



EPI BRIEFING PAPER

ECONOMIC POLICY INSTITUTE • APRIL 16, 2015 • BRIEFING PAPER #397

THE TRANS-PACIFIC PARTNERSHIP IS UNLIKELY TO BE A GOOD DEAL FOR AMERICAN WORKERS

BY JOSH BIVENS

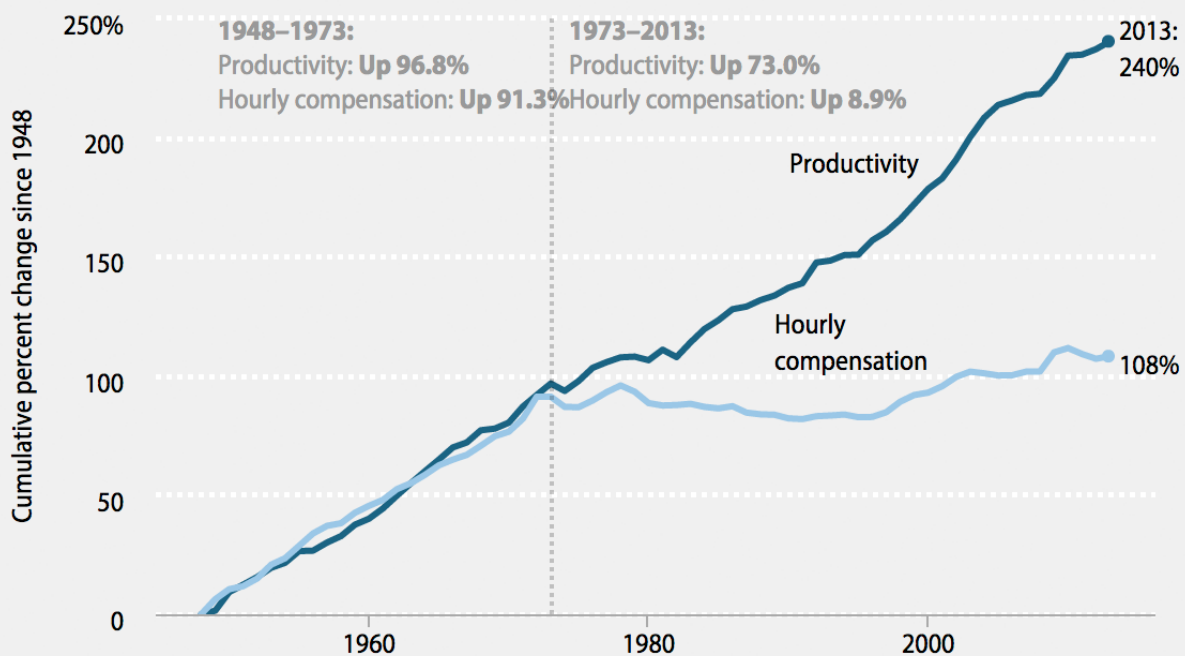
This report is part of **Raising America's Pay**, a multiyear research and public education initiative of the Economic Policy Institute to make wage growth an urgent national policy priority. Raising America's Pay identifies broad-based wage growth as the central economic challenge of our time—essential to alleviating inequality, expanding the middle class, reducing poverty, generating shared prosperity, and sustaining economic growth. epi.org/pay

Introduction and executive summary

Debate is heating up about the Trans-Pacific Partnership (TPP)—a proposed new trade agreement. At EPI we urge policymakers to assess every issue they approach—whether macroeconomic stabilization policy, tax and budget policy, regulatory policy, labor policy, or yes, trade policy—on the grounds of whether or not it will boost wages for the vast majority of Americans. This is an important benchmark because most Americans' hourly pay has not been boosted at all from the economy's growth over the past generation (**Figure A** depicts the growing wedge between hourly pay for the vast majority and economy-wide productivity).

FIGURE A

Disconnect between productivity and typical worker's compensation, 1948–2013



Note: Data are for compensation (wages and benefits) of production/nonsupervisory workers in the private sector and net productivity of the total economy. "Net productivity" is the growth of output of goods and services less depreciation per hour worked.

Source: EPI analysis of Bureau of Labor Statistics and Bureau of Economic Analysis data

Updated from Figure A in *Raising America's Pay: Why It's Our Central Economic Policy Challenge*

ECONOMIC POLICY INSTITUTE

In regard to the TPP and wages for the vast majority of Americans, there are two important concerns in play. The first is whether it will help generate aggregate demand (i.e., increase spending by households, governments, and businesses) and tighter labor markets in coming years. The second is whether it will lead to a trade policy that boosts low- and

moderate-wage workers' power to bargain for higher wages—instead of continuing to favor corporate managers and capital owners. This briefing paper makes the following points:

- Unless there is a strong currency provision in the TPP, reductions in the U.S. trade deficit—the most promising route back to sustainable full employment—will be harder to obtain following its passage.
- Recent claims that a strong currency provision in the TPP would be impossible to craft without impinging on the Federal Reserve's ability to undertake expansionary monetary policy to fight recessions are clearly wrong.
- Expanded trade, particularly with trading partners that are poorer and more labor-abundant than the United States, is likely to lower the wages of *most* American workers. While expanded trade is generally “win-win” at the country level, expanded trade redistributes so much income within countries that it's possible to make the majority of residents *worse off*—and this is indeed the likeliest scenario for the United States.
- TPP proponents who highlight the treaty's estimated net national gains while ignoring its likely regressive distributional outcomes are hiding the ball from policymakers. The net national gains from trade have the exact same root as the regressive distributional outcomes—they both stem from reshuffling of domestic production away from labor-intensive import-competing sectors—and you cannot have one without the other.
- Some TPP supporters claim the agreement will be “all gain, no pain” for American workers because U.S. tariffs are already low while trading partners' tariffs are higher. These arguments are economically incoherent. In fact, studies that show the TPP will increase overall American national income *also* show that it will cause substantial reshuffling of domestic production away from labor-intensive import-competing sectors. This will clearly inflict damage on large groups (probably the majority) of American workers.
- The wage losses to workers on the wrong end of expanded trade are almost surely larger (in percentage terms) than the estimated net national gains from the TPP. Specifically, if the TPP would indeed boost national income by 0.4 percent while boosting imports and exports by 0.6 percent of GDP by 2025, as a widely cited estimate claims, this would imply a loss to wages of non-college-educated workers of between 0.4 and 0.6 percent.
- Further, this widely cited estimate's ratio between estimated *income gains* stemming from the TPP and estimated *increases in trade flows* is deeply inconsistent with standard models relating these two variables. It is even inconsistent with the findings of other studies on trade liberalization's impact on incomes that show trade having particularly large income-boosting effects.
- These widely cited estimates of the TPP's effect on income and trade imply that every dollar of *imports* spurred by reducing trade costs in the TPP will increase *national income* by more than a dollar. This is an extraordinarily large effect. Standard models imply that every dollar of imports boosted by reduced trade barriers should boost national incomes by only 5–10 cents.

The TPP, aggregate demand, and currency provisions

For most of the 30 years before the Great Recession, a majority of macroeconomists assumed that the Federal Reserve's control of short-term interest rates would be sufficient to keep the economy at full employment. There was thus little concern about the effects of trade deficits and surpluses on the level of aggregate demand. When one assumes the economy has self-correcting properties and institutions that will ensure a rapid return to full employment in the face of any

shock, this lack of concern about trade's effects makes some sense. But this assumption should not have survived the Great Recession—the U.S. economy has been stuck well below potential for more than seven years now, even as the Federal Reserve has pursued expansionary monetary policy for much of that time.

Worse, there's evidence that the demand shortfall that has delayed a full recovery from the Great Recession could be chronic and last for years to come.¹ Economic history argues this is not impossible: Japan has been stuck below potential for decades, and much of Western Europe suffered a decade or more of excessively high unemployment because policymakers failed to boost demand growth. In the United States, fiscal policy has been historically contractionary during the recovery from the Great Recession, and pressure is building on the Fed to be less accommodative to growth even with no sign of accelerating inflation in sight. In short, a policy-induced chronic demand shortfall (call it “secular stagnation” if you like) seems to be a distinct possibility.

What does the TPP have to do with this? Once one realizes that the economy is *not* at full employment and that there is no automatic mechanism that can return it there quickly, then trade flows can have a powerful influence on aggregate demand. The United States has run chronic trade deficits for well over a decade. Since 2002, these deficits have been overwhelmingly driven by the conscious policy choices made by several of our major trading partners to manage the value of their currency for competitive advantage in U.S. and global markets.² They buy dollar-denominated assets to boost the value of the dollar and depress the value of their own currencies. This results in cheaper imports for the United States and makes U.S. exports more expensive in global markets. Ending this currency management (or currency manipulation) by our trading partners is hence a crucially important goal for macroeconomic stabilization in coming years.

Given this, a trade agreement that includes several countries that are obvious currency managers would seem like a good place to start addressing the problem. Yet there is every sign that the TPP will not include any useful currency provisions. The arguments against such provisions are weak. Particularly unconvincing is the argument that any such currency provision would somehow bar the Federal Reserve from undertaking expansionary monetary policy that included purchasing bonds to help the U.S. economy through a recession.

To be clear, tying the Fed's hands in fighting recessions would indeed be a bad thing, but it is clearly possible to define currency management in a way that does not constrain the Fed or any other central bank wanting to undertake similar maneuvers. Quantitative easing, or QE (the policy that some are claiming to be at risk in the future if a currency provision is added to the TPP), works through the Fed purchasing *domestic* assets in exchange for reserves it creates. That is, the Fed buys U.S. Treasury bonds and U.S. mortgage-backed securities (MBS) and credits the sellers with reserves held at the Fed. This has a first-order effect of lowering interest rates on Treasury bonds and MBS. These lower rates in turn do exert some downward pressure on the value of the U.S. dollar, which makes our exports cheaper and imports more expensive, thereby reducing our trade deficit. But the primary channel and primary target is the domestic interest rate, and the asset being purchased is denominated in the same currency that the nation's monetary authority controls.

Conversely, when people describe mercantilist currency management, they universally mean the purchase by a nation's monetary authorities of *foreign* assets. For example, the Chinese central bank buys not Chinese bonds, but U.S. Treasury bonds and MBS. This has the first-order effect of changing the relative demand for Chinese versus U.S. assets, which moves the U.S.–China exchange rate. In short, putting limits or rules in the TPP (or some other agreement)

on the extent of foreign asset purchases a nation's monetary authorities can undertake would do *nothing at all* to stop initiatives like the Fed's QE program during and after the Great Recession.

The TPP, globalization, and wage growth: No such thing as an “all gain, no pain” treaty

It is now widely acknowledged that globalization has played a role in the weak wage growth for most American workers and the rise in inequality that has characterized the past generation.³ In debates over trade agreements in the 1990s, this wage-suppressing impact of globalization was hotly disputed. But a reassessment of evidence as well as a sharp increase in imports from much-poorer nations has led most observers to agree that globalization has likely contributed to rising inequality.

Despite this, however, many economists and policymakers continue to support trade agreements like the TPP. Often they argue that yes, global integration likely put downward pressure on the wages of a large swath of Americans over the past generation, but now the U.S. market is already so open to imports that further damage will be minimal.⁴ The corollary runs that because *foreign* markets remain less open to U.S. goods, trade agreements will just offer new opportunities for U.S. *exporters*. Implicit in this view is that we can enjoy the overall national income-augmenting benefits of expanded trade opportunities offered by the TPP without suffering any of the regressive redistribution that has accompanied growing globalization in the past. We can call this the “all gain, no pain” theory of the TPP.

However, these are facile arguments that don't hold up to serious scrutiny.

Gains from trade and regressive redistribution: Two sides of the same coin

To see why, it's crucial to understand that the *benefits* of lower trade barriers for overall national income have the exact same root as the *regressive redistribution* they cause: a reshuffling of domestic production away from labor-intensive import-competing sectors and toward capital-intensive exportable sectors.⁵

The rough intuition is as follows. Trade agreements reduce domestic prices for imports—traditionally but not exclusively through cutting import tariffs (we will explain other channels a bit later). Lower prices for imports in turn pull down prices that domestic firms producing import-competing goods can charge (henceforth we label domestic import-competing goods *importables*). If the process stopped here then all consumers would be better off; American workers would pay a bit less for importable apparel, textiles, and electronics—and hence price-adjusted incomes would rise. But, unfortunately for most American workers, the process doesn't stop here—there are many other moving parts.

For one, while *consumers* benefit from lower prices for importables, *producers* of importables see incomes suffer, as they receive less for each unit of output they sell. For another, trade agreements see tariffs in our trading partners lowered as well, so American exporters now have expanded options for selling abroad. This actually pushes *up* the price of exportable goods for American consumers. Essentially American consumers now have to outbid a larger pool of potential global customers for American output in export industries. These higher prices for exportable goods actually claw back some of the overall gains to U.S. consumers from expanded trade, as higher export prices reduce price-adjusted real incomes even as lower importable prices increase these incomes.⁶

Further, the combination of lower prices for importable sectors and higher prices for exportable goods leads to resources (labor and capital) shifting from importable sectors to exportable sectors. Measured in dollar terms, the contraction of importables and the expansion of exportable sectors will balance.⁷ But each \$100 of production in exportable industries requires more capital and less labor than each \$100 of production in import-competing industries. How do we know this? The United States is among the most capital-abundant countries in the global economy, while many of our major trading partners are among the most labor-abundant countries.⁸ This makes capital relatively cheaper in the United States and labor relatively expensive, meaning that our comparative advantage is naturally in capital-intensive goods (which we will export) and not in labor-intensive goods (which we will import).⁹ So, this reshuffling of production away from labor-intensive industries toward capital-intensive industries reduces the demand for labor, which pulls down wages, and increases the demand for capital, which bids up its return.

The key lesson here is that if trade flows are determined (even in part) by the difference in capital and labor abundance between the United States and its trading partners, then the gains from trade (lower prices caused by a decline in the price of importables) are totally inseparable from the regressive redistribution it causes. And there is ample evidence that this difference in capital and labor abundance is indeed a basis for trade flows.¹⁰ This is a hugely important point: If expanded trade *does* lead to a reshuffling of domestic production from importables to exportables, then it will increase inequality and drag on wages for a large majority of American workers. If it does *not* lead to such a reshuffling of domestic production, then there are no benefits to be had from it through this channel.

A variation of the following argument has become ubiquitous: *Trade lets us keep the good jobs in the United States and sends the bad jobs overseas.* It's easy to see how this impression can be gained; in the example above, the United States is left with more exportable jobs (call them "aircraft jobs") and fewer importable jobs (call them "apparel jobs"). On average, aircraft jobs pay better than apparel jobs, so, it seems as if the United States has "kept the good jobs." However, this reflects confusion between what happens to *jobs* versus what happens to *workers*. More *jobs* are indeed located in the higher-wage sector (aircraft) post-trade, but *workers* receive lower wages *in both sectors*. The higher pay in the aircraft sector is wholly a function of the higher ratio of (high-paid) managers relative to workers employed there.

Finally, most standard models that map this reshuffling of domestic production onto changes in wages for different groups of American workers likely miss important channels through which globalization impacts wages. For example, these models assume competitive labor markets, so wages for workers on the losing end of trade are only harmed by the reduction in demand stemming from the domestic reshuffling of production away from importables. But there is copious evidence that labor markets are not perfectly competitive and that bargaining power explains a good portion of wage dynamics.¹¹ If expanded trade does not just reduce the demand for certain groups of workers, but also reduces their bargaining power vis-à-vis employers, this could provide a drag on wages that standard models do not pick up.

Claims that the TPP will be "all gain, no pain" are economically incoherent

This background should make one wary of claims that any trade agreement—and the TPP specifically—can provide the benefits of trade by boosting exports *without* spurring any of the redistributive effects caused by moving resources out of importable sectors. And there are further reasons to be wary about this claim.

Essentially all analysis of the gains from trade agreements assume that they have no impact on the trade deficit and that the economy is operating at full employment. These assumptions are, of course, problematic for numerous reasons.

These limitations are important to keep in mind when people brandish studies estimating the national income gains from agreements.

What does this have to do with the argument that the TPP will be all gain, no pain because barriers to imports are already essentially dismantled? If it is argued that the TPP will *expand exports* for American business using a model that assumes *balanced trade*, then it is implicitly being argued that imports must rise as well. And that's exactly what models of trade agreements universally show.¹² Thus, the argument that TPP will boost exports but not boost imports is simply wrong.

Further, remember that the standard mechanism by which expanded trade leads to wage suppression is the reshuffling of domestic production—our capital-intensive sectors expand while our labor-intensive sectors contract. Pretend for a moment we believed the claim that the *direct* impact of the TPP on imports is negligible because there are no more tariffs left to be cut in the United States. But remember that trade models predicting gains from the TPP assume full employment. So, if the economy is at full employment and then export opportunities expand due to the TPP, this *by definition* means that *non-export sectors must shrink* (if the economy is already at full employment, then you can only get more production in one sector—exporters—by ramping down production somewhere else). So, capital-intensive export production expands while less-capital-intensive production in other parts of the economy contracts. And the result is the same—demand for capital rises while demand for labor falls.

Finally, just because tariffs in the United States are already low doesn't mean that importable industries in the United States can't suffer from a treaty like the TPP. A key point of such treaties is to remove barriers from American investors setting up production facilities in foreign countries. If this influx of foreign direct investment increases productivity in foreign firms competing with American companies, this will have the same impact as a tariff cut—the price of imports falls and production shifts out of import-competing sectors, and wages fall as a consequence.

We should note an important asymmetry common in most trade agreements that the United States has signed in recent decades. These agreements tend to provide legal protections to U.S. firms that want to invest in production facilities in low-wage countries. This in turn leads to increased productivity in those countries' export sectors, which puts downward pressure on U.S. importable prices and leads to regressive redistribution within the United States. However, these same agreements often *undercut* possible advantages of foreign firms competing with U.S. exportables. Take software and pharmaceuticals: Foreign firms serving their home market can make larger profits if they are not forced to pay large royalties to American holders of intellectual property monopolies. Following the intellectual property harmonization that is a standard part of too many U.S. trade agreements, these foreign firms are not just unable to export output *back to the United States* without paying these royalties, they are often not even allowed to continue serving their own home market without making these royalty payments.¹³ This has the effect of boosting the rise in exportable prices in global markets that tends to follow tariff-cutting trade agreements. In turn, this increases the amount of domestic reshuffling of production in the U.S. economy, amplifying the regressive redistribution caused by trade.^{14 15}

Trade, TPP, and wage suppression: How many workers, and how much money?

So far we've sketched out the theory of how the same processes that lead to higher *overall* national incomes resulting from reduced trade barriers also lead to wage suppression for workers disproportionately represented in importable sectors. Too many of those writing about TPP and globalization assume that this logic applies only to trade-exposed sectors such as manufacturing. They then dismiss concerns regarding globalization by citing the relatively small share of U.S. workers remaining in manufacturing. But this represents a bad misunderstanding of textbook trade theory. It is not just those workers *employed in* importable sectors harmed by trade, it's also workers *who are disproportionately represented in importable sectors*. This means that it is not just workers employed in importable sectors such as apparel that need worry about the wage-suppressing effects of expanded trade, but also the workers employed in non-traded sectors—such as retail—that the apparel workers could compete with for jobs if they're displaced by trade. Or, to put it more succinctly, waitresses and landscapers do not lose their jobs due to trade, but their wages are definitely hurt because they need to compete with laid-off apparel workers who were displaced by imports.

When empirical investigations of trade's impact on wages for different groups of workers are undertaken, two proxies are generally used to divide those winning from those losing as a result of trade expansion: *non-production and supervisory workers* versus *production and non-supervisory workers*, and those workers *with* a four-year college degree versus those workers *without* a four-year degree.¹⁶ We tend to focus on the latter split—a college degree seems a better marker of capital, skills, and credentials that form the basis of U.S. comparative advantage. It is important to note that just under 70 percent of the U.S. workforce does not have a four-year college degree, *meaning that the majority of U.S. workers are likely on the losing end of expanded trade.*¹⁷

Using standard models that capture just one channel through which trade can suppress wages—the effects of relative demands based on competitive labor markets—I have calculated in previous work (Bivens 2013) that expanded trade overall has suppressed wages sufficiently to cost a non-college-educated worker about \$1,800 per year if they worked full time at the national median wage.¹⁸ This is not enough to explain all, or even the majority, of the overall wedge between national productivity and wages for typical workers documented in Figure A, but it is a significant amount of money.

More importantly for debates about trade, much more money is lost by workers on the losing end of expanded trade than is gained by the nation overall. This is obviously intuitive: If expanded trade *lowers* wages for one subset of workers but *raises* wages for the remaining group of workers, then the net of those gains and losses must be smaller (in absolute value) than the gross losses suffered by workers on the wrong end of expanded trade. In terms of relative magnitudes, one way to think of this is that the impact of globalization since the late 1970s is roughly analogous to taking a combined \$5 out of the pockets of the bottom two-thirds of workers (roughly those without a four-year college degree) and giving \$6 to the top third.¹⁹ Note what this means for comforting claims about how the workers on the wrong end of expanded trade can be compensated by the national gains from trade: We'd have to *take 85 percent* of the winners' gains from expanded trade—i.e., \$5 out of the \$6 gain—just to hold those on the losing end harmless. That is a very heavy political lift—and one unlikely to be undertaken enthusiastically by today's Congress.

What will the TPP in particular (as opposed to globalization *writ large*) do to wage growth for the vast majority of American workers? Empirically, that's a very tough question to answer with precision. But the first thing we should note is that the well-advertised gains to American GDP from trade agreements like the TPP are highlighting the *net overall gain* (i.e., that \$1 net gain above) while ignoring the much larger gross losses to the majority of American workers.

Estimates of the TPP's effects on the U.S. economy, and what they mean for wages

Probably the most-cited estimate of the TPP's likely effect on American incomes and trade flows comes from Petri and Plummer (2012). They estimate that the TPP could add almost 0.4 percent to American GDP by 2025. As detailed below, this is actually a very aggressive estimate of potential growth that could be spurred by trade liberalization, especially given the modesty of the estimated impact on actual trade flows (roughly 0.6 percent of GDP). But for now we will examine its implications.²⁰

Petri and Plummer (2012) do not include different factors of production (i.e., capital and labor) in their model, so they rule out distributional changes by definition. But we can tell from their description of the model that a reshuffling of domestic production is predicted by their modeling. As they say in an op-ed:

Trade agreements work by helping to move people and resources toward an economy's most productive firms and industries. ... [T]he TPP would benefit America's most competitive sectors. ... The TPP's investment and intellectual property provisions, for example, should help to make American know-how – Internet technologies, apps, movies and more – more accessible and secure in dynamic markets. ... [B]y 2015 around 650,000 more people, close to 0.5 percent of the labor force, can be expected to work in export-related jobs and correspondingly fewer in less-productive import-competing jobs because of the TPP.

It is very hard to read this as anything but evidence that the TPP will lead to an expansion of exportables and a contraction of importables. And since the evidence shows that American exportables are capital-intensive while American imports are labor-intensive, this will indeed spark the regressive redistribution we noted previously.

Given the Petri and Plummer (2012) estimates of trade expansion, and given the clear qualitative description of their model that notes these gains come from moving resources into capital-intensive production, we can feed their predictions regarding trade flows into a standard model relating trade flows to relative wages to get an estimate of what this implies for wages (see Bivens 2013 for a description of this methodology). As we will show later, this is potentially problematic in that we are taking *outputs* of one model (the Petri and Plummer 2012 model) and using them as *inputs* into another. And the outputs of the former model are inconsistent with the model of trade, wages, and national income we are using to assess wage impacts. Specifically, the ratio of trade flows to income gains is *much* higher in the Petri and Plummer (2012) model than in our trade and wages model, so we can only choose one of these (i.e., either national income gains or import increases) to be the exogenous parameter in the trade and wages model.

Below, we discuss results that use the import gain estimated by Petri and Plummer (2012). Next, we also discuss results that are derived by using the estimated national income gain from Petri and Plummer (2012), but which assume an import-to-income-gain *ratio* from another model (Anderson, Martin, and van der Mensbrugge 2006).

Simple estimates of the relationship between trade flows, relative wages, and overall income

The Petri and Plummer (2012) estimates are that trade flows will be higher by \$124 billion in 2025, roughly 0.6 percent of U.S. GDP in that year. In the models used by Bivens (2013) to relate growing trade flows and relative wage changes, this amount of trade expansion predicts a decline in non-college wages of roughly 0.4 percent (and a 0.2 percent increase in college wages).

How much faith should we put in this number? Not a lot—the Petri and Plummer (2012) estimates for the income-boosting effects of TPP are very high, given that the United States is starting from such a low level of tariffs and non-tariff barriers to trade. Further, the relationship between their estimate of the *ratio* of overall income effects to the rise in import penetration is significantly higher than what is found in more standard models. For example, in the standard model used by Bivens (2013), a 0.6 percent increase in overall trade is only associated with a change of roughly 0.03 percent of GDP.

Given this incongruity between the income gains and import increases in the Petri and Plummer (2012) models, one could imagine asking a different question of the trade and wages model.

Specifically, one could ask the model to assess the relative wage impacts associated with an *expansion of trade large enough to generate a 0.4 percent gain in overall income*. This large an income gain in the standard trade and wages model would require an increase in imports of 6 full percentage points of GDP—almost a doubling of imports from non-advanced economies and about 10 times as large an increase in trade as Petri and Plummer (2012) project. The resulting wage changes would be absurdly huge—with non-college wages falling more than 6 percent.²¹

In the third column of **Table 1**, we use the estimated income gain from the TPP estimated by Petri and Plummer (2012), but then choose an estimate of the ratio of income gains to import gains from another trade model (Anderson, Martin, and van der Mensbrugghe 2006). The Anderson, Martin, and van der Mensbrugghe (2006) model is notable for showing quite large gains from trade liberalization, due both to estimating a more ambitious liberalization scenario and to making modeling decisions that boost liberalization's income effect. But even though Anderson, Martin, and van der Mensbrugghe's (2006) estimates of the income effects of trade are large relative to those of most other models, they still yield a ratio of import changes to income changes of roughly 2.3:1, instead of the 1.5:1 as in the Petri and Plummer (2012) model.²²

If we apply the 2.3:1 ratio (again, an extraordinarily ambitious ratio for trade models) to our standard trade and wages model to assess the import growth that *would be needed* to achieve a 0.4 percent gain in overall national income, this implies imports would rise by roughly 0.9 percent of GDP by 2025, or roughly \$190 billion, not \$124 billion, as Petri and Plummer (2012) suggest. A rise in imports of this size would lower non-college wages by roughly 0.6 percent in our standard model.

The last two columns of Table 1 draw on results from another study that aims to assess the impact of rising imports on American wages (Autor, Dorn, and Hanson 2013). This study finds that each \$1,000 per worker increase in imports from China between 1990 and 2007 was associated with a 0.82 log-point decline in weekly earnings for non-manufacturing workers without a four-year college degree in the United States.²³ The Petri and Plummer (2012) estimates of

TABLE 1

Estimating wage effects consistent with TPP import projections

	Change in total trade with LDCs, 1973–2013	Estimated TPP effect, based on import/GDP ratio	Estimated TPP effect, alternate import/income gain ratio	Estimated TPP effect, based on import/GDP ratio	Estimated TPP effect, alternate import/income gain ratio
		Based on model in Bivens (2013)		Based on Autor et al. (2013)	
<i>Imports/GDP</i>	4.9%	0.6%	0.9%	0.6%	0.9%
<i>Overall income gains</i>	0.3%	0.0%	0.4%	0.0%	0.4%
Implied wage effects					
<i>Non-college wages</i>	-3.1%	-0.4%	-0.6%	-0.6%	-1.4%
<i>College wages</i>	1.9%	0.2%	0.4%		

Note: The first three columns are based on the methodology described in Bivens (2013). The model used to generate relative wage changes generates these changes, overall income gains, and import share simultaneously. This means that the Petri and Plummer (2012) results on overall income growth and import share increases are inconsistent with this model's structure. To address this, we model the relationships between relative wages, overall income gains, and import shares two ways. In the first, we assume that the estimated TPP import share increase is correct and in the second, we assume that the estimated TPP overall income gains are correct. The second column uses the import share as the forcing variable, while the third column uses the increase in overall income as the forcing variable. The third column uses the ratio between import gains and income gains estimated by Anderson, Martin, and van der Mensbrugghe (2006) in their estimate of gains from full merchandise trade liberalization, and then applies that ratio to the Petri and Plummer (2012) estimate of national income gains to get an implied import effect. The final two columns use the same measure of trade increase due to the TPP, but then apply the estimated effect of import flows on wages from Autor, Dorn and Hanson (2013).

Source: EPI analysis of Bivens (2013); Petri and Plummer (2012); Anderson, Martin, and van der Mensbrugghe (2006); and Autor, Dorn, and Hanson (2013)

ECONOMIC POLICY INSTITUTE

rising imports stemming from the TPP translate into roughly \$750 per U.S. worker, implying a 0.6 log-point decline (which is essentially equivalent to a 0.6 percent decline) in non-college wages, right in line with estimates from the standard model surveyed in Bivens (2013). If we instead use the \$275 billion increase in imports that makes the Petri and Plummer (2012) ratio of income gains to import increases consistent with Anderson, Martin, and van der Mensbrugghe (2006), this would imply a 1.4 percent decline in non-college wages.²⁴

If wage suppression stems from expanded trade, why do so many support the TPP?

It is striking how little public comment on the TPP has focused serious analytical attention on the wages issue. On the one hand, the role of currency provisions has occupied a lot of the TPP debate, and this is clearly a healthy development. The TPP is the first agreement in which the demand for a currency provision had muscled its way to the top of skeptics' concerns, and it's also the first major agreement that has been debated in the post–Great Recession period when there is growing recognition that the demand-sapping aspects of chronic trade deficits could be a major problem in coming years.

On the other hand, there has been too much evasion of the wages issue. The Petri and Plummer (2012) estimates of the TPP's likely economic impact focus like a laser on net national income gains while not examining distributional consequences. This is the case even though one of the foundational models that informs the Petri and Plummer (2012) modeling effort does indeed include different factors of production.

And even the research team (David Autor, David Dorn, and Gordon Hanson) that *published academic articles* on the wage-suppressing impact of less-developed countries' imports that we use in the previous section managed to avoid the wage issue entirely in a recent op-ed in favor of the TPP.²⁵ Autor, Dorn, and Hanson instead focused on the claim that TPP opponents focus on the "job-killing aspects of globalization" as their reason for rejecting it.²⁶ They say that manufacturing job loss associated with globalization is a "*fait accompli*" and argue that "much as we might like to return to 1970 when manufacturing comprised a quarter of U.S. non-farm employment, that's impossible without massive protectionist barriers."

Besides eliding the crucially important wage issue entirely, this is a straw-man argument about trade and jobs. Nobody thinks that manufacturing as a share of total employment should not have shrunk in recent decades. But the *level* of manufacturing employment fluctuated essentially between 17 and 19.5 million workers (depending on the phase of the business cycle) for 35 years between 1965 and 2000. Since 2000 it's down by more than 5 million workers (in 2014 manufacturing employment stood at 12.2 million, after bottoming out at 11.5 million in 2010). This decline since 2000 is driven largely by rising trade deficits and would indeed be substantially reversed if we addressed the currency management that drove those trade deficits.

Autor, Dorn, and Hanson then endorse the all gain, no pain claim offered in support of the TPP, claiming that it will *not* cause importable sectors to shrink but *will* allow exportables to expand (again, they frame the only "pain" from import competition as its effect on jobs, not wages). But as we've noted before, this all gain, no pain aspect of TPP is almost surely a mirage. They write:

Further the TPP's lower trade barriers would barely affect import competition faced by US manufacturers. ... Cutting back rock-bottom US manufacturing tariffs to zero for the remaining TPP countries would thus have negligible effects on US producers. These countries already enjoy unfettered access to US markets. But if the TPP has little downside for the US, what's the upside? ... Successfully exporting information and computer services, where the US maintains substantial technological leadership, requires more than low tariffs. It also requires protecting patents against infringement and safeguarding business assets and revenues against expropriation by foreign governments. To the extent that Obama succeeds in enshrining these guarantees in the TPP, the agreement would give a substantial boost to US trade.

Finally, it's worth noting that lots of the export "opportunities" highlighted by proponents of the TPP—including in the passage above—are not necessarily opportunities for U.S. firms to export *more*, they are instead opportunities to use the TPP to ensure that foreign consumers *pay more* for U.S. exports. Treaties like the TPP routinely harmonize other nations' intellectual property laws to meet U.S. standards, which are very kind to U.S. pharmaceutical and software companies. This essentially means other countries must now spend resources to ensure higher prices are paid by their own consumers to protect the monopoly profits of firms like Pfizer and Microsoft. It is hard indeed to see how this is a win for the wages of the vast majority of American workers. As Dean Baker (2015) points out, it's clearly a loss for other tradable sectors, since the increased prices foreign consumers have to pay for U.S. software and pharmaceuticals will

crowd out potential demand for other U.S. tradables. But it's awfully easy to see how this is a loss for foreign consumers and a big win for capital owners in the United States. The traditional argument for expanded trade being "win-win" at the national level was each country could enjoy cheaper prices for importables. But the logic above actually says the United States will benefit from the TPP by *raising* the price its trading partners must pay for some U.S. exports.

Summing up

The two biggest economic challenges facing the U.S. economy are (1) how to generate sufficient aggregate demand (spending by households, governments, and businesses) to ensure full employment and (2) how to stop the ever-rising inequality of wages and incomes that has smothered wage growth for the vast majority of workers.

The TPP is relevant to both issues. Absent a strong currency provision, it will do nothing directly to help close trade deficits and increase aggregate demand. This is a major problem. The chronic trade deficit has been dragging on demand for over a decade now, and signing a trade agreement without provisions to stop currency management that keeps the trade deficit from closing will make this issue harder to address in the future.

As regards wages and inequality, if the TPP leads to a reshuffling of domestic production toward exportable sectors that are capital-intensive and away from importable sectors that are labor-intensive, then it will exacerbate inequality. If it does not lead to such a reshuffling, then wage effects will be modest, but this begs the question of why would we bother to sign a trade agreement that did *not* lead to such a reshuffling of production? That is, after all, *the entire point* of trying to expand trade opportunities, and is the source of estimated net national gains from trade. Assurances that the TPP will be all gain, no pain are deeply disingenuous in this regard.

Often when pressed on the issue of American inequality, economists and policymakers will admit that such trade agreements could indeed be bad for large numbers of American workers, but profess their continued support for them on the grounds that these agreements are good for workers in other countries. This would be a fair rationale if it were true, but in the case of the TPP it seems hard to see how it could be. The largest gains to U.S. national income identified by American policymakers seem to be largely obtained through zero-sum increases in monopoly industry profits that come directly out of foreign households' incomes.

Finally, it's worth noting that there are many economic challenges facing the United States and the rest of the global economy that could benefit from global cooperation. For example, international cooperation to allow individual countries to effectively tax capital income (through either individual or corporate tax codes) without it simply fleeing to tax havens abroad would be a huge boon for national policymakers. Another boon would be international action to ensure that some countries' efforts to raise the price of greenhouse gas emissions do not simply lead to "leakage" as carbon-intensive production is shipped to countries without effective measures to control emissions.

International commercial negotiations that aimed to tackle these issues would be a big win for Americans and our trading partners. Instead, the TPP looks like it will just constitute one more step toward using commercial agreements to maximize three things: (1) the damage done through global integration to the wages of most American workers; (2) the rents earned by those holding a monopoly on intellectual property claims; and (3) the influence that the preferences of global economic elites have on the policymaking of American trading partners.

Endnotes

1. See Krugman (2013) and Summers (2014) for the most famous and clearest presentations of this hypothesis.
2. See Gagnon (2012) and Scott (2014) for estimates on the origins and consequences of currency management.
3. See Cline (1995), Spence (2011), Summers (2006), and Krugman (2008) for qualified-at-least endorsements of the view that globalization likely contributed to rising American inequality. See Bivens (2008) for a review of the academic evidence.
4. See DeLong (2015) and Autor, Dorn, and Hanson (2015) for variants of these arguments.
5. Note that in this formulation I'm including *human capital*—the excess returns earned by workers with better credentials and/or skills relative to others.
6. How do we know that the lower prices for imports and import-competing goods trump the higher prices for exportables in boosting overall price-adjusted incomes? Because we consume more importables than we produce (that's why we import them) and we produce more exports than we consume (that's why we export them). This means the average price of *consumption* items unambiguously falls due to trade, and hence price-adjusted national income increases. But this effect is much smaller than would be inferred by looking *only* at import price declines.
7. This balanced trade occurs in theory and in trade models estimating the impact of trade agreements. In real life, such balance will only occur if provisions to stop countries from engaging in currency management for competitive gain are also part of the trading system.
8. A very important point here is that labor-abundant and capital-abundant are *relative* terms. The United States is labor-scarce and capital-abundant relative to Mexico even though in raw terms there are more American workers than Mexican workers. But because the ratio of labor (think workers without credentials such as a four-year college degree) to capital (think both physical capital and workers with credentials such as four-year college degrees) is higher in Mexico than the United States, then Mexico is considered the labor-abundant country relative to the United States.
9. Note that one need not claim that relative factor abundance is the only determinant of trade flows. Lots of other things determine comparative advantage for particular industries—idiosyncratic technological differences, geography, returns to scale, etc. But so long as the entire bundle of imports and exports of a country is influenced by factor proportions, this logic holds. Also note that currency values can make a country like the United States a net importer even of goods that it naturally has a comparative advantage in.
10. See Wood (2007) for compelling evidence on this. Davis and Weinstein (2001) provide the most careful and comprehensive measure of the relative factor intensity of U.S. trade flows vis-à-vis the rest of the world and find clearly that U.S. imports are labor-intensive while exports are capital-intensive.
11. See Blanchflower, Oswald, and Sanfey (1996); Bivens (2006); Oswald (2008); and Martins (2009) for evidence on the empirical importance of rents and bargaining power in wage determination. Jayadev (2007) has identified a “bargaining channel” impact of globalization on the labor share of income and has found in a cross-country panel that increased financial globalization is associated with lower labor shares of income. Elsbey, Hobijn, and Sahin (2013) have empirically identified a link between rising import penetration and reduced labor share of income in the U.S. economy.
12. The Petri and Plummer (2012) results on the TPP that we will discuss later show exactly that exportable production rises while importable production falls as a result of the TPP.

13. Trade agreements that result in increased productivity in foreign countries' export sector while implicitly reducing productivity (by raising the cost of inputs if these include intellectual property held by Americans) in their importable sector will hence increase the U.S. terms of trade (the price of imports relative to the price of exports). This will make the reshuffling of U.S. domestic production that much greater, hence amplifying trade's inequality-generating effects.
14. Baker (2003) is among the first, and the most consistent, in pointing out this asymmetry in U.S. trade policy.
15. Bilateral tariff cutting leads to foreign consumers facing cheaper prices for U.S. exports because of reduced tariffs. But in global markets, the price of U.S. exportables actually rises (by less than the tariff cut) because of the resulting increase in demand for U.S. exports.
16. The production worker versus non-production-worker classification is more widely used, mostly for data availability reasons. See Feenstra and Hanson (1997) and Berman, Bound, and Griliches (1994) for examples of this. Production and non-supervisory workers represent roughly 80 percent of the private-sector workforce.
17. Work by Anderson, Tang, and Wood (2006) actually implies the potential for an even smaller share of the workforce to see benefits from falling trading costs—only those well-credentialed workers who can deploy their human capital to help boost production in the poorer nations.
18. See Bivens (2013) for a quick description of the model and methodology. Bivens (2007) lays out the longer arguments regarding this channel through which trade can impact wages.
19. The 5-6 to 1 ratio of net gains to gross losses comes out of making standard assumptions about labor market parameters such as the elasticity of relative labor demand. See Rodrik (2013) for a long discussion of the ratio between the overall national gains from trade and the redistribution caused by falling trade costs.
20. Petri and Plummer (2012) note that their estimates are increased by roughly 40 percent by a modeling assumption they make regarding the effect of the TPP in reducing fixed-cost barriers to trade that stimulate large increases in trade on the “extensive margin,” or, increases in trade flows associated with firms that did not previously export or import at all. The importance of the extensive margin in explaining rising trade flows is well-established, and a well-pedigreed theoretical literature (exemplified by Melitz 2003) shows that a trade-policy-induced reduction in fixed trading costs could indeed boost trade flows on the extensive margin. But Petri and Plummer (2012) do not identify specific fixed costs of trading that will actually be reduced by the TPP, and empirical work on what leads to large increases in trade on the extensive margin has shown that developments besides tariff-cutting have driven past increases, and that some episodes of tariff-cutting have not led to large extensive margin increases. In short, assuming a very large increase in extensive margin trade stemming from the TPP is a pretty aggressive assumption.
21. In many of the models cited by Petri and Plummer (2013), increases in trade flows are biased toward the most productive firms, leading to a rise in economy-wide productivity that is absent from most trade models. It should be noted that if this domestic shift from low- to high-productivity firms is associated in any way with an increased use of capital vis-à-vis labor (and much research [like Sampson 2014 and Egger and Kreikemeir 2009] indicates that it might be), this additional channel of trade effects could lead to larger redistributions than implied by current models, as well as larger gains from trade.
22. The assumption that increases the gains from trade is that tariff revenue is replaced with lump-sum taxes—replacing a distortionary tax (tariffs) with a non-distortionary tax (lump-sum taxes) that does not generally exist in the real world. The more ambitious liberalization scenario they model is complete liberalization (removal of all tariff and non-tariff barriers to trade) of merchandise trade in the world.
23. Autor, Dorn, and Hanson (2013) examine changes in import penetration and wages across geographic areas in the United States to obtain their results. While they examine Chinese imports specifically, this is in large part because they are confident that

the growth of Chinese imports into the United States was exogenous to U.S. economic developments. The Petri and Plummer (2012) estimates of income growth stemming from the TPP are by definition exogenous to U.S. economic developments, so the Autor, Dorn, and Hanson (2013) results seem likely to hold on this scale. It could be that Chinese imports skew more labor-intensive than imports from TPP countries, biasing up the Autor, Dorn, and Hanson (2013) results when applying them to the TPP import increases. Yet, Autor, Dorn, and Hanson (2013) note that their estimates of wage impacts could be biased down precisely because Chinese imports are exceptionally labor-intensive, and they find large disemployment effects of these as well. If the labor-intensity of Chinese imports leads to disproportionate job loss among the lowest-credentialed U.S. workers, this will actually attenuate their estimate of the wage impact.

24. Autor, Dorn, and Hanson (2013) also find negative effects in non-manufacturing industries on the wages of college-educated workers. However, the effects are smaller than for non-college workers, and non-college workers actually even see negative wage impacts stemming from increased imports in manufacturing, contrary to their findings on college workers.

25. See Autor, Dorn, and Hanson (2013).

26. Again, if the “job killing” aspect refers to the demand-sapping effect of chronic trade deficits, then this is a prime reason to oppose a TPP with no currency provision.

References

Anderson, Edward, Paul Tang, and Adrian Wood. 2006. “Globalization, Co-operation Costs, and Wage Inequalities.” *Oxford Economic Papers*, vol. 58, no. 4, 569–595.

Anderson, Kym, William Martin, and Dominique Van der Mensbrugge. 2006. “Market and Welfare Implications of Doha Reform Scenarios.” *Agricultural Trade Reform and the Doha Development Agenda*, 333–399.

Autor, David, David Dorn, and Gordon Hanson. 2013. “The China Syndrome: Local Labor Market Effects of Import Competition in the United States.” *The American Economic Review*, vol. 103, no. 6, 2121–2168.

Autor, David, David Dorn, and Gordon Hanson. 2015. “Why Obama’s Key Trade Deal with Asia Would Actually Be a Good Thing for American Workers.” *Washington Post*, March 12.

Baker, Dean. 2003. *Professional Protectionists: The Gains from Free Trade in Highly Paid Professional Services*. Center for Economic and Policy Research.

Baker, Dean. 2015. “Getting It Wrong on Trade: TPP Is Not Good for Workers.” *Beat the Press* (Center for Economic and Policy Research blog), March 14.

Berman, Eli, John Bound, and Zvi Griliches. 1994. “Changes in the Demand for Skilled Labor within U.S. Manufacturing: Evidence from the Annual Survey of Manufacturers.” *The Quarterly Journal of Economics*, vol. 109, no. 2, 367–397.

Bivens, Josh. 2006. “Wages, Profits, and Rent-Sharing in an Open Economy.” *International Review of Applied Economics*, vol. 20, no. 1, 69–83.

Bivens, Josh. 2007. *Globalization and American Wages: Past, Present, and Future*. Economic Policy Institute, Working Paper #279.

Bivens, Josh. 2008. *Everybody Wins Except for Most of Us: What Globalization Really Teaches About Globalization*. Washington, D.C.: Economic Policy Institute.

- Bivens, Josh. 2013. *Using Standard Models to Benchmark the Costs of Globalization for American Workers Without a College Degree*. Economic Policy Institute, Briefing Paper #354.
- Blanchflower, David, Andrew Oswald, and Peter Sanfey. 1996. "Wages, Profits, and Rent-Sharing." *The Quarterly Journal of Economics*, vol. 111, no. 1, 227–251.
- Cline, William. 1995. *Trade and Income Distribution*. Institute for International Economics.
- Davis, Donald, and David Weinstein. 2001. "An Account of Global Factor Trade." *The American Economic Review*, vol. 91, no. 5, 1423–1453.
- DeLong, Brad. 2015. "[The Debate Over the Trans-Pacific Partnership: Focus](#)." Washington Center for Equitable Growth blog, March 11.
- Egger, Harmut, and Udo Kreickemeier. 2009. "Firm Heterogeneity and the Labor Market Effects of Trade Liberalization." *International Economic Review*, vol. 50, no. 1, 187–216.
- Elsby, Michael, Bart Hobijn, and Aysegul Sahin. 2013. "The Decline of the U.S. Labor Share." *Brookings Papers on Economic Activity*, no. 2, 1–63.
- Feenstra, Robert, and Gordon Hanson. 1997. "Foreign Direct Investment and Relative Wages: Evidence from Mexico's Maquiladoras." *Journal of International Economics*, vol. 42, no. 3, 371–393.
- Gagnon, Joseph. 2012. "Combating Widespread Currency Manipulation." *Policy Brief in International Economics*, Peterson Institute for International Economics.
- Jayadev, Arjun. 2007. "Capital Account Openness and the Labour Share of Income." *Cambridge Journal of Economics*, vol. 31, no. 3, 423–443.
- Krugman, Paul. 2008. "Trade and Wages, Reconsidered." *Brookings Papers on Economic Activity*, no. 1, 103–154.
- Krugman, Paul. 2013. "[Secular Stagnation, Coalmines and Larry Summers](#)." *The Conscience of a Liberal* (New York Times blog), November 16.
- Martins, Pedro. 2009. "Rent Sharing Before and After the Wage Bill." *Applied Economics*, vol. 41, no. 17, 2133–2151.
- Melitz, Marc. 2003. "The Impact of Trade on Intra-Industry Reallocations and Aggregate Industry Productivity." *Econometrica*, vol. 71, no. 6, 1695–1725.
- Petri, Peter, and Michael Plummer. 2012. *The Trans-Pacific Partnership and Asia-Pacific Integration: Policy Implications*. Peterson Institute for International Economics Policy Brief.
- Rodrik, Dani. 2013. "[What Is Wrong \(and Right\) in Economics?](#)" Blog post, May 7.
- Sampson, Thomas. 2014. "Selection into Trade and Wage Inequality." *American Economic Journal: Microeconomics*, vol. 6, no. 3, 157–202.
- Scott, Robert. 2014. *Stop Currency Manipulation and Create Millions of Jobs, With Gains Across States and Congressional Districts*. Economic Policy Institute Briefing Paper #372.

Spence, Michael. 2011. "The Impact of Globalization on Income and Unemployment: the Downside of Integrating Markets." *Foreign Affairs*, July/August.

Summers, Lawrence. 2006. "The Global Middle Cries Out for Reassurance." *Financial Times*, October 26.

Summers, Lawrence. 2014. "US Economic Prospects: Secular Stagnation, Hysteresis, and the Zero Lower Bound." *Business Economics*, vol. 49, no. 2, 65–73.

Wood, Adrian. 2007. "Heckscher-Ohlin in Theory and Reality." Department of International Development, University of Oxford, Working Papers, 157.