

Exposure to Offshoring and the Politics of Trade Liberalization: Debate and Votes on Free Trade Agreements in the 108th U.S. Congress

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Abstract

The movement of jobs overseas, known as offshoring, is one of the most politicized aspects of globalization in the United States. Concerns about the loss of jobs to foreign workers are central to debates about further economic integration. Because trade liberalization reduces the costs of offshoring, it has negative welfare consequences for workers in offshorable jobs in both manufacturing and services. I argue that vulnerability to offshoring introduces a new dimension of protectionist sentiment distinct from skill or industry cleavages. I hypothesize that legislators are more likely to oppose trade liberalization when a larger share of their constituents are vulnerable to offshoring. Looking at debates and roll call votes on free trade agreements (FTAs) in the U.S. House of Representatives between 2003 and 2004, I find that legislators are more likely to discuss the costs of trade for workers and vote against FTAs when constituency vulnerability to offshoring is greater.

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The movement of jobs overseas, referred to in the popular press as offshoring or outsourcing, is one of the most salient and politicized aspects of globalization in the United States and other developed countries (see for instance Blinder, 2006; Drezner, 2004; Mankiw and Swagel, 2006). In a 2004 survey, 69% of respondents indicated that they believe outsourcing hurts the U.S. economy.¹ Similarly, a 2006 PEW News Interest Poll found that 71% of respondents believe “outsourcing is bad for the American economy because it sends good jobs overseas” (for the People and the Press, 2006). A 2012 survey found 63% of respondents were very worried about “[o]utsourcing American jobs to other countries” (and an additional 14% were fairly worried about the same issue).² Mansfield and Mutz (2013) examine attitudes toward offshore outsourcing and find that a majority of the U.S. public consistently opposes outsourcing. Not only is offshoring unpopular, it is also politically salient to voters. In a study of the effects of trade related job loss and compensation on incumbent vote share in presidential elections in the U.S., Margalit (2011) demonstrates that this type of job loss generates electoral costs for the incumbent.

It is therefore unsurprising that concerns about the loss of American jobs to foreign workers is central to debates about further economic integration, especially in debates over free trade agreements (FTAs). For example, in a 1992 presidential debate, Ross Perot claimed that NAFTA would lead to a “giant sucking sound” of American jobs moving across the border to Mexico. In the 2004 election cycle, offshoring was again a salient issue after the Chairman of the Council of Economic Advisors, Gregory Mankiw, suggested that outsourcing was good for the U.S. economy in a controversial “Economic Report of the President.” Then presidential candidate, Senator John Kerry, denounced outsourcing and “Benedict Arnold

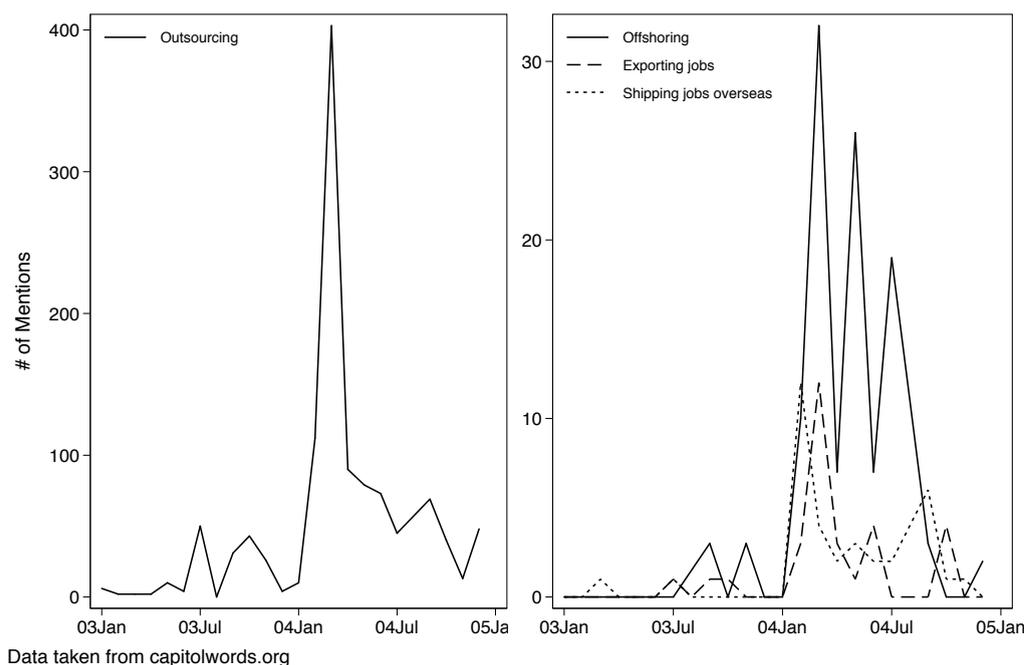
¹The Associated Press (2004.). The poll asked “Some economists have said outsourcing will help the U.S. (United States) economy in the long run by creating prosperity in other countries, and eventually, a stronger market for U.S. goods. Other economists say outsourcing hurts the economy by sending jobs and salaries overseas, without any real long-term benefit. Do you believe outsourcing helps or hurts the economy?”

²Time/Abt SRBI Poll, September 2012.

CEOs” that ship American jobs overseas. In 2004, there were 1,000 references to outsourcing in four major newspapers, a significant increase compared to fewer than 300 mentions in previous years (Mankiw and Swagel 2006, 4; see also Maraglit 2011).

During this period, members of Congress were also attentive to the issue, as suggested by Figure 1, which presents mentions of “outsourcing,” and associated phrases like “offshoring” and “exporting jobs” in the 108th Congress.³ There is a marked increase in mentions of outsourcing, from 10 in January 2004, to 112 in February and 403 in March which corresponds to the controversial “Economic Report of the President.” Campaign ads in battleground states also criticized President Bush for supporting outsourcing. During the 2012 presidential election, Democrats attacked Mitt Romney for outsourcing American jobs to China. These examples suggest that not only is offshoring salient, but the politics of offshoring are distinct from other aspects of international trade.

Figure 1: Mentions of Outsourcing in the 108th Congress



Although the terms outsourcing and offshoring are used interchangeably in the press,

³These data are from the Capitol Words database, which measures word counts from legislator speeches on the floor of Congress (capitolwords.org.). Accessed October 12, 2013.

offshoring is the correct term for the phenomenon of interest because it refers to the process of moving jobs overseas regardless of whether the activity remains wholly within the firm, while outsourcing, on the other hand, is the process of moving a job outside the company, either domestically or internationally. Offshoring represents not only imports by U.S. multinationals from their affiliates, but also imports of intermediate inputs, final goods, and services used in the production of an American firm, or sold under its brand (Feenstra, 1998, 36). As such, it does not correspond to one specific category of international trade, but may encompass the imports of goods and services or foreign direct investment (Blinder, 2009*b*). Offshoring in the 1990s and 2000s included more skill intensive tasks from a broader range of industries, especially services, because declining transportation and telecommunication costs have increased the number of jobs that can be provided from a distance (Jensen and Kletzer, 2005; Feenstra, 1998; Feenstra, 2010). One estimate suggests that 29 percent of jobs in the U.S. workforce are potentially offshorable (Blinder, 2009*a*).

A job can be offshored if job tasks do not require face-to-face delivery and the tasks are not location-specific (Blinder, 2006). Occupations which perform many tasks meeting these criteria are said to be offshorable.⁴ According to this definition, most manufacturing jobs are offshorable because the various stages of the production process can be performed in almost any location. Indeed, offshoring in manufacturing is not a new phenomenon.⁵ International competition in manufacturing has had a disproportionately negative impact on less-skilled workers in developed countries like the U.S. (Feenstra, 2010). Alternatively, offshoring in services is new and different, because services offshoring exposes new segments

⁴Acemoglu and Autor (2011) suggest that occupations are best understood as bundles of tasks. For instance, a lawyer (an occupation) may perform various tasks like writing briefs, arguing in court, etc.

⁵Materials offshoring is the subject of a large literature (see e.g. Feenstra and Hanson, 1996; Feenstra and Hanson, 1999). Feenstra (2010, 102) characterizes the 1980s as the era of materials offshoring and in the U.S., many low skill manufacturing jobs have already been moved overseas.

of the labor force that were traditionally viewed as non-tradable (e.g. Hays, 2009; Iversen and Wren, 1998) to competition from abroad.⁶ Moreover, many offshorable service jobs are higher-skill, high-wage white collar jobs. Software developers are one of the most prominent examples of this. However, other skilled workers, such as those in managerial positions (e.g. CEOs), as well as less-skilled workers in childcare or food service for instance, provide location-specific services and thus are not vulnerable to offshoring.

What does this mean for the politics of trade liberalization? I argue that offshoring in services transforms the political economy of trade in two ways: (1) it expands the size of the constituency with a stake in globalization and (2) it introduces new distributional consequences from trade that are based on the characteristics of occupations. Unlike manufacturing, vulnerability to offshoring in services does not map onto skill or industry. Because trade liberalization facilitates offshoring by reducing the costs of cross-border production, it has negative welfare consequences for those in offshorable jobs, making those citizens likely to oppose further trade liberalization. Thus, the size of the constituency vulnerable to offshoring is a key source of protectionist sentiment that legislators seeking re-election must factor into their trade policy positions. Neither of the dominant theoretical frameworks meant to account for the relevance of labor concerns over trade, the Heckscher-Ohlin-Samuelson (HOS) model, which suggests that less skilled workers in developed countries will oppose trade liberalization, or the Ricardo-Viner (RV) model, which predicts industry-based cleavages in which workers in import-competing industries will oppose trade liberalization, can account for this circumstance.⁷ Therefore, I expect that legislators with constituencies vulnerable

⁶Chase's (2008) study of offshoring in the motion pictures industry is an important exception that explicitly studies globalization in services.

⁷In HOS, trade increases returns to abundant factors and decrease returns to scarce factors (Stolper and Samuelson, 1941). The U.S. is relatively endowed with skilled labor, and relatively scarce in unskilled labor, suggesting that the former will support and the latter will oppose free trade. The Ricardo-Viner model, on the other hand, predicts that the distributional consequences of trade will tend to occur along industry lines. Thus individuals in import-competing (exporting) industries are expected to oppose (support) free trade. For

to offshoring will be more likely to oppose trade liberalization. I use Blinder's (2009*a*) classification of offshorable occupations, in combination with U.S. Census data, to construct a measure of constituency exposure to offshoring at the congressional district level.

If the argument above is true, then we should observe that legislators are more likely to raise concerns about how trade liberalization impacts workers and also more likely to vote against trade liberalization when a larger share of constituents are vulnerable to offshoring. I test these two observable implications of the argument by looking at floor debates and roll call votes on four FTAs in the House of Representatives during the 108th U.S. Congress between 2003 and 2004. FTAs are one of the most prominent forms of trade liberalization and thus FTAs provide an ideal context to examine the influence of offshoring on the political economy of liberalization.⁸ I look at these votes because the the 108th House considered FTAs with both developed and developing countries and the 2003-2004 period corresponds to the first period of political concern about offshoring in services. I examine speeches during bill debates and roll call votes as indicators of legislators' positions on trade liberalization. I find evidence in support of my hypotheses in the analysis of roll call votes and floor debate: representatives are more likely discuss the costs of trade for workers in debates and less likely to vote in favor of FTAs when offshorability among constituents is higher. The results suggest that offshorability introduces a new dimension to the politics of trade liberalization, even after controlling for competing factors suggested by the existing literature.

1 The political economy of trade with offshoring

Incorporating offshoring into models of trade introduces a new dimension of labor interests to the political economy of trade. Politicians must take into consideration first, that the reduction of barriers through trade liberalization reduces the costs of offshoring, which increases the range of tasks likely to be shifted overseas and second, that this increase in competition

review, see Milner (1999) and Rogowski (2006).

⁸Since signing NAFTA in 1994, the U.S. has signed FTAs with 18 countries, and it is currently negotiating the Trans Pacific Partnership agreement.

has negative consequences for those in offshorable jobs. Politicians, motivated by the desire for re-election, face a tradeoff between the benefits of trade for the economy as a whole and the costs borne by certain economic actors, including those in offshorable jobs. A number of scholars have emphasized different aspects of the aggregation of competing preferences and influences on U.S. trade policy.⁹ I focus my discussion on how diffuse labor interests shape trade policy, drawing on Bailey's (2001) argument about diffuse interests to explain why elected officials' positions on trade liberalization vary systematically according to how exposed their constituencies are to offshoring. In this section, I first discuss how the distributional consequences of offshoring generate a new source of protectionist sentiment among workers. I then discuss why legislators have incentives to be responsive to constituency vulnerability to offshoring.

International trade generates negative welfare consequences for those in offshorable jobs. Those in offshorable jobs face downward pressure on wages and rising job insecurity due to competition from labor overseas even if jobs remain in the United States.¹⁰ Blinder (2009*a*) finds that those in the most offshorable occupations pay a wage penalty, even after controlling for education. Similarly, Ebenstein, Harrison, McMillan and Phillips (2014) find that workers exposed to globalization experience large negative wage effects.¹¹ Individuals in offshorable jobs are also more likely to lose their job, and among those who are displaced, those in

⁹For example, see Bailey and Brady (1998), Bailey (2001), Fordham and McKeown (2003), Goldstein (1986), Milner (1988), and Milner and Tingley (2011) Nollen and Quinn (1994). In particular, the following emphasize (to varying degrees) the role of organized labor: Baldwin and Magee (2000), Conybeare and Zinkula (1996), Feinberg, Husted and Reynolds (2011), Matschke and Sherlund (2006), and Steagall and Jennings (1996).

¹⁰To limit the analysis to only those directly displaced by offshoring would understate the impact of this phenomenon on the welfare of workers.

¹¹Their results further suggest that the expansion of offshoring activity in low wage locations decreases wages for routine workers, and the size of these effects appear to be increasing over time (Ebenstein et al., 2014).

offshorable jobs face additional costs compared to those displaced for other reasons. For instance, Jensen and Kletzer (2005, 107), in a study of tradable and nontradable occupations, find that job market displacement is higher among those employed in tradable occupations, with larger differences in displacement rates between tradable and nontradable occupations in the service sector. These differences persist among white- and blue-collar workers, though the re-employed workers in tradable services experienced smaller wage losses than their manufacturing counterparts (Jensen and Kletzer, 2005).¹² Moreover, models of international trade that do not assume full employment suggest that trade has negative consequences for the level of employment (Ebenstein et al., 2014; Mitra and Ranjan, 2010), job security and the quality of jobs (Davis and Harrigan, 2011).¹³

As a result, vulnerability to offshoring is likely to generate protectionist sentiment among workers, leading them to oppose further trade liberalization. Members of Congress have incentives to respond to these interests, even though as is often the case with labor, these interests are diffuse. Bailey (2001) argues that diffuse interests matter not only because these interests represent votes, but also because other actors may try to mobilize these interests, including for instance electoral challengers or hostile interest groups. Therefore, diffuse labor interests may influence the policy positions of legislators even in the presence of high levels

¹²Jensen and Kletzer (2005) define tradable occupations as those for which production is geographically disbursed in the United States. For similar findings on the effects of international trade on displacement in manufacturing, see Kletzer (2001; 2004). As another example, among displaced Danish workers, those displaced as a result of offshoring sustained longer and more persistent earnings losses than those displaced for other reasons, and the effect is more pronounced for unskilled workers (Hummels, Jørgensen, Munch and Xiang, 2014).

¹³Davis and Harrigan (2011) suggest that the creative destruction of jobs resulting from churning of firms can account for higher levels of perceived job insecurity, not just in import-competing firms, but also in exporters and multinationals. In contrast, the canonical trade models (HOS and RV) assume full employment, so the distributional consequences are limited to wage effects.

of interest group activity because elected officials must anticipate any mobilization of those interests and how voters would respond (Bailey, 2001).¹⁴

In order for the mechanism of anticipated reaction to shape the behavior of elected officials, Bailey (2001) argues that there must be a latent shared interest and also someone willing to mobilize that interest. The case of offshoring fits these two conditions because there is clear shared opposition to this dimension of international trade and many examples of attempts to mobilize voters along this issue. As an example, consider the 2004 election in which groups like Moveon.org and The Media Fund sponsored ads about offshoring in battleground states like Ohio (Mankiw and Swagel, 2006). For instance, an ad titled “Ohio Outsourced” features a citizen saying “When President Bush says that he’s going to help companies outsource jobs, it’s infuriating.” A second Media Fund ad, titled “It’s About Jobs,” announces that: “During the past three years it’s true George W. Bush has created more jobs. Unfortunately, they were created in places like China. Bush’s policies have encouraged the loss of nearly three million jobs. He supported tax breaks to corporations that shipped jobs overseas.”¹⁵ These examples demonstrate that mobilization on the issue of offshoring is likely and thus elected officials have incentives to consider the impact of trade on those in offshorable jobs. Because larger groups command more voters and thus more attention, legislators from districts with higher levels of exposure to offshoring should be more likely to oppose trade liberalization and there should be systematic differences in legislators’ positions based on constituency exposure to offshoring.

Legislators have an incentive to consider vulnerability to offshoring among constituents even if citizens do not precisely understand the mechanics of the relationship between offshoring and trade or how these phenomena affect them. Citizens observe the economy around them, make inferences about future income and job security, and respond accordingly. “Most Americans judge economic reality from what they observe in their lives, not from debates among economists or what journalists write. The reality includes job losses and threats of

¹⁴Bailey (2001) argues that anticipated reaction explains why skilled workers are represented in trade policy.

¹⁵Text of both ads available from Appleman (2015).

job losses due to offshoring and trade, three decades of stagnant real wages for most workers despite rapid productivity growth, and greater inequality to which globalization contributed” (Freeman, 2009, 67). Rising voter sentiments of economic insecurity, regardless of whether the source is clearly known, are likely to have implications for policy preferences (Aldrich et. al n.d., 14). Given the extent to which the public is concerned about jobs being shipped overseas, there is strong reason to suspect that attitudes toward offshoring will shape attitudes toward FTAs. However, elected officials should only care if the citizens link offshoring and trade. Mankiw and Swagel (2006, 22) suggest that “[i]n the public’s mind, the issue of trade is inextricably linked to the issue of job creation. Embracing free trade is sometimes seen as indifference to the goal of full employment.” Politicians are able to, and in practice do, create links between offshoring and international trade, especially those critical of how economic globalization affect workers. The examples in the introduction suggest that this is a key aspect of the politics of trade liberalization.

Broadly, I argue that constituency exposure to offshoring will affect legislators’ positions on trade liberalization. Legislators’ with constituencies that are more exposed to offshoring are less likely to support trade liberalization. Although a legislator’s position on trade liberalization is an unobserved variable, we can learn about legislators’ latent trade policy positions by examining legislative speech and votes. In addition to votes, which are the end result of the legislative process, position-taking is another important part of the legislative process as suggested by Box-Steffensmeier, Arnold and Zorn (1997), Grimmer (2013) and others. Speeches during legislative debates are intended for a broad audience, which includes constituents and the media, as well as other representatives (Pearson and Dancey, 2011*a*, 912). Moreover, “legislative debate on important legislation is often disseminated well beyond the halls of Congress, in quotes by print reporters, on the television news, and, more recently, in online posts” (Pearson and Dancey, 2011*b*, 498). If my argument about constituency vulnerability to offshoring is correct, we should observe that members of Congress with more constituents exposed to offshoring are more likely to discuss the costs of trade for workers and also more likely to oppose liberalization. I test the following observable implications of this argument:

H1: Legislators with a larger share of their constituency exposed to offshoring will be more likely to discuss costs of trade for labor during debates on liberalization.

H2: Legislators with a larger share of their constituency exposed to offshoring will be less likely to vote in favor of trade liberalization.

As an occupation characteristic, offshorability taps different worker attributes than those suggested by the HOS and RV models of trade (skill and industry, respectively). To understand how offshorability differs from skill, it is useful to explain the role of occupation in international trade by turning to the literature on the trade in tasks (e.g. Acemoglu and Autor, 2011; Grossman and Rossi-Hansberg, 2008). Grossman and Rossi-Hansberg (2008, 1978) suggest that “[f]or centuries, trade mostly entailed an exchange of goods. Now it increasingly involves bits of value being added in many different locations, or what might be called trade in tasks.” Individual workers are endowed with skills, and these skills can be applied to a range of tasks; for instance, although medium skill workers are more likely to perform medium skill tasks, an increase in the supply of medium skill tasks from abroad will shift domestic medium skill workers to low skill tasks (Acemoglu and Autor, 2011). Occupations are bundles of tasks, and as such, some occupations are more intensive in low-skill tasks (and therefore more likely to be filled by less-skilled workers), while others are intensive in medium- or high-skill tasks (and therefore more likely to be filled by higher skilled workers).

Table 1 illustrates that offshorability is not simply another measure of skill by providing examples of occupations that vary by the level of skill and offshorability.¹⁶ The offshorability of an occupation is drawn from Blinder’s classification of occupations (described in further detail below), in which occupations intensive in tasks that can be provided from abroad are the most offshorable. As an indicator of skill, I report the modal level of education reported by respondents in the O*NET (Occupational Information Network) database. Across all categories of offshorability, there are prominent examples of occupations that require more-

¹⁶Indeed, Blinder (2006; 2009a) presents evidence that vulnerability to offshoring is not highly correlated with education or median occupation wage - two measures of skill currently used in the literature on individual trade preferences.

and less-skilled workers. For instance, the category of highly offshorable jobs includes computer programmers, which tend to be more skilled workers, as well as telemarketers, which tend to be less skilled workers. The same is true of those occupations in the offshorable category, including accountants and production workers, and the non-offshorable (sales managers vs. clerks) and highly non-offshorable (chief executives vs. childcare workers) categories. The distinction between offshorability and industry requires less elaboration, because some occupations are found in many industries (e.g. offshorable occupations like accounting and other office functions, as well as less offshorable occupations in sales or management). Other occupations are more concentrated in a specific industry (e.g. offshorable manufacturing production occupations as well as non-offshorable childcare services occupations). Thus offshorability introduces a new dimension to the political economy of trade because individuals with the same skill level or within the same industry may have different preferences over liberalization based on their level of offshorability.

Table 1: Examples of offshorability, occupation and skill

Offshorability category	Occupation	Education
Highly offshorable	Computer programmers	BA+
	Telemarketers	HS
Offshorable	Accountant	BA+
	Production workers	HS or HS
Non-offshorable	Sales managers	BA
	Shipping and receiving clerks	HS
Highly non-offshorable	Chief executive	BA+
	Childcare worker	HS

Therefore, this new source of protectionist sentiment from workers exposed to offshoring cuts across the factor and industry based cleavages suggested by the existing literature. The preferences of those in non-offshorable jobs are less straightforward. Their preferences may be shaped by other worker attributes (like skill),¹⁷ or by consumer interests or sociotropic and media effects. Thus, I am not suggesting that cleavages based on offshoring completely

¹⁷For instance, Acemoglu and Autor (2011) suggest that medium-skill workers who may be replaced by foreign labor shift into lower skill tasks, thus increasing competition among low-skilled workers.

replace existing cleavages. All else equal, legislators are still more likely to support free trade as the skill abundance in their district increases as predicted by HOS. Similarly, support for trade is likely to be lower (higher) in districts in which industries experience a high level of import competition (exporting) as predicted by RV. The argument of this paper is that there is an additional dimension to trade preferences in which labor interests fall along occupational lines, and I test this argument alongside the HOS and RV theories. Furthermore, legislators must weigh interests regarding offshorability against those who stand to benefit from a given trade agreement, a group which may include consumers, exporters and multinationals. Arguments about pro-liberalization interests are well-established in the literature, and so I defer further discussion of these factors to model specification and control variables.

2 Empirical strategy and background

FTAs are a useful place to examine the influence of labor, and specifically, the role of offshorability on the politics of trade, because FTAs are high-profile (in comparison to other trade bills) and thus more likely to be salient to voters. The conclusion of a trade agreement is a “more credible means for leaders to signal voters about their policy choices than do unilateral policy declarations, which leaders may be able to quietly reverse at any time” (Mansfield, Milner and Rosendorff, 2002, 480). Therefore, I examine all FTAs voted on by the House of Representatives during the 108th Congress in 2003 and 2004. I choose this Congress and set of agreements because concerns about services offshoring are emerging for the first time and the U.S. negotiated trade agreements with both developed and developing countries during this period. To test my hypotheses, I examine whether constituency vulnerability to offshoring shapes representatives’ (1) speeches during floor debates and (2) votes on FTAs.

2.1 Background on FTAs in the 108th Congress

The 108th Congress voted on (and approved) trade agreements with the following four countries: Australia, Chile, Morocco, and Singapore. These countries have different levels of development and differing levels of trade with the United States. For example, in 2003

the U.S. traded (exports plus imports for consumption) the most with Singapore (\$29.2 billion), followed by Australia (\$18.9 billion), Chile (\$6.4 billion) and finally Morocco (\$0.86 billion) (Fergusson and Sek, 2004, 16). Each of these agreements was negotiated under trade promotion authority (TPA), formerly known as ‘fast-track’ authority. TPA grants the President the power to negotiate reciprocal trade agreements that Congress must vote up or down on without amendment. The 107th Congress approved TPA legislation in 2002.

Table 2 presents the vote breakdown for each agreement in the House. There is a high degree of correlation between the votes on the FTAs with Chile and Singapore because these FTAs were both voted on in the House on July 24, 2003. In fact, only 12 representatives switched their votes on these two bills. The implementing legislation for the agreements with Australia and Morocco were considered in July 2004. Though all four agreements passed, the margin of support was narrower for the Chilean and Singaporean agreements for two primary reasons. First and foremost, the economic impact of these two agreements on U.S. imports and exports was expected to be much larger than the effects of the Australian and Moroccan FTAs, based on simulations by the U.S. International Trade Commission (USITC).¹⁸ Table 3 presents the estimated impact of the full implementation of the agreed upon tariff cuts on U.S. exports to and imports from each of the partner countries. For example, the estimated impact of the Singaporean FTA on imports is 18.7 billion, compared to an estimate of 1.1 and 0.2 billion for Australia and Morocco, respectively. Second, the Chilean and Singaporean agreements were the first to be negotiated under this round of TPA, and representatives were concerned that these agreements would serve as templates for future FTAs, including the Central American Free Trade Agreement (CAFTA).

Table 2: Breakdown of votes on FTAs in the House of Representatives

	Australia	Chile	Morocco	Singapore
Favor	314	271	325	271
Oppose	109	156	99	155
Total	423	427	424	426

As initial evidence that politicians link trade, offshoring and the loss of jobs in the manner suggested by my theory, I examine the extent to which members of Congress highlight

¹⁸USITC (2004*a*), USITC (2003*a*), USITC (2004*b*), USITC (2003*b*).

Table 3: Simulated impact of each FTA on U.S. exports and imports

	Exports (Mil.)	Imports (Mil.)
Australia	1,499	1,161
Chile	4,108	4,771
Morocco	1,811	198.6
Singapore	21,974	18,706

Numbers from simulations by the USITC.

the costs of trade for labor during debates. During all of the debates, representatives who opposed trade liberalization frequently emphasized the cost of these agreements to American workers, in general, and with respect to offshoring in particular. Multiple speakers raised the issue of exporting or shipping jobs overseas. Not only did representatives consistently discuss lost manufacturing jobs (in the past due to agreements like NAFTA, as well as likely future losses), they also raised concerns about the new threat to white collar, high-wage service jobs of being moved overseas. While debates across all four agreements addressed jobs, the negative welfare consequences of the agreements for U.S. workers was especially highlighted during the debates on implementing legislation for Chile and Singapore. For example, Representative Stark (D-California) suggests that in addition to 500,000 manufacturing jobs lost due to NAFTA,

It is anticipated that 3.5 million white collar jobs and \$136 billion in wages will shift from the United States to low-cost countries in the next 10 years. So all of those, in addition to the 100,000 high-tech jobs we have already lost in California, Silicon Valley, those jobs will become obsolete under the Bush administration's course for free trade. It will not just be IT jobs. We will see a shift in financial service jobs, research and development jobs, service call center jobs and insurance jobs (*United States-Chile Free Trade Agreement Implementation Act*, 2003, H7471).

Similarly, Congressman Ryan (D-Ohio), during debate on the Singaporean FTA, states that “we are finding out that IBM is sending 3 million high-tech software jobs, computer-design jobs to India, so is Microsoft, so is Oracle, and we wonder why there is not a recovery in this country. The investments, the capital, are going to countries that we are doing trade

deals with that have low environmental standards and low labor standards” (*United States-Singapore Free Trade Agreement Implementation Act*, 2003, H7497).

In addition to discussions of offshoring explicitly, representatives also raised concerns during all of the debates about the weakness and enforceability of the provisions for labor standards. The provisions require both partners to uphold domestic labor laws, which could include weak labor protections and would also allow countries to revise standards downwards. Furthermore, because labor standards are not subject to the dispute settlement mechanism that governs the commercial provisions of the agreements, the labor standards were criticized as unenforceable. In the debate on the Australian FTA, Representative Defazio (D-Oregon), asks why we cannot “have an enforceable labor standard? And if we have not got one with Australia, who are we ever going to get one with?” (*United States-Australia Free Trade Implementation Act*, 2004, H5703). Similarly, Representative Pascrell (D-New Jersey) states that “while Australia has a strong labor and environmental protection, what we are doing in this legislation is saying that if we cannot have strong labor and environmental agreements with Australia, who the heck can we have it with?” (*United States-Australia Free Trade Implementation Act*, 2004, H5707). Multiple speakers also voiced concerns that these provisions would create a bad precedent in future trade negotiations with partners with worse labor standards than these four countries (especially CAFTA). In summary, legislators frequently discussed the costs of trade for workers, which provides anecdotal evidence in support of the argument that legislators consider diffuse labor interests, particularly vulnerability to offshoring, during the formation of their trade policy positions.

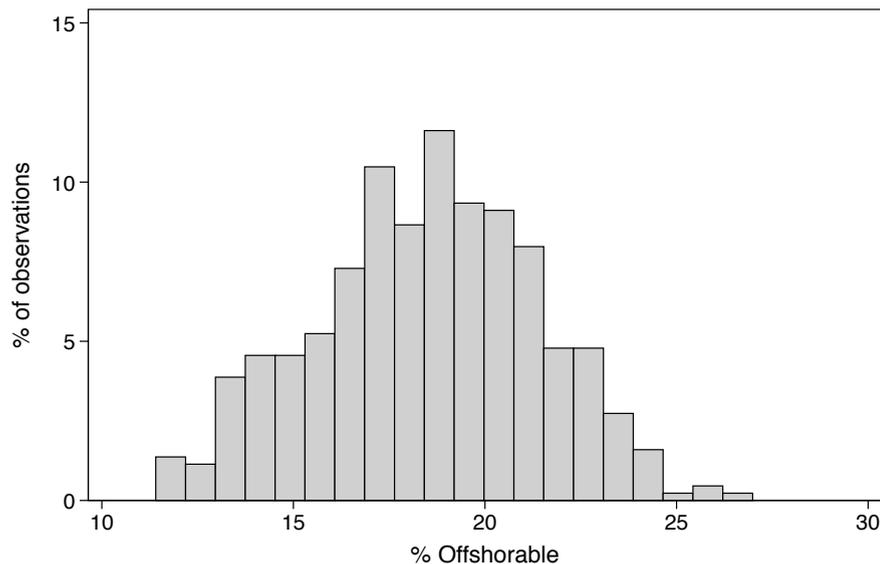
2.2 Measuring labor’s economic interests

I now discuss how I measure different dimensions of diffuse labor interests to test my hypotheses alongside alternatives suggested by the literature. The main independent variable is share of the labor force vulnerable to offshoring. I measure *Offshorability* as the percent of workers in the congressional district in offshorable occupations using occupation data from a five percent weighted sample from the 2000 Census.¹⁹ Individuals’ occupations are coded

¹⁹This is the largest sample available in the public Census data.

according to Blinder’s (2007) ranking of offshorability, which defines occupations that cannot be offshored as those that (1) must be performed at a specific domestic location (e.g. a farm) or (2) require face-to-face contact with end-users (e.g. taxi driver). Using O*Net occupation information, Blinder categorizes 817 occupations into the following four groups: highly offshorable, offshorable, non-offshorable and highly non-offshorable. District offshorability is thus measured as the sum of workers in offshorable and highly offshorable jobs over the total number of individuals in the labor force.²⁰ Workers are matched to congressional districts based on a concordance between the public-use microdata areas (PUMAs) from the Census and congressional districts. Further details on the construction of this measure are available in the appendix. Offshorability ranges from 11.4 percent to 27.0 percent, and has a mean of 18.5 and a standard deviation of 2.9 percent. Figure 2 shows that exposure to offshoring across congressional districts is normally distributed.

Figure 2: Distribution of % Offshorable



Two well-established theories suggest additional variables that capture alternative labor cleavages with respect to trade. First, as suggested by HOS, I include the percent of the

²⁰The labor force is restricted to those over the age of 18 who are not in the armed forces.

district with a college education to account for interests based on comparative advantage. These data are based on congressional district summary files from the Census and are made available by Milner and Tingley (2011).²¹ Educational attainment is a common measure of individual skill level in the survey literature, which shows that those with higher levels of educational attainment are more likely to support trade liberalization (e.g. Mansfield and Mutz, 2009; Mayda and Rodrik, 2005).²² I expect that legislators from districts with a greater share of constituents who are college educated will be more likely to support FTAs.

Second, the RV model suggests that those in industries of comparative disadvantage will oppose trade liberalization, while those in industries of comparative advantage will support further liberalization. To measure industry cleavages at the district level, I use the ratio of employment in industries of comparative advantage to employment in industries of comparative disadvantage. As the share of employment in comparative advantage industries increases relative to industries of comparative disadvantage, legislators will be more likely to support free trade according to the RV model. Following Mayda and Rodrik's (2005) definition of revealed comparative advantage, I classify industries of comparative advantage (disadvantage) as those for which net adjusted imports with a given trade partner are negative (positive). Further details are provided in the appendix. I calculate revealed comparative advantage using data on bilateral non-related party imports and exports for agriculture and manufacturing industries.²³ I use non-related party trade flows rather than total trade because related party trade tends to be mediated by multinationals, and this may benefit the employees of

²¹I use the district characteristics data provided by Tingley (N.d.).

²²Educational attainment, and a college education in particular, may also shape attitudes to trade for non-material reasons, including more cosmopolitan views of the world (e.g. Hainmueller and Hiscox, 2006; Malhotra, Margalit and Mo, 2013). While acknowledging this important point, I refer to this as a measure of skilled labor. The results are robust when an alternative measure of skilled labor based on occupation is used (see supplemental appendix).

²³Trade and employment for agriculture is measured at the 2-digit NAICS level (agriculture). The following 3-digit manufacturing industries are included: food, beverages and

multinationals. Therefore, non-related party imports and exports better capture the level of trade competition for workers (see Owen and Quinn, Forthcoming). Data on employment across industries at the district level is calculated using the 2003 County Business Patterns. For each district i , industry j , and agreement k , *Industry cleavage* is calculated as:

$$Industry\ cleavage_{ik} = \frac{\sum CA_{jk} \times emp_{ij}}{\sum CD_{jk} \times emp_{ij}} \quad (1)$$

As the ratio increases, legislators should be more likely to support FTAs. This variable is logged to account for skewness. Under the RV assumption of immobile labor, workers in non-tradable industries should be indifferent to, or perhaps slightly in favor of trade liberalization and thus do not appear in the measure (Mayda and Rodrik, 2005). Additional information on data sources is available in the appendix. Summary statistics for the independent variables are available in Table 4, and the correlation matrix is presented in Table A1 of the appendix.

Table 4: Summary statistics for independent variables

	Mean	Std. Dev.	Min.	Max.
% Offshorable	18.478	2.904	11.407	26.987
% College	24.103	9.056	6.256	56.914
Republican	0.524	0.5	0	1
Industry cleavage				
Australia	6.98	6.378	0.206	46.253
Chile	3.943	3.357	0.166	25.122
Morocco	5.737	5.339	0.426	41.725
Singapore	20.324	21.799	0.75	255.743
All trade partners	3.511	3.056	0.462	47.15
N=439 (due to mid-session special elections).				

tobacco, textile mills, textile product mills, apparel, leather and allied products, wood, paper, printing, petroleum and coal, chemical, plastics and rubber, non-metallic minerals, primary metals, fabricated metals, machinery, computer and electronics, electrical equipment and appliances, transportation equipment, and miscellaneous manufacturing.

3 Content Analysis of House Floor Debates on FTAs

The anecdotes discussed earlier suggest that members of the House not only recognize the link between offshoring and trade, but also make this connection explicit during debates on FTAs. In this section, I use dictionary-based content analysis to analyze whether attention to the costs of trade for workers in representatives' speeches during floor debates on FTAs varies according to the level offshorability among constituents as suggested by Hypothesis 1.

Content analysis is based on the idea that certain topics are discussed using a certain set of words (Quinn et al. 2010). Given the limited time and opportunity to speak on the floor, time allocated to discussing the costs of trade for workers is a good measure of the priority placed on labor interests.²⁴ I measure the relative frequency of labor keywords as an indicator of the importance placed on labor interests by each speaker. I create the dictionary category "labor," which includes mentions of collar, jobs, labor*, manufacturing, offshor*, outsourc*, and workers, with the asterisk capturing variations of the stem words. "Collar" is included to capture mentions of "white collar" jobs, because the software used (Yoshikoder; Lowe, 2011) does not allow for multi-term dictionary entries. These keywords were selected to capture attention to the link between trade liberalization, offshoring and the distributional consequences for workers.

Although dictionary-based automated content analysis is difficult to validate (Grimmer and Stewart, 2013), the above dictionary was created specifically for the topic of interest and was based on a close reading of the full corpus of debate transcripts. Furthermore, I examine the keyword in context for each of the dictionary words to ensure these words are used to discuss the costs of trade for workers as expected.²⁵ This alleviates concerns that

²⁴See Grimmer (2013, 628), who suggests that the proportion of press releases allocated to different topics indicates legislators' expressed priorities.

²⁵This dictionary is fairly conservative in that it does not include words like "protections," "rights," or "standards" that were also important components of the debates, but which do not exclusively refer to labor. Additionally, I do not include immigration-related words in the event that this taps a different underlying issue than the use of other labor-related words

the dictionary may not be appropriate for the question of interest.

The dependent variable, *Rate of labor speech*, is equal to the number of labor keywords used as a percent of total words.²⁶ This measure is calculated by pooling speeches across all four debates, so for representatives that spoke during more than one debate, the rate of labor speech is total labor words in all debates as a percent of the total number of words.²⁷ The unit of analysis is therefore the individual legislator, and thus labor words as a percent of the total is a measure of attention to labor interests in debates on FTAs. It is necessary to pool speakers from all debates because debate in the House is governed by special rules that limit the time for debate (two hours for the debates under consideration here), which ultimately restricts the number of speakers. Each party is allocated a certain amount of time to be controlled by the parties' managers of the bill.²⁸ Typically the managers of the bill are members of the committees with jurisdiction over the bill. In determining who gets to speak, bill managers typically seek to represent a broad range of interests. The total number of different legislators who spoke on at least one trade agreement is 95.²⁹ The mentions of labor keywords as a percent of the total ranges from zero to 4.96 percent (with a mean of 0.97 percent). On average, attention devoted to labor constitutes the largest share of total words among a number of categories, for all but the Australian FTA.³⁰ This suggests that (e.g. ethnocentrism, nationalism).

²⁶I do not perform any pre-processing of text, including removal of stopwords or stemming.

²⁷I limit the sample to those representatives that were in the House during all four debates.

²⁸For instance, in the debate over Chile, the House Ways and Means Committee was allocated 50 minutes for each party and the Judiciary committee was allocated 10 minutes for each party.

²⁹The number of speakers for each FTA varies: Australia (51), Chile (39), Morocco (28), Singapore (39).

³⁰For comparison of labor-related words to other topics, including immigration, drugs, foreign policy goals and other issues, a breakdown by agreement is presented in the supplemental appendix.

labor issues are an important component of debates on FTAs. Additionally, again with the exception of Australia, a difference of means test shows that the rate of labor speech during debate is greater among representatives who voted against the agreement than among those voting in favor of the agreement. This lends further validity to the notion that this concept captures a dimension of anti-trade sentiment.

Because there are limits on who speaks, the sample of speakers is not a random sample from the House and thus the rate of labor speech is censored. Therefore I use a Heckman selection model to account for the fact that the share of labor speech is conditional upon the decision to speak during at least one of the four debates. In the outcome equation, the key independent variables are the measures of labor interests described above: the percent of the population exposed to offshoring, the percent with a college education, and industry trade cleavages.³¹ I also include a dummy variable for members of the Republican party, which I expect to have a negative effect on labor-related speech.³²

One challenge of selection models is that is often difficult to find determinants of selection that do not also influence the outcome of interest. Fortunately there is a substantial literature on who speaks in Congress that can guide the specification of the selection equation. I build on the model of Pearson and Dancy (2011*a*), who identify a number of institutional and demographic characteristics that influence who speaks. To capture institutional factors, I include dummy variables for Republican party membership, leadership position on relevant committees, and party leadership positions.³³ I include representatives' years in office as

³¹For this analysis, because all debates are pooled together, industries of comparative advantage and disadvantage are determined by examining adjusted net non-related party imports from all trade partners.

³²The 108th House includes 1 Independent, 208 Democrats and 230 Republicans.

³³Committee leaders are defined as representatives that are the chair or ranking minority member of relevant committees and subcommittees. Each of the FTAs was considered in Trade subcommittee of the House Ways and Means Committee, the subcommittee on Domestic and International Monetary Policy, Trade, and Technology of the Financial Services Committee, and the Judiciary committee. Party leaders include the Speaker of the House,

an additional measure of seniority. To capture electoral considerations, I include a dummy variable for those in a safe seat and the district vote share of President George W. Bush in the 2000 election. To account for the motivation to speak and the interest of bill managers to represent many views, I include the absolute value of the DW nominate score (first dimension) as a measure of ideological extremity. Finally, I include individual dummy variables for female, black, and hispanic representatives, who are less likely to speak during floor debate. See appendix for data sources.

The results are presented in Table 5. I first discuss the results for the selection equation which models the decision to participate in floor debates. Representatives are coded as one if they spoke during the debate on the implementing legislation of at least one trade agreement. There are 95 uncensored observations (representatives speaking in at least one debate) and 339 censored observations (representatives that did not speak in any debate). Republicans are less likely to speak than are Democrats (and one Independent). As predicted, committee leaders are more likely to speak than non-committee leaders. Finally, an increase in ideological extremity increases the probability that a representative will speak. The model fits the data well, correctly predicting 79.5 percent of all observations.

Turning to the outcome equation, the coefficient on offshorability is positive and statistically significant, suggesting that as constituency exposure to offshoring increases, the use of labor keywords also increases, conditional upon selection. This finding provides support for Hypothesis 1. The coefficient on the level of education is negative and statistically significant, suggesting that as the district share of skilled labor increases, the use of labor keywords decreases, which is consistent with HOS. The coefficient on Republican partisanship is negative and statistically significant, suggesting that Republican representatives are less likely to address labor-related issues. The coefficient on industry cleavages is not statistically significant. The results are robust to alternative specifications of the selection equation such as including measures of diffuse labor interests in both the selection and outcome equations, naive estimation ignoring selection, as well as negative binomial analysis of the leaders and whips of the minority and majority parties, and the leaders of the Democratic and Republican caucuses.

Table 5: Selection model of % labor speech

% Labor words (1)	
% Offshorable	0.078** (0.037)
% College	-0.031*** (0.010)
Industry cleavage	0.253 (0.190)
Republican	-0.463 (0.284)
Constant	0.596 (1.307)
Selection into debate speech (2)	
Republican	-0.427** (0.209)
Committee leader	1.470*** (0.464)
Party leader	0.215 (0.558)
# years in office	0.014 (0.009)
Safe seat	-0.001 (0.200)
Ideological extremity	0.986** (0.447)
Female	0.225 (0.193)
Black	-0.287 (0.279)
Hispanic	0.008 (0.328)
Vote share George W. Bush (2000)	-0.625 (0.793)
Constant	-0.940** (0.452)
% correctly predicted	79.5
ρ	-0.410 (1.026)
$\ln(\sigma)$	-0.140 (0.314)
Observations	434
Log likelihood	-325.1
chi^2	24.2
BIC	759.6

Robust standard errors in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

the number of labor-related words. See supplemental appendix for these results.

4 Roll call votes

To test Hypothesis 2, I examine roll call votes on the agreements with Australia, Chile, Morocco and Singapore. The dependent variable is coded one for those representatives who voted in favor of the agreement and zero for those who voted against the agreement.³⁴ Votes are estimated as a function of district offshorability, skill, industry cleavages and representative party identification. First, I estimate a panel model that pools votes on all four agreements similar to Nollen and Quinn (1994) and Milner and Tingley (2011). For this model, I include fixed effects for each FTA and estimate a logistic regression with standard errors clustered by representative. I then estimate separate regressions for each FTA. The results, presented in Table 6, support the hypothesis that legislators are more likely to vote against trade liberalization when a greater share of constituents is vulnerable to offshoring.

The results for the panel model are presented in Model 1. The coefficient on offshorability is negative and statistically significant from zero, as suggested by Hypothesis 2. The coefficient on the share of skilled labor is positive and statistically significant, as expected by the HOS model, while the coefficient on industry cleavages is not statistically different from zero. Republicans are more likely to vote in favor of a free trade agreement than are non-Republicans. Finally, the coefficients on the dummy variables for the Australian and Moroccan FTAs are positive and statistically significant, suggesting that representatives were more likely to vote in favor of these agreements than the Chilean FTA (the reference category), all else equal. The model fits the data well, correctly predicting 77 percent of all votes and generating a 24.7 percent reduction in error over the modal response.

³⁴Data on roll call votes are taken from Griswold (2005).

Table 6: House logistic regression results

	Pooled (1)	Australia (2)	Chile (3)	Morocco (4)	Singapore (5)
% Offshorable	-0.103** (0.041)	-0.017 (0.051)	-0.108** (0.055)	-0.175*** (0.055)	-0.153*** (0.053)
% College	0.051*** (0.013)	0.037** (0.015)	0.059*** (0.016)	0.052*** (0.017)	0.056*** (0.016)
Republican	2.251*** (0.207)	1.737*** (0.262)	2.603*** (0.266)	2.002*** (0.288)	2.597*** (0.273)
Industry cleavage	-0.007 (0.109)	0.311* (0.170)	-0.269 (0.195)	0.215 (0.179)	-0.123 (0.162)
Singapore	0.001 (0.076)				
Australia	0.659*** (0.137)				
Morocco	0.829*** (0.170)				
Constant	0.270 (0.659)	-0.702 (0.820)	0.310 (0.827)	2.137*** (0.829)	1.266 (1.046)
Observations	1700	423	427	424	426
Log likelihood	-825.7	-207.3	-208.1	-191.4	-207.5
χ^2	158.8	59.2	99.5	61.7	97.0
% Correctly predicted	77.2	74.7	77.3	77.1	77.9
% Reduction in error	25.4	1.8	37.8	2.0	39.4

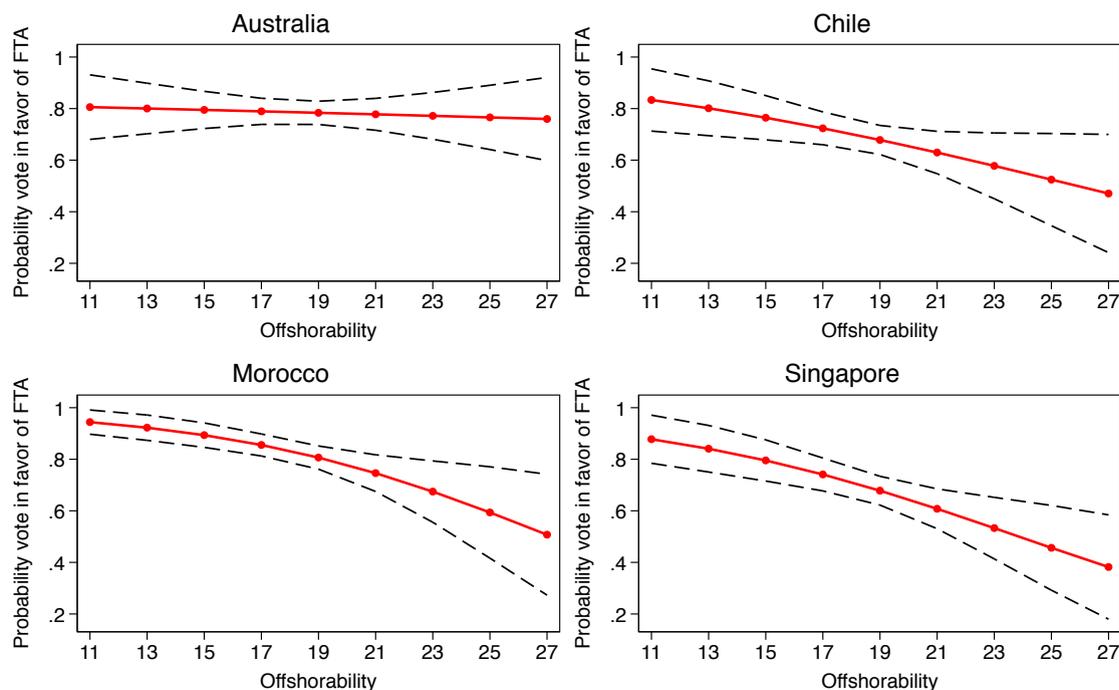
Clustered standard errors in parentheses for Model 1. Robust standard errors for Models 2-5.

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Turning to the analysis of individual FTAs, Hypothesis 2 is again supported. The coefficient on offshorability is negative and statistically different from zero for the votes on the Chilean, Moroccan and Singaporean FTAs. Although negative, the coefficient is not statistically different from zero for the Australian FTA. This lack of a statistically significant effect of offshorability on legislators' votes on the Australian FTA is consistent with the evidence from the floor debates above, where for all agreements but the Australian case, labor-related concerns were the most discussed issue. There may be fewer concerns about offshoring in the Australian case because the expected economic impact of the Australian agreement was significantly smaller than the Chilean and Singaporean FTAs, and furthermore, Australia, like the U.S., is a developed democracy. To examine the substantive effect of offshorability, I present the predicted probability of a vote in favor of each agreement in the House as a function of offshorability in Figure 3. With the exception of the Australian FTA, an

increase from the minimum to maximum value of offshorability has a substantively significant negative effect on the probability that a representative votes in favor of the respective agreement.

Figure 3: Effect of Offshorability on Votes in the House



Dashed lines represent 95% confidence intervals.

The results also support the predictions of the HOS theory: across all four votes, the coefficient on the percent of the district with a college education is positive and statistically different from zero. Legislators are more likely to vote in favor of each FTA as the share of the district with higher education increases. This is consistent with expectations from HOS because skilled labor is more likely to benefit from trade; therefore, as the share of skilled labor in the district increases, legislators have more incentives to vote in favor of liberalization.

In contrast, industry cleavages do not appear to have a robust influence votes on trade liberalization. The coefficient on the ratio of employment in partner-specific industries of comparative advantage to employment in those industries of comparative disadvantage is

positive and statistically different from zero only in Model 2, the analysis of the Australian FTA. The positive coefficient suggests that as a greater share of workers in a district are employed in an industry comparative advantage relative to disadvantage, representatives are more likely to vote in favor of the Australian FTA. In all other models, the coefficient is not statistically different from zero. This lack of a robust finding is consistent with many studies at the individual level, in which the industry of employment does not help explain trade preferences.³⁵

The coefficient on Republican party membership is positive and statistically significant as expected. Republicans are more likely to vote in favor of each FTA than are Democrats or Independents.

Finally, the models perform well on several metrics. For all of the models, the chi-square statistic is statistically different from zero. Additionally, all of the models perform well in terms of predictive ability; the percent of observations correctly predicted is in the mid to high 70s for each model. However, the models for Chile and Singapore perform the best in terms of improving predictive ability over the modal category: the percent reduction of error is 37.8 and 39.4 percent respectively. In comparison, the models for Australia and Morocco provide more modest improvement in predictive accuracy over the modal prediction (1.8 and 2.0 percent respectively), due to the lopsided nature of the vote tally in favor of these FTAs.

One factor that is left out of the models in Table 6 is the role of special interest groups. Typically the influence of special interests is measured using campaign contributions. However, contributions are endogenous to votes (e.g. Feinberg, Husted and Reynolds, 2011). To address this, I re-estimate the models from Table 6 controlling for the percent of campaign contributions from bank, corporate and labor PACs during the previous session of Congress. Lagging contributions one period eliminates concerns of endogeneity (though it reduces the sample size). The results are presented in Table 8. The coefficient on offshorability re-

³⁵See for instance Blonigen and McGrew (2014) and Mansfield and Mutz (2009). Mayda and Rodrik (2005) are one of the few to find evidence in favor of Ricardo-Viner. However, this is likely due to the fact that their measure of industry exposure to trade is actually based industry imputed from occupation.

mains negative and statistically significant for the panel model, and the models of votes on the agreements with Chile, Morocco and Singapore. Similarly, the coefficient on the share of campaign contributions from labor PACs is negative and statistically significant for the same models. The coefficients on bank and corporate contributions are not consistent across models. Banking contributions reduce the likelihood of voting in favor of the FTA with Chile and increase the likelihood of voting in favor of the FTA with Morocco, while corporate contributions increase the likelihood of voting in favor of the Australian FTA.

Additional robustness checks are available in the supplemental appendix. The results are robust to alternative measures of offshorability, calculated at the commuting zone level, and for industry cleavages calculated using total related and non-related party flows. I also examine the robustness of the findings to additional control variables suggested by the existing literature, including campaign contributions and other district economic and demographic characteristics. The findings support those reported here, namely that in both speeches and in roll call voting, a higher level of district offshorability leads legislators to take a more protectionist position on trade liberalization.

5 Conclusions

I argue that offshoring is an important aspect of international trade with new distributional consequences for labor. In particular, vulnerability to offshoring reduces wages and job security among workers in occupations for which the quality of job performance does not diminish if performed at a distance. Offshoring in services exposes a new category of workers to international competition. Moreover, vulnerability to offshoring is not simply a proxy for skill level or industry. Thus offshorability is a new source of protectionist labor preferences and I argue that as a result, legislators are less likely to support trade liberalization when offshorability among constituents is higher.

I test this argument in the context of debates and roll call votes on four free trade agreements in the U.S. House of Representatives between 2003 and 2004. Members of Congress from districts where a larger share of constituents are exposed to international competition through the possibility of offshoring are more likely to discuss labor concerns during speeches

and are less likely to vote in favor of free trade agreements. Although this study is limited to one country, I expect these dynamics to extend to other developed countries, especially other English-speaking countries that face growing competition from India (Blinder, 2009*b*).

The above findings suggest several new areas of research. First, it is important to examine additional areas of trade policy. The findings of this paper suggest that offshoring may also affect votes designed to help workers facing adjustment costs from trade and offshoring in the form of Trade Adjustment Assistance and other forms of compensation. Second, it will be important to test the implications of this argument at the individual level in a systematic manner. There is a well-established literature that examines the determinants of individual preferences over trade policy. To date, these have largely sought to determine whether the HOS or RV models best explain preferences over trade. Other work has sought to identify other mechanisms, including education (e.g. Hainmueller and Hiscox, 2006), sociotropic factors (Mansfield and Mutz 2009, 2013), or factors like home ownership (Scheve and Slaughter, 2001) and attitudes about fairness (Lu, Scheve and Slaughter, 2012). Job security concerns and risk also play an important role in shaping demands for protection and redistribution. See, for example, the recent paper by Malhotra, Margalit and Mo (2013). If there is little microlevel evidence to support the mechanism that exposure to offshoring affects attitudes toward trade, it may suggest that the link between offshoring and trade liberalization is emphasized for political reasons.

Appendix

Data

OFFSHORABILITY. Blinder (2009a) codes 817 occupations from the Census Standard Occupation Classification (SOC), based on the degree to which they require face-to-face delivery of tasks and work at a specific location. The index ranges from 0 (completely non-offshorable) to 100 (highly offshorable), though because it is ordinal Blinder recommends examining four broad groups: highly offshorable (76-100), offshorable (51-75), non-offshorable (26-50) and highly non-offshorable (0-25). Blinder classifies 817 occupations into the following groups:

Group 1: Highly offshorable (e.g. computer programmer)

Group 2: Offshorable (e.g. accountant)

Group 3: Non-offshorable (e.g. radio operator)

Group 4: Highly non-offshorable (e.g. child care provider)

I apply this classification to individuals' occupations for a five percent sample of the 2000 Census. The percent offshorable is equal to $100 \times \frac{Group\ 1 + Group\ 2}{Group\ 1 + 2 + Group\ 3 + Group\ 4}$, calculated using individual sampling weights. Note the denominator is equal to the total number of individuals in the labor force. This measure is calculated at the congressional district by matching Public Use Microdata Areas to congressional districts using the Missouri Census Data Center Geographic Correspondence Engine (available at <http://mcdc2.missouri.edu/websas/geocorr2k.html>).

ADDITIONAL CONTROLS.

- Data on district education rates, partisanship, and campaign contributions were made available by Milner and Tingley (2011). For access, see Tingley (N.d.).
- To calculate *Industry cleavages*, I use Mayda and Rodrik's (2005) definition of revealed comparative advantage, which is based on whether adjusted net imports are positive (disadvantage) or negative (advantage). First, the adjustment parameter for each trade partner k (Australia, Chile, Morocco, Singapore, all trade partners), λ_k , is equal to $\frac{\sum(M_{jk} - X_{jk})}{\sum M_{jk}}$, where j represents tradable goods industries in agriculture and manufacturing, and M and X are imports and exports respectively. Revealed comparative

advantage CA_{jk} is equal to one if $M_{jk} - X_{jk} - \lambda_k M_{jk} < 0$. Similarly, comparative disadvantage is CD_{jk} is equal to one if $M_{jk} - X_{jk} - \lambda_k M_{jk} > 0$. For each legislator, the industry cleavage is equal to total employment in industries of comparative advantage over total employment in industries of comparative disadvantage. Data on industry employment shares are available from the 2003 County Business Patterns report. For the employment data, county employment levels were matched to congressional districts using a concordance provided by the Missouri Census Data Center (<http://mcdc.missouri.edu/websas/geocorr2k.html>) and weighted by population. Data on non-related party imports and exports were collected from the Bureau of Economic Analysis (www.bea.gov.)

- Selection variables. Data on Bush's vote share is from Tingely (N.d.). Data on safe seats is available from Giroux (2002). Demographic data is available from the CQ Press Congress Collection.

Table 7: Cross-correlation table

Variables	1	2	3	4	5	6	7	8	9	10	11	12
Australia (1)	1.00											
Chile (2)	0.52 (0.00)	1.00										
Morocco (3)	0.62 (0.00)	0.61 (0.00)	1.00									
Singapore (4)	0.55 (0.00)	0.94 (0.00)	0.61 (0.00)	1.00								
% Labor words (5)	-0.43 (0.00)	-0.41 (0.00)	-0.50 (0.00)	-0.39 (0.00)	1.00							
% Offshorable (6)	0.07 (0.16)	-0.07 (0.17)	-0.07 (0.13)	-0.06 (0.20)	0.09 (0.39)	1.00						
% College (7)	0.15 (0.00)	0.13 (0.01)	0.11 (0.02)	0.14 (0.00)	-0.21 (0.04)	0.52 (0.00)	1.00					
Australia CA/CD (8)	0.12 (0.01)	0.02 (0.69)	0.03 (0.48)	0.04 (0.47)	-0.03 (0.80)	0.23 (0.00)	0.14 (0.00)	1.00				
Chile CA/CD (9)	0.14 (0.01)	-0.02 (0.74)	0.05 (0.28)	0.00 (0.98)	0.01 (0.96)	0.37 (0.00)	0.27 (0.00)	0.81 (0.00)	1.00			
Morocco CA/CD (10)	0.16 (0.00)	-0.01 (0.92)	0.06 (0.21)	0.01 (0.83)	-0.04 (0.73)	0.28 (0.00)	0.22 (0.00)	0.85 (0.00)	0.92 (0.00)	1.00		
Singapore CA/CD (11)	-0.00 (0.95)	0.02 (0.69)	0.02 (0.71)	0.03 (0.60)	0.12 (0.25)	-0.24 (0.00)	-0.32 (0.00)	0.12 (0.02)	0.05 (0.28)	0.07 (0.12)	1.00	
All trade CA/CD (12)	0.06 (0.20)	0.09 (0.05)	0.10 (0.05)	0.10 (0.04)	0.05 (0.64)	-0.00 (0.92)	-0.01 (0.78)	0.18 (0.00)	0.35 (0.00)	0.28 (0.00)	0.27 (0.00)	1.00
Republican (13)	0.36 (0.00)	0.53 (0.00)	0.37 (0.00)	0.53 (0.00)	-0.35 (0.00)	-0.04 (0.44)	0.05 (0.31)	0.14 (0.00)	0.07 (0.14)	0.08 (0.12)	0.07 (0.17)	0.13 (0.01)

Table 8: Analysis of votes, controlling for past contributions

	Panel (1)	Australia (2)	Chile (3)	Morocco (4)	Singapore (5)
% Offshorable	-0.085*	0.002	-0.077	-0.203***	-0.139**
	(0.046)	(0.059)	(0.064)	(0.067)	(0.057)
% College	0.048***	0.041**	0.057***	0.047**	0.054***
	(0.015)	(0.019)	(0.019)	(0.019)	(0.019)
Republican	1.025***	0.778*	1.016**	1.300***	1.093**
	(0.371)	(0.400)	(0.472)	(0.435)	(0.464)
Industry cleavage	-0.033	0.113	-0.263	0.285	-0.238
	(0.125)	(0.206)	(0.226)	(0.207)	(0.180)
% Corp. contributions (107th)	1.055	4.636***	-0.539	-2.128	0.374
	(1.533)	(1.714)	(1.737)	(2.023)	(1.827)
% Labor contributions	-3.262***	-0.600	-5.301***	-3.771**	-4.624***
	(1.238)	(1.215)	(1.652)	(1.642)	(1.687)
% Bank contributions	-2.368	-2.286	-5.372**	34.510**	-3.484
	(1.903)	(2.263)	(2.469)	(14.264)	(2.492)
Singapore	-0.017				
	(0.088)				
Australia	0.749***				
	(0.157)				
Morocco	0.987***				
	(0.195)				
Constant	1.004	-1.747	1.992	4.423***	3.013**
	(1.102)	(1.309)	(1.370)	(1.495)	(1.529)
Observations	1461	364	368	362	367
Log likelihood	-680.0	-170.5	-168.1	-152.6	-168.4
χ^2	154.5	55.0	102.0	60.0	97.1
BIC	1440.1	388.3	383.5	352.4	383.9
% Correctly predicted	78.6	77.2	78.8	79.0	79.3
% Reduction in error	32.0	13.5	44.3	10.6	45.3

Clustered standard errors in parentheses for Model 1. Robust standard errors for Models 2-5.

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

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