.12	14.37	12.42	115.32	58.0%
Cotton	86.32	67.91	41.72	496.66	39.5%
Rice	124.67	96.73	70.92	541.77	54.0%
Grain Sorghum	43.80	23.20	15.38	132.58	62.1%
Barley	53.90	20.12	20.30	164.86	57.2%
Oats	42.70	2.64	15.54	105.17	57.9%
Peanuts	90.19	132.27	46.17	503.96	53.3%

Farmers and ranchers, for instance, routinely import fuel and fertilizer as part of their regular operations.[54] One study concluded that the BAT would significantly increase the prices paid for petroleum products, including gasoline and diesel,[55] and the USDA has noted that domestic fertilizer plants are already operating at capacity, meaning the price that U.S. agriculture pays for fertilizer is dependent on import prices.[56] Intermediate goods imported for the agricultural industry totaled $21.4 billion in 2015, potentially opening the industry up to a $2.1 billion tax on imports assuming a partial currency adjustment that offsets half of the tax.[57] Fertilizer, chemicals, and fuel — much of which is imported — comprise a significant portion of operating costs for the industry.[59]

Of the major crops grown in the United States, fertilizer, chemicals, and fuel/lube/electricity account for between 39.5 to 62.1 percent of operating costs per planted acre, representing a significant portion of costs and illustrating the sensitivity of American agriculture to an increase in the cost of imports. Looking at the effect of energy prices on agriculture, the USDA has concluded that "[a]gricultural production is sensitive to changes in energy prices, either through energy consumed directly or through energy-related inputs such as fertilizer. … Higher energy-related production costs would generally lower agricultural output, raise prices of agricultural products, and reduce farm income, regardless of the reason for the energy price increase."

U.S. agriculture, though, faces a greater threat from the border adjustment tax in the reaction that trading partners will have to the enactment of this tax on imports. *The New York Times* explained that "[e]ven those seemingly safe from import taxes, exporters like … American farmers, could also lose sales if other countries retaliated."[60] Many in the industry have already expressed concern about the potential for a trade war,[61] including the chairman and CEO of Deere, who said: "If, as a result of the adjustment tax, it has an unintended consequence of causing countries like China and Mexico to buy their ag commodities from other countries, that would be negative for U.S. farmers that do a lot of exporting to China, Canada and Mexico."[62] U.S. farmers and livestock producers could see their income plummet.[63] Retaliation could also take the form of devastating tariffs.

Far from being a remote threat, growing signs of potential trade retaliation are already beginning to appear. A senator from Mexico — one of the top buyers of American corn — has already threatened to introduce a bill to have Mexico instead shift its purchases to Brazil and Argentina in part because of a potential tax on Mexican imports.[64] Following this promise of legislative action, Mexico's agriculture minister also revealed plans to visit Argentina and Brazil to buy yellow corn to diversify its supply.[65] A ban on U.S. corn by Mexico — the third largest market for U.S. agricultural exports[66] — would depress already low corn prices and hurt U.S. farmers.[67] A trade war would ripple out to the rest of the ag economy and threaten the livelihood of American farmers.[68]

> ***"If you were to go to a farmer and say what does a border adjustment tax mean to you, they might try to sell the farm right then."***
>
> **–SENATOR CORY GARDNER (R-CO)**

Finally, proponents of a border adjustment tax have promised a large and rapid appreciation of the U.S. dollar — though both the scale and speed of any currency adjustment is in dispute. A stronger dollar creates its own problems for an export-heavy industry like ag,[69] and the Farm Bureau has noted that "a stronger dollar would make it harder to sell American products abroad."[70] Rancher, state senator, and president of the South Dakota Retailers Association Gary Cammack explained that a dramatically stronger dollar "would be absolutely devastating for agricultural trade with our trading partners around the world."[71]

The border adjustment tax currently lacks a single champion in the U.S. Senate. Its potential impact on U.S. agriculture, though, has prompted senators to question its viability.[72, 73] Senator Cory Gardner (R-CO), expressing concern over retaliation, argued that "[i]f you were to go to a farmer and say what does a border adjustment tax mean to you, they might try to sell the farm right then." [74]

THE FOLLY OF A MODIFIED BORDER ADJUSTMENT TAX

Recently, Chairman Brady has suggested that he would be open to modifications to the tax in order to gain more support for the unpopular provision. These modifications could come in the form of carve-outs, phase-ins, and exemptions for certain industries.[75]

Any carve-out or similar modification to the tax would be problematic for three main reasons. First, it recognizes that there will be serious harm to these industries under the tax, to necessitate an exemption. Second, it perpetuates the same broken methods of dealing with tax policy that currently exists — special interest exemptions and carve-outs are exactly the kind of bad policies we are trying to get rid of through comprehensive tax reform. The House Blueprint itself says that "[w]hen carve-outs and loopholes are built into the tax code, they increase complexity, undermine the principle of fairness, and create economic distortions that draw resources away from more productive uses and therefore reduce economic growth."[76] We couldn't agree more. Why, then, would the same drafters want to implement a BAT with new loopholes and complexities? A modified BAT would only serve to perpetuate the very problems that we see in our current code that is riddled with such carve-outs.

Finally, the theory that the U.S. dollar will appreciate in value to offset the tax is already on shaky ground, as discussed above. However, that theory is also entirely dependent on a complete and perfect implementation of the BAT. Exempting particular industries from the tax would only serve to further undermine the legitimacy of the currency adjustment theory, and makes the implementation of the tax even riskier for American businesses and consumers.[77] The BAT must be dropped altogether in order to avoid the consequences we have laid out throughout this report.

BORDER ADJUSTMENT TAX POSES THREAT TO AMERICAN INDUSTRIES

The above highlighted industries — manufacturing, energy, retail, financial services, and agriculture — which together employ nearly one-third of all private domestic employees,[78] stand to be dramatically and negatively impacted by the implementation of a 20 percent border adjustment tax on imports. Our analysis shows that these industries and their many sectors tend to rely heavily on imported goods or otherwise would be affected by a tax on imports, even in ways that many Americans might not realize.

- American manufacturers rely on the importation of intermediate goods for products that they make in the United States and could face an additional $67 billion burden from a 20 percent tax on imports, even assuming partial currency adjustment.
- The impact on the energy sector would be felt by every American when gas prices increase by 30 to 40 cents a gallon.
- Retailers that rely heavily on imports would see their tax bills soar higher than their profits in many cases.
- Complexities in the financial services industry make it almost impossible to apply a BAT, but using carve-outs and loopholes to "fix" that problem would only make things worse.
- The agricultural industry is vulnerable to the threat of trade retaliation as trading partners look to buy from other countries in response to the BAT.

In today's highly integrated global economy, American industries rely on suppliers around the globe to meet their business needs — and this system works to the benefit of both businesses and consumers. Implementing a tax on imports would have significant ripple effects throughout American industry, threatening jobs and economic growth along the way.

Comprehensive tax reform is the key to spurring the economic growth that our country desperately needs after years of slow recovery following the Great Recession. The goals of comprehensive tax reform should be aimed at lowering rates, eliminating special-interest carve-outs and deductions, and relieving businesses and individuals from the burdens of the current, overly-complex tax code. There are a number of excellent proposals in both the president's and the House Republican tax reform plans that address these goals. However, the inclusion of the border adjustment tax, or any similar tax on imports that is designed to raise revenue, would undermine the success of other good reforms by shifting the costs of tax reform unfairly to importing businesses, the employees that rely on them for jobs, and the consumers that rely on their products.

APPENDIX

WIDESPREAD DOUBT ABOUT RAPID AND FULL CURRENCY ADJUSTMENT

ECONOMISTS AND ANALYSTS

Goldman Sachs Economist Alec Phillips: "It Is Unlikely That Nominal Or Even Real Exchange Rates Would In Fact Adjust So Quickly And Perfectly." "Goldman Sachs economist Alec Phillips doesn't expect the dollar to appreciate as theory predicts. In a research note, he said, 'It is unlikely that nominal or even real exchange rates would in fact adjust so quickly and perfectly.'" (Courtney Reagan, "How A Controversial GOP Plan Could Boost The Taxes On A Sweater From $1.75 To $17," *CNBC*, 12/20/16)

AEI Fellow Desmond Lachman: There Are Reasons To Doubt That The Border Tax Adjustment Will Result In A Rapid And Large Dollar Appreciation. "There would seem to be at least two reasons to doubt that the border tax adjustment will result in a rapid and large dollar appreciation even though one might still subscribe to the idea the tax adjustment will in the end have little impact on the U.S. trade balance." (Op-Ed, Desmond Lachman, "Would The GOP's Border Tax Adjustment Lead To A Trade War?," *The Hill*, 1/18/17)

- **Retaliatory Measures From U.S. Trade Partners Would Boost Their Currencies And Prevent Any Improvement In The U.S. Trade Balance.** "The first is that one would suppose that foreign exchange participants would anticipate that U.S. trade partners are likely to respond to the border tax adjustment by retaliating. They would do so by taking similar trade measures as did the U.S. with the aim of boosting their own exports and of penalizing U.S. imports. If the U.S. trade partners did indeed act in that way, those measures would have the effect of boosting those countries' currencies in much the same way as the border tax adjustment would boost the dollar. At the same time, those retaliatory measure would prevent any improvement in the U.S. trade balance." (Op-Ed, Desmond Lachman, "Would The GOP's Border Tax Adjustment Lead To A Trade War?," *The Hill*, 1/18/17)

- **The Adverse Effect Of A Strengthening Dollar On Emerging Market Economies Would Lead To Them Importing Less From The U.S. And Mitigate The Dollar's Appreciation.** "A second reason for doubting that the border tax would lead to a rapid and strong dollar appreciation is because of the adverse impact that such an appreciation would have on the major emerging market economies. Those economies would be hit hard by a dollar appreciation since their corporate sectors are excessively indebted in U.S. dollar terms. Indeed, according to the Bank for International Settlements, emerging market corporations constitute a major risk to the global economic recovery since those corporations have increased their dollar-denominated borrowing by around $3.5 trillion over the last eight years. If a dollar appreciation were now to cause the emerging market economies, including China, to falter, those economies would import less from the U.S., which would limit the degree to which the U.S. trade balance might improve. That, in turn, would have the effect of attenuating the dollar's tendency to appreciate because of the border tax adjustment." (Op-Ed, Desmond Lachman, "Would The GOP's Border Tax Adjustment Lead To A Trade War?," *The Hill*, 1/18/17)

Morgan Stanley Analysts Foresee A 10-15 Percent Rise In The Dollar As Opposed To The 25 Percent Necessary To Offset The Border Adjustment Tax. "Morgan Stanley foresees a smaller rise in the dollar in the event of a 20 percent border-adjustment tax, rather than a one-time 25 percent appreciation of the dollar, as implied by textbook theory. 'We think a 10-15 percent rise in USD is reasonable,' Castagno and his team wrote. 'Even if we don't get a full exchange rate offset, the policy will still have a large impact on U.S. competitiveness and, therefore, the dollar.' In other words, their projections suggest Trump may succeed in endowing exporters with a competitiveness boost since the dollar is unlikely to adjust fast enough to absorb the tax change." (Sid Verma, "Trump's Border Tax Threat May Weaponize The Dollar," *Bloomberg*, 1/11/17)

TD Securities Analyst Mark McCormick Foresees A 10 Percent Rise In The Dollar. "This view is echoed by Mark McCormick, of TD Securities Inc., who predicts the dollar may advance by 10 percent. 'Exchange rates are unlikely to adjust rapidly enough in order to internalize the tax change,' the analyst wrote on Jan. 6. 'In other words, a border adjustment tax is likely to boost the USD but the net change (USD strength and export subsidy) will likely still favor U.S. exporters and production.'" (Sid Verma, "Trump's Border Tax Threat May Weaponize The Dollar," *Bloomberg*, 1/11/17)

FEDERAL RESERVE

President Of The New York Fed Bill Dudley: "I'm Not Of The View That Import Prices Would Go Up 10 Percent, The Dollar Would Appreciate By Exactly 10 Percent, So That The Value That Retailers Pay For Imported Goods Would Be Exactly The Same In Dollar Terms." "Most supporters of the tax argue that the dollar will strengthen so much as a result of border adjustment that imports will in effect become cheaper or at least remain the same – and therefore, consumer prices will not increase. But Dudley indicated skepticism about that idea. 'I'm not of the view that import prices would go up 10 percent, the dollar would appreciate by exactly 10 percent, so that the value that retailers pay for imported goods would be exactly the same in dollar terms,' Dudley told the NRF audience. Lundgren pointed out that for new dollar strength to negate higher import prices, the greenback would have to increase specifically against the currencies of countries that make the products sold by American retailers." (Michelle Caruso-Cabrera, "NY Fed's Dudley Sees 'A Lot Of Unintended Consequences' From Border-Tax Plan," *CNBC*, 1/17/17)

Federal Reserve Chair Janet Yellen: "It's Very Uncertain Exactly What Would Happen To The Dollar. There Has Been A Lot Of Discussion Of That And I Think It's Complicated And Uncertain." "The nerdiest wonk fight in some years is over the question of how a border-adjusted tax would affect the exchange rate value of the dollar. Count Janet Yellen as someone who isn't sure. 'It's very uncertain exactly what would happen to the dollar. There has been a lot of discussion of that and I think it's complicated and uncertain,' she said." (Joshua Zumbrun, "How About That Border-Adjusted Tax," *The Wall Street Journal,* 3/15/17)

JOINT COMMITTEE ON TAXATION

JCT Economist Paul Chen: Not Much Evidence Supports The Notion That A Rising Dollar Would Soften Price Increases From The House GOP Plan To Tax Imports. "Not much evidence supports the notion that a rising dollar would soften price increases from the House GOP plan to tax imports, an economist at the Joint Committee on Taxation said today. Economists simply haven't spent a lot of time studying the foreign exchange effects of such a proposal and data are limited, JCT's Paul Chen said today at an event hosted by the D.C. Bar. As a result, academic literature is lacking on the topic of greenback gains under a border adjustment system. 'There's a lack of clarity in the discussion because there's a lack of empirical research on the question,' Chen said." (Aaron Lorenzo, "Evidence Lacking On Currency Impact From Border Adjustment, JCT Economist Says," POLITICO Pro, 4/20/17)

CURRENCY TRADERS

Bloomberg: "Currency Traders Spot Fatal Flaw in Republicans' Border Tax Plan". (Andrea Wong, "Currency Traders Spot Fatal Flaw In Republicans' Border Tax Plan," *Bloomberg,* 4/18/17)

- **Traders And Strategists Who Make A Living In The $5.1-Trillion-A-Day Currency Market Say The Notion That The Dollar Will Appreciate Enough To Offset Any Increase In The Cost Of Imported Goods Is "Preposterous."** "In Washington D.C., one of the selling points of an ambitious border-tax plan rests on a key economic assumption: The dollar will appreciate enough to offset any increase in the cost of cheap, imported goods that so many Americans have come to rely on. It's just Econ 101, backed by well-established macroeconomic theory. But on Wall Street, traders and strategists who make a living in the $5.1-trillion-a-day currency market say such notions are preposterous." (Andrea Wong, "Currency Traders Spot Fatal Flaw In Republicans' Border Tax Plan,"*Bloomberg,* 4/18/17)

- **"You'd Be Hard-Pressed To Find Anyone In The Market Who Believes It Will Result In The Greenback Strengthening 25 Percent, As The Plan Suggests."** "Even if congressional Republicans can set aside their differences to pass the proposed border-adjusted tax -- a prospect that seems more remote with each passing day -- you'd be hard-pressed to find anyone in the market who believes it will result in the greenback strengthening 25 percent, as the plan suggests." (Andrea Wong, "Currency Traders Spot Fatal Flaw In Republicans' Border Tax Plan,"*Bloomberg*, 4/18/17)

Bank Of America Head Of Global Rates And FX Strategy David Woo: "The FX Market Is The Most Difficult Thing To Forecast, And To Build An Inter-Generational Tax Reform Based On The Assumption Of What The FX Market Will Do Is A Laughable Notion." "'The FX market is the most difficult thing to forecast, and to build an inter-generational tax reform based on the assumption of what the FX market will do is a laughable notion,' David Woo, the head of global rates and FX strategy at Bank of America, said in a Bloomberg TV interview." (Andrea Wong, "Currency Traders Spot Fatal Flaw In Republicans' Border Tax Plan," *Bloomberg*, 4/18/17)

- **Woo: To Think That The Dollar Simply Turns On Trade Policy Would Be Naïve At Best.** "For Woo, it all boils down to simple math. Daily trading of goods and services between the U.S. and the rest of the world averages about $14 billion. That amounts to 0.3 percent of the $4.4 trillion in dollars transacted in the global currency market each day. In short, little more than rounding error. Much of the ebb and flow in currencies are dictated by the vagaries of traders as they respond to changes in monetary policy, economic growth and political risk. At times, it can cause the dollar to veer away from levels that economists would consider rational using measures like purchasing power parity. To think that the dollar simply turns on trade policy would be naïve at best, Woo says." (Andrea Wong, "Currency Traders Spot Fatal Flaw In Republicans' Border Tax Plan," *Bloomberg*, 4/18/17)

EVEN A STUDY THAT PROPONENTS OF THE BAT TOUT INCLUDES MAJOR CAVEATS

American Made Coalition Spokesman John Gentzel Touts A Study By The Peterson Institute For International Economics To Bolster His Argument That The Dollar Would Adjust Rapidly And Fully Under A BAT. "While opponents ignore history and disbelieve in currency adjustment, a new paper by the Peterson Institute for International Economics that looked at the experience of other countries came to this conclusion: 'Overall, the results suggest that real exchange rate movements eventually fully offset border-adjusted consumption taxes.'" (John Gentzel, "Some Perspective On The Freedom Partners Tax 'Study'," American Made Coalition, 4/7/17)

THE PETERSON INSTITUTE STUDY CITED BY GENTZEL INCLUDES MASSIVE CAVEATS:

PIIE Study Authors Caroline Freund And Joseph E. Gagnon: The BAT "Differs In Important Ways" From The Value Added Taxes (VATs) Used In The Study, Raising The Possibility Of A Slower Adjustment Process. "We note that the border-adjusted cash flow tax of the House Republicans differs in important ways from consumption taxes used in our study, which raises the possibility of a slower adjustment process with temporarily larger trade effects." (Caroline Freund And Joseph E. Gagnon, "Effects Of Consumption Taxes On Real Exchange Rates And Trade Balances," Peterson Institute For International Economics, 4/17)

Freund And Gagnon: Because The United States Is "Special," Appreciation "Might Disrupt The Global Financial System" Or, Alternatively, "The Special Role Of The Dollar Could Mean That The Nominal Exchange Rate Responds Only Partially To Trade Pressures, Especially If Other Countries Resist The Corresponding Depreciation Of Their Currencies." "Second, the United States is special. Although appreciation of the nominal exchange rate would facilitate domestic economic adjustment, it might disrupt the global financial system given the dollar's dominant role in finance. Alternatively, the special role of the dollar could mean that the nominal exchange rate responds only partially to trade pressures, especially if other countries resist the corresponding depreciation of their currencies. Limits on dollar appreciation would force the adjustment to come through US prices and wages instead. It would take time for prices and wages to reach a new equilibrium, because wages are set in advance through contracts, and the Federal Reserve may not accommodate the full shift." (Carline Freund And Joseph E. Gagnon, "Do Border Adjusted Taxes Affect Trade Or The Exchange Rate?," Peterson Institute For International Economics, 4/5/17)

Freund And Gagnon: The Proposed BAT "Would Require A Very Large Adjustment" That Is "Much Larger Than The Events Studied In This Paper, And Hence More Likely To Be Disruptive." "Finally, the House proposal would require a very large adjustment. It would tax gross cash flow at 20 percent, which implies a 25 percent tax rate on cash flow net of the tax, and would require a 25 percent real exchange rate appreciation in equilibrium. Whether adjustment eventually comes through a 25 percent dollar appreciation or a 25 percent increase in US wages and prices or some combination of the two, these adjustments are large, and much larger than the events studied in this paper, and hence more likely to be disruptive." (Carline Freund And Joseph E. Gagnon, "Do Border Adjusted Taxes Affect Trade Or The Exchange Rate?," Peterson Institute For International Economics, 4/5/17)

TABLE 2: 2015 CONTRIBUTIONS OF SELECT INDUSTRIES TO GDP BY STATE (MILLIONS OF CURRENT DOLLARS)[79, 80]

STATE	TOTAL GDP	AGRICULTURE	MANUFACTURING	RETAIL	FINANCE & INSURANCE	SELECT INUDUSTRIES SUBTOTAL	SELECT INDUSTRIES AS A PERCENTAGE OF TOTAL GDP
Alabama	199,656	2,553	35,156	14,364	10,497	62,570	31.3%
Alaska	52,747	685	1,569	2,264	1,286	5,804	11.0%
Arizona	290,903	2,125	23,530	22,828	19,243	67,726	23.3%
Arkansas	118,907	3,449	17,859	8,503	4,986	34,797	29.3%
California	2,481,348	33,482	277,634	141,358	125,555	578,029	23.3%
Colorado	313,748	2,479	22,909	17,421	17,981	60,790	19.4%
Connecticut	252,930	295	26,744	14,103	32,150	73,292	29.0%
Delaware	68,724	*	4,816	2,991	19,589	27,396	39.9%
Florida	888,087	6,021	44,893	68,589	55,733	175,236	19.7%
Georgia	497,944	3,900	54,644	30,639	38,571	127,754	25.7%
Hawaii	80,376	409	1,666	5,398	2,833	10,306	12.8%
Idaho	65,549	3,508	7,379	5,541	3,097	19,525	29.8%
Illinois	776,882	5,621	99,514	39,881	78,699	223,715	28.8%
Indiana	336,053	4,331	100,908	20,109	18,238	143,586	42.7%
Iowa	174,030	9,366	32,901	9,483	19,968	71,718	41.2%
Kansas	149,641	5,131	20,939	9,639	8,437	44,146	29.5%
Kentucky	193,274	2,438	38,232	11,286	9,826	61,782	32.0%
Louisiana	239,305	1,739	52,399	15,395	8,164	77,697	32.5%
Maine	57,297	877	5,578	4,851	3,232	14,538	25.4%
Maryland	365,356	874	19,990	19,298	21,865	62,027	17.0%
Massachusetts	484,943	787	47,933	20,532	41,152	110,404	22.8%
Michigan	468,334	3,307	91,738	30,375	24,725	150,145	32.1%
Minnesota	328,340	6,306	48,211	18,445	26,681	99,643	30.3%
Mississippi	105,819	2,631	16,377	8,878	4,745	32,631	30.8%
Missouri	294,491	3,913	38,832	18,699	22,978	84,422	28.7%
Montana	45,237	1,814	3,050	2,967	1,934	9,765	21.6%
Nebraska	113,282	8,010	14,172	6,051	10,447	38,680	34.1%
Nevada	139,724	319	6,307	10,555	7,199	24,380	17.4%
New Hampshire	73,867	217	7,924	5,083	6,287	19,511	26.4%
New Jersey	567,738	726	45,008	33,197	37,283	116,214	20.5%
New Mexico	93,339	1,279	4,244	5,796	3,055	14,374	15.4%
New York	1,433,531	2,632	73,610	70,071	247,688	394,001	27.5%
North Carolina	495,402	5,079	98,116	26,623	38,428	168,246	34.0%
North Dakota	55,860	2,657	4,034	3,268	2,432	12,391	22.2%
Ohio	610,928	3,810	109,476	36,513	52,378	202,177	33.1%
Oklahoma	185,981	2,805	18,594	11,190	6,797	39,386	21.2%

STATE	TOTAL GDP	AGRICULTURE	MANUFACTURING	RETAIL	FINANCE & INSURANCE	SELECT INUDUSTRIES SUBTOTAL	SELECT INDUSTRIES AS A PERCENTAGE OF TOTAL GDP
Oregon	217,629	4,048	49,734	10,656	8,758	73,196	33.6%
Pennsylvania	709,762	3,941	85,112	36,163	44,376	169,592	23.9%
Rhode Island	56,052	*	4,524	3,089	5,314	12,927	23.1%
South Carolina	201,005	1,022	33,510	14,347	8,947	57,826	28.8%
South Dakota	47,244	3,506	4,537	3,505	7,274	18,822	39.8%
Tennessee	315,857	1,575	51,653	22,283	15,771	91,282	28.9%
Texas	1,630,082	9,587	237,082	96,396	82,032	425,097	26.1%
Utah	147,503	804	17,146	10,200	13,268	41,418	28.1%
Vermont	30,038	406	2,711	2,315	1,805	7,237	24.1%
Virginia	481,084	1,751	42,571	25,109	24,227	93,658	19.5%
Washington	445,413	6,809	57,546	33,899	16,005	114,259	25.7%
West Virginia	74,321	330	7,518	5,023	2,519	15,390	20.7%
Wisconsin	302,076	4,638	57,253	17,938	22,750	102,579	34.0%
Wyoming	39,864	622	2,205	2,212	1,171	6,210	15.6%

TABLE 3: 2015 CONTRIBUTIONS OF SELECT INDUSTRIES TO EMPLOYMENT BY STATE [81, 82]

STATE	TOTAL JOBS	FARM	MANUFACTURING	RETAIL	FINANCE & INSURANCE	SELECT INUDUSTRIES SUBTOTAL	SELECT INDUSTRIES AS A PERCENTAGE OF TOTAL JOBS
Alabama	2,594,292	45,183	267,989	284,393	107,922	705,487	27.2%
Alaska	465,780	1,108	16,683	46,113	11,058	74,962	16.1%
Arizona	3,542,969	32,204	171,627	391,375	221,199	816,405	23.0%
Arkansas	1,615,649	52,298	160,532	172,763	57,239	442,832	27.4%
California	22,625,879	244,735	1,402,133	2,085,478	987,781	4,720,127	20.9%
Colorado	3,563,215	42,697	158,294	331,683	198,978	731,652	20.5%
Connecticut	2,288,491	10,843	168,287	223,622	186,869	589,621	25.8%
Delaware	569,232	3,758	28,537	62,014	55,823	150,132	26.4%
Florida	11,287,608	80,273	383,624	1,271,975	638,996	2,374,868	21.0%
Georgia	5,827,516	49,979	400,457	592,124	271,160	1,313,720	22.5%
Hawaii	900,005	12,427	18,663	89,821	27,900	148,811	16.5%
Idaho	948,030	39,262	67,849	108,221	38,064	253,396	26.7%
Illinois	7,748,448	75,602	603,153	728,886	478,142	1,885,783	24.3%
Indiana	3,808,403	61,122	534,256	396,470	145,510	1,137,358	29.9%
Iowa	2,064,932	90,797	223,274	225,305	126,964	666,340	32.3%
Kansas	1,913,784	64,810	168,397	189,471	98,902	521,580	27.3%
Kentucky	2,481,356	85,548	249,259	257,158	104,225	696,190	28.1%
Louisiana	2,707,690	31,904	153,703	282,428	104,695	572,730	21.2%
Maine	822,105	11,684	56,142	100,436	32,168	200,430	24.4%
Maryland	3,601,539	16,958	114,486	349,701	160,095	641,240	17.8%
Massachusetts	4,542,723	11,734	262,989	410,036	263,835	948,594	20.9%
Michigan	5,517,824	70,826	612,097	566,711	233,383	1,483,017	26.9%
Minnesota	3,671,890	81,683	333,633	362,933	208,500	986,749	26.9%
Mississippi	1,573,471	41,072	147,435	171,572	54,731	414,810	26.4%
Missouri	3,666,616	98,655	274,914	386,474	184,731	944,774	25.8%
Montana	661,956	30,126	23,413	75,769	24,379	153,687	23.2%
Nebraska	1,304,802	57,143	100,916	136,252	79,184	373,495	28.6%
Nevada	1,660,482	5,717	47,649	173,505	81,881	308,752	18.6%
New Hampshire	860,052	5,791	72,371	112,220	42,530	232,912	27.1%
New Jersey	5,291,743	17,320	254,445	548,541	322,680	1,142,986	21.6%
New Mexico	1,095,949	28,772	34,076	115,724	34,612	213,184	19.5%
New York	12,115,516	55,129	491,287	1,119,649	861,509	2,527,574	20.9%
North Carolina	5,703,767	68,518	484,595	589,655	245,660	1,388,428	24.3%
North Dakota	600,660	31,475	27,044	62,366	26,777	147,662	24.6%
Ohio	6,886,299	85,581	715,200	694,641	325,711	1,821,133	26.4%

STATE	TOTAL JOBS	FARM	MANUFACTURING	RETAIL	FINANCE & INSURANCE	SELECT INUDUSTRIES SUBTOTAL	SELECT INDUSTRIES AS A PERCENTAGE OF TOTAL JOBS
Oklahoma	2,287,902	76,515	148,796	232,908	98,340	556,559	24.3%
Oregon	2,387,585	56,506	202,653	250,775	91,085	601,019	25.2%
Pennsylvania	7,524,509	76,314	598,615	779,408	389,694	1,844,031	24.5%
Rhode Island	623,519	1,707	43,591	57,375	35,150	137,823	22.1%
South Carolina	2,635,467	28,478	245,635	291,367	105,354	670,834	25.5%
South Dakota	595,484	32,142	44,900	68,004	39,023	184,069	30.9%
Tennessee	3,863,831	72,688	347,828	408,718	167,741	996,975	25.8%
Texas	16,367,980	267,650	953,778	1,611,683	932,311	3,765,422	23.0%
Utah	1,863,692	20,550	133,001	198,176	118,868	470,595	25.3%
Vermont	434,619	9,875	34,998	46,691	13,686	105,250	24.2%
Virginia	5,059,067	52,406	246,975	500,651	208,807	1,008,839	19.9%
Washington	4,197,155	83,351	312,030	434,468	158,193	988,042	23.5%
West Virginia	907,496	20,965	50,536	106,648	25,941	204,090	22.5%
Wisconsin	3,636,743	85,928	484,769	380,800	177,487	1,128,984	31.0%
Wyoming	406,576	14,191	11,798	39,780	15,851	81,620	20.1%

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