GENDER, EDUCATION, AND TRADE POLICY PREFERENCE:

DO TRADITIONAL GENDER BIASES IN HIGHER EDUCATION

LEAD TO GENDER DEVIATION ON ASSESSMENTS OF

INTERNATIONAL TRADE?

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Abstract

THESIS: Gender, Education, and Trade Policy Preference: Do Traditional Gender Biases in Higher Education Lead to Gender Deviation on Assessments of International Trade?

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The literature surrounding individual trade policy preference has traditionally relied on economic self-interest as the impetus for opinion formation. However, every survey-based study has observed a significant and baffling gender bias, with women being consistently more likely to oppose international trade than their male counterparts. One explanation for this phenomenon focuses on the specialized, economic training required to understand the complex subject of international trade. This study uses a unique sample of undergraduate students from Ball State University, stratified by academic department. The survey instrument is aimed at comparing departments that emphasize economic training with those that do not and how this effects the individuals trade policy preferences. The results show that controlling for economic training eliminates the significance of gender in predicting trade policy preference.

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Chapter 1

Introduction

For more than fifty years researchers and theorists from various disciplines have tried to explain how individuals form their opinions on international trade. The literature surrounding individual trade policy preference has focused primarily on economic self-interest (so-called "pocketbook" or income effect models), but has more recently begun to include social/ideological character traits (sociotropic [1] concerns, cosmopolitanism, and national pride, etc.) to explain the formation of individual opinions. Regardless of the theoretical lens taken, however, every survey-based study has observed a significant and baffling gender bias that has yet to be fully explained. Through decades of global change and development, whether faced with economic prosperity or hardship, irrespective of race, political party and income, women are consistently more likely to be protectionist than their male counterparts. This per-

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[1] Sociotropic is a term adopted from psychological medicine and applied to the present field as a characteristic that promotes the assessment of policy based on the gains and losses to the national economy over the individual (Kocher and Minushin, 2006).

sistent trend warrants much more attention than it has received in the prevailing literature, where it has primarily been pointed out as a subject for future study and then dismissed.

Gender's reputation as a preeminent predictor for most social dependent variables may lead researchers to simply write off its influence as being part of a fundamental difference between men and women that can be applied *ad hoc* to any regression analysis. In the case of gender and trade policy preference, many of the suggested explanations for the difference between men and women on the issue of international trade have been references to other somewhat abstruse trends, such as women's tendency to empathize with others in need (Gilligan, 1982; Shapiro and Mahajan, 1986; Chaney et al., 1998; Welch and Hibbing, 1992). Aside from finding little to no significance when tested empirically (Burgoon and Hiscox, 2004), these explanations rely on weak assumptions regarding the way women think about international trade, casting them in the role of the irrational economic actor. By discounting half of the population as "irrational," these economic models are limiting their predictive power.

The inefficiency of pocketbook models in predicting trade policy preference has hardly gone unnoticed, prompting a number of recent studies to include predictors based on social and ideological concerns, such as national pride and concern for others' well-being (Burgoon and Hiscox, 2004; Mayda and Rodrik, 2005; Scheve and Slaughter, 2001; Kaltenthaler et al., 2004; O'Rourke et al., 2001; Burgoon and Hiscox, 2004; Hainmueller and Hiscox, 2006; Hiscox, 2006). Another common critique of

the economic models in question is the use of education as a measure of skill.[2] Skill is the primary independent variable in the Stolper-Samuelson model, the most popular income effects model used to predict trade policy preference. While the relationship between education and skill is obvious, skill is not the only potentially significant predictor of trade policy preference related to education. Higher education, specifically undergraduate study, is ideologically, socially, and economically influential. Even more importantly, higher education contributes to specialized knowledge. Trade policy is a very complex topic, deeply rooted in economic theory, and if an individual is not aware of the economic ideas that promote international trade, it is not likely they will form their opinions along the same lines as an economist. Economic education, to the degree necessary to understand the complex relationships of international trade, is most likely encountered at the college level. Still, not every college student takes an economics course during their time as an undergraduate, and women in particular are extremely underrepresented in the field of economics (Fraumeni, 2011; Jensen and Owen, 2000; Dynan and Rouse, 1997; Hall, 1989). This lack of economic training means women are less likely to follow the same reasoning patterns and reach the same conclusions as economists when thinking about international trade.

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[2]Throughout the literature and in this article, 'skill' is considered a factor of production which separates laborers into two groups: skilled and unskilled. In this sense, skill is something a laborer owns and then uses for producing goods. The more specialized knowledge or training required to produce a good, the more skill a laborer must own. An example of a 'skilled labor' good is a microprocessor and an example of an 'unskilled labor' good is a t-shirt.

This study uses a unique sample of undergraduate students from Ball State University, stratified by academic department. Two types of academic department were identified for sampling: departments that emphasize economic understanding and are disproportionately male (Economics, as well as Business and Marketing), and departments that do not emphasize economic understanding and are disproportionately female (Psychology and Elementary Education). By controlling for academic department, I am able to isolate the effect of economic training on trade policy preference. The inclusion of academic department as a predictor diminishes the significance of gender. Thus, this study concludes that the gender gap on trade policy preference is due to women's underrepresentation in college-level economics.

Chapter 2

Literature Review

2.1 Modeling Trade Policy Preference

Trade policy preference has traditionally been approached as an economic issue, with most attempts to model individual trade policy preference forming hypotheses around theories of economic self-interest. These so-called pocketbook models (or income effect models) predict that individuals will form their opinions of trade policy based on how the policy will affect their income. The most popular of these pocketbook models is the Stolper-Samuelson (S-S) theorem (1941).[1] According to the S-S theorem, an individual's skill level, in relation to the relative abundance of skilled labor in the individual's home country, will determine the individual's trade policy preference. For instance, according to the model, if a country like the United States has an

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[1]The Stolper-Samuelson theorem is based on the Heckscher-Ohlin model (Heckscher, 1919; Ohlin, 1933), which predicted trade policy preference based on factor ownership, using labor and capital as the primary factors owned by individuals.

abundance of skilled labor relative to the rest of the world, the goods produced by high-skilled laborers will fetch a greater premium internationally than domestically. With the added international demand, skilled laborers in the U.S. will benefit from increasing international trade. On the other hand, because the United States has a scarcity of low-skilled labor relative to the rest of the world, low-skilled laborers will experience a decrease in demand due to the influx of international goods produced by low skilled workers from other countries. This leads low-skilled workers to hold protectionist opinions, opposing increases to international trade.

The S-S model has dominated individual trade policy preference literature, with most empirical studies finding some degree of support for the theorem (O'Rourke et al., 2001; Mayda and Rodrik, 2005; Kaltenthaler et al., 2004; Beaulieu, 2002; Scheve and Slaughter, 2001; Balistreri, 1997; Baker, 2005). Since skill level can be a very difficult concept to quantify and almost impossible to measure objectively using a self-administered survey, studies have employed different proxies to capture the primary independent variable of the S-S theorem. Few studies have depended on a singular measure, choosing instead to create multiple measures and compare their performance. The most common measures of skill have been occupational factors, usually average occupational wage (Balistreri, 1997; Beaulieu, 2002; O'Rourke et al., 2001; Scheve and Slaughter, 2001), and educational attainment, usually measured in years of formal education (Beaulieu, 2002; Mayda and Rodrik, 2005; Scheve and Slaughter, 2001). Baker (2005), in a model that included consumption-based predictors, used a

factor analysis of income, education, and occupation to create a measure of skill. All of these measures, individually, produce the predicted positive relationship between skill and support for international trade (in skill-abundant countries). The sample used for the present study represents a single skill level (i.e. some college), so any measure of skill is insignificant due to lack of significant variation in the sample. This allows me to focus on the independent variables of particular interest to this study, i.e. gender and economic training.

2.2 Gender in Trade Policy Preference Modeling

Like many rational economic models, the S-S theorem is limited by its inability to deal with non-economic characteristics, specifically gender. In some studies, gender was not even included as a control variable, presumably because the S-S theorem suggests that men and women form their opinions in the same fashion (Balistreri, 1997; Beaulieu, 2002). This assumption is understandable in the context of the S-S theorem since there is no chromosomal influence on skill level. However, in every model that does include gender as a control variable it is consistently a significant predictor of trade policy preference, with women tending to be more protectionist (Burgoon and Hiscox, 2004; Mayda and Rodrik, 2005; Scheve and Slaughter, 2001; Kaltenthaler et al., 2004; O'Rourke et al., 2001). From an international survey representing 23 countries, Mayda and Rodrick (2005) found that men were 7.4% more likely to support increasing international trade than women. This difference persists

even when controlling for whether or not the respondent is currently in the labor force, performing as a skilled or unskilled laborer. Theoretically, women and men of a similar skill level should form similar opinions in regard to international trade, as they both stand to gain or lose to a similar degree. However, the consistent and significant relationship between gender and trade policy preference does not support this assumption. Which leads to the first hypothesis of this study:

> **Hypothesis 1:** *Female undergraduates will be less likely to hold pro-trade*
> *sentiments than their male counterparts.*

Attempts to elucidate this gender gap, while still appealing to the explanatory power of economic rationality, have had little success. One hypothesis considers the possibility that women see trade protection as a form of labor protection, or welfare, provided by the government. Women in general have frequently been found to be more in favor of social welfare programs than men (Gilligan, 1982; Kornhauser, 1997; Welch and Hibbing, 1992; Alvarez and McCaffery, 2003; Iversen and Soskice, 2001). Some of the explanations for women's propensity to support welfare point to the tendency for women to exhibit greater levels of compassion than men (Gilligan, 1982; Shapiro and Mahajan, 1986; Chaney et al., 1998; Welch and Hibbing, 1992). There is another hypothesis, more grounded in economic rationality, that claims women's affinity for social welfare stems from their greater vulnerability in the labor market (Estevez-Abe et al., 2001; Iversen and Soskice, 2001). Due to childbearing roles or longstanding

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sexism, women may feel that they are at a greater risk of unanticipated unemployment than men. Thus, women are more interested in social welfare programs because they feel that they are more likely to rely on these programs at some point in their lives. This hypothesis shares some common ground with international trade policy research that may help explain the gender gap in trade policy preference. As international trade expands, consumers and laborers are introduced to new levels of volatility and risk. For instance, if the U.S. removes all trade limitations with China, an economic shock in China will be felt in the U.S. market. This new risk does not go unnoticed by the general populace, as increasing levels of trade have been shown to correlate with increasing demand for government spending, such as unemployment benefits, to offset the new risks (Rodrik, 1997, 1998; Mayda et al., 2007). Based on this relationship, it makes sense that women, feeling especially vulnerable in the labor market, would want to resist introducing the new risks of expanding trade. However, when this hypothesis was tested directly, accounting for women's increased vulnerability did little to reduce the gender divide on trade policy preference (Burgoon and Hiscox, 2004).[2] It would seem that economic rationality cannot, by itself, account for the difference between men and women on international trade policy preference.

More recently, the S-S theorem and pocketbook models in general have been experiencing increasing criticism. Not only because the models are unable to account

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[2]Burgoon's (2008) investigation of this hypothesized relationship between trade protection and trade adjustment assistance found no evidence that the two should be considered substitutes for one another.

for the gender gap, but also because they oversimplify market relationships and ignore social considerations (Baker, 2003, 2005; Davis, 1996; Kleinberg and Fordham, 2010; Kocher and Minushin, 2006; Mansfield and Mutz, 2009). The issue of international trade is rooted in both economics and politics, but, ultimately, it is an issue of public policy. This characteristic alone casts doubt on the validity of the S-S theorem. Studies of public policy in general have found that the sort of personal economic considerations that are the basis of the S-S theorem rarely dictate individual's police preferences. Rather, people tend to use a retrospective assessment of similar policies and their effects on the individual's social group (Citrin and Green, 1990; Sears and Funk, 1990; Brody and Sniderman, 1977). This trend has been linked to the personal intangibility of most national-level policies. In the case of international trade, it is very difficult for people to predict how increased trade will affect their personal economic opportunities. However, by assessing the effects of previous trade expansions on their neighbors, their state, or their country as a whole, people are better able to form an opinion on international trade. This kind of retrospective assessment of policy, based on societal rather than personal affects, gives individuals a sense of understanding on such esoteric topics as fiscal policy and international trade that they do not personally feel a connection to.

The hypotheses of retrospective and sociotropic assessment predicting international trade policy preference have found significant support after empirical testing. In almost every model, variables measuring an individual's assessment of the effects

of international trade on the country as a whole have outperformed economic-rational predictors that emphasize personal impacts (Kocher and Minushin, 2006; Mansfield and Mutz, 2009; Wolfe and Mendelsohn, 2005). In a similar vein, evidence suggests that increased levels of national pride (nationalism or patriotism) are also associated with protectionist trade policy preference. Sentiments of national superiority lead individuals to oppose any foreign cultural or economic influence. National pride was measured by a series of questions addressing the individual's attachment to his/her country and feelings of superiority over other countries. These measures were significantly related to trade policy preference, with greater levels of national pride correlating to a greater likelihood of protectionism (Mayda and Rodrik, 2005; Scheve and Slaughter, 2001; O'Rourke et al., 2001).[3] However, in every one of these models, which include economic variables, measures of nationalism, and sociotropic variables, gender remained a significant predictor. These more socially oriented predictors are clearly a step in the right direct, but they still do not tell the entire story. Why are women still more likely to be protectionist even after controlling for social and economic variables? The answer to this question may lie in the operationalization of "skill" in these empirical analyses.

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[3]Baker (2005) has pointed out that the relationship between nationalism and protectionism may be endogenous rather than causal.

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2.3   Education, Economics, and Gender

As mentioned, many studies have used education as a proxy measure for skill level. In these models, the observed relationship between skill and trade policy preference is actually a relationship between education and trade policy preference. While the assumption that skill increases with education in a linear fashion seems commonsensical, using education as a substitute for skill may oversimplify the relationship. Baker (2005) points to multiple confounding characteristics of the relationship between skill and education that make them imperfect substitutes. First, conceiving of education as the sole source of additional skill ignores the many other sources of skill, such as on-the-job training and personal experience. Second, and especially important when considering measures of education internationally, there can exist extreme levels of disparity between the amount of skill accrued during one year of formal education from one country to another, and even from one institution to another within a single country. Finally, even within a single institution there is a disparity of skill attainment between individuals, most practically evidenced by the grading scale. Beyond this problem of imperfect substitution, a closer examination of the relationship between education and trade policy preference reveals some tendencies that run counter to the predictions of the S-S theorem.

Most of the studies that support the S-S theorem found that in countries where skilled labor is relatively abundant, the hypothesized positive relationship between

skill and support of trade expansion was observed (Scheve and Slaughter, 2001; O'Rourke et al., 2001; Mayda and Rodrik, 2005; Beaulieu, 2002; Balistreri, 1997; Baker, 2005). The problem is that the negative continuation of this linear relationship, wherein highly educated ("skilled") individuals tend toward protectionism in countries that are scarce of skilled labor, has not been observed. Instead, education almost universally lead to support for international trade, irrespective of relative skill abundance (Hoffman, 2009; Hainmueller and Hiscox, 2006). Furthermore, when education is considered categorically (i.e. High School, University, Technical College) rather than continuously (i.e. 12 years, 14 years, 16 years) the hypothesized linear relationship breaks down slightly. Whereas university graduates still display a greater propensity towards supporting international trade than high school graduates, graduates of technical or trade schools are no more likely than high school graduates to support international trade (Hainmueller and Hiscox, 2006). Both four-year universities and technical colleges contribute to higher levels of skill, but both do not lead to the increased support for free trade that the S-S theorem predicts. So, if it is not the increase in skill, what aspect of university education is leading individuals to support increases to international trade?

A general trend of increased cosmopolitanism and tolerance of international difference has been seen as somewhat unique to the four-year college experience (Bauer et al., 1972; Holsti, 1996). These traits resist the nationalistic sentiments that have already been shown to effect trade policy preference. In this way, it can be said that

increasing education leads to support for international trade by means of ideological influences (Baker, 2005). However, both nationalism and education have appeared in models together, and these models still showed a significant difference between men and women on international trade policy preference. While the relationship between education and nationalism does little to explain the gender gap, it does illustrate a flaw in using a general education measure as the primary independent variable predicting trade policy preference.

Another predictor of trade policy preference that has been linked to education is economic knowledge (Walstad, 1997; Walstad and Rebeck, 2002). In these studies economic knowledge is measured through a test of basic economic ideas and formulas. Obviously, those who have taken economics courses would be much more likely to score higher on such a test. Economics is more heavily emphasized at the university level, which may account for some of the difference between university students and high school and technical college students on the issue of trade policy preference. However, assuming that every university student graduates with the same level of economic knowledge ignores the fact that college allows for personal selection of educational content.

Most would agree that the higher education experience results in an increased knowledge base for each student that participates. However, not all individuals experience higher education the same way, which leads to divergent sets of knowledge. The specialization of educational pursuits that become particularly emphasized at institu-

tions of higher learning (specifically four year universities) lead to greater differences between the individuals that come out of these institutions. The clearest source of this differentiation of knowledge lies in the selection of students into major departments. Modern universities allow students to select from a multitude of specialized areas of study, which inevitably leads to differentiation between students' knowledge. A student graduating with a degree in entomology, for instance, leaves their alma mater with a different set of knowledge than a student graduating with a degree in theatre. Both students have, no doubt, acquired a vast amount of information and tools to be used in their specific area. However, the theatre graduate would likely differ in his/her opinion from the entomology graduate in regards to the importance of butterfly migrations. It is not that the theatre graduate is less educated than the entomology graduate; they are simply less knowledgeable in the specific area of butterfly migration. In the same way, one would expect a student of economics to be more familiar with the complexities of international trade and, more importantly, aware of the economic reasoning behind the support for international trade (Baker, 2005; Hainmueller and Hiscox, 2006). This leads to the second hypothesis of the present study:

Hypothesis 2: *Students who have been exposed to college-level economic training will be more likely to disagree with increasing limits on trade.*

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Modern economists have almost universally promoted the neoliberal goal of international free trade. If one has not been introduced to the formulas and reasoning mechanisms that have led economist to endorse free trade, one may not come to the same conclusions. Walstad (2002) found that individuals with high degrees of economic knowledge were much more likely to agree with economists on a number of economic issues, concluding that the influence of economic knowledge may be more important than gender. Furthermore, in a study on the effects of question framing on trade policy preference, Hiscox (2006) found that both women and individuals with less education were particularly susceptible to framing differences. This suggests that women and those with less education lack a preconceived assessment of international trade, allowing them to be swayed by the wording of the question. In these studies college-educated women display similar levels of economic knowledge as those who have no college-level education. This idea is echoed in Burgoon and Hiscoxs (2004) finding that the gender gap on trade policy preference is only present at the college level. Men and women with no college experience were equally likely to hold protectionist opinions on international trade. The introduction of college education significantly reduced the propensity for protectionism in men, but not in women, implying that men are receiving something at the collegiate level that women are not. The authors also found that the gender gap is larger for older generations, so whatever it is that women are missing at the college level today, they were lacking even more so forty years ago. Burgoon and Hiscox concluded that what men are

receiving at the collegiate level that women are not, the source of the gender gap on trade policy preference, is exposure to economic ideas.

The underrepresentation of women in the field of economics has been a long-standing phenomenon. The lack of women in economic departments was even more pronounced forty or fifty years ago, potentially explaining why the gap between men's and women's trade policy preferences is larger among older cohorts (Burgoon and Hiscox, 2004). Women's presence in the academic field of economics has been slowly increasing over the past few decades, making up 38% of new economics Ph.D. students in 2011, up from 28% in 2000 (Fraumeni, 2011). However, female undergraduates are still less likely than their male counterparts to take an economics course, and even if they do, they are less likely to continue studying economics afterword (Jensen and Owen, 2000). The reason women avoid the area of economics is still a mystery, but many have made guesses. One suggestion is that women's underperformance in mathematics leads them to feel lost in economics courses that use mathematical concepts (Dynan and Rouse, 1997). Another theory sees the "chilly" learning environment of economics, contrasted by the more nurturing environments of the humanities, as leading women to feel unwanted or alienated (Hall, 1989). Perhaps as a combination of these two sources of women's discomfort in the field of economics (or for some other reason entirely), women seem to feel that they do better in other departments, and find economics uninteresting (Dynan and Rouse, 1997). This disinterest may be a self-perpetuating trend, similar to the trend identified by Delli Caprini and Keeter

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(2000) for political knowledge, wherein women's historical exclusion from politics has lead to a continual disinterest in politics.[4] No matter what its cause, this underrepresentation of women in economics may be able to explain the difference between men and women on trade policy preference. Because men, in the aggregate, are receiving more specialized training in economics than women, men are more likely to follow the economic reasoning that promotes international trade.[5] Which leads to the third and final hypothesis of the present study:

> **Hypothesis 3:** *By controlling for economic training at the college level the relationship between gender and trade policy preference will be significantly diminished.*

Individual trade policy preference has been studied for well over half a century, and the mystery of female protectionism has endured almost as long. Using this mystery as an indication of a flaw in traditional trade policy preference prediction models, I have identified major problems in both the underlying assumptions and applications of the S-S theorem. The use of skill alone to predict trade policy preference is inefficient in its ignorance of social forces and the greater trends of public policy opinions,

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[4]Dolan (2011) has suggested that women's underperformance on measures of political knowledge, commonly attributed to a lack of interest on the part of women (Burns et al., 2001; Delli Carpini and Keeter, 2000; Kenski and Jamieson, 2000), is actually the result of unintentionally sexist measurements of political knowledge. Dolan found that when questions about issues more important to women are included in the test of political knowledge, men's and women's scores were not significantly different.

[5]It has also been demonstrated that economic knowledge is retained well after an individual exits the education environment (Saunders, 1980; Gleason and Van Scyoc, 1995), allowing the gender gap on economic knowledge and thus trade policy preference to be sustained long after exiting college.

both of which have explanations for the difference between men and women on trade policy preference but do not explain the entire gender gap. Furthermore, the use of education as a measure of skill ignores the many complex influences that are related to increasing education, such as decreasing nationalistic sentiments, and, more importantly, the introduction of specialized training. It is this latter point that Burgoon an Hiscox (2004) as the primary source of female protectionism. Because women are less likely to be exposed to the complex economic ideas that promote international trade, they are less likely to have a clear idea of why international trade would be beneficial. Unfortunately, Burgoon and Hiscox were not able to test their hypothesis directly. By comparing a sample of undergraduate students from academic disciplines that are disproportionally male and emphasize economic theory (Business Management and Economics), to a sample of students from academic disciplines that are disproportionately female and do not emphasize economics (Psychology and Elementary Education) I am able to control for the influence of economic training, while also controlling for age, education level, and national pride (as well as other potentially important variables). By comparing such a model with the more traditional model for predicting trade policy preference I will observe the influence of an economic training variable on trade policy preference and the coefficient for gender. If the inclusion of a control for economic training results in an insignificant gender coefficient I can conclude that, within the sample population, any initial significant influence of gender

was spurious and women's tendency towards protectionism is merely a reflection of women's underrepresentation in college-level economics courses.

Chapter 3

Methods

An original, electronic survey instrument was constructed and administered to a stratified random sample of 842 Ball State University undergraduate students through the survey hosting website surveymonkey.com. The 842 students were from four academic departments representing both economically focused curriculum and non-economic focused curriculum. Responses were collected between September 5th and September 17th, 2013. Of the 842 students contacted, 125 completed the survey, of which 103 responses were included in the analysis following listwise deletion of missing values. All participants were volunteers and completed the survey anonymously.

3.1   The Survey

The thirty-item survey (Appendix A), which was specifically designed for assessing trade policy preferences of undergraduate students, is composed of multiple questions

addressing trade policy issues, demographic indicators, as well as questions about the respondent's economic training. Choosing the wording of the primary dependent variable measure was a difficult process. Many studies have cited question wording as a potential error in the measurement of trade policy preference (Kleinberg and Fordham, 2011; Burgoon and Hiscox, 2004; Davis, 1996; Hiscox, 2006). For this reason, two separate measures of trade policy preference were included in the survey. The first measure is a single question, adapted from the 1992 National Election Survey (NES), which asks respondents to what degree they agree or disagree with increasing limits to trade. Before the question, a small block of text briefly explains the arguments for and against limits to trade:

> *Some people feel that the United States should increase limits on trade*
> *to protect American industry, while others feel decreasing limits on trade*
> *creates greater benefits for consumers and the world economy.*

These arguments are attributed to "some people" so as to avoid any implication of expert opinion potentially influencing respondents' opinions. Beyond wording issues, many researchers have pointed out that the use of just one question to measure trade policy preference leaves the measure particularly susceptible to error (Davis, 1996; Hainmueller and Hiscox, 2006). For this reason, the second measure developed for this survey uses a multi-question format.

The second measure of trade policy preference combines the responses from five questions addressing more specific applications of trade policy. These five questions

were developed using the insights gained from an informal focus group of current Ball State University undergraduate students. The group agreed that they felt uncomfortable answering the single trade policy opinion question because they did not think they had enough information on the subject to form an opinion. The concept of "limits" on trade seemed too broad and intangible. Some thought that more specific question, relating to situations they may have personally encountered, would be easier to answer. Working from this basic idea, the five questions in the survey include more specific topics such as outsourcing and consumer product prices, and mention specific countries to enhance the respondents' ability to relate to the topic. These five questions follow the NES-based question in the survey, as the more specific questions could potentially influence responses to the more general question while the reverse influence is less likely. By reducing the potential influence of the five question measure on the single question measure, comparability is preserved between this and previous studies as well as between the two measures.

The survey was distributed via an email invitation, sent to the students' university email account, which included a link to the survey. Two invitations were sent out, one week apart, and a chance to win a $50 gift card was included to increase interest in the survey. It can be assumed that the population being studied is technologically literate with adequate access to the internet. Thus, the use of a web-based survey should not have systematically excluded any respondents.

3.2 The Sample

The population being surveyed in this study is the 2012-2013 undergraduate populations of four academic departments from Ball State University: the Department of Economics, the Department of Marketing and Management, the Department of Psychological Science, and the Department of Elementary Education. This population lends itself well to the purposes of this research due to its relative homogeneity across specific demographics. Using the Ball State University 2012-2013 undergraduate population provides a built in control for age (constrained to 18 to 25 year old students in this study), education level (some college) and individual sector of employment (student). These variables have all been shown to have a strong relationship with individual trade policy preference, and having these variables organically held constant has been, to this point, unexplored in the literature. There is still significant variation in the population on important variables like economic training and national pride. This will facilitate some comparison to previous studies, allowing me to see if similar trends arise in this unique sample. The location of Ball State University may have some influence on the acquired data since Muncie, Indiana is located in the "Rust Belt" of the United States, a region that has been negatively impacted by welcoming foreign competition. Hopefully the presence of out-of-state students balances some of this influence. Also, the main purpose of the study is aimed at identifying a difference

between males and females on trade policy with relationship to education, and this difference should still exist even in areas that display greater protectionism overall.

The sampling frame was acquired from four Ball Statue University academic departments chosen to represent both economic-oriented curriculum and non-economic-oriented curriculum. The four departments include the Department of Marketing and Management and the Economics Department, representing the economic concentrations, and the departments of Psychological Science and Elementary Education representing the traditionally non-economic concentrations. Because the lists were acquired directly from the departments, the lists are composed entirely of students who have declared a major and/or minor. The declaration of a major can happen at any point in a student's academic career, however freshmen are far more likely to be undeclared. For this reason, the present sample is skewed towards older, upper-classmen. This sampling frame was subjected to a stratified simple random sampling process to produce the final sample. The total number of students from the four departments is 2,123, of which 842 were contacted and 125 responded.

Chapter 4

Data

4.1   Independent Variables

A number of important variables for determining trade policy preference have been identified in the literature. This list includes gender, age, skill level, nationalism, sociotropic concerns, and economic training. Table 4.1 contains descriptive statistics for each variable used in the final models of this study. In the population being studied presently, some of these variables have been organically held consent due to lack of significant variation in the sample. Undergraduate college students are fairly homogenous along such variables as age and skill level (as measured by educational attainment), two variables that have been consistently significant in predicting trade policy preference. Measures for these two variables were still included in the survey instrument to test for the significance of minor changes in age and education, though no significant results are expected. The average age of respondents ranged from 18

to 25, with a mean age of 20.6 years. 16% of respondents were freshmen, 11% were sophomores, 20% were juniors, and 53% were seniors. As expected, the sample tended to overrepresent upperclassmen due to the sampling process eliminating all undeclared students. Again, this should not be a problem simply because the minimal variation on age and education level throughout the undergraduate population is not expected to be significant. Also, because these two measures are so closely related only one could be included in the final analysis as the inclusion of both caused multicoliniarity issues. Year in college was selected to be used in the final models, however both measures produced similar results.

Table 4.1: Descriptive Statistics

Variable	Mean	Std. Dev.	Range
Independent Variables			
Age	20.6	1.6	18—25
Year in College	3.1	1.1	1—4
Nationalism Score	5.5	2.7	0—10
Trade Hurt U.S.	0.28	0.45	0—1
Female	0.65	0.48	0—1
Psychology or Elementary Ed. Student	0.55	0.50	0—1
LN of Number of Econ or Business Classes	1.0	1.2	0—3.526
Dependent Variables			
Pro-Trade Preference	0.32	0.47	0—1
Scale Measure of Protectionism	-1.1	2.6	-8—4

The measure for nationalism uses the answers from five questions asking the respondent to what degree they agree or disagree with statements addressing the superiority of the United States as a nation and the respondent's preference for the United States above other countries. The responses are combined into a scaled measure of national identity. A response of "Strongly Agree" to a nationalistic statement was

given a score of two, a response of "Agree" was given a score of one, and all other answers were given a score of zero. These questions were adopted from the International Social Survey Program module on national identity and the resulting scale is similar to the one used by O'Rourke et al. (2001). Possible nationalism scores range from zero to ten with a Cronbach's Alpha of 0.85 for the scale. The mean nationalism score for respondents is 5.02 with a standard deviation of 2.70.

The measure of sociotropic concern is a single question which asks respondents:

Overall, would you say that in the last 10 years international trade has helped or hurt the U.S. economy?

Possible responses to this question were: *Helped a lot, Helped some, Neither helped nor hurt, Hurt some, Hurt a lot,* and *Don't know.* This question was recoded into two dummy variables, one called Trade-Help and 1 called Trade-Hurt. Trade-Hurt was coded 2 for "Hurt a lot" and one for "Hurt some" with all other responses given a score of zero. The same process was applied to create Trade-Help. Both of these measures produced similar results within all of the models, so only the results for Trade-Hurt are reported herein.

Finally, the two variables identified in the primary hypotheses for this study, gender and economic training are discussed at length in the results section so I will only briefly describe them here. Two measures of economic training were used in predicting trade policy preference. The first measure was at the department level, which was simply a dichotomous measure of whether or not the student was from

the Psychology or Elementary Education departments (coded as 1), or from the Economics or Business and Management departments (coded as 0). Because economic training is emphasized in economics and business, it is assumed that students from these departments will have more economic training than students from psychology and elementary education. Gender was measured with a dummy variable indicating whether or not the respondent identified as female (Female = 1, Male = 0). Overall, the respondents are 64.5% female, and 55.1% Psychology or Elementary Education students. The average number of business or economics classes taken is 5.4 with a standard deviation of 7.9 classes. 48% of respondents had not taken a single business or economics class while in college. Moreover, gender and economic training were highly correlated, with 90% of students who reported having taken zero business or economics classes being women.

A number of measures from the survey were also analyzed, but are not reported as the inclusion of these variables did not effect the core results presented herein. Among these insignificant variables are, income, participation in sports, enjoyment of competition, and interest in economics before entering college. Income was included as both a linear and non-linear transformed measure, as well as various interaction terms, none of which produced a significant result. The variables addressing sports participation, competition, and interest in economics were meant to test for endogeneity between gender and trade policy preference. Through socialization, it is understood, that males may receive a greater reinforcement of the value of compe-

tition, a cornerstone of economic theory. It may be this preference for competition that leads men to support free trade, as apposed to economic training. However, none of these measures produced a significant effect on the trade policy preference or the coefficients associated with gender or economic training.

4.2   Dependent Variables

Following the methods used by Mayda and Rodrik (2005) and Hainmueller and Hiscox (2006), the single NES-based measure of trade policy preference was recoded into a set of two binary variables, one representing a Pro-Trade preference and one represented an Anti-Trade preference. For both of these binary measures, the responses "Neither Agree nor Disagree" and "Don't Know / Refused" were given a value of zero. According to the results of both Mayda and Rodrik (2005) and Hainmueller and Hiscox (2006), their Pro-Trade and Anti-Trade binaries preformed almost identically as dependent variables. This was not the case for my analysis. While most variables still behaved as expected when significant, very few variables had a significant effect when being regressed on the Anti-Trade binary variable. Most notably, gender was never found to be a significant predictor of an Anti-Trade preference. This result could be due to women's increased likelihood of providing "Don't Know" responses to survey questions in general (Kleinberg and Fordham, 2011). The question addressing trade policy preference used in the present survey does not provide a "Don't Know" response option, so the "Neither Agree nor Disagree" may be acting as a psudo-"Don't

Know" response. In fact, of the respondents who selected the "Neither Agree nor Disagree" response for the question addressing trade policy preference, 78% were women. Combining this with the expectation that women will be more protectionist than men, the binary variable "Anti-Trade" may be splitting women almost equally between these two tendencies, resulting in an insignificant gender coefficient.

Scheve and Slaughter (2001) went as far as removing all "Don't Know" responses from their sample. Mayda and Rodrik (2005) and Hainmueller and Hiscox (2006) also reported employing this method with little effect on their results. When "Neither Agree nor Disagree" responses were removed from the present sample the results were nearly the same as the models produced when regressing the entire sample on the Pro-Trade binary variable. However, the removal of these responses severely diminished the size of the sample, which was small to begin with. For this reason, the Pro-Trade binary was selected as the primary dependent variable for the final models.

Furthermore, the scale measure of trade policy preference produced models that were very similar to those produced when using Pro-Trade as the dependent variable. The scale measure was created by recoding four questions asking respondents to agree or disagree with statements about more specific aspects of international trade. Responses that were in favor of trade received negative scores, negative one for "Agree" or "Disagree" and negative two for "Strongly Agree" or "Strongly Disagree" depending on whether the statement was pro-trade or anti-trade. Responses that were against trade were given a positive score, and all of these scores were added together

to form a scale with larger numbers indicating stronger protectionist responses. The Chronbach's Alpha score for the scale measure of trade policy preference is 0.622, with respondents' scores ranging from -8 to 4. The mean score was -1.1, with a standard deviation of 2.6. Because this measure produces such similar results to the Pro-Trade binary measure of trade policy preference, the results are not presented herein.

Chapter 5

Results

The logistic regression results for both the traditional S-S theorem model and the models including measures of economic training are presented in Table 5.1. Model (1) represents the S-S model, including controls for national pride and sociotropic concerns, as well as controlling for gender. Models (2) and (3) both introduce a unique measure of economic training. In model (2) economic training is represented by a dummy variable indicating whether or not the respondent was a student in the Psychology or Elementary Education department. Since the sample was drawn from only four departments, those respondents who are not in the Psychology or Elementary Education department could only be in the Economics or Business and Marketing department. Model (3) uses a non-linear (natural logarithmic) transformation of the respondents' total number of business or economic classes taken during their collegiate career to measure economic training. Models (4) and (5) include both gender and each of the economic training predictors in turn. I will explore each of

these models in relation to my three primary hypotheses, starting with Hypothesis
1: female undergraduates will be less likely to hold pro-trade sentiments than their
male counterparts.

Table 5.1: The Independent and Combined Effects of Gender and Economic Training
on Trade Policy Preference

	Dependent variable:				
	Pro-Free Trade ITTP				
	(1)	(2)	(3)	(4)	(5)
(Intercept)	1.326	1.346	0.125	2.173	1.250
	(1.167)	(1.182)	(1.029)	(1.330)	(1.248)
Female	−1.665**			−1.082	−1.105
	(0.562)			(0.609)	(0.611)
Year in College	−0.189	−0.429	−0.747*	−0.429	−0.730*
	(0.238)	(0.272)	(0.313)	(0.281)	(0.330)
Democrat	−0.426	0.481	0.860	0.159	0.500
	(0.715)	(0.726)	(0.761)	(0.774)	(0.815)
Independent	1.099	2.374**	2.367**	1.799*	1.859*
	(0.726)	(0.766)	(0.778)	(0.824)	(0.834)
Don't Know Political Leaning	−0.285	0.063	0.531	−0.013	0.412
	(0.759)	(0.781)	(0.874)	(0.802)	(0.867)
National Pride Score	−0.036	−0.005	−0.067	−0.042	−0.098
	(0.098)	(0.101)	(0.106)	(0.105)	(0.111)
International Trade Hurts the U.S.	−2.522**	−2.332*	−2.210*	−2.323*	−2.222*
	(0.853)	(0.856)	(0.852)	(0.874)	(0.870)
Psych/Elementary Ed Department		−2.060**		−1.655*	
		(0.638)		(0.683)	
ln Transformation of Number of Econ/Business Classes			1.108***		0.956**
			(0.320)		(0.338)
Observations	103	103	102	103	102
Log likelihood	−46.460	−44.851	−42.596	−43.249	−40.940
Pseudo R^2	0.289	0.313	0.344	0.338	0.369

Note: *p<0.05; **p<0.005; ***p<0.001

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5.1 Hypothesis 1: Women and Trade

Within the sample population, the gender bias on trade policy preference is easily observed. Table 5.2 provides a simple cross-tabulation as a gauge for the extent of deviation between males and females on trade. As shown in Table 5.2, a much larger proportion of women were in favor of increasing limits on trade than men (42% compared to 18%). This 24% difference clearly supports the assumption that women tend to be more protectionist than men. This difference remains significant even after controlling for both economic and social predictors in model (1). These

Table 5.2: Gender Gap in Trade Policy Preference

Dependent variable: Agree or Disagree with Increasing Limits on Trade			
	All Respondents	**Men**	**Women**
Agree	34% (N=36)	18% (N=7)	42% (N=29)
Disagree	32% (N=34)	61% (N=23)	16% (N=11)

results are similar to those observed in previous studies of trade policy preference and lend initial support for Hypothesis 1, i.e. female undergraduates will be less likely to hold pro-trade sentiments than their male counterparts. The variable 'Female' has a significant, negative relationship with the likelihood of holding a pro-trade liberalization preference. Figure 5.1, which is based on the results of model (1), displays the difference in log-odds of being in favor of trade liberalization for an

otherwise identical man and woman in the present sample. Most other variables also
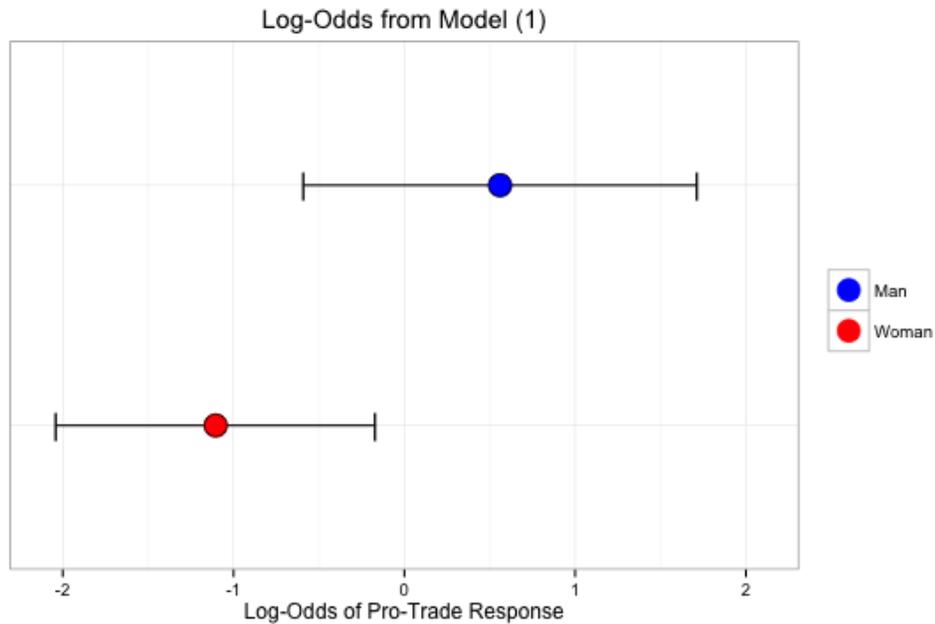

Figure 5.1: To generate these log-odds, the political alignment variables and the sociotropic measure were all held to zero, year in college and national pride score were held to their sample means (3.09 and 5.02, respectively). Gender was varied to display the difference between a Male and a Female with all other variables held constant. Log-Odds are displayed with 95% confidence intervals.

preformed as expected. The variable estimating sociotropic concerns ("International Trade Hurts the U.S.") produced a significant, negative relationship with the tendency to give a pro-trade response, echoing the results of Kocher and Minushin (2006) and Mansfield and Mutz (2009). Political alignment had no significant affect as predicted by Mayda and Rodrik (2005). Due to the sampling frame design creating a natural control for the effects of age and years of education, year in college was also insignificant as predicted. The only variable that did not behave as predicted was

the measure of national pride. Although national pride demonstrated no significant effect on trade policy preference, it was included in the model to enhance congruence with previous studies.

So far, these results are in agreement with the existing trade policy preference research, including the mysteriously strong relationship between gender and pro-trade sentiments. According to the S-S theorem, because all of the respondents represent a uniform skill-level, as measured by educational attainment, their personal economic interest in international trade should be equally uniform. All of the students in the sample are theoretically exposed to the same international market opportunity due to their similar education level. Therefore, the difference between men and women in the sample cannot be due to a disparity in individual factor ownership.

However, the impacts of international trade go far beyond the individual level. Whole communities can be affected by shifts in trade agreements. Women's tendency toward empathetic assessment would suggest that the difference between men and women on trade policy preference is due to women considering these community-level effects more than their male counterparts. This empathy for a larger population is a form of sociotropic concern, in which the individual creates their assessment of a trade policy based on its affect on their community over themselves. Using the U.S. as the community in which the respondents are nested, the survey question asking whether international trade has helped or hurt the U.S. over the last ten years controls for these sociotropic concerns. Yet, just as Mansfield and Mutz (2009) found, even

with this control for sociotropic concern in model (1), the effect of gender remains significant.

5.2   Hypothesis 2: Economic Training and Trade

Hypothesis 2 predicts that students who have been exposed to college-level economic training will be more likely to disagree with increasing limits on trade. Having training in economics increases an individual's likelihood of agreeing with economists (Walstad and Rebeck, 2002), likely because the logical heuristic for sorting through complex scenarios provided by the discipline usually generates concrete answers with rational explanations. In my sample, 50% of students in the departments of Economics or Business and Marketing sided with the economists and disagreed with adding limits to trade, compared to only 17% of Psychology and Elementary Education students.

Again, these students are possessed of equivalent skill-levels, which should, according to the S-S theorem, lead them to form their opinions of international trade in a more unified vein. In model (2), the relationship between academic department and trade policy preference is significant even when controlling for traditional predictors, further supporting Hypothesis 2. It could be suggested that these students' academic departments represent industries of employment, and that the strong effect of academic department really represents students forming their opinions in response to the effect trade will have on their industry. This "factor specific" hypothesis, wherein factors of production (i.e., skill) are not perfectly mobile between industries, result-

ing in industry cleavages on trade policy preferences, has been tested with limited success (Scheve and Slaughter, 2001; O'Rourke et al., 2001). In this case, however, the factor specific model would not have clear predictions for either set of departments. Psychology and Elementary Education are both non-traded industries, which does not provide a bases for predicting trade policy preference. And, while both Economics and Business and Marketing include globalized industries, the range of potential industries of employment would also limit predictability.

In model (3), an alternative measure of economic training is introduced. The natural log of the number of economics and business courses taken during the respondent's college career is also significantly related to trade policy preference, with higher values resulting in an increased likelihood of giving a pro-trade response. The non-transformed number of economics and business classes was also modeled (model not presented here) and a significant relationship was observed, however the transformed measure gave a better overall fit to the model (Pseudo R^2 of 0.369, compared to a Pseudo R^2 of 0.329 with the non-transformed measure). The natural-log transformation gives greater importance to the first few business or economics classes, suggesting that only a basic introduction to these economic ideas is sufficient to influence trade policy preference.

Overall, the current sample clearly supports Hypothesis 2 in both a categorical and more continuous fashion. Both measures of economic training were significant

and improved model fit, suggesting that how an individual has been taught to think about trade policy effects that individual's opinion of international trade.

5.3 Hypothesis 3: Economic Training and Gender

The present analysis has established a clear relationship between gender and trade policy preference, as well as a relationship between economic training and trade policy preference. What complicates these two relationships is the equally pronounced relationship between gender and economic training. In the sample women were less likely than men to be in either the Economics or Business and Management department, with only 30% of female respondents coming from those departments, while 71% of male respondents were Economics or Business and Management students. Furthermore, the average number of economics or business classes taken by women was 3.6, while men reported taking an average of 9.4 economics or business classes. So, the question becomes, if both of these significant predictors are highly correlated, to what degree is the effect of gender simply displaying the unobserved effect of economic training?

Hypothesis 3 predicts that by controlling for economic training at the college level the relationship between gender and trade policy preference will be diminished significantly. The only difference between model (1) and models (4) and (5) is the inclusion of a control for economic training. In both models (4) and (5), the inclusion of this control results in an insignificant coefficient for gender, supporting Hypothesis

3. Once economic training is added to the model, men and women begin looking very similar. This is emphasized by Figure 5.2, which shows the effect of the natural-log transformed measure of economics or business classes on trade policy preference for men and women. The parallel growth of the two lines demonstrates the similar effect economic training has on men's and women's probability of being pro-trade, and their mostly overlapping confidence intervals accentuates the lack of a significant effect of gender. All of this together clearly shows that the initial significant effect of gender was spurious.
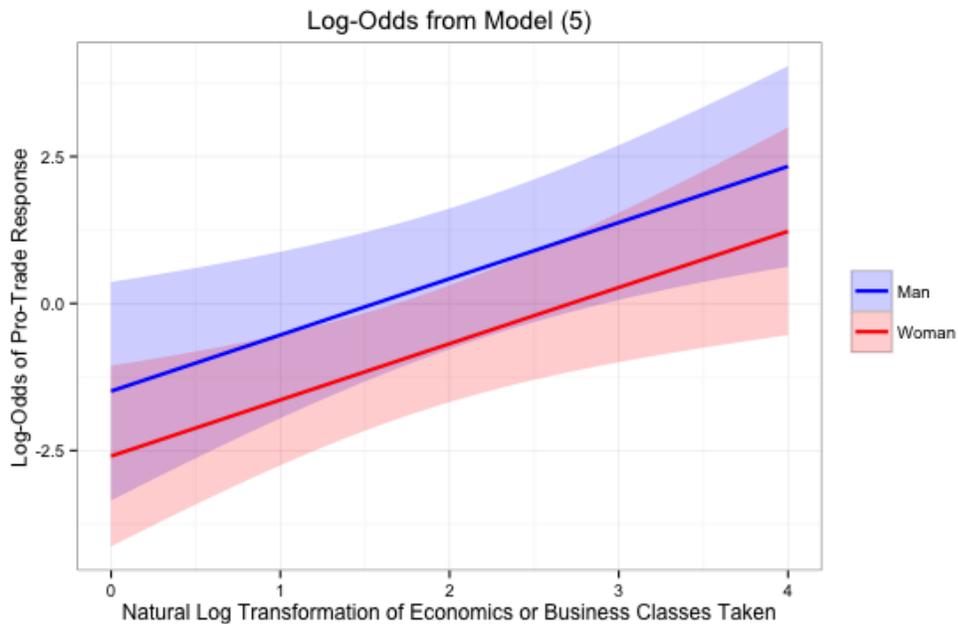

Figure 5.2: To generate these Log-Odds, the political alignment variables and the sociotropic measure were all held to zero, year in college and national pride score were held to their sample means (3.09 and 5.02, respectively). Log-Odds are displayed with 95% confidence intervals.

Exploring this idea further, table 5.3 shows the results of models (1) (2) and (3) from Table 5.1 when they are regressed on women and men separately. A set of three fully-interacted models was also regressed, interacting gender with every other variable. The results for these models are not reported here, but the terms that were significant are denoted in Table 5.3. If the interaction term for a variable was significant, the corresponding coefficient will be marked with a ^{I}, and with a ^{A} if the the main effect term was significant. However, when predicting the likelihood of a pro-trade response none of the gender interaction terms were significant, supporting the idea that men and women's opinions on international trade are similarly influenced by the included variables. Comparing the female models (models (1), (2), and (3) from Table 5.3) to the male models (models (4), (5), and (6)), different variables are significant for each set of models. In fact the only variables that have significance across genders is the sociotropic measure in the model that does not control for economic training, and the non-linear measure of economic and business classes. However, the lack of significant interaction coefficients, coupled with the small number of observations used by each regression model, fundamentally means that these within group results are not able to be interpreted.

The processes by which individuals form their opinion on international trade may still be too complex to predict accurately across all populations. Many factors still remain unexplored. For instance, there may be some classes that women are more likely to take as they advance through their collegiate career than men that emphasize

the negative effects of international trade. Such classes would act in much the same way as economic training classes, only in the opposite direction, further separating men and women on trade policy preference. Further more, the reasons women tend to avoid economics courses are still somewhat ambiguous. However, economic training does seem to be an important influence across all models produced in this analysis. The initial significance of gender in predicting trade policy preference was eroded by the inclusion of controls for economic training, diminishing support for Hypothesis 1. Hypothesis 2 was upheld throughout, which, in turn, supported Hypothesis 3. However, because the relationship between gender, economic training, and trade policy preference remains difficult to map, Hypothesis 3 requires further evidence. Overall, the results clearly illustrate the importance of economic training in predicting trade policy preference, a variable that has been largely overlooked in the prevailing literature.

Table 5.3: Men V. Women: Pro-Free Trade

	Dependent variable:					
	Pro-Free Trade ITTP: Women			Pro-Free Trade ITTP: Men		
	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)	0.416 (1.356)	4.114 (2.316)	1.000 (1.565)	0.708 (1.674)	0.853 (1.704)	0.569 (1.742)
Year in College	−0.439 (0.327)	−1.119* (0.491)	−0.966* (0.467)	−0.045 (0.382)	−0.108 (0.400)	−0.812 (0.568)
Democrat	0.075 (1.024)	1.062 (1.166)	1.006 (1.184)	−0.853 (1.080)	−0.493 (1.147)	0.193 (1.244)
Independent	1.687 (1.222)	2.793 (1.486)	2.361 (1.387)	0.574 (1.052)	0.963 (1.142)	1.517 (1.264)
Don't Know Political Leaning	−0.195 (1.018)	0.493 (1.191)	0.314 (1.139)	−0.328 (1.399)	−0.375 (1.392)	0.938 (1.685)
National Pride Score	−0.094 (0.147)	−0.207 (0.197)	−0.177 (0.184)	0.052 (0.157)	0.067 (0.160)	−0.009 (0.175)
International Trade Hurts the U.S.	−2.457*^{A} (1.186)	−1.991^A (1.251)	−2.135 (1.231)	−2.663*^{A} (1.225)	−2.464*^{A} (1.229)	−2.318 (1.233)
Psych/Elementary Ed Department		−3.152* (1.258)			−0.992 (0.976)	
ln Transformation of Number of Econ/Business Classes			0.930*^{A} (0.470)			1.336*^{A} (0.648)
Observations	65	65	65	38	38	37
Log likelihood	−24.051	−19.651	−21.647	−21.222	−20.694	−17.595
Psuedo R^2	0.186	0.335	0.268	0.168	0.188	0.283

Note: ^{A}*Main Effect term significant in fully-interacted model;* ^{I}*interaction term significant in fully-interacted model*

*p<0.05; **p<0.005; ***p<0.001

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Chapter 6

Conclusion

The economic, rational model for predicting trade policy preference identifies skill as the one primary influence on an individual's opinion of international trade. And while the present study has done nothing to disprove this theory, it does add to a growing body of literature emphasizing the many social influences on trade policy preference that need to be included in the discussion. Earlier studies looking into more social variables identified a relationship between gender and trade policy preference. The mysterious trend of female protectionism directed my attention to an unaccounted for social influence, identified in this study as economic training.

The sample used in this study was unfortunately small. Many restrictions were used to limit the size of the sampling frame in order to increase the ease of access as well as limit the amount of extraneous variables. This also decreased the generalizability of the results. Future studies should include more academic departments with less obvious relationships to economic training in the sampling frame to see if

the simple measure of economics and business classes remains a significant predictor. Ideally, a longitudinal study could track students after leaving the college setting to see if these economic training influences diminish over time, or if certain life events offset these influences. In the meantime, a simple retrospective question, asking respondents if they remember participating in various numbers of economics or business courses while in college should be included in all future studies examining trade policy preference formation.

This study also endorses the continued investigation of social and ideological influences on traditionally economic areas of research. The significance of gender in previous work on trade policy preference demonstrates the difficulties associated with assumptions of economic rationality and economic self-interest. Economic rationality assumes a uniform understanding of economic principles that does not exist in large populations. Even within this study, the ways men and women may differ in formulating opinions of international trade are not fully illuminated. Especially if you consider the way in which individuals are introduced to economic principles in a university setting. Because students choose to take courses in economics there is a possibility that some uncontrolled factor is influencing their decision. Even if economic training is what ultimately leads to forming a pro-trade opinion, women are still less likely to take economics courses. While some have speculated as to why women are less likely to take economics courses, and even though the gender imbalance in economics departments is beginning to fade, there may be some ideology that

is making certain people less likely to take economic courses, thus influencing their trade policy preference.

Overall, the strong support for hypothesis 2, demonstrating the predictive power of economic training on trade policy preference, is enough to recommend that future studies of trade policy preference include some form of control for economic training. Within the present sample, this predictor was able to eliminate the gender gap on trade policy preference, a feat that has defied researchers for more than fifty years. If these results can be reproduced in a more representative sample, the mystery of female protectionism may finally be put to bed.

Appendix A

Survey Instrument

Hello

Welcome to the College Student Opinion: International Trade Policy survey. The purpose of this study is to better understand the ways in which college students form their opinions on international trade. Whether or not you have thought much about this subject, your personal responses to this survey are extremely important. All of your responses are completely anonymous. None of your responses will be linked to your name or identifying information. The data collected from this survey will be used in a scholarly article with the intention of publishing the article in a research journal, as well as used as data in a Master's Thesis. Please only complete this survey if you are currently enrolled as a Ball State University undergraduate student between the ages of 18 and 23.

Your participation in this study is completely voluntary and you are free to withdraw your permission at any time for any reason without penalty or prejudice from the investigator. Please feel free to ask any questions of the investigator before completing this survey and at any time during the survey. There are no rewards or benefits granted to you upon completing this survey.

All data will be stored on a password protected hard drive in an encrypted file. The data will be stored for a maximum duration of five years and then deleted.

Thank you for taking the time to contribute to a better understanding of this complex subject.

If you have any questions about the study or would like more information please contact Josiah Grover at josiah.grover@bsugmail.net or by phone at (763) 234-9351 or Chadwick Menning at clmenning@bsu.edu.

If you have any concerns about your rights as a participant you may contact the Office of Research Integrity, Ball State University, Muncie, IN 47306, (765) 285-5070, irb@bsu.edu .

Again, Thank you for your participation.

*1. Please indicate here that you have read the above information and wish to continue with the survey.

○ Continue to survey

○ End survey now

2. Are you currently an undergraduate college student attending Ball State University?

○ Yes

○ No

Some people feel that the United States should increase limits on trade to protect American industry, while others feel decreasing limits on trade creates greater benefits for consumers and the world economy.

3. How much do you agree or disagree with the statement that the United States should increase limits on trade?

- ○ Strongly Agree
- ○ Agree
- ○ Neither Agree nor Disagree
- ○ Disagree
- ○ Strongly Disagree

Copy of page:

How much do you agree or disagree with the following statement?

4. To protect American manufacturing, the U.S. should place special taxes on manufactured goods from places like China and Mexico.

- ○ Strongly Agree
- ○ Agree
- ○ Neither Agree nor Disagree
- ○ Disagree
- ○ Strongly Disagree

Copy of page: Copy of page:

How much do you agree or disagree with the following statement?

5. The U.S. should pass international trade laws that make it more difficult to outsource jobs.

- ○ Strongly Agree
- ○ Agree
- ○ Neither Agree nor Disagree
- ○ Disagree
- ○ Strongly Disagree

Copy of page: Copy of page: Copy of page:

How much do you agree or disagree with the following statement?

6. Limits on imports hurt consumers by making products more expensive than they should be.

- ○ Strongly Agree
- ○ Agree
- ○ Neither Agree nor Disagree
- ○ Disagree
- ○ Strongly Disagree

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How much do you agree or disagree with the following statement?

7. Rather than limiting imports, the U.S. needs to become more innovative and competitive to create new jobs.

- ○ Strongly Agree
- ○ Agree
- ○ Neither Agree nor Disagree
- ○ Disagree
- ○ Strongly Disagree

How much do you agree or disagree with the following statement?

8. The United States should offer assistance to workers who lose their jobs due to decreased limits on trade.

- ○ Strongly Agree
- ○ Agree
- ○ Neither Agree nor Disagree
- ○ Disagree
- ○ Strongly Disagree

9. Are you a U.S. citizen?

- ○ Yes
- ○ No

10. How proud are you of being American?

○ Very Proud

○ Somewhat Proud

○ Not Very Proud

○ Not Proud at All

○ Don't Know

11. How important is it to you to be an American?

○ Extremely Important

○ Somewhat Important

○ A Little Important

○ Not Important At All

How much would you agree or disagree with the following statement?

12. Generally speaking, the United States is a better country than most other countries.

○ Strongly Agree

○ Agree

○ Neither Agree nor Disagree

○ Disagree

○ Strongly Disagree

How much would you agree or disagree with the following statement?

13. I would rather live in the United States than any other country.

○ Strongly Agree

○ Agree

○ Neither Agree nor Disagree

○ Disagree

○ Strongly Disagree

How much would you agree or disagree with the following statement?

14. The United States should follow its own interests, even if it leads to conflicts with other countries.

○ Strongly Agree

○ Agree

○ Neither Agree nor Disagree

○ Disagree

○ Strongly Disagree

15. Overall, would you say that in the last 10 years international trade has helped or hurt the U.S. economy?

○ Helped a lot.

○ Helped some.

○ Neither helped not hurt.

○ Hurt some.

○ Hurt a lot.

○ Don't know.

How much would you agree or disagree with the following statement?

16. I consider myself knowledgeable on the topic of international trade.

○ Strongly Agree

○ Agree

○ Neither Agree nor Disagree

○ Disagree

○ Strongly Disagree

17. Did you take any Economics classes in high school? (Do not count "Home Economics" classes, like cooking, personal finance, etc.)

○ Yes

○ No

18. Have you taken or are you currently taking any Economics or Business classes in college?

○ Yes

○ No

19. About how many economics and/or business classes (including any classes you are currently taking) have you taken during your undergraduate career?

Economics classes [　　　　　]

Business classes [　　　　　]

20. On average, how well (did you do/ are you doing) in your business and/or economics class(es)?

○ Mostly A's

○ Mostly B's

○ Mostly C's

○ Mostly D's

○ Mostly F's

21. Before coming to college, how interested were you in studying economics?

○ Very Interested

○ Somewhat interested

○ Not Interested at all

○ Didn't really think about it

22. What is your family's approximate yearly income?

○ $0-$15,000 per year

○ $15,001 - $30,000 per year

○ $30,001 - $45,000 per year

○ $45,001 - $60,000 per year

○ $60,001 - $75,000 per year

○ $75,001 - $90,000 per year

○ $90,001 - $105,000 per year

○ $105,001- $120,000 per year

○ More than $120,000 per year

○ Don't Know

23. What political party do you most align with?

○ Republican

○ Democrat

○ Independent

○ Other

○ Don't Know

24. How old are you?

years old [   ]

25. What is your gender?

○ Male

○ Female

○ other

26. In either high school or college, have you/do you participate in school sports?

○ Yes

○ No

27. Do you enjoy participating in competitive sports or games?

○ Yes, extremely

○ Yes, somewhat

○ No, not really

○ Not at all

28. What is (are) your Major(s)?

29. What is (are) your Minor(s)?

30. What is your current class rank?

○ Freshman

○ Sophomore

○ Junior

○ Senior

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