




# Economic self-interest, information, and trade policy preferences: evidence from an experiment in Tunisia

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## ABSTRACT

We address a central question about the integration of developing countries into the global economy: what factors affect public support for such globalization. Do public preferences toward trade correlate with its economic consequences or socio-cultural resonances? Using a nationally representative survey experiment in Tunisia, a majority Muslim, developing country, we investigate whether providing information about trade's distributional consequences causes respondents to connect their economic self-interest to their trade policy preferences. Respondents seem to understand their economic self-interest, and information provision enhances this. Information about the likely benefits of trade causes people in the export-oriented sector to respond more positively to trade liberalization, as economic theory predicts. Information about its costs has confounding effects on those in import-competing sectors; those involved in global value chains maintain support for trade more than those outside such production chains who become protectionist. We find scant evidence that sociotropic, political, or cultural variables influence trade attitudes. Contributing to the recent debates over trade policy preferences, we show that public preferences align most strongly with their economic self-interest as derived from recent trade theories.

## KEYWORDS

International trade; trade policy; globalization; public opinion; new; new trade theory; sociotropism; survey experiment; developing country; Islam; culture

## 1. Introduction

Since the 1980s, many developing countries have opened their markets to international trade and foreign investment, thereby joining the global economy. While the economic effects of this have been debated (Goldberg & Pavcnik, 2007; Harrison & Hanson, 1999), we are interested in the political implications. We ask whether the public supports opening their national economy and whether public attitudes toward trade correlate with its economic consequences. These are important questions since such public preferences may affect whether developing countries remain open to trade and foreign investment.

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These issues are also important elements of the political science debate over what factors shape public preferences about public policies, like international trade. Current debates raise questions that are unresolved. First, does the public have preferences about trade policy? Do citizens have sufficient information about trade to develop such preferences? Second, if they do, what factors shape these preferences? They could be driven by their own economic self-interest, or more by socio-tropic, cultural, or political factors. Finally, do existing theoretical models, derived from the rich Western economies, help us understand preferences about globalization in the developing world? We investigate these questions in a non-Western economy. As we show, in economic terms, Tunisia is fairly typical among middle income developing countries, but has two outstanding characteristics that make it especially interesting. First, as a Muslim country, it has strong religious and cultural practices that differentiate it from the typical countries studied in trade politics, like the US or OECD ones (Hainmueller & Hiscox, 2006; Scheve & Slaughter, 2001; Tomz, 2007). Second, it has recently become democratic, and thus the opinions of its public are likely to have weight with the government. Tunisia opened its economy up in the 1990s under an autocratic government. An important issue is whether this young democracy will be able to maintain support for this openness. Our study asks whether the distributional consequences of trade and/or Tunisia's specific socio-cultural context will erode support for trade.

The open economy politics (OEP) theory claims the first step in understanding policy is knowing public preferences (Lake, 2009).<sup>1</sup> OEP derives its expectations about these preferences from economic theory, especially in the trade case the Heckscher–Ohlin (HO) and Stolper–Samuelson (SS) theorems, on the one hand, and Ricardo–Viner (RV) one, on the other (see Kuo & Naoi, 2015). These standard economic models theorize about the distributional effects of trade, and assume that people prefer policies that increase their income and oppose those that decrease it. For Tunisia the SS model implies that its abundant factor, less skilled labor, benefits from more trade, while capital and high-skilled labor would not benefit since they face competition from advanced industrial economies. In the RV framework, those in the export industry should favor trade, while those in the import-competing sector should oppose it. The recent third wave of trade theory, so-called 'new, new trade theory' (NNTT), posits that people's interests follow from the degree of global connections the firm they work in possesses; firms that export, import from, and/or sell to global firms – i.e. those that are part of global value chains (GVCs) – should favor trade.<sup>2</sup>

Using a nationally representative survey experiment, we ask whether Tunisians understand their economic self-interest and whether providing information about their economic situation causes respondents to connect more clearly their economic self-interest to their trade policy preferences. Our experiment focuses on the RV hypothesis since it seems most appropriate for this context, as discussed below. We show that first when not provided with information about trade's likely effects, many seem to understand the connection between their jobs, incomes, and trade policy; second, when told more about trade's impact, those in the export sector respond positively as expected, while those in the import-competing one do not uniformly respond negatively; and, third, sociotropism and other cultural factors, which might account for this, do not. Our findings provide support for the new theories of trade (so-called new, new trade theory or NNTT).

In [Section 2](#), we present the literature on theories of trade policy preferences and use these to develop our hypotheses. [Section 3](#) discusses why we focus on Tunisia, sets forth our data and research design, and describes all of our variables. [Section 4](#) presents the results of our experiment focusing on the RV hypotheses. [Section 5](#) explores how new trade theory helps us understand the data. [Section 6](#) examines the role of SS models. And [Section 7](#) examines the effects of non-economic factors. We conclude by pointing to our contributions to the debate on trade policy preferences and OEP.

## 2. Theory

A lively debate exists over the sources of public preferences for policies, including trade; Kuo and Naoi (2015) provide an excellent review. For trade, early research showed that people understood the economic effects of trade and developed preferences based on their economic self-interest (Ardanaz, Murillo, & Pinto, 2013; Baker, 2005; Balistreri, 1997; Fordham & Kleinberg, 2012; Hicks, Milner, & Tingley, 2014; Mayda & Rodrik, 2005; O'Rourke & Sinnott, 2001; Scheve & Slaughter, 2001). Critical reactions suggested that other factors might account for this seeming relationship (Hainmueller & Hiscox, 2006; Hiscox, 2006). Further research suggested that sociotropic concerns might influence trade preferences (Mansfield & Mutz, 2009).<sup>3</sup> Finally, other research showed that people may not have enough information in order to develop such self-interested preferences (Guisinger, 2009; Rho & Tomz, 2017). We explore similar issues in a new context to contribute to this debate.

Standard expectations about individual economic self-interest as driving preferences employ three theoretical approaches. First, HO and SS theorems identify who gains and loses from trade, given their factor endowments and employment. If people develop preferences on the basis of economic self-interest, they should use the net economic gains for themselves from a policy as the basis for their preferences. Policies that provide them with overall gains economically should be favored while those creating losses should be disliked. Economic theories of the distributive effects of trade then can provide information about who likes and dislikes trade policy. These well-known theories have been tested before, mainly in advanced industrial countries (Balistreri, 1997; Beaulieu, 2002; Midford, 1993; Rogowski, 1989; Scheve & Slaughter, 2001); what is novel here is their examination in a developing country context.

In developing countries, factor mobility tends to be low and hence SS models seem less appropriate. Labor mobility in particular is very low in many poorer countries. In Tunisia, the World Bank notes that '[t]he lack of mobility may in part be driven by very restrictive labor regulations that make firing both costly and difficult' (Rijkers, Arouri, Freund, & Nucifora, 2014, p. 16). In addition, in our data we see that the geographic mobility of workers is very limited. The median respondent in our survey has always lived in the same town; and the mean percentage of their lifetimes that respondents had lived in the same location was 82%. We thus focused our experiment on RV models, which assume that factor mobility is limited. The RV, or so-called specific factor, model focuses on what sectors people work in and how these sectors are affected by trade to derive preferences (Hiscox, 2001, 2002; Irwin, 1994, 1996; Magee, Brock, & Young, 1989). Since

workers cannot move easily, it is assumed that their income is tightly tied to their sector of employment. Hence how trade affects their sector is most important for determining their preferences about trade. Policies that liberalize trade should create more exports and imports. It predicts that people in the export sector should favor trade and trade liberalization, while those in import-competing sectors should oppose trade and support protectionism.

**Hypothesis 1:** Support for trade should be highest among those who work in export-oriented sectors, and lowest for import-competing sectors.

Similar to RV models, recent trade theory, so-called NNTT, focuses attention on the specific context of workers' employment. Unlike RV which examines whole sectors, NNTT examines the firm and focuses on a different mechanism – productivity differences – to generate the distributional effects of trade (Bernard, Eaton, Jensen, & Kortum, 2003; Bombardini, 2008; Jensen, Quinn, & Weymouth, 2015; Johns & Wellhausen, 2016; Kim, 2017; Melitz, 2003; Naoi & Kume, 2015; Osgood, 2016). People derive their interests from their firm's international connections, or lack thereof, which depend on their relative productivity. Again, because labor is not highly mobile workers define their interests on the basis of the specific firm they work in and its global connections. Globalization recently has meant the development of global production or value chains where firms buy inputs from domestic and foreign firms and sell their products to (often as inputs to other) domestic and foreign firms.<sup>4</sup> Since the early 2000s, studies of GVCs and global production networks (GPNs) have developed as ways to understand the evolution of globalization (Coe, Dicken, & Hess, 2008; Coe, Hess, Yeung, Dicken, & Henderson, 2004; Gereffi, 2014; Gereffi, Humphrey, & Sturgeon, 2005; Henderson, Dicken, Hess, Coe, & Yeung, 2002; Neilson, Pritchard, & Yeung, 2014). These studies focus on the power asymmetries and governance structures within GVCs or GPNs, often emphasizing the power of the lead firm (Gereffi, 1994, 1999; Yeung, 2014). While they highlight the international dynamics of globalization, these studies are less concerned with our focus on domestic preferences.

New, new trade theory, which also accounts for this complex process, points to the domestic distributional effects of GVCs that might affect preferences about trade. NNTT suggests two ways in which import-competing firms and workers can lose from trade barriers as a result of the global production chains that they are (trying to be) part of (Melitz, 2003). First, they may buy imported goods and services to produce the products they make, and raising barriers to trade may increase their costs of production rendering them less profitable. Second, import-competing firms may provide intermediate inputs into bigger firms in Tunisia, perhaps exporters and multinational firms, and if these bigger firms are hurt by trade barriers then they cannot buy these intermediate goods. Both of these connections to the global economy make import-competing firms less likely to favor protectionism. Evidence for this comes from our focus group interviews conducted in the fall of 2015 with business owners across Tunis. Both import-competing firms and exporters spoke of the importance of international trade, arguing that a closed economy hurts all sectors.

Tunisia is well integrated in GVCs through foreign investment (African Development Bank, OECD, & United Nations Development Programme, 2014). Foreign investment is important, accounting for about 10% of Tunisian industrial

production, one-third of its exports, and 15% of its total jobs. In 2011, Tunisia's total GVC participation was about 51% of its total gross exports (OECD.Stat 2016).<sup>5</sup> GVCs upend the conventional view of globalization as bolstering export-oriented industries while disadvantaging import-competing firms. In GVCs, specialization revolves around tasks, rather than sectors (Grossman & Rossi-Hansberg, 2008), and imports are critical for exports (see OECD, 2013).

The integration of a country's enterprises into GVCs includes backward and forward linkages. Backward integration means using imported raw material or semi-processed commodities in a country's production for export. Forward integration involves the further processing of a country's exported commodities in foreign countries for subsequent export to world markets. Imports of intermediate goods enable firms to access more efficient inputs. This is true in Tunisia where many of its key export sectors, such as textiles, electrical machinery, and agro-industries, are controlled by foreign firms and depend heavily on intermediate goods and services (Bass, 2016). In 2011, intermediate products constituted about 60% of all imports, and 43% of these intermediate imports ended up in Tunisia's exports (OECD.Stat, 2016). Tunisian firms also provide intermediate inputs into these bigger foreign firms. Tunisia has been entering GVCs in new sectors, such as automotive and aerospace components, as the country adopted policies to propel new foreign investment and shift up the value-added chain (Fabiani, 2017). The policy regime for onshore, or domestic, firms differs from that for so-called offshore firms, ones which export and are multinational. The offshore policy regime in Tunisia promotes GVCs through tax incentives and has been relatively successful in integrating the economy into GVCs (Baghdadi, Kheder, & Arouri, 2017; Rijkers et al., 2014; Rijkers, Baghdadi, & Raballand, 2015; Rijkers, Freund, & Nucifora, 2017).

New, new trade theory models predict somewhat similarly to RV ones: people in exporting firms should prefer free trade, but those in import-competing firms may have more mixed preferences since they may be in global production chains and benefit from trade. People who work in import-competing firms within GVCs benefit from trade because their firm depends on imported materials and/or export their products. They may also sell to exporting or foreign firms. Unlike traditional models of trade, people in import-competing sectors should not have homogeneous preferences for protectionism.

**Hypothesis 2:** Among import-competing firms, individuals working in firms that are part of GVCs will show greater support for trade than individuals working in firms that do not participate in GVCs.

Many studies cannot identify people's skill level or sector of employment well; thus their results about economic self-interest are often tentative. We have taken great care to try to pin down these features of our respondents very precisely by developing one of the most elaborate instruments to measure sector of employment.

Recent research has called into question whether citizens have enough information to understand their self-interest in trade (Guisinger, 2009; Rho & Tomz, 2017). To assess how trade affects them economically, people should have a sense of what effects trade will have on them and/or their family; that is, they should have a sense of how their job is tied to the international economy and/or how

wages for their skill level are affected by trade. We follow Rho and Tomz (2017) in trying to assess whether people understand their self-interest.

Unlike previous studies, we manipulate the information that respondents have about their sector of employment and how trade affects it. We randomly assign one of three cues to the respondents: no information, information about their sector of employment, information about trade's likely effects on their sector. We provide these cues about the distributional effects of trade to see if they make more self-interested calculations as predicted by RV.

**Hypothesis 3:** When treated with information about trade's effect on their sector, citizens will respond more self-interestedly. Those in the export sector will become more positive toward trade, while those in the import-competing sector will become more negative.

While our experiment does not manipulate skill levels, we can examine whether respondents react to trade on the basis of their skill levels as SS models would expect. If factor endowments are key and factor mobility is high, then the SS prediction for a developing country like Tunisia is that individuals with high skill levels and human capital will oppose trade because trade will bring competition from high-skilled labor and capital-abundant countries in the developed world. Lower-skilled individuals should thus favor trade and its liberalization. This prediction about trade preferences is the opposite of what should happen in the advanced industrial democracies. Examining this in a developing country context allows separating the impact of education from capital endowments. In developed countries, high education could lead to support for trade because one has high skill or because one has been 'educated' into the benefits of trade (Hainmueller & Hiscox, 2006). In developing countries, low skilled workers who have not had much education are expected to be the main supporters of trade, meaning that skill level is not confounded with education.

**Hypothesis 4:** Support for trade will be lowest among individuals with greater human capital (i.e. high skill or higher education) and highest among those with lower levels of human capital.

In addition to self-interest, other factors may condition citizen's preferences over trade. These non-economic factors may intervene between people's economic understanding and their preferences, overriding self-interest calculations. Or they may be more influential given that people might not have enough knowledge about their economic situation to understand their self-interest. Sociotropic studies focus on perceptions of the national economy and how trade affects it. The prediction is that the more one believes trade is good (bad) for the country, the more one supports (opposes) an open trade policy.

In addition, some research indicates that factors like nationalism, attitudes toward the West, or religiosity may affect policy preferences (Herrmann, Tetlock, & Diascro, 2001; Margalit, 2012; Sabet, 2016). Tunisia is an excellent context to explore these arguments since it differs from most advanced industrial countries which have been the main object of study. As a former French colony, it has a complicated relationship with the West. As an overwhelmingly Muslim country, it is far more religious than most in the West and has distinct mores. Its Islamic traditions might shape attitudes toward trade distinct from those found in predominantly European and American contexts. Indeed, many expect a negative attitude toward trade and globalization more generally in the MENA region. As one study

of Muslim responses to globalization generalizes, ‘Building on two centuries of Muslim critiques of capitalism and materialism (from Al-Jabarti to Sayyid Qutb, and Ali Shariati) contemporary writers see globalization as sabotaging the ‘Islamic Personality’ and ‘infect[ing] the people’, causing a ‘planned exchange’ with true Muslims through the introduction of materialist culture’ (Levine, 2002). On the whole, however, we know little about how Muslims respond to globalization and trade in particular.

Some research suggests that Muslims have tended to oppose globalization when it is seen as undermining core Islamic values or beliefs (Brown, 2012; Kepel, 2002; Roy, 2004; Wickham, 2015; Zuhur, 1992). The mobilization of Islamic political parties against globalization – whether in Egypt in the 1980s, the Islamic Action Front in Jordan in the 1990s, and more recently debates about whether Ennahda, Tunisia’s Islamist party, would ban alcohol and bikinis from beaches – illustrates the ways in which Islamic convictions shape preferences about globalization.

Our own survey of Tunisians finds that citizens oppose globalization when it conflicts with core Islamic values. About 60% maintain that banks which charge interest contradict the teachings of Islam and should be banned; 55% believe that foreign companies that bring in impermissible goods like pork and alcohol should be banned; and 66% of Tunisians do not support allowing foreign investment if it brings in non-Islamic practices and products. Tunisian commitments to core Islamic values could play a significant role in dampening support for globalization (Guiso, Sapienza, & Zingales, 2003; Noland & Pack, 2007; Voigt, 2005).

### 3. Research design and method

#### 3.1. Why Tunisia?

Tunisia is an interesting case for four reasons. First, Tunisia’s economy and trade relations are about average for the 107 middle-income developing countries in the world today. Its GDP and GNP per capita are in the middle range for these middle-income countries (World Bank, 2016b). Tunisia is heavily trade dependent at about 93% of GDP, which is about average for these countries. Tunisia is now very open to trade thanks to policy changes since the 1990s (Gwartnery, Lawson, & Hall, 2016; Sachs, Warner, Aslund, & Fischer, 1995; Wacziarg & Welch, 2008). It signed myriad trade agreements with OECD states as well as other Arab and African states, and signed onto the GATT in 1990 and the WTO in 1995 (Konan & Kim, 2004). In the mid-1990s Tunisia had an average applied tariff rate of about 30%; by 2015, its tariff rate was only 6% (World Bank, 2016b). On many dimensions Tunisia is an average middle-income developing country that recently opened to the global economy.

Despite the fact that Tunisia is classified as a middle-income developing country, there is considerable evidence that Tunisia is low-skill abundant. First, a small minority of the adult population has completed college. According to World Bank Development Indicators, only 12% of the population over 25 years old had completed post-secondary education in 2012 (the latest year available). Less than 40% of the adult population (over 25) have completed at least lower secondary school. Foreign firms also told the World Bank (2014):

the level of workers skills and education are the second leading perceived constraint to firm operations ... For instance, 70% of respondents stated that the types of engineers and/or professionals available on the job market do not possess adequate skills required for the position.

Tunisian companies report similar problems: more than 39% of Tunisian firms surveyed in the same report said that the lack of workers with relevant skills was a 'severe problem'. All of this puts Tunisia on a similar footing as other developing countries, with a shortage of skilled labor and preponderance of informal and small-scale employment (Rijkers et al., 2014, p. 3).

Second, Tunisia is a Muslim country, with a 99% Muslim population. According to the Arab Barometer (2014), Tunisia shares religious views with its MENA neighbors. Roughly similar significant minorities in Tunisia and other MENA countries think that democracy contradicts Islam (36% vs 28%) and that non-Muslims should have fewer political rights (26% versus 33%). Tunisians are about as religious as their MENA brethren; large majorities pray daily (74% versus 89%) and read the Quran (77% versus 63%). This strong and pervasive religiosity contrasts with many other developing nations, enabling us to explore whether these beliefs affect support for globalization.

Third, support for trade runs very high in the MENA region overall at about 84% of the public, and it runs even higher in Tunisia at 93% (Arab Barometer, 2014). But beliefs that trade is good for the national economy and for a respondent's family are less strong in Tunisia than in the MENA overall (75 versus 79%; 44 versus 53%). Generally, Tunisians support trade but are less sure it will benefit them personally, much as do other MENA publics. One reason for such strong support for trade and foreign investment in Tunisia is that domestic firms were often seen as being captives of the ruling family. Much evidence shows that many domestic firms had political connections that allowed them to avoid taxes and import duties and practice non-competitive policies (Burger, Ianchovichina, & Rijkers, 2016; Rijkers, Arouri, & Baghdadi, 2016; Rijkers et al., 2015, 2017). These firms also appeared to favor protectionism and limits on foreign investment to protect themselves. This behavior by the major domestic firms has been costly to the public and it may have led the public to favor more foreign trade and investment.

Finally, Tunisia became a democracy after 2011, and as such the opinions of its public are more likely to reflect their actual beliefs and to be salient for policy. Its Polity score was 4 right after the revolution and in 2015 had risen to 7 (out of 10) (Marshall, Gurr, & Jaggers, 2017). Tunisia is thus an important case for better understanding how economic self-interest and socio-cultural values shape attitudes toward globalization.

### **3.2. Data description and methods**

We conducted a survey experiment in Tunisia to study trade attitudes and preferences in a developing country. In total, we surveyed a nationally representative sample of 2491 adults between the ages of 18 and 93 from January 28 to April 6, 2015. Tunisian enumerators conducted face-to-face interviews in Arabic through computer assisted personal interviewing (CAPI), based on a complex sample design including stratification and clustering as described in detail in Appendix A. We



stratified the random assignment of the treatment across four employment sectors: exporters, import-competers, non-traders, and public.

To investigate how an individual's sector of employment affects her trade preferences, we leverage a detailed battery of questions in our survey about the respondent's or the family's main income earner's (MIE) occupation. We classified an occupation as net-exporting, net-importing, non-traded, or public/government based on industry-level trade data from COMTRADE (United Nations, 2015). We first observed whether an industry was net exporting or net importing by taking the average current account balance for each product at the HS 2-digit level from 2005 to 2015. We then classified each occupation into one of four sectors.<sup>6</sup> In our sample, we find that 18% were in exporting industries; 20% in import-competing; 41% in non-traded; and 21% in public service.

Respondents received three different statements but the same question about international trade in each of these four sectors. A first group within each of the four sectors was provided with no informational cues. A second group was provided with information about what sector they work in. A third group was given information about both the sector they work in and the distributional consequences of increasing trade. The information we gave each sector about trade and its impact was consistent with economic theory. After this, all respondents were read the same question:

**Experimental Question:** Some people have suggested placing new limits on foreign trade in order to protect the Tunisian economy. Others say that such limits on trade would hurt the Tunisian economy. Do you favor or oppose placing new limits on trade of foreign goods and services?

**Answer options:** (1) Favor limits on foreign trade; (2) Oppose limits to foreign trade

The first group within each of the four sectors was randomly assigned to receive no information about their employment sector or the possible distributional consequences of increased trade exposure. Respondents were simply told that some people suggested placing new limits on foreign trade in order to protect Tunisian economy, whereas others oppose these limits saying that trade restrictions would hurt the Tunisian economy. They then answered the question about placing trade barriers on foreign goods based solely on preexisting knowledge.

In the second group, we cued them only with information about the sector of their employment. This information differed across the four main sectors. This allowed us to assess whether conditional upon being told of the sector they worked in, they better understood the possible distributional consequences of trade. Hence, we told those binned in each sector that they were in that sector; no deception was used. Specifically, each respondent was first told 'You indicated earlier that [you/MIEperson] [work/works/worked] in the [industry]' and presented with the following information about their sector's relationship to trade:

**Exporters:** This sector is heavily involved in international trade; that is, it exports a lot of its products or services to other countries.

**Import-Competing:** This sector is heavily involved in international trade. It faces much competition from goods and services imported from other countries.

**Non-traders/Public:** This sector currently does not face direct competition from foreign firms.

The third randomly assigned group was told information about their *sector* and the likely *effect of trade on wages and jobs in their sector*, as derived from economic theory, RV in this case. Exporters received information that their sector will grow from increased trade and that wages and jobs in their sector might increase. Respondents in import-competing industries were told that the flow of foreign goods into their sector will grow much larger so wages and jobs in their sector may decrease. The exact wording are below:

**Exporters:** In the future, economists predict that Tunisia's trade will grow very substantially. This means that exports in [your/his/her] sector will grow much larger so that wages and jobs in [your/his/her] sector may increase.

**Import-Competing:** In the future, economists predict that Tunisia's trade will grow very substantially. This means that foreign goods imported into [your/his/her] sector will grow much larger so that wages and jobs in [your/his/her] sector may decrease.

**Non-traders/Public:** In the future, economists predict that Tunisia's trade will grow very substantially. This means Tunisian exports and imports will grow much larger and this will affect demand for the goods and/or that [your/his/her] industry produces.

Following these informational treatments, we asked them the same question about whether limits on foreign goods and services should be imposed.

### 3.3. Variable description

In order to evaluate the effects of skill and education on trade policy views, we constructed separate measures of skill and human capital. We first classified respondents as high skill if they told us that they were private sector (non-micro) business owners or professionals such as those engaged in science and technology, health, and business administration.<sup>7</sup> Second, we used a six-point scale measure of education ranging from 'illiterate' to 'master's degree or above'. We find that close to 80% of the sample are lower skill or did not complete college. This is expected in a developing country and closely aligns with national statistics on education in Tunisia. The SS model predicts that lower skill workers would support trade the most, with opposition among the higher skilled and educated workers.

In addition, we examine eight important factors, which could complicate standard economic theories of trade: sociotropism, nationalism, religiosity, gender, conservative Islamic values, attitudes toward the West, union membership, and job informality. Trade attitudes could be influenced by sociotropism – i.e., paying more attention to the national economy than their own self-interest. Before the treatment, we asked whether they thought opening Tunisia's market to foreign trade was 'very good', 'somewhat good', 'somewhat bad', or 'very bad' for the Tunisian economy. Consistent with the existing literature (Mansfield & Mutz, 2009), we use this four-point measure to distinguish sociotropic perceptions from self-interested preferences. About 55% of respondents thought that trade was 'very good' for the Tunisian economy, with no differences among the sectors. The remainder largely said 'good' with only five percent thinking trade had no effect or

was bad. We expect those who are more sociotropic to be more likely to support a liberal trade policy, no matter the consequences for themselves.

For religiosity, we asked five questions about how important religion is in their daily life such as praying regularly, fasting during holy periods, and reading their religion's holybook.<sup>8</sup> For each question, respondents told us how often they participated in the activity on a five-point scale from 'never' to 'always'. We averaged across the five questions and then classified the upper quartile as 'High Religiosity', the bottom quartile as 'Low Religiosity', and the middle two quartiles as 'Middle Religiosity'.

We assessed views about conservative Islamic beliefs by asking people to answer three questions about their views on whether Tunisia should ban banks charging interest or foreign firms importing 'impermissible things' as well as if the country should encourage FDI by non-Muslim firms, even ones that may contradict established religious practices.<sup>9</sup> We used principal component analysis of these three questions to create a composite score and then took the first component as a measure of conservative Islamic beliefs. There were no significant differences in this score between individuals employed at export-oriented or import-competing firms.

For nationalism, we asked respondents for their views on the statement, 'My Tunisian identity is more important than any other identity'. Respondents answered on a five-point scale ranging from 'Strongly Disagree' to 'Strongly Agree'. Approximately 84% of respondents strongly agreed with the statement, and there were with no significant differences among sectors.

In the MENA context, studies have often looked at legacies of nationalism, and anti-Western sentiments in shaping support for globalization (see Ayoubi, 1995; Brownlee, 2012; Dawisha, 2005; Jamal, 2012). We explored the effects of Tunisia's colonial legacy on trade preferences. Respondents placed themselves on a 0–10 scale where 0 meant having a pro-West orientation and 10 an anti-West orientation. On balance, our sample leaned pro-West with 56% of respondents saying they felt more pro-West than anti-West. Exporters were more pro-West than import-competers, with 61% supportive compared to 53%.

Ahlquist, Clayton, and Levi (2014) found that workers who belong to unions with anti-trade stances adopt more protectionist attitudes regardless of their economic self-interest.<sup>10</sup> This could be particularly true in Tunisia where its largest trade union, Tunisian General Labor Union (UGTT), is a powerful political actor. The UGTT has mobilized to block several post-revolution attempts by the government to reform the public sector (see Economist, 2017). We created an indicator from a question directly asking if the respondent was a member of UGTT. As expected, a large minority of public sector workers are UGTT members (23%), with small percentages of union members among exporters (8%) and import-competers (6%).

In addition to union membership, previous work has found that formal labor rights and employer-provided health and pension benefits can alter trade preferences (Dean, 2015). For example, Dean (2015) argues that workers in formal jobs are more likely to align with the preferences of capital than those with weaker employment commitments. To assess these effects, we classify workers on a three-point scale ranging from 'Formal' (1) to 'Out of the Market/Unemployed' (2) to 'Informal' (3). We defined formal employment as those respondents who were employed, had a work contract, and employer-provided social security.

**Table 1.** Pre-experiment: support for trade liberalization.

	Job	Firm	Economy
<i>Sector</i>			
Export-oriented	79.8	84.5	96.2
Import-competing	73.2	77.0	94.2
Non-traded	57.5	60.7	93.4
Public	44.4	N/A	94.4
<i>Skill</i>			
High skill	60.2	78.2	93.7
Low skill	62.5	69.1	94.4
Overall	62.0	70.3	94.3

Notes. Percentage of respondents who believed that opening Tunisia's market to international trade was 'Very Good' or 'Somewhat Good'.

Approximately, 16% of workers were formally employed. Out the Market/Unemployed workers were homemakers, retired, students, or unemployed (59%). The balance of workers were classified as informal (25%).

Because these variables are cited as being important in understanding people's preferences, we include them as controls in some of our models. In addition, we later explore whether they confound the relationship between economic self-interest and trade preferences by looking at their subgroup effects. We expect that all of them except sociotropism might lower support for trade. Next, we examine our pre-experiment and experimental evidence about trade preferences.

## 4. Findings

### 4.1. Descriptive findings

Economic models predict that there should be differences in preferences about trade according to an individual's occupational sector or skill level. Do Tunisian citizens understand their economic self-interest in trade, and thus have trade policy preferences driven by self-interest? If we see differences among the sectors or the skill levels, then we have some reason to conclude positively. If the export sector and the low skill/educated are most positive about trade, and the import-competing sector and high skilled are least so, then this provides some validation for expectations drawn from RV and SS theories. A lack of difference between the export and import-competing groups or between high had low skilled implies that neither RV nor SS is explaining respondents' views of trade well. However, it might suggest that new trade theory (NNTT) is more applicable.

Using our pre-experiment question on trade as shown in Table 1, we see that among a representative sample of Tunisians the export sector is most positive about trade as expected. Roughly 96% of those in the export and 94% in the import-competing groups view trade positively for the Tunisian economy, and large but slightly different majorities – 80% and 73% – see it as positive for their job, respectively. In terms of their jobs and impact on the firms where they work, people who work in the export sector are significantly more positive on trade than those in the import-competing sector.<sup>11</sup> RV models correctly anticipate that those in the export sector will be more positive about trade, especially for their own jobs and the firms where they work. The surprise is that respondents in import-competing sectors are so positive on trade. We find similar differences across education or

skill level. Low skill citizens view trade more positively for their own jobs (63%) than do high skill workers (60%). All groups view trade positively, but the export and less skilled groups view it more positively. The surprise according to SS models is that respondents with high human capital are so positive on trade. This observational evidence points to economic self-interest as having some impact on preferences and suggests support for hypothesis #1.

## 4.2. Experimental evidence

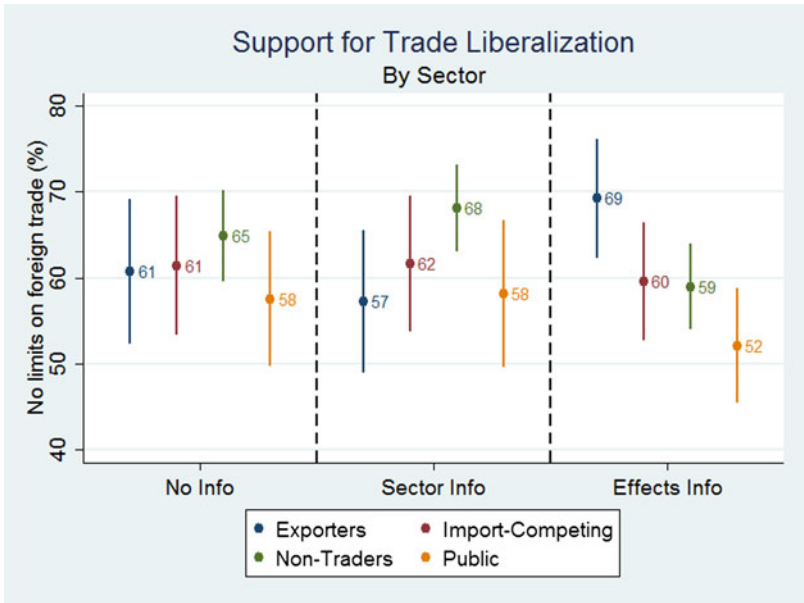
The uniformly positive view of trade across different sectors and skill levels is indeed puzzling. On average exporters seem to understand their economic self-interest in trade. However, we anticipated that those in import-competing sectors would be much more negative. We wondered if lack of information was the problem. How would Tunisians respond if they were given more information about how trade might affect them?

Figure 1 depicts responses to our experimental question about opposition to limits on the import of foreign goods and services; that is, it shows the average level of support for a free trade policy within each of the four sectors by one of the random cues they received. Responses were recoded so that 100 corresponds to opposition to new limits (=support for freer trade) and 0 refers to supporting limits on foreign trade (=support for protectionism). Points indicate mean values for each sector with lines indicating 95% confidence intervals. Interestingly in the first group — i.e., those randomly assigned just this question about limits on trade but no other information — we see no significant differences in support for a free trade policy across the four sectors, as seen in the left panel of Figure 1. About 61% in the export and import-competing sectors oppose erecting barriers to trade.<sup>12</sup> Again as in the pre-experimental evidence, the puzzle is why the import-competing respondents are so positive about trade.

When we provided information about the sector of their employment but no information about the effects of trade on their sector, little changed. See the central panel of Figure 1. In the left and center panels, then we see no significant differences between any group receiving no cues and any group which was provided only with information about sector of employment but not the likely effects of trade. In the rest of the analyses here, we combined the respondents receiving no information and those being told just their sector into a single pooled ‘control’ group.

When informed not only about their sector but also about the possible effects of trade on jobs and wages, we see differences. As expected, the preferences of respondents in exporting industries change considerably, as seen in the right panel of Figure 1. When told about the benefits of trade for their sector, they become even more favorable to it. Nearly 70% oppose limits on foreign goods and services in this experimental group, which is a more than 10% point increase over the average of the control group ( $p = 0.028$ ). Giving people information about their sector and the possible effects of trade more strongly induces self-interested preferences for trade policy as economic theory anticipates, providing support for hypothesis #3.

While exporters responded to the treatment in line with their economic self-interest as proposed by RV or NNTT, RV fails to predict the preferences of respondents employed in import-competing industries. When we informed them



**Figure 1.** Experimental support for trade liberalization. Points represent mean values for each sector when asked about limits on foreign trade and bars represent 95% confidence intervals.

about trade possibly decreasing wages and jobs in their sector, their support for protectionism stayed the same instead of increasing, as seen in the right panel of [Figure 1](#). There are economic reasons why some in import-competing industries might fail to identify their economic interest as RV theories of trade predict despite informational treatment. We explore how new, new trade theory might explain this in [Section 5](#).

**4.3. Multivariate models of experimental evidence**

[Figure 1](#) shows that when given more information many respondents – especially exporters – more readily understood their economic self-interest, supporting hypothesis #3. However, this evidence is not sufficient since it does not control for the differences across the sectors. The random assignment of the experimental treatments was done within each sector, not across the entire respondent pool. As expected from economic theory, we found that the type of respondents within the sectors to be unbalanced on a range of demographic and geographic covariates. [Table A4](#) (appendix, see [supplementary material](#)) report balance tests using a series of logistic regressions with the dependent variable as an indicator for each sector. We found that the exporters, on average, were significantly more female, older, less well educated, and concentrated in distinct regions; in contrast, respondents in import-competing industries were more male and younger than the rest. Exporters were concentrated in the governorates of Ben Arous, Monastir, Naebeul, and Sfax, whereas large numbers of import-competing respondents came from Beja, Jendouba, Manouba, Sousse, and Zaghouane. Other research on Tunisia has found that regional differences are important (Berman & Nugent, 2017; Cavatorta &

Haugbølle, 2012; Nucifora, Rijkers, & Funck, 2014). It is thus important to control for these factors when assessing the treatments, as we do below.

Table 2 reports estimates where the dependent variable is support for trade liberalization, holding constant demographic and geographic variables that are unbalanced across the sectors. Each model uses OLS where the dependent variable was recoded so 0 indicates a preference for new limits on trade and 100 indicates a preference for no limits on trade.<sup>13</sup> Treatment refers to informational cues where we tell each person what sector they are in and how trade will affect their sector. In all models, we use fixed effects at the governorate level because regional differences matter. Using these fixed effects means we are controlling for all factors that vary among the regions since we are only estimating within governorate differences.

The first column of Table 2 includes economic controls for education and high skill as well as demographic covariates that are unbalanced across the four sectors (female, age, and age2 to capture its non-linear functional form). Table 2 shows that respondents in the export sector responded as RV and NNTT theory would lead us to expect when they were told what sector they were in and how it might be affected by trade. The information treatment made them even more positive on average about trade. Looking at the control variables, we see that education but not skill is negatively correlated with support for trade. This provides some further support for Hypothesis #3 and #4.

In the second column, we include various sociocultural and economic factors that could influence the effects of the treatment, as discussed above (i.e. nationalism, sociotropism, conservative Islam, religiosity, anti-Western ideology, union membership, and informality).<sup>14</sup> Respondents who hold conservative Islamic views are more protectionist. Older respondents are more protectionist. Surprisingly, however, female respondents expressed support for fewer limits on imports, perhaps because employed women are more prevalent in the export sector. The coefficients for the other controls are in the expected directions, but are not statistically different from zero. These results are robust to various changes in controls and estimation strategies including multiple imputation, as we show in Tables A17 and A18 (appendix, see [supplementary material](#)). The results are also robust if we restrict the sample to only those who passed the manipulation check, as shown in Tables A13 and A14 (appendix, see [supplementary material](#)).

To compare between sectors, we calculate difference-in-differences estimations between pairs of sectors (e.g. exporters versus importers) before and after treatment. Specifically, we use the OLS estimations from Table 2 and calculate the net treatment effects using the control as a baseline between each sector.<sup>15</sup> The difference-in-differences in Table 3 show that the export sector responds significantly more positively to trade when they are cued than the other sectors, as we expect. This finding supports hypothesis 3. But the import-competing sector does not respond to the treatment. This is puzzling from an RV perspective since this group was told it might lose from further trade liberalization and hence as potential losers might be expected to react most strongly.

## 5. New, new trade theory

What explains why respondents in import-competing sectors did not become more protectionist after the treatment about trade's effects on their sector? First, it could

**Table 2.** Main effects – support for trade.

	(1) Base b/se	(2) Full b/se
Treatment	–5.193 (3.582)	–6.323 (3.917)
Exports	–2.625 (5.360)	–5.447 (5.586)
Imports	–0.717 (4.130)	–3.841 (4.624)
Non-traded	3.304 (5.454)	1.247 (6.007)
Treatment × exports	14.937*** (5.171)	18.224*** (5.447)
Treatment × imports	2.416 (5.376)	5.533 (5.737)
Treatment × non-traded	–1.969 (4.987)	–0.431 (5.487)
Age	–1.161*** (0.400)	–1.284*** (0.403)
Age <sup>2</sup>	0.011** (0.004)	0.012*** (0.004)
Female	3.603 (2.144)	5.809** (2.240)
Education	–3.011*** (0.871)	–3.693*** (0.937)
High skill	–4.551 (5.263)	–4.377 (5.309)
Nationalism		0.212 (2.586)
Sociotropic		2.803 (1.765)
Cons. Islam		–5.461*** (0.957)
Religiosity		1.182 (2.247)
Anti-west		0.017 (0.273)
Union Member		–0.169 (4.336)
Informal		0.294 (1.189)
Constant	97.820*** (13.899)	85.534*** (14.936)
<i>N</i>	2416	2273
<i>R</i> <sup>2</sup>	0.072	0.092

Notes. \* $p < 0.1$ ; \*\* $p < 0.05$ ; \*\*\*  $p < 0.01$ . OLS estimates with robust standard errors clustered by governorate. Control and public sector are reference categories. Governorate fixed effects not shown.

be that a sizable number of import-competing respondents failed to understand the treatment. However, less than 20 percent of the import-competing sector who received any information failed the manipulation check asking whether economists predicted that imports would increase, decrease, or remain stable. An even smaller percent (9%) told us after the experiment that they did not believe our treatment. So, it is unlikely that people failed to understand our treatments.

Alternatively, the import-competing sector may be comprised of two different sets of firms and workers who have divergent reactions to the treatment. Some workers in the import-competing sectors may be part of GVCs and believe that their economic interest is tied to the world economy and the viability of the export



**Table 3.** Difference-in-differences: support for trade.

	(1) Base b/se	(2) Full b/se
Exporters versus import-competing	12.520** (4.89)	12.690** (4.44)
Exporters versus non-traders	16.910*** (4.56)	18.650*** (4.51)
Exporters versus public	14.940** (5.17)	18.220*** (5.45)
Import-competing versus non-traders	4.380 (5.69)	5.960 (5.04)
Import-competing versus public	2.420 (5.38)	5.530 (5.74)
Non-traders versus public	-1.970 (4.99)	-0.430 (5.49)

Notes. \* $p < 0.1$ ; \*\* $p < 0.05$ ; \*\*\* $p < 0.01$ . Difference-in-differences (DID) between sectors, calculated from OLS estimates reported in Table 2. Control and Public Sector are reference categories. For example, DID = [Treatment<sub>Exporters</sub> - Control<sub>Exporters</sub>] - [Treatment<sub>Import-Competers</sub> - Control<sub>Import-Competers</sub>]. A positive coefficient indicates that when treated exporters are more supportive of trade than the import-competing group.

sector. More trade even if it means more imports may be associated with better outcomes for these individuals. As studies of GVCs note, ‘[d]omestic firms can of course benefit from export opportunities, but they also depend on reliable access to imports of world class goods and services inputs in order to improve their productivity and their competitiveness’ (OECD, 2015). Tunisian firms that operate to serve large multinational firms, which are the center of GVCs, may themselves depend on imports, or they may also associate rising exports with growing trade, thus increasing the value of their global production chain overall. Rising trade is viewed positively by these individuals because it contributes to the GVC. Protectionism is viewed negatively since it drives away FDI, GVCs, and the jobs they bring.<sup>16</sup> As the OECD notes, ‘where foreign investment is a driver of export capacity, the cumulative effect of a number of seemingly small costs [of protectionism] may discourage firms from investing, or from maintaining investment, in the country and may lead them to take production facilities, technologies, and jobs elsewhere’ (OECD, 2015).

The Tunisian government has recognized the importance of global value chains for transforming the economy (World Bank, 2016a, p. 12). The Tunisian government began its offshore policy regime promoting exports and foreign investment after the 1960s; it was successful in boosting exports and bringing in FDI (Baghdadi et al., 2017). More recently, integration into GVCs through foreign investment has become a key pillar of its 2016–2020 development plan, *Note d’Orientation Stratégique*, which contains ambitious initiatives to facilitate trade through infrastructure spending and a new foreign investment law. Tunisia also has two free trade zones (FTZ) in Bizerte just north of Tunis, which specializes in manufacturing of textiles and auto parts, and in Zarzis on the eastern coast in Médenine, which specializes in agro-alimentary production. These zones attract much foreign investment and bring in imports and send out exports.

To evaluate the expectations from NNTT, we examine respondents in our sample directly. Using input-output tables as is frequently done (Bass, 2016; Kummritz & Quast, 2016; Timmer, Dietzenbacher, Los, Stehrer, & Vries, 2015;

**Table 4.** GVC participation and support for trade.

	(1) Base b/se	(2) Full b/se
Treatment	16.433** (7.162)	20.266*** (7.149)
Imports	6.663 (6.582)	5.238 (6.352)
Treatment x imports	-26.563*** (8.217)	-28.471*** (8.524)
GVC	1.246 (8.956)	-0.079 (8.558)
Treatment x GVC	-12.946 (10.750)	-15.270 (10.709)
Imports x GVC	-17.220 (10.961)	-15.771 (10.881)
Treatment x imports x GVC	32.755** (14.668)	34.367** (15.551)
Age	-1.509** (0.682)	-1.554** (0.727)
Age <sup>2</sup>	0.014* (0.007)	0.014* (0.007)
Female	0.034 (3.157)	0.315 (3.525)
Education	-1.124 (1.258)	-1.079 (1.287)
High skill	-7.555 (6.941)	-8.560 (7.019)
Nationalism		1.041 (3.172)
Sociotropic		3.112 (2.681)
Cons. Islam		-3.709*** (1.150)
Religiosity		0.556 (2.762)
Anti-west		0.402 (0.497)
Union member		4.576 (5.060)
Informal		-0.377 (2.493)
Constant	108.330*** (17.720)	85.850*** (19.344)
<i>N</i>	916	860
<i>R</i> <sup>2</sup>	0.130	0.145

Notes. \* $p < 0.1$ ; \*\* $p < 0.05$ ; \*\*\* $p < 0.01$ . OLS estimates with robust standard errors clustered by governorate. Control and exporters are reference categories. Governorate fixed effects not shown.

Wang, Wei, & Zhu, 2013), we construct indexes of how much involvement in GVCs a sector has; that is, to what extent the sector is involved in backward and forward linkages to the global economy. We reclassify all of our export-oriented and import-competing respondents into GVC and non-GVC participation using a 25% cut-off point as described in appendix section A. We directly estimate the effects of GVC participation on export-oriented and import-competing respondents using OLS.<sup>17</sup> In Table 4, columns 1 and 2, we compare differences among individuals in export-oriented and import-competing industries integrated into GVCs versus those out of GVCs. For the interaction of those treated and in

GVCs (Treatment X Imports X GVC), the coefficient should be positive because those in GVCs should not respond in favor of protectionism when cued about trade's impact. We find consistent results that import-competers involved in GVCs are less likely to respond to the treatment. In contrast, the interaction between treatment and import-competers is negative as anticipated. These results hold when including covariates that are unbalanced across sectors (column 1) and a range of economic and sociocultural controls (column 2).<sup>18</sup>

Our results are surprising when we consider standard RV accounts of trade, which predicts that workers engaged in import-competing industries should hold homogeneous preferences in favor of protectionism. Instead, we see differences between individuals working in firms engaged in GVCs and those not, and thus find support for NNTT and hypothesis #2.

## 6. Self-interest, Stolper–Samuelson models, and skill/education

In [Section 2](#), we documented the extensive literature which examines the effects of skill and education affect people's trade preferences. Our experiment focuses on RV models of trade, which seem most appropriate for developing countries which tend to have low labor mobility. We can look at whether SS variables such as skill or education affect our results and whether subgroups of low or high skill and education influence our experimental findings. Predictions from the Stolper–Samuelson theorem are that high-skilled or highly educated workers would be most resistant to trade liberalization in a developing economy such as Tunisia. [Table 2](#) shows that when added as a control education is consistently significant; less educated people, if as usual we assume they are less skilled, are much more supportive of trade in this developing country. This finding calls into question the idea that education is more about being educated to support trade than about its relationship to skill levels (c.f. [Hainmueller & Hiscox, 2006](#)). Less educated citizens, who have less knowledge of economics, are more favorable to trade here. This latter finding supports SS models and hypothesis #4. But, the failure to find results for the skill variable makes this weak support for SS.

To see if education or skill affected our treatment, we need to look at the multiplicative interaction between treatment, sector, and subgroup. To make direct comparisons across treatment pool (control versus treatment), occupational sector, and different subgroups of interest (e.g. high versus low education), we constructed indicators for each subgroup, described in [appendix B](#). We estimate these models of support for trade using OLS and include controls for age and gender along with sociocultural variables and governorate fixed effects to control for unexplained geographic heterogeneity.

[Table 5](#) displays the summary results for skill and education on support for trade; the full regressions that produce these results are in [Tables A19–A28](#) ([appendix](#), see [supplementary material](#)). Again, the interaction of education with the export sector and treatment is significant and negative. However, we fail to find significant differences among workers in the import-competing sector, and the results do not hold when we use skill levels. Could other factors, like sociocultural ones, explain these patterns better?<sup>19</sup>

**Table 5.** Subgroup effects summary table: economic factors.

	(1) Base b/se	(2) Full b/se
Treatment × exports × high education	−38.010** (13.111)	−46.468** (12.978)
Treatment × imports × high education	−13.331 (12.077)	−19.469 (12.449)
Treatment × non-traded × high education	−11.964 (12.276)	−14.641 (12.404)
Treatment × exports × high skill	−10.545 (17.969)	−11.864 (18.733)
Treatment × imports × high skill	−4.014 (13.182)	−3.910 (14.201)
Treatment × non-traded × high skill	13.101 (14.492)	12.469 (15.115)

Notes. \* $p < 0.1$ ; \*\* $p < 0.05$ ; \*\*\* $p < 0.01$ . Summary table of OLS estimates with robust standard errors clustered by governorate. Control, Public Sector, 'Low' Subgroup (e.g. Low Education) are reference categories. Full models with controls and lower order interaction terms are in appendix F.

## 7. The effects of non-economic factors

Table 2 shows that as controls some of non-economic factors are significant. Gender has consistently strong effects. In contrast to previous studies, females in Tunisia are much more supportive of freer trade overall (c.f. Baker, 2005; Burgoon & Hiscox, 2008; Guisinger, 2016; Mansfield, Mutz, & Silver, 2015; Mayda & Rodrik, 2005). Like men, those with a conservative Islamic set of beliefs are significantly negative on trade. However, sociotropism, nationalism, religiosity, and one's attitudes toward the West are all insignificantly correlated with trade preferences. Adding these controls does not change the significant effect of our information treatment on the export sector.

To see if these factors affected our treatment, we looked at three-way interactions. To make direct comparisons across treatment pool (control versus treatment), occupational sector, and different subgroups (e.g. high versus low religiosity), we constructed indicators for each subgroup as described in the appendix B and estimate the same OLS model of support for trade using interactions of treatment, sector, and subgroup to compare the change in the average treatment effect of each sociocultural variable.

Table 6, using regressions shown in Tables A25–A28 (appendix, see [supplementary material](#)), displays the summary results for the sociocultural variables. We find very few strong consistent effects. Generally, sociotropism seems to have some impact. Workers in the import-competing sector, who believed that trade strengthens the overall economy, were less likely to respond to the treatment. They supported trade much more than those in the import-competing sector who thought that trade was less beneficial to the Tunisian economy. We find a similar effect among non-traders. We find no consistent evidence of heterogeneous effects for any other subgroup. The relationship between economic self-interest and trade preferences does not seem to be affected by the main sociocultural factors that might distinguish Tunisian citizens. When primed about the effects of trade, people in different sectors respond as economic models based on RV and new trade theory anticipate.

**Table 6.** Subgroup effects: sociocultural.

	(1) b/se	(2) b/se
Treatment × exports × female	−27.061* (12.875)	−26.865* (10.968)
Treatment × imports × female	−21.595 (12.461)	−19.430 (13.395)
Treatment × non-traded × female	−13.333 (10.345)	−13.521 (10.890)
Treatment × exports × high nationalism	−17.682 (25.563)	−5.950 (24.079)
Treatment × imports × high nationalism	30.543 (30.010)	36.721 (29.382)
Treatment × non-traded × high nationalism	−45.980** (14.770)	−36.141* (14.273)
Treatment × exports × high sociotropic	19.505 (10.855)	14.975 (11.639)
Treatment × imports × high sociotropic	24.849* (10.039)	26.324* (11.257)
Treatment × non-traded × high sociotropic	28.731** (9.884)	27.611* (9.864)
Treatment × exports × high Cons. Islam	2.429 (17.400)	3.499 (16.482)
Treatment × imports × high Cons. Islam	11.434 (13.592)	9.009 (13.496)
Treatment × non-traded × high Cons. Islam	−4.642 (11.570)	−7.295 (11.223)
Treatment × exports × high religiosity	20.258 (13.958)	17.641 (14.051)
Treatment × imports × high religiosity	8.274 (14.236)	6.782 (12.842)
Treatment × non-traded × high religiosity	−0.654 (9.252)	4.270 (10.307)
Treatment × exports × anti-west	−23.675 (12.590)	−25.295 (13.827)
Treatment × imports × anti-west	4.059 (14.485)	2.428 (14.369)
Treatment × non-traded × anti-west	−6.831 (14.320)	−8.187 (15.086)

Notes. \* $p < 0.1$ ; \*\* $p < 0.05$ ; \*\*\* $p < 0.01$ . OLS estimates with robust standard errors clustered by governorate. Control, Public Sector, ‘Low’ Subgroup (e.g. Low Religiosity) are reference categories. Full models with controls and lower order interaction terms are reported in the appendix F.

## 8. Conclusions

Unlike recent studies (Guisinger, 2009; Rho & Tomz, 2017), we find that many individuals do base their trade policy preferences on their economic self-interest. They apparently possess some sense of their situation and trade’s distributional effects to make this connection. Those in the export sector, even when not told about their sector or trade’s impact, are very positive about trade. When we cued them about the impact of trade, we see an even stronger connection between their self-interest and their preferences. The import-competing sector’s response was puzzling from a standard RV perspective. Respondents were very positive on trade on average and when we cued them with information about its negative effects, the sector overall did not respond by becoming more protectionist.

This result is surprising for RV theories of trade but not for NNTT. The import-competing sector appears to consist of two types of firms. Respondents in firms in GVCs did not react to our treatment, while those in traditional import-

competing sectors did become more protectionist. This mixed reaction supports NNTT; it suggests that a firm's ties to global production chains matter for trade policy preferences. Respondents in import-competing sectors operating within GVCs seemed to believe that more protectionism would hurt their sector rather than help it.

We anticipated that other non-economic factors, like sociotropism, religion, gender, political ideology, attitudes toward the West, and nationalism, might have important effects, especially in the Tunisian context. But, we found little evidence for this beside some weak signs that sociotropism might influence preferences. Even in the import-competing sector where some people did not react to the treatment as expected, this was not because of these socio-cultural factors but because they are tied to the international economy through GVCs that dominate modern capitalism.

Our study thus provides a new context in which to explore the relationship between economic self-interest, information, and trade policy preferences. We have four main conclusions. First, many respondents seemed to know their economic self-interest and adopt trade policy preferences based on it. Whether and how individuals come to understand the effects of economic policies on their lives is a key question worthy of more study. Second, despite Tunisia's religious, Islamic context, and former colonial status, these sociocultural factors did not make much difference to people's trade preferences. This was surprising since many studies suggest that this cultural and religious context should matter and might dampen support for globalization (Ehteshami, 2007; Levine, 2002; Pasha, 2000).

Third, Tunisians overwhelmingly support trade and globalization and prefer a liberal trade policy, as in many developing countries. The hope of many people and governments in the developing world is that trade and foreign investment will bring jobs, especially good jobs and more skills. Foreign competition through trade and investment may also be seen an antidote to the crony capitalism endemic to domestic firms. A big question is whether trade and GVCs will bring such benefits. If they do not, preferences may change and become more hostile to globalization.

Fourth, new, new trade theory does the best among the economic theories in explaining people's trade policy preferences. Future research on trade preferences should focus more on NNTT. Finally, in contrast to the advanced industrial countries, women in Tunisia are more supportive of a liberal trade policy than men; some have suggested that in developing countries with strong gender discrimination, such as those in the MENA region, women may gain more from trade than men (Shephard & Stone, 2017). Our survey experiment in Tunisia adds a new context and findings to the highly debated question of how publics form policy preferences, which is central to democratic representation. But more research on the role of new trade theory, information about causal beliefs, and sociocultural factors like gender is important.

## Notes

1. For the importance of preferences in IR theory generally, see Milner (1997) and Moravcsik (1997).
2. Yeung (2014, pp. 83–84) defines 'a global production network...as one that is coordinated and controlled by a globally significant transnational corporation and involves a vast network of their overseas affiliates, strategic partners, key customers and non-firm institutions.'

3. Sociotropic means that people evaluate policy according to its anticipated impact on the economic well-being of the nation, not on their personal economic situation.
4. Kaplinsky and Morris (2001, p. 4) define the value chain as ‘the full range of activities which are required to bring a product or service from conception, through the different phases of production (involving a combination of physical transformation and the input of various producer services), delivery to final consumers, and final disposal after use’.
5. This is slightly higher than the average of other developing economies (49%) and advanced economies (48%).
6. A full description of our classification procedure can be found in appendix section A.
7. See appendix section B for a full list of occupations.
8. For specific questions, see appendix section B.
9. For specific questions, see appendix section B.
10. We thank two anonymous reviewers for suggesting we explore union membership and informality and providing citations.
11. People in the non-traded and public sectors were similarly positive about the impact of trade on the national economy but less positive about its effect on their own jobs, although not significantly. The difference across the groups was less in those who viewed trade negatively, but rather in those who said it would have no effect on them. Economic theory is unclear about what the public sector or the non-traded sector should prefer about trade.
12. This question is different from our pre-experiment question, but the level of positive responses is similar to that given in the pre-experiment for how trade affects their job.
13. As shown in Tables A11–A16, results are very similar when using logistic regression on the original coding of the dependent variable as 0 and 1.
14. These variables have very low correlations with each other, as shown in appendix table A3.
15. For example, the difference-in-difference for exporters versus import-competers is calculated as  $DID = [\text{Treatment}_{\text{Exporters}} - \text{Control}_{\text{Exporters}}] - [\text{Treatment}_{\text{Import-Competers}} - \text{Control}_{\text{Import-Competers}}]$ .
16. As the OECD (2013, p. 5) summarizes, ‘Imports are essential for exports, especially in complex value chains such as transport and electronics. In GVCs, tariffs and non-tariff barriers are effectively a tax on exports.’
17. There is no GVC participation among non-traders and public respondents.
18. In appendix section G, we run two other models. First we consider the number of foreign firms by governorate as an alternative measure of GVCs. We find that coefficient estimates are in expected directions, but not statistically different from zero at conventional levels. However, we could not run these estimates using a fixed effects specification due to multicollinearity between the FDI and governorate variables. We, therefore, have lower confidence in these results than the GVC results presented above. Second, we use the classification of offshore industries as an alternative to GVCs from Baghdadi et al. (2017). We find that importers who are in the offshoring sector, like those in GVCs, are significantly more supportive of trade even when treated.
19. We explore and do not find significant subgroup effects for union membership and informality in Tables A22 and A23 (appendix, see [supplementary material](#)).

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## Disclosure statement

No potential conflict of interest was reported by the authors.

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