What Kinds of Trade Liberalization Agreements Do People in Developing Countries Want?

Gabriele Spilkera, Thomas Bernauerb, and Víctor Umañac

aUniversity of Salzburg; bETH Zurich; cINCAE Business School

ABSTRACT
One of the most striking developments in the global economy in the past decades is the rapid proliferation of preferential trade agreements (PTAs), with many of them concluded among or with participation of developing countries. On the presumption that current popular debates on trade policy are not so much about whether citizens want free trade but rather what kinds of trade liberalization they want, we examine individual trade policy preferences with regard to PTAs that can vary in content along several dimensions. To that end we carried out conjoint choice experiments embedded in representative surveys in three developing countries that differ strongly in income levels, political system, and trade liberalization history: Costa Rica, Nicaragua, and Vietnam. We conceptualize trade policy preferences as preferences over the scale and scope of trade liberalization, environmental and labor standards, and labor market access (migration). Two main findings emerge. First, non-economic considerations, such as sympathy/antipathy toward particular countries and environmental and labor rights concerns influence citizens’ preferences at least as much as factors based on standard economic logic. Second, preferences over particular facets (attributes) of trade liberalization, that is PTA content, are surprisingly consistent across countries, despite strong differences in macro-economic and political context.

KEYWORDS
Conjoint experiments; preferential trade agreements; public opinion

While trade liberalization efforts within the multilateral framework of the World Trade Organization (WTO) have stalled since the turn of the millennium, the number of preferential trade agreements (PTAs) has continued to grow at a spectacular pace up to the present. One of the main reasons for this development is that PTAs provide participating countries with flexibility in view of both picking their partner countries and the content of these agreements (Dür et al. 2014). By addressing behind the border regulations, such as those concerning the environment, worker rights, migration, investment, or...
government procurement, modern PTAs cover more sectors and regulate more economic issues than the WTO agreements.

Developing countries have been a very important part of this trend toward regionalism and bilateralism in trade policy (Dür and Elsig 2015). As of now, a majority of PTAs either include developing countries among their members or are formed exclusively between two or more developing countries. The great and continuing importance of PTAs for developing countries has motivated a considerable amount of academic research on this issue. Most of this research focuses, from a macro-level perspective, either on why developing countries enter into PTAs (Baccini and Urpelainen 2012; Baier and Bergstrand 2004; Baldwin 2011; Hicks and Kim 2012; Manger and Shadlen 2014), or on economic and other (for example environmental or social) implications of joining PTAs (Bechtel and Tosun 2009; Hafner-Burton 2005; Spilker and Böhmelt 2013).

Very little research seeks to explain public attitudes toward trade liberalization in developing countries (Baker 2003; Bernauer and Nguyen 2015; Urbatsch 2013); and there is virtually no research on what kinds of PTAs – in terms of specific features and content of PTAs – citizens in developing countries prefer. Yet, we believe that such research is important for at least two reasons. First, while, overall, PTAs are clearly designed to liberalize trade, such agreements can differ along several dimensions, for example, the number of countries involved, whether and how they regulate labor market access, whether environmental and labor standards are addressed, and how, and which sectors they deal with (see Dür et al. 2014). In view of historic and more recent intense public debates over PTAs and various aspects thereof, for instance in the context of the North American Free Trade Agreement (NAFTA), the Trans-Pacific Partnership (TPP), or the Trans-Atlantic Trade and Investment Partnership (TTIP), we need to understand how citizens form their preferences toward PTAs and what PTA features matter most in this regard. Hence we believe that the “real” issue in trade policy is usually not whether government, firms, and citizens want free trade or not, but what kinds of trade liberalization they want. Second, on the presumption that policy-makers usually seek to align their policy choices with prevailing public opinion, understanding trade policy preferences can also help account for existing and anticipate future policy choices.

To the best of our knowledge, the research presented in this article is the first to try and fill this gap. Building on existing trade theories, we identify a set of PTA characteristics (attributes) that are likely to matter when citizens form their preferences toward PTAs, and formulate expectations on how these characteristics are likely to affect preferences. We then test these expectations (hypotheses) by means of a conjoint choice experiment, which was embedded in surveys carried out with representative samples in three

---

1For an overview of PTAs see www.designoftradeagreements.org.
developing countries: Costa Rica, Nicaragua, and Vietnam. The choice of
these three countries is motivated by the fact that while all of them are
developing countries they differ strongly with respect to income levels,
political systems, and environmental and social standards. Consequently,
we are interested in finding out, to what extent, particular PTA character-
istics matter for public opinion formation in similar ways across very differ-
ent economic and political contexts in the “Global South.”

In our conjoint experiment, respondents were asked to evaluate and
express their preferences with respect to (stylized) pairs of potential PTAs
their government negotiated. Because the different attributes of each poten-
tial PTA (for example involved partner countries, labor market access,
environmental standards of other countries) were designed as experimental
treatment conditions and were randomly assigned to participants, we are able
to estimate the relative influence of each attribute value on the resulting
choice or rating of the (hypothetical) PTAs (Hainmueller et al. 2014). In
other words, our empirical research is set up in a way that allows for causal
inference with respect to specific contents (attributes) of PTAs that make
people more or less supportive of PTAs.

The empirical results show that conventional arguments focusing on re-
distributional (economic) implications of trade liberalization have rather limited
explanatory value in a multi-dimensional choice setting. While agreements
implicating a reduction in price substantively increase support, sympathy or
antipathy toward particular countries seems to matter even more than purely
economic considerations. Finally, preferences over different facets (attributes) of
trade liberalization including environmental and worker rights concerns are
very similar across countries, despite strong differences in economic and poli-
tical conditions.

While these results are interesting in academic terms, they also have
important policy implications. In the context of current debates on PTAs,
it often seems as if large parts of the general public oppose trade agreements
as such. However, our results suggest that this should depend to a significant
degree on how the specific agreements are designed. While clearly extreme
trade skeptics might not be convinced by even the most favorable design of a
trade agreement, those who hold less extreme views on trade should, accord-
ing to our results, be more likely to adapt their support for a respective PTA
depending on its design. Given that particular trade-related issues, for exam-
ple worker rights, environmental standards, and rules on migration, can be
incorporated into PTAs in differing ways, the potential for achieving suffi-
cient public support for PTAs may, depending on what PTA design choices
are made, actually be higher than is oftentimes assumed.
Public opinion on trade: state of the art

Most political economy research on individual trade policy preferences, that is, mass public opinion concerning trade liberalization or protectionism, is strongly informed by macro-level trade theories. From such theories, individual preferences over a one-dimensional policy space, ranging from support for to opposition against free trade, can be derived. This general approach to the study of public opinion on trade liberalization lines up well with the common assumption in the literature that macro models explaining aggregate (collective level) outcomes must ultimately rest on empirically valid assumptions about individual level preferences and behavior.

Theoretical accounts of individual trade preferences typically derive these preferences by focusing on the redistributive (economic) effects of trade liberalization. In this context, the two most common theoretical models of international trade underlying existing research are the factor endowments (or Heckscher–Ohlin (H–O)) and the specific factors (or Ricardo–Viner) model (Oatley 2012). According to the H–O model, the winners and losers of trade liberalization are based on ownership of production factors. For industrialized countries, the H–O model predicts that highly skilled individuals, that is, the owners of the abundant production factor in richer countries, tend (on average) to gain from trade liberalization while people with lower skills tend to lose. On the presumption that individuals know what the consequences of trade liberalization will be for them personally, and that their preferences are a function of economic self-interest, higher-skilled people are likely to support free trade, lower-skilled people not. In developing countries, where the main comparative advantage is less skilled and cheaper labor, the H–O framework offers the converse prediction: lower-skilled persons are likely to support free trade, higher-skilled persons not.

In contrast, the specific factors model, also known as the Ricardo–Viner (R-V) framework, singles out sectors as the main driving force of trade preferences. The R–V model holds that skills of individuals are often hard to transfer from one sector to another. It thus predicts that individuals working in comparatively advantaged sectors (that is sectors that will gain from trade liberalization) should be in favor of trade liberalization, whereas individuals who work in internationally exposed but less competitive industries should oppose trade liberalization. What both accounts have in common is that economic self-interest serves as the main motive for individual level trade preferences.

A considerable body of literature in political economy examines the degree to which these expectations are empirically relevant (Baker 2003, 2005; Beaulieu 2002; Beaulieu et al. 2005; Blonigen 2008, 2011; Hainmueller and Hiscox 2006; Mansfield and Mutz 2009; Mayda and Rodrik 2005; O’Rourke et al. 2001; Scheve and Slaughter 2001; Walter 2010). With regard to the
validity of the H–O versus the R–V framework, most of these studies find some support for the H–O model (Kaltenthaler et al. 2004; Mayda and Rodrik 2005; O’Rourke et al. 2001; Scheve and Slaughter 2001). However, due to a lack of reliable data on respondents’ sectoral employment, most research either does not test the sectoral (R–V) model’s predictions at all or often uses proxies that inadequately measure the underlying theoretical argument. To the extent the R–V model is tested, results have been mixed (Walter 2010).

While the existing literature offers a wealth of valuable insights into how individuals form their preferences on trade issues, three limitations remain. First, most studies view trade preferences as a one-dimensional concept, and correspondingly rely on one single survey item to measure individual level trade preferences. Besides the obvious problem of measurement error that may result from using a single survey item, both trade policy debates among experts as well as the mass public and the media discourse on trade issues strongly suggest that trade policy is multi- and not one-dimensional. While policy-makers and citizens do eventually aggregate preferences over multiple facets of trade policy into a general preference, for instance with respect to a particular proposal for a trade agreement, jumping to a one-dimensional overall measure in empirical research misses out on a lot of potentially interesting information.

Shifting away from a one-dimensional analytical perspective is also helpful in addressing a second limitation of the existing literature. Empirical testing of the H–O and R–V frameworks has thus far produced mixed or rather weak findings. Several recent contributions therefore question whether correlations between education level – the typical measure for skill level – and free trade support are actually a meaningful test of the H–O hypothesis. The reason is that education level tends to be also correlated with cosmopolitan attitudes and more knowledge of economics (Hainmueller and Hiscox 2006). This means that the often times observed correlation of education level and free trade support may reflect an ideational or knowledge effect, rather than a factor endowments effect. This limitation is important because existing empirical work has, thus far, offered more support for the H–O than for the R–V framework.

Recent research also questions the usefulness of the H–O and R–V frameworks for explaining trade preferences of individuals from another viewpoint. Various studies show that people know rather little about trade policy, but do express preferences when prompted in surveys to do so (Guisinger 2009). When trying to form and express opinions on trade policy under conditions of little information and knowledge, respondents tend to resort to elite cues as well as their own general world views, beliefs, and attitudes in order to (quickly, in the context of a survey) “make up their mind.” Several recent studies in fact show that political ideology, cosmopolitan attitudes,
environmental attitudes, socio-tropic economic considerations, and other factors — taken together — have larger effects on trade preferences than predictors derived from the H–O and R–V frameworks (Bernauer and Nguyen 2015; Mansfield and Mutz 2009; Rho and Tomz 2017). Hence the question arises to what degree the distributional effects of free trade, as emphasized by the H–O and R–V frameworks, are indeed the main drivers of individual level trade preferences?

Finally, the vast majority of studies empirically concentrate on advanced industrialized countries, above all the United States (Blonigen 2008, 2011; Fordham and Kleinberg 2012; Rho and Tomz 2017). A few other studies focus on Canada (Beaulieu 2002), Switzerland (Bechtel et al. 2012; Spilker et al. 2012), Japan (Naoi and Kume 2011), or rely on international omnibus surveys, such as the Eurobarometer or the World Values Survey (Baker 2005; Gabel 1998; Hooghe and Marks 2004; Schaffer and Spilker 2015). However, only very little research centers on trade policy preferences in middle-income and/or developing countries (Baker 2003; Lü et al. 2012; Spilker et al. 2016).

In this article, we address several of the aforementioned limitations in existing research. We rely on an experimental approach, and a conjoint experiment in particular, to identify causes of trade preferences, whereas most existing work is based on correlational analysis. Moreover, using a conjoint experiment enables us to examine trade preferences in terms of preferences over a multi-dimensional policy space, in which several of the facets (attributes) of trade policy to be examined are non-economic (for example environmental or social concerns). Finally, the empirical analysis here focuses on three developing countries that differ strongly in income levels, political system, and trade liberalization history: Costa Rica, Nicaragua, and Vietnam.

**Theoretical arguments**

In principle, trade policy can vary in many different ways across countries, time, and agreements. Based on empirically observed differences between PTAs (http://www.designoftradeagreements.org) and a review of past and current debates on trade liberalization worldwide (Baldwin 2011; Dür et al. 2014; Manger and Shadlen 2014), we focus on four crucial dimensions of trade liberalization: scale and scope of trade liberalization, standards, and labor market access. Table 1 summarizes these dimensions as well as their subcategories, which, in our experiment, are presented to participants in the form of a proposed PTA having these features. For each of the four trade policy dimensions, we then outline in the following paragraphs the expected effect on individual trade preferences in developing countries.

2The only other studies we know of that use conjoint choice experiments to study trade policy preferences vis-à-vis PTAs are by Spilker et al. (2016) and Umaña et al. (2015). However, those studies focus on trade partner characteristics, and not on PTA design features.
<table>
<thead>
<tr>
<th>Dimension</th>
<th>Specific attributes</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scale of liberalization</td>
<td>Number of participating countries</td>
<td>The number of countries participating in the proposed trade agreement may range from two to many.</td>
</tr>
<tr>
<td></td>
<td>Membership: The proposed agreement also includes (a</td>
<td>One of the following countries besides (home country) will be among the participants in the proposed trade agreement: European Union, Brazil,</td>
</tr>
<tr>
<td></td>
<td>particular other country)...</td>
<td>China, India, Russia, the United States</td>
</tr>
<tr>
<td>Scope of liberalization</td>
<td>Effect on consumer prices</td>
<td>The proposed agreement may increase the prices of goods the respondent buys, reduce the prices of goods she/he buys, or may have no effect on</td>
</tr>
<tr>
<td></td>
<td>Employment in agriculture</td>
<td>consumer prices.</td>
</tr>
<tr>
<td></td>
<td>Employment in services sector</td>
<td>The agreement may result in more jobs or less jobs in agriculture, or may not affect employment in this sector.</td>
</tr>
<tr>
<td></td>
<td>Employment in manufacturing</td>
<td>The agreement may result in more jobs or less jobs in the services sector (for example financial, health care, retail, accommodation and food</td>
</tr>
<tr>
<td>Standards</td>
<td>Environmental protection standards</td>
<td>services or IT industry) or may not affect employment in this sector.</td>
</tr>
<tr>
<td></td>
<td>Worker rights protection standards</td>
<td>The agreement may require (home country) government to increase, maintain or reduce environmental protection standards.</td>
</tr>
<tr>
<td>Labor market access</td>
<td>Work permits for foreign citizens with <strong>high</strong> skills</td>
<td>The agreement may or may not make it easier for foreign citizens with high skills (i.e. doctors, engineers) to obtain work permits in (home country).</td>
</tr>
<tr>
<td></td>
<td>Work permits for foreign citizens with <strong>medium</strong></td>
<td>The agreement may or may make it easier for foreign citizens with medium skills (i.e. teachers, nurses) to obtain work permits in (home country).</td>
</tr>
<tr>
<td></td>
<td><strong>skills</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Work permits for foreign citizens with <strong>low</strong></td>
<td>The agreement may or may make it easier for foreign citizens with low skills (i.e. agricultural and construction workers) to obtain work</td>
</tr>
<tr>
<td></td>
<td><strong>skills</strong></td>
<td>permits in (home country).</td>
</tr>
</tbody>
</table>
As noted further below, this set of arguments and PTA design features results in a rather complex but empirically quite realistic (in view of what PTA features appear in public debates) experimental setup.

**Scale of liberalization**

We assess the scale of liberalization via two specific attributes (characteristics) of PTAs. The first – the number of participating countries – captures the scale of liberalization in, arguably, its simplest form. The second subcategory then focuses on which precise countries are involved.

**Number of participating countries**

We hypothesize that citizens are likely to prefer PTAs with a smaller number of partner countries to PTAs with higher numbers. The reason is that, with fewer countries, perceived uncertainty is likely to be lower as individuals are better able to identify ex-ante their gains emanating from these agreements (Fernandez and Rodrik 1991; Wei and Frankel 1996). PTAs in contrast to multilateral liberalization à la WTO allow for a more tailor-made liberalization in that certain sectors that would lose under multilateral liberalization could be excluded ex-ante in a preferential trade liberalization process. Furthermore, sectors that, potentially, cannot successfully compete under a multilateral liberalization regime, might win in a preferential trade liberalization process because their comparative advantages are enough to make gains in this specific, typically regional, market (Fernandez and Rodrik 1991; Wei and Frankel 1996). This implies that due to the specific selection of partner countries for a PTA typically fewer sectors in the economy are adversely affected.

Conversely, multilateral liberalization, that is liberalization on a big scale involving many countries, is likely to encounter more political opposition because many people are uncertain about their economic fate and may believe they could lose from this liberalization process (Fernandez and Rodrik 1991; Wei and Frankel 1996). Thus, in essence, it should be easier for individuals to identify gains and losses from a trade agreement with one or very few other countries while the distributional effects of multilateral liberalization depend on the exchange of market access commitments between more than 160 countries (the current setup in the World Trade Organization).

---

3We are aware that there is a potential trade-off between the scale of an agreement and its scope. Thus, it might be that a PTA that is very extensive in its membership might be rather shallow and does therefore not lead to much de facto liberalization. However, using a conjoint experimental setting is designed to deal with exactly these types of situations. Since our experiment includes both the scale of an agreement, in the form of membership, and the scope of an agreement, in the form of the particular liberalization an agreement would involve, we can estimate which of the two aspects is more important to individuals in forming their opinion about a particular PTA.
Specific countries involved

Besides the sheer number of countries involved, specific countries are likely to matter as well. Recent research on public support for international trade agreements (Gray and Hicks 2014; Hearn 2013; Spilker et al. 2016; Umaña et al. 2015) shows that not only specific characteristics of countries, in a stylized sense, matter for trade preferences, but also the general image of these countries. In view of informational constraints, individuals tend to rely on the name of specific countries as heuristics and attach positive or negative images to them. For example, due to historical animosity between the two countries, PTAs including Costa Rica are likely to be viewed less favorably by Nicaraguans than PTAs with other countries, and vice versa. Similarly, due to military and security rivalries PTAs including China could be perceived more negatively in Vietnam compared to PTAs with other large economies.4

We therefore include in all three surveys the United States, the European Union (EU) and the BRIC countries, that is Brazil, Russia, India and China, as potential countries involved in the liberalization process. The reason for choosing these countries is twofold: First, these countries are the major players in the worldwide economy and hence their market size renders them attractive international trading partners. Second, these countries represent very different geographical regions therefore including countries in close vicinity of the survey country (for example the United States for Costa Rica and Nicaragua and China for Vietnam) and countries further away (for example the EU).

The only exception we have made was that for both Costa Rica and Nicaragua we excluded Russia since trade ties are not very developed between these countries. Instead we included Venezuela and Costa Rica in the case of Nicaragua and Venezuela and Nicaragua in the case of Costa Rica in order to represent the most important neighboring markets.

Scope of liberalization

Concerning the scope of liberalization we focus on two aspects: The agreement’s likely impact on consumer prices and its effects on employment. Since we differentiate the latter category by sector, this allows us to obtain a better understanding of the implications of the R–V framework for individual level trade preferences.

---

4While this approach might consume a lot of variation across agreements because reading specific countries by name is more salient than other dimensions, we consider this to be the most conservative approach. Without naming countries by name individuals might still imagine specific countries without us being able to explicitly control for it.
**Consumer prices**

While it seems uncontroversial to argue that citizens should prefer trade agreements that lower consumer prices since this benefits them directly, the question that arises here is not so much whether this effect will materialize, but how large it is relative to other determinants. Especially for individuals in developing countries, consumption is likely to be very salient (Baker 2003). In contrast to industrialized countries, individuals in developing countries tend to spend a larger share of their income on the consumption of basic goods. Thus a decrease in the price of these goods implies an immediate and substantive welfare increase (Baker 2005). Consequently, we expect this factor to matter quite strongly, potentially crowding out other aspects of the liberalization process.

**Employment**

In addition to their effect on consumer prices in general, trade agreements tend to affect employment. While, again, we do not expect respondents to prefer an agreement that reduces employment over an agreement that maintains current levels of or even increases employment, the interesting issue with the employment dimension is sectoral. Several studies argue that the main reason why the agricultural sector receives disproportionately high levels of subsidies and other forms of protection from trade is rooted in the sector’s image. Most citizens consider agriculture to be an important part of a country’s economy and cultural heritage, and therefore support its protection (Jensen and Shin 2014; Naoi and Kume 2011). Following these arguments, we expect a particularly negative effect of job losses in the agricultural sector independently of the sector of employment of the respective respondent.

Furthermore, following the predictions of the R–V framework as outlined above, job losses in a respondent’s sector of employment are likely to be perceived more negatively than job losses in the other sectors. This should be the case because an agreement resulting in job losses in a respondent’s sector should serve as an informational heuristic on his/her individual job security. Hence individuals could infer from the general statement that jobs will be lost in their sector of employment that their own jobs are potentially unsafe too (Mansfield and Mutz 2009). Since, according to the R–V framework, individuals typically cannot relocate jobs between sectors without costs, one should expect, following this logic, that individuals tend to react to job losses in their own sector with increased opposition to trade liberalization.

**Environment and labor standards**

In contrast to the WTO, PTAs have become particularly prominent fora for linking trade policy with labor and environmental standards (Cottier 2002;
Hafner-Burton 2005; Spilker and Böhmelt 2013). The literature focusing on social and environmental policies typically explains the different commitment levels across countries via differences in public opinion or public demand for such policies (Bernauer and Böhmelt 2013). Building on the idea of post-material value systems, particularly prominent in the trade-environment literature, differences in income levels are seen as the main cause for the variation in environmental and social policy preferences: with increasing income levels individual demand for stronger social policies and higher environmental standards tends to grow (Anderson 1997; Bechtel et al. 2012; Ferrantino 1997; Franzen and Meyer 2010; Spilker 2013).

Hence by implication, citizens’ demand for trade agreements that also mandate high environmental and/or social standards is likely to increase with a country’s economic development level. Consequently, one should expect that for citizens from developing countries, unlike those from advanced economies, high environmental and/or labor standards should not be an important feature of PTAs.

Bernauer and Nguyen (2015) have shown, however, that this hypothesis rests on shaky empirical grounds, and that sacrificing environmental quality at the expense of welfare increasing trade liberalization may be less popular among the general population than among part of the economic and political elite in developing countries. Similar arguments could be made with respect to labor standards. This generates two opposing expectations and requires empirical clarification. On the one hand, following the post-materialism argument, one should expect citizens in developing countries to dislike trade agreements that include stronger environmental and labor standards, relative to the status quo standards in the country. On the other hand, because “ordinary” citizens are usually at the receiving end of polluting production and weak labor standards, one could expect them to support PTAs including enhanced environmental and labor standards. That is, they should support high standards in PTAs in order to “import” such standards from trade partner countries that already have higher standards.

**Labor market access**

While global trade agreements in the framework of the WTO do not deal with labor market issues, many PTAs do. One should expect this issue to be very sensitive and salient from the perspective of citizens. The reason is that labor market access has – via immigration – direct economic implications for citizens, whereas trade liberalization per se typically impacts indirectly on domestic labor markets by affecting imports and exports and employment risks in the sectors affected. PTAs can include various arrangements for labor market access. In our study, we use a characterization that focuses on skill levels. We do so in order to assess how useful the H–O framework is in our
context. From a theoretical viewpoint, the expectation is straightforward: since granting labor market access to a given skill group implies more competition for the same skill group in the respective home country, ego-centric respondents catering to their material self-interest should prefer not to offer labor market access to the same skill group. In contrast, offering labor market access to other skill groups may be viewed as fostering economic growth and could thus be perceived as more positive.

**Empirical study design**

To assess the multidimensionality of trade liberalization empirically, we implemented conjoint experiments, an approach well suited for analyzing multidimensional choices (Green et al. 2001; Hainmueller et al. 2014). The experiments were embedded in face-to-face interviews administered to national random samples of the population aged 18 to 64 in Costa Rica, Nicaragua, and Vietnam from December 2013 to February 2014. Sample sizes were 820 in Costa Rica, 800 in Nicaragua, and 700 in Vietnam.

We chose these three countries because despite them being developing countries they differ greatly with respect to their political system, their labor and environmental standards and their income. While studying merely three countries from the Global South clearly sets a strict limit on how much we can generalize, our intention by selecting such diverse countries is to enhance external validity as much as possible by showing that public opinion on PTA characteristics is similar across a wider range of states that do differ in key underlying political and socio-economic conditions. While Costa Rica is an upper middle-income economy both Vietnam and Nicaragua compete in the global arena primarily on the basis of low skilled labor and natural resources with their low productivity reflected in low wages (Sala-i-Martin and Schwab 2012). Similarly, both Nicaragua and Vietnam have rather low environmental and labor standards and rank mostly at the bottom of Yale’s Environmental Performance Index (EPI 2014). In contrast, Costa Rica has a long-standing tradition of social and environmental protection and ranks no. 1 in Latin America and no. 25 in the world on the Social Progress Index measuring environmental and social performance alongside GDP (Porter et al. 2014). With respect to political rights, however, it is Costa Rica and Nicaragua that are both democratic whereas Vietnam has a one-party autocratic system (Marshall et al. 2006). In 2007, Costa Rica even held a

---

5Whereas our surveys in Costa Rica and Nicaragua included the entire country, we focused the sampling in Vietnam to the Hanoi and Ho Chi Minh City (HCMC) areas, which also include large rural districts. The latter restriction was necessary for logistical and cost reasons. As shown by Bernauer and Nguyen (2015) the socio-demographics of these two areas are very similar to the socio-demographics of the country as a whole and should therefore not bias our results.
nation-wide referendum whether to ratify the Free Trade Agreement between the Dominican Republic, Central America and the United States – DR-CAFTA – a first for a developing country (Hicks, Milner, and Tingley 2014). An overview of the main characteristics of and differences between the three countries, which formed the basis of our country selection – can be found in the Online Appendix Part 1.

We used a particular variety of conjoint analysis, called choice-based conjoint analysis. Participants in our surveys were confronted, in stylized form, with two potential trade agreements at a time, shown side by side. These two agreements varied with respect to the 11 different characteristics (attributes) displayed in Table 1. Respondents were then asked to state which of the two agreements they prefer and to express on a seven-point scale how much they like each of the two agreements. The latter measure is valuable because the choice-based measure alone does not tell us the degree to which a respondent prefers one potential agreement over the other. Furthermore, the choice based measure does not take into account cases where a respondent prefers or dislikes both agreements equally. Consequently, either respondent choices for or against a specific agreement or their rating of this agreement form our dependent variable, while PTA dimensions correspond to the explanatory variables in our hypotheses.

Respondents were asked to complete five choice tasks in total, each of which consisted of profiles of two potential trade agreements with a fixed set of attributes whose values varied between and across the choice tasks. Table 2 shows an example of such a choice task for the case of Vietnam. Hence for each choice task respondents saw two new agreement profiles with randomly inserted values for each of the 11 attributes. Because the attribute values are randomly assigned, it allows the identification of the causal effect – the Average Marginal Component Effect (AMCE) – of each attribute value on the probability that a particular agreement will be chosen or rated as more or less desirable (Hainmueller et al. 2014).

Table 2. Example of conjoint choice task – Vietnam.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>PTA 1</th>
<th>PTA 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Numbers of countries involved</td>
<td>2</td>
<td>150</td>
</tr>
<tr>
<td>The agreement also includes</td>
<td>Brazil</td>
<td>China</td>
</tr>
<tr>
<td>Prices of the goods you buy will</td>
<td>stay the same</td>
<td>decrease</td>
</tr>
<tr>
<td>Employment in the agricultural sector will</td>
<td>increase</td>
<td>increase</td>
</tr>
<tr>
<td>Employment in the manufacturing sector will</td>
<td>increase</td>
<td>stay the same</td>
</tr>
<tr>
<td>Employment in the service sector will</td>
<td>stay the same</td>
<td>stay the same</td>
</tr>
<tr>
<td>Environmental protection standards will</td>
<td>increase</td>
<td>stay the same</td>
</tr>
<tr>
<td>Labor protection standards will</td>
<td>increase</td>
<td>increase</td>
</tr>
<tr>
<td>Foreign citizens with high skills will be allowed to work in Vietnam</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>Foreign citizens with medium skills will be allowed to work in Vietnam</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>Foreign citizens with low skills will be allowed to work in Vietnam</td>
<td>no</td>
<td>yes</td>
</tr>
</tbody>
</table>

Which agreement would you prefer?
The conjoint part of the survey started with a short introductory text on what PTAs are and instructions on how to complete the choice tasks. The respondents then saw a table describing each of the 11 attributes (similar to Table 1) before proceeding to the actual choice tasks (for further details, see Online Appendix Part 2). Using this setup, the unit of analysis is the single agreement profile. Since each individual completed five choice tasks consisting of two agreement profiles we have a maximum of five times two times number of respondents, that is 8200 observations in the case of Costa Rica, 8000 for Nicaragua, and 7000 for Vietnam. We rescaled the seven-point scale of the second dependent variable, where 1 indicates that the respondent would “never support” such an agreement and 7 indicates that she would “always support” such an agreement, to range from 0 to 1. Following Hainmueller et al. (2014), we estimate the AMCEs by regressing either the choice or the ranking variable on the different values of the attributes (for example whether the agreement will reduce employment in the agricultural sector), each of which is measured in binary form. Standard errors are clustered on the respondent to account for the non-independence of their (2 × 5) choices.

One potential issue with our conjoint experiment design pertains to the number of attributes. The existing literature offers no clear guidelines on how many attributes at what level of complexity are meaningful (Green et al. 2001; Hainmueller et al. 2014). Many studies use 6–12 attributes. Since we specified our attributes in rather simple terms we decided to opt for a relatively large number of attributes. The advantage is that this makes the set of PTA characteristics quite realistic. During our intensive pre-test phase based on pilot studies with samples recruited on Amazon Mechanical Turk, we carefully checked that individuals are able to fully understand the respective dimensions of PTAs and are clearly able to differentiate between them. At the extreme, cognitively overburdening respondents with too many and too complex attributes is most likely to result in all treatment effects becoming insignificant (to the extent respondents then simply perceive “noise”). The results reported below show that this is clearly not the case because the majority of PTA design features have significant effects. Besides, we checked whether effects decrease (or increase) as study participants complete the five choice tasks. We do not observe such effects. Overall, therefore, we believe that our conjoint design works sufficiently well.

---

6The introductory text was: Costa Rica is currently negotiating international trade agreements with other countries. The purpose of such trade agreements is to make it easier for producers from other countries to sell their goods and services in Costa Rica (imports), and to make it easier for producers based in Costa Rica to sell their goods and services in other countries (exports). Trade agreements may involve smaller or larger groups of countries. They may cover different economic sectors. And they may have different effects on the economies of the countries involved.

We are interested in what kinds of international trade agreements you prefer.
On a much more general note though, critics have been pointing out that it is very challenging to measure and explain citizens’ preferences toward trade policy in a reliable and meaningful way because citizens know rather little about trade issues (Guisinger 2009). We agree to some extent with this concern, which of course applies to virtually all research on mass public attitudes toward policy issues of almost any type, not only trade policy. However, as shown by a lot of existing research on this issue (for an overview on public opinion research see Lupia 2015), citizens do hold relatively clear and stable opinions even on rather complex policy issues (for example trade policy). We thus believe that careful design of surveys can generate reliable and substantively meaningful information on mass public opinion on trade issues, including PTAs.

In our specific case, we used everyday language in the survey pre-tested in pilot tests, so that “ordinary” people with little knowledge on trade issues could well understand the survey items. It is also worth mentioning in this context that survey experiments like ours do not presume that every citizen forms her/his preference toward PTAs based on a systematic evaluation according to the exact same criteria we based our survey experiment on (for example the attributes in the conjoint analysis). Rather, experiments like ours evaluate how citizens form their preferences when confronted with a set of criteria for evaluation. The effects of our attributes in the conjoint analysis, for instance, tell us how citizens are likely to evaluate PTAs and which criteria are likely to matter more or less in this regard. Moreover, in assessing the robustness of our findings we explicitly look at whether differing levels of education as a proxy of prior knowledge on trade issues (see Hainmueller and Hiscox 2006) moderate the role PTA attributes play in individuals’ evaluation. The results are very similar, meaning that the level of prior knowledge on trade issues has only a weak moderating effect. Taken together, we believe that designing a survey experiment along these lines can generate robust and interesting information on mass public attitudes toward PTAs.

**Results**

We start our discussion of the results with an overview of the overall popularity of PTAs. Relying on the rating task in the conjoint experiments, we can obtain an overall measure of how much individuals support PTAs in general. Figure 1 shows support levels across all potential trade agreements for the three samples. The bars in the three panels indicate how many of the proposed (stylized) PTAs were rated as “1,” implying no support at all for this PTA, to “7,” implying strong support for this particular PTA. While in all three countries a majority of respondents are in favor of PTAs in general, in the sense that they rate PTAs (with any attributes) with a score of 4 and
higher, clearly PTAs seem to be more popular in Nicaragua and Vietnam than in Costa Rica.

Turning to the specific findings for the three countries, Figures 2.1–2.3 illustrate the results for the conjoint experiment for each country. In all figures dots represent the estimates for each attribute on the probability that an individual chose the respective PTA profile. Horizontal lines represent the 95% confidence intervals. Each attribute can be interpreted relative to the (omitted) baseline category, which is depicted as a dot on the vertical zero line.

In contrast to our theoretical expectations, people tend to prefer agreements with more over agreements with fewer countries. Hence our theoretical argumentation that individuals associate agreements including more countries with higher levels of uncertainty does not receive support. Moreover, with the exception of the United States in the case of Costa Rica and Nicaragua, all other countries are less preferred trading partners than the EU. Since the EU is rather far away from all three countries in terms of geographic distance, this effect seems to reflect the general positive image of the EU as potential trading partner. As described above, despite them being neighboring countries, Nicaraguans are not judged favorably in Costa Rica and vice versa due to historical animosities. This is clearly reflected in our results as Costa Rica, in the case of Nicaragua, and Nicaragua in the case of

Figure 1. Overall support levels across all possible PTAs.
Costa Rica are associated with one of the worst trading partner images. In Vietnam, the least preferred trading partner turned out to be China, which probably reflects the strained relations between both countries due to their military–security rivalry. Furthermore, this second facet of scale of liberalization clearly dominates all other PTA characteristics in terms of effect size.

As expected, reducing prices has a substantive and significant effect in all three countries. However, as we have discussed above, the question is not so much whether people will find price reduction attractive but rather how large the effect is compared to other features of trade liberalization, that is prices’ relative importance. Interestingly, while reducing prices is one of the most substantial effects – about an eight percentage point increase in support of a PTA which reduces prices – this effect is not significantly larger than those concerning employment, for example.

With regard to employment, we also observe that PTAs expected to create more employment are clearly preferred. In contrast to earlier studies on the importance of the agricultural sector (Naoi and Kume 2011), we do not find that employment considerations in agriculture are especially important. Rather to the contrary, effect sizes for agriculture are slightly, though not significantly, smaller than for manufacturing and services. It might be that
this finding is due to our empirical focus on developing countries. Most existing studies on protectionism in the agricultural sector are based on evidence from industrialized countries (Jensen and Shin 2014; Naoi and Kume 2011). Thus it might be that agricultural protectionism is not that pronounced in countries of the Global South. Yet, without comparative data this is difficult to evaluate and could therefore be the focus of future research.

Moreover, we also do not find significant support for the argument that individuals value employment creation mostly in their own sector. As summarized in Table 3, most individuals seem to value job creation in all three sectors independent of their own sector of employment. While for several sectors, for example, the services sector in Costa Rica or Nicaragua, individuals have a slight preference for agreements creating more employment in their own, that is the services sector, this effect is not statistically different from employment creation in the other sectors (see also Figures A.2.1 to

Figure 2.2. Nicaragua.
A.4.3 in the Online Appendix Part 2). The only exception is individuals working in the agricultural sector in Vietnam (Figure A.4.3): These respondents have a clear preference for those PTAs increasing employment in the agricultural sector. Overall, however, the sectoral dimension, as highlighted by the R–V framework, does not seem to play a very prominent role in the three countries studied in this analysis.

Turning to labor and environmental standards, our results do not offer support for the perspective that individuals in developing countries do not attach much importance to such standards. In all three countries, individuals prefer PTAs either maintaining or increasing worker and/or environmental rights. Furthermore, in all three countries the effect sizes of the environmental and labor standard dimensions are about similar to those of the economic dimensions, such as price and employment effects.

Figure 2.3. Vietnam.
As to migration provisions, we see, for the first time, some significant country variation. While in all three countries we observe a preference for low-skilled labor migration, only in Vietnam also high- and medium-skilled individuals are preferred immigrants. In contrast, in Nicaragua individuals do not prefer high-skill labor migration and in Costa Rica individuals do not prefer medium-skill labor migration. One interpretation is that Costa Rica, being a middle-income country, is no longer abundant in low-skilled labor but has already reached a medium-skill level. This means that its citizens, on average, may prefer not to compete with medium-skilled immigrants.

To fully understand how citizens’ skill level impacts their preferences for migration, the last two rows in Table 3 summarize the conditional results (corresponding figures are displayed in the Online Appendix Part 2). While, overall, most respondents tend to value immigration by all skill types, we observe some interesting variation according to respondents’ own skill level. Following the predictions of the H–O framework, we argued above that individuals should prefer other skill groups to enter the country but prefer to restrict immigration for individuals of their own skill group. However, overall, we do not find much evidence for such a competition logic of immigration. In both Costa Rica and Nicaragua, high-skilled respondents favor especially PTAs that offer working permits for high- and medium-skilled individuals. Furthermore, in all three countries low-skilled individuals prefer PTAs offering working permits for low-skilled individuals. Only high-skilled respondents in Vietnam correspond to the competition logic since they tend to favor medium- and low-skilled worker access, but do not prefer PTAs offering working permits for individuals with high skills.

**Discussion**

Although citizens only rarely vote directly and specifically on international trade issues, public opinion plays an important role in trade policymaking (Kono 2008; Mansfield and Milner 2012). As trade liberalization efforts in recent years have increasingly shifted from the global to regional and bilateral levels, the specifics of (potential) trade agreements have moved to the forefront of public discourse on this topic. The current public backlash in both the United States and Europe with regard to several trade agreements presently under negotiation, such as the TPP and the TTIP, demonstrates the importance of understanding what considerations are shaping citizens’ attitudes with respect to PTAs. However, public debate on PTAs is not confined to advanced industrialized countries. Costa Rica, for example, held a national referendum on ratification of the Free Trade Agreement between the Dominican Republic, Central America, and the United States (DR-CAFTA; see Hicks, Milner, and Tingley 2014).
Our existing knowledge on what drives public opinion on trade issues is mostly confined to industrialized countries, however, and is based largely on an approach that considers public opinion on trade liberalization in a one-dimensional way, ranging from support to opposition. In this examination, we strove to broaden our understanding of trade preferences by experimentally studying, in the context of PTAs, the multi-dimensionality of individual level trade preferences. While PTAs are of course meant and designed to liberalize trade, they also cover a range of other issues that are directly or indirectly related to trade liberalization. These properties constitute a perfect setting for conceptualizing and empirically studying them in terms of preferences over a multi-dimensional policy space.

Using choice-based conjoint experiments, in which we confront respondents, in stylized form, with potential PTAs, we find that independent of their country of origin respondents in Costa Rica, Nicaragua, and

<table>
<thead>
<tr>
<th>Table 3. Overview of conditional results.</th>
<th>Costa Rica</th>
<th>Nicaragua</th>
<th>Vietnam</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respondent works in <strong>agricultural</strong> sector</td>
<td>Dislikes no effects for agricultural sector</td>
<td>No statistical differences</td>
<td>prefers job increases in: • Agriculture</td>
</tr>
<tr>
<td>Respondent works in <strong>manufacturing</strong> sector</td>
<td>prefers job increases in: • Manufacturing and services • Slight preference for own sector but not significant</td>
<td>prefers job increases in: • Services</td>
<td>prefers job increases in: • Manufacturing and services • Slight preference for own sector but not significant</td>
</tr>
<tr>
<td>Respondent works in <strong>services</strong> sector</td>
<td>prefers job increases in: • All sectors • Slight preference for own sector but not significant</td>
<td>prefers job increases in: • All sectors • Slight preference for own sector but not significant</td>
<td>prefers job increases in: • All sectors</td>
</tr>
<tr>
<td>Respondent has <strong>higher education</strong></td>
<td>prefers working permits for: • High-skilled individuals • Medium-skilled individuals</td>
<td>prefers working permits for: • High-skilled individuals • Medium-skilled individuals • Low-skilled individuals</td>
<td>prefers working permits for: • Medium-skilled individuals • Low-skilled individuals</td>
</tr>
<tr>
<td>Respondent has <strong>no higher education</strong></td>
<td>prefers working permits for: • High-skilled individuals • Low-skilled individuals</td>
<td>prefers working permits for: • Medium-skilled individuals • Low-skilled individuals</td>
<td>prefers working permits for: • High-skilled individuals • Medium-skilled individuals • Low-skilled individuals</td>
</tr>
</tbody>
</table>

G. SPILKER ET AL.
Vietnam tend to favor rather similar trade agreements, though overall levels of PTA support differ quite strongly. In all three countries, the most important factor shaping people’s trade preferences is sympathy or rather antipathy toward particular other countries. Furthermore, conventional political economy explanations, which were developed in view of one-dimensional trade policy preferences, have merely about the same explanatory power as non-economic considerations, such as environmental and labor standards. While we expected that price and employment effects of PTAs might crowd out effects of environmental and labor standards, this is empirically not the case. In contrast, despite being developing countries, which is typically highlighted in post-materialist explanations as leading to a lower priority of environmental and labor concerns, respondents in all three countries prefer trade agreements that maintain or even increase labor and environmental standards.

Our evaluation of the implications of both the H–O and the R–V frameworks resulted in rather limited support for these models. First, and in some contrast to the predictions derived from the H–O framework, individuals favored PTAs offering labor market access to all types of workers. Only in Vietnam did respondents prefer not to offer working permits to foreign workers from the same skill group. Hence only in Vietnam, but not in Costa Rica and Nicaragua, do experimental findings align with a competition logic suggesting that individuals prefer not to compete with foreign workers of the same skill group. Moreover, we do

![Figure 3. Potential support for PTAs.](image-url)
not find support for the idea that individuals mostly value employment creation in their own sector, which would be in line with the predictions of the R–V framework. Rather, individuals dislike job losses independent of the sector concerned.

At least three policy implications emerge from this study. First, our results imply that despite current debates surrounding PTAs, such as the TPP and the TTIP agreements, it seems possible to design trade agreements in ways that engender public support. To illustrate this point, Figure 3 shows for each of the countries the support levels for a hypothetical PTA corresponding to the worst\(^7\) and to the best-case\(^8\) scenario. This shows that potential support ranges widely, for example in the case of Costa Rica, from a low of 0.29% to a high of 0.74%. This suggests that policy-makers have considerable room to maneuver in selecting contents and participants of PTAs that are appealing to citizens. While we acknowledge that there are clear limits to changing support for PTAs by adjusting their design, still there is important variation. Hence though it might not be possible to make a clear PTA skeptic accept PTAs if only the specific PTA had a favorable design, for citizens with no extreme views on trade liberalization design features could indeed make the decisive difference.

Second, trade preferences seem to be rather consistent across the three countries, despite strong differences in macro-economic and political contexts. These similarities imply that policy-makers in different developing countries might be able to rely on somewhat similar strategies to increase support for PTAs, though our results by no means imply that simple tweaks in PTA signs will necessarily have massive implications for public support.

Third and finally, while the existing literature on trade policy preferences and mass public opinion in this area has largely focused on the economic effects of PTAs, our results suggest that non-economic dimensions of trade liberalization are at least as important. While such issues have been largely sidelined in global trade liberalization efforts in the framework of the WTO, evidence from PTA negotiations over the past decade suggests that resolving conflicting positions on non-economic issues is very challenging indeed, and perhaps more challenging than resolving differences over the conventional market access issues. From the perspective of policy-makers, this requires careful ex-ante (before embarking on negotiations) considerations of trade-offs between economic gains from PTAs and the political feasibility of dealing with non-economic issues in ways that result in sufficient support from

\(^7\)For Costa Rica this is a PTA with Nicaragua that would decrease both environmental and worker rights standards, increase prices, reduce jobs in all three sectors and would not allow for any type of immigration. For Nicaragua and Vietnam the respective countries would be Costa Rica or India respectively.

\(^8\)For all countries this is a PTA with the US that would increase both environmental and worker rights standards, decrease prices, increase jobs in all three sectors and would allow for all types of immigration.
domestic constituencies. Controversy over non-trade issues in the past and ongoing efforts to establish PTAs has also shown that mass public opinion matters particularly with respect to non-economic issues, and that policy-making can benefit from increased knowledge on how economic and non-economic implications of trade liberalization shape public opinion formation.

Finally, it is worth mentioning caveats and options for further research. The most obvious limitation is the focus on three (albeit very different) developing countries. The fact that our findings are similar for all three countries under study suggests that our results are likely to be relevant to other developing countries as well. However, empirical demonstration of such relevance will require survey experiments in other parts of the Global South. It would also be interesting to carry out similar research for advanced industrialized countries. One particular issue worth investigating for the latter countries could, for instance, be the extent to which PTA design attributes matter for public support in countries characterized by high levels of political polarization, for instance the United States. Such research could provide interesting insights into how existing or prospective PTAs could be (re-)designed in order to increase acceptance among particular types of citizens.

**Acknowledgment**

We would like to thank the members of the political economy research group at ETH Zurich, participants of the economics colloquium at the University of Salzburg and participants of the Austrian Political Science Conference 2015, the Journal’s Editors, as well as three anonymous reviewers for very helpful comments on earlier versions of this article.

**Funding**

The data collection for this article was funded by the Swiss National Center for Competence in Research (NCCR) “Trade Regulation.”

**References**


