AN ANALYSIS OF ATTITUDES TOWARD FOREIGN TRADE

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ABSTRACT

Recent developments in communications technology have made the world a global work place. This changed business environment has created immense opportunities and challenges for businesses as well as universities which need to increase the supply of graduates who are capable of handling international business responsibilities. Using a questionnaire administered to undergraduate International Trade students at the beginning (pre-sample) and at the end (post-sample) of the semester, this paper analyzes differences in attitudes of students toward foreign trade based on age, major, gender, knowledge, and citizenship.

INTRODUCTION

Advancements in technologies continue to bring countries ever closer. It is not surprising that the share of imports of goods and services in world GDP has increased from 12 percent in 1965 to 24.8 percent in 2000 and has stayed constant since then. Not only are countries purchasing relatively more goods and services from outside, but significant developments in telecommunications have brought different parts of the world much closer to one another. A remarkable development of the past decade is that the world is truly becoming a global work place. The outsourcing of white-collar jobs from Europe and the U.S. to other countries attests to this phenomena. As countries become more interdependent, it is essential to train the labor force to have a better understanding of the international business environment. This need to have a globally conscious workforce has created pressures on colleges and universities to internationalize their curriculum (see, for example, Webb, Mayer, Pioche & Allen, 1999). Responding to this need, the U.S. Department of Education introduced a number of initiatives to promote international

education and research. Many institutions have received funding to develop specific international programs emphasizing business techniques, foreign languages, and an understanding of diverse cultures and customs (see, for example, Cant, 2004). Moreover, the American Assembly of Collegiate Schools of Business (AACSB) changed its accreditation standard in 1974 to require the internationalization of the business curriculum.

A major objective and challenge of business schools is to prepare students for the rapidly changing business environment. Ahlawat (2006) notes that this is particularly difficult for smaller schools which primarily serve students who come from neighboring areas and who have little exposure and sensitivity to cross-cultural differences. The biggest hurdle in internationalizing the curriculum often stems from a lack of desire on the part of students to appreciate the international business environment or to think globally. Given the importance of understanding the international aspects of business and the difficulties faced by smaller schools, it will be interesting to examine the attitudes and basic international trade knowledge of students at Pittsburg State University (PSU)[1].

In their 2005 study, Mayda and Rodrik analyze differences in attitudes towards foreign trade using two cross-country data sets. They find that pro-trade preferences are significantly related to an individual's level of human capital, in the manner predicted by the factor endowment model. Thus, highly educated individuals tend to be pro-trade in countries that are well-endowed in human capital (for example, U.S. and Germany), but are anti-trade in countries that are poorly endowed with human capital (for example, Philippines and Bangladesh). They also find empirical support for the specific factors model. A person's trade preferences are partly related to the trade exposure of the sector in which an individual is employed: individuals in non-trade sectors tend to be more pro- trade, while individuals in import-competing sectors are more protectionist. They also show that non-economic determinants play a very important role in preferences towards trade. For example, a high degree of neighborhood attachment and nationalism is associated with protectionist tendencies, while cosmopolitanism is correlated with pro-trade attitudes. Other things constant, individuals who have greater confidence in the workings of domestic political and economic institutions are less likely to be protectionist. Other studies of individual preferences regarding international trade also indicate that individuals are guided primarily by self-interest and the environment.

The purpose of this paper is to examine the differences in attitudes towards foreign trade among a sample of students enrolled in an undergraduate class in

international trade. Specifically, using responses of students to a questionnaire administered at the beginning and end of the semester, this paper seeks to explain differences in attitudes (when students are classified according to some characteristics) and whether these attitudes change after exposure to international trade issues. Section II of this paper outlines the survey methodology and summarizes the results. Section III explains the differences in attitudes based on regression analysis. The final section summarizes the main findings and conclusions.

SURVEY, METHODOLOGY AND RESULTS

In the fall 2006 term, a questionnaire was administered to an undergraduate International Trade (ECON 640) class on the first and last day of classes. This survey consisted of three parts: (1) questions regarding demographics and other student information; (2) questions about student attitudes toward foreign trade, and; (3) questions about students' basic knowledge of foreign trade. Participation in this survey was voluntary and 57 out of 77 students participated. Table 1 below summarizes the characteristics of the sample.

Table 1: Personal Information

S. No.	Characteristic/Sub-Group/Variable	Number of Students
(1)	(2)	(3)
A	SAMPLE SIZE	
A.1	Total Number of Students	77
A.2	Total Number of Respondents	57
B	CITIZENSHIP	
B.1	U. S. Citizens	45
B.2	Non U. S. Citizens	12
C	POLITICAL AFFILIATION	
C.1	Democrats	10
C.2	Republicans	22
C.3	Independent/Undecided	25
D	GENDER	
D.1	Females	25

Table 1: Personal Information		
S. No.	Characteristic/Sub-Group/Variable	Number of Students
D.2	Males	32
E	AGE DISTRIBUTION	
E.1	Younger Students (below 25 years of age)	50
E.2	Older Students (over 25 years of age)	7
F	MAJOR	
F.1	Management/Marketing	47
F.2	Others	17

Table 1 shows that 50 of the 57 respondents are younger students, 32 are male, 45 are U.S. citizens, and 47 are management/marketing majors[2]. Moreover, 22 students identify themselves as Republican, 10 Democrats, and 25 independent or undecided voters.

Analysis of Attitudes

The second part of the survey on attitudes consists of five questions designed to reflect student attitudes toward foreign trade. The student's response to each question is assigned a score in the following manner: "1" if the choice reflects a pro-trade preference and "0" otherwise. The scores are added for each student and the overall attitude score ranges from 0 to 5, with higher scores reflecting more pro-trade attitudes. These attitude scores are compiled for each respondent in the pre- and post-sample surveys. Table 2 outlines mean attitude scores for each category (sub-group) based on responses to the questionnaire, on a pre- and post-sample basis. Table 3 outlines the results for a null hypothesis of means equality between different categories in the pre- and post-samples.

> *Hypothesis 1: Do mean attitude scores vary across different sub-groups, when sub-groups are characterized by personal characteristics or attributes?*

The average attitude score for all 57 respondents is 3.63 in the pre-sample phase and 3.86 in the post-sample phase. In the pre-sample phase, the average attitude score of US citizens, Republicans, females, below 25 years of age, and

management/marketing majors is higher than the overall class average. In the post-sample phase, the average attitude score of US citizens, Democrats, males, and management/marketing majors is higher than the class average.

Table 2: Mean Attitude Scores

S. No.	Characteristic/ Sub-Group/Variable	Sample Size	Pre - Sample Mean Attitude Score (Standard Errors)	Post - Sample Mean Attitude Score (Standard Errors)	Test of Differences in Mean Attitude Scores in Pre - and Post Samples: t statistic (Probability)
(1)	(2)	(3)	(4)	(5)	(6)
A	All Respondents	57	3.63 (0.13)	3.86 (0.09)	1.44 (0.15)
B.1	U. S. Citizens	45	3.76 (0.15)	3.98(0.09)	1.26 (0.21)
B.2	Non U. S. Citizens	12	3.17 (0.21)	3.42 (0.23)	0.81 (0.33)
C.1	Democrats	10	3.20 (0.25)	3.90 (0.18)	2.28 (0.04)
C.2	Republicans	22	3.77 (0.22)	3.77 (0.16)	1.95 (0.06)
D.1	Females	25	3.76 (0.21)	3.80 (0.14)	0.16 (0.88)
D.2	Males	32	3.53 (0.16)	3.91 (0.12)	1.85 (0.07)
E.1	Younger Students (below 25 years of age)	50	3.72 (0.14)	3.42 (0.19)	1.06 (0.29)
E.2	Older Students (over 25 years of age)	7	3.00 (0.31)	3.75 (0.20)	1.55 (0.15)
F.1	Management/Marketing	47	3.74 (0.90)	3.96 (0.62)	1.34 (0.18)
F.2	Others	10	3.10 (1.19)	3.40 (0.84)	0.64 (0.53)

We find that US citizens have a higher average attitude score compared to non-US citizens in both pre- and post-samples (Table 2). The null hypothesis of equality between mean attitude scores of US and non-US citizens is rejected at the 90% level of confidence in samples (Table 3). Thus, US citizens are consistently more pro-trade. This result is contrary to Mayda and Rodrik who find that US

citizens are protectionist. We also test whether attitudes toward foreign trade differ because of party affiliations and/or beliefs. Our results show that Democrats, who tend to have a lower mean pre-attitude score, are statistically different (at the 80% confidence level) from Republicans. Thus, Republicans are more pro-trade, a finding that corresponds with our initial expectations. However, we could not reject the null hypothesis of difference in means between Democrats and Republicans in the post-sample phase. This suggests that the attitudes of Democrats are no different than those of Republicans after taking a course in international trade.

Table 3: Equality of Mean Attitude Scores between different sub - groups in Pre - and Post - samples

S. No.	Characteristic/ Sub-Group/Variable	Test of Differences in Mean Attitude Scores in Pre - Sample: t - statistics (probability)	Test of Differences in Mean Attitude Scores in Post - Sample: t - statistics (probability)
(1)	(2)	(3)	(4)
A.	U. S. versus Non - U. S. Citizens	1.90 (0.06)	2.62 (0.01)
B.	Democrats versus Republicans	1.57 (0.13)	0.48 (0.64)
C.	Males versus Females	0.88 (0.38)	0.57 (0.57)
D.	Younger versus Older Students	1.87 (0.07)	0.27 (0.79)
E.	Management/Marketing versus Other Majors	1.94 (0.06)	2.41 (0.02)

Though female students have a relatively higher pre-sample mean attitude score as compared to male students, the null hypothesis of test of equality of pre-attitude mean scores could not be rejected even at the 80% level of confidence. The same result is confirmed in the post-sample phase. Thus, we find no differences in attitudes based on gender. Table 2 shows that the younger students had a higher pre-sample mean attitude score than the older students. Null hypothesis of tests of equality of means between these two categories was rejected at 90% level of confidence, and thus the younger students were more open to trade relative to the

older students in the pre-sample phase. However, we could not reject the null hypothesis of no difference in mean attitudes scores between the two age groups in the post-sample phase. Finally, the mean attitude score of management/marketing majors is higher than that of other majors in both the pre- and post-samples. Tests of equality of means between these two sub-categories show that management/marketing majors are more open to foreign trade and this difference does not change with a course in international trade.

Thus, our results show that attitudes toward foreign trade can be different based on citizenship, political affiliation, age, and major area of study. However, we detect no difference in attitudes based on gender. We also find that some sub-groups are more likely to change their attitudes towards foreign trade as compared to others.

Hypothesis 2: Do attitudes change after a basic course in international trade?

Column (6) in Table 2 provides the test results of a null hypothesis of no statistical difference in mean attitude scores of different sub-groups in the pre- and post-samples. We find that the overall mean attitude score of the class is higher in the post-sample relative to the pre-sample. The raw mean scores for different sub-groups are also greater (except for younger students) in the post-sample relative to the pre-sample. Statistically, Democrats, males, students over 25 years of age, and management/marketing majors tend to raise their scores after undergoing a course in international trade. There are no changes in attitudes in the other sub-groups. It is important to note that no category tended to become less pro-trade after the trade course.

Analysis of Knowledge

The third part of the questionnaire consists of ten questions designed to assess the students' basic knowledge of foreign trade. Each correct response receives a score of 1 and an incorrect response receives a score of 0. These scores are added for each student, with the knowledge score ranging from 0 to 10 in the pre- and post-samples. Table 4 outlines the mean knowledge scores of different categories in the pre- and post-samples. Table 5 outlines the test results for a null hypothesis of equality of mean knowledge between different categories in the pre- and post-samples.

Table 4: Mean Knowledge Scores

S. No.	Characteristic/ Sub-Group/ Variable	Sample Size	Pre - Sample Mean Knowledge Score (Standard Errors)	Post - Sample Mean Knowledge Score (Standard Errors)	Test of Differences in Mean Knowledge Scores in Pre - and Post Samples: t statistic (Probability)
(1)	(2)	(3)	(4)	(5)	(6)
A	All Respondents	57	4.81 (0.24)	4.96 (0.23)	0.48 (0.63)
B.1	U. S. Citizens	45	4.29 (0.22)	4.56 (0.24)	0.83 (0.41)
B.2	Non U. S. Citizens	12	6.75 (0.43)	6.50 (0.44)	0.41 (0.69)
C.1	Democrats	10	4.80 (0.33)	4.60 (0.69)	0.26 (0.80)
C.2	Republicans	22	4.64 (0.44)	5.18 (0.40)	0.94 (0.35)
D.1	Females	25	4.40 (0.36)	4.44 (0.34)	0.08 (0.94)
D.2	Males	32	5..13 (0.31)	5.38 (0.30)	0.58 (0.56)
E.1	Younger Students (below 25 years of age)	50	4.72 (0.26)	4.88 (0.25)	0.44 (0.66)
E.2	Older Students (over 25 years of age)	7	5.43 (0.37)	4.96 (0.61)	0.20 (0.84)
F.1	Management/ Marketing	47	4.51 (1.74)	4.79 (1.73)	0.77 (0.44)
F.2	Others	10	6.20 (1.23)	5.80 (1.69)	0.61 (0.55)

Table5: Equality of Mean Knowledge Scores between different sub - groups in Pre - and Post - samples

S. No.	Characteristic/ Sub-Group/ Variable	Test of Differences in Mean Knowledge Scores in Pre - Sample: t - statistics (probability)	Test of Differences in Mean Knowledge Scores in Post - Sample: t - statistics (probability)
(1)	(2)	(3)	(4)
A.	U. S. versus Non - U. S. Citizens	5.14 (0.00)	3.80 (0.00)
B.	Democrats versus Republicans	0.25 (0.80)	0.77 (0.45)
C.	Males versus Females	1.55 (0.13)	2.06 (0.04)
D.	Younger versus Older Students	0.99 (0.33)	0.98 (0.33)
E.	Management/Marketing versus Other Majors	2.91 (0.01)	1.69 (0.09)

Hypothesis 3: Does basic knowledge vary across different sub-samples when sub-samples are characterized by personal characteristics or attributes?

The average knowledge score for all 57 respondents is 4.81 in the pre-sample phase and 4.96 in the post-sample phase. In the pre-sample phase, the average knowledge scores of non-US citizens, males, younger students, and other majors exceed the overall class average. In the post-sample phase, the average knowledge scores of non-US citizens, Republicans, males, older students, and other majors are higher than the overall class average.

Non-US citizens have a higher knowledge score than US citizens in both the pre-and post-samples. The null hypothesis of equality of mean knowledge scores between US and non-US citizens is rejected at the 90% confidence level of confidence in both samples. Although the score of Democrats is higher than that of Republicans in the pre-sample phase, the situation is reversed in the post-sample phase. However, results show that there is no statistical difference in mean attitudes scores of Republicans and Democrats in either sample.

Male students have a higher average knowledge score than females in both samples. The null hypothesis of equality of mean scores between males and females

is rejected (at the 80% level) in the pre-sample and likewise (at the 90% level) in the post-sample. Thus, the knowledge score of male students is statistically higher than that of female students in both sample phases. When respondents are classified according to age, older students are found to have a higher mean knowledge score than younger students in both samples. However, Table 5 shows that there is no statistical difference in mean scores based on the age of the respondents. Finally, management/marketing majors consistently have a lower mean score compared to other majors. The null hypothesis of equality is rejected (at the 90% level) in both samples. Thus, the basic knowledge of other majors is statistically greater than that of management/marketing majors in both pre- and post-samples.

Hypothesis 4: Does basic knowledge change with an undergraduate course in international trade?

Column (6) in Table 4 also outlines the t-statistics and probability of not rejecting the null hypothesis. Figures in column (6) reveal that there is no statistical difference in means scores of different categories in the pre- and post-sample phases, and thus the null hypothesis of equality of means cannot be rejected at 80 or 90% level of confidence.

Several results are worth noting. First, the mean knowledge scores of non-US citizens, male students, and other majors are greater in both sub-samples. Second, there is no difference in mean knowledge scores based on age and party affiliations. Finally, the knowledge score for each category of students did not change with a course in international trade.

Analysis of Scores

Table 6 below outlines the average percent scores received by different groups of students in the international trade course (based on quizzes, exams, homework, and class work assignments). The overall average score for all respondents (57) is 80.52. The average score for US citizens is 77.8 while for non-US citizens it is a high 90.61. The average scores for Democrats and Republicans are close (81.2). The average score for females is marginally lower at 79.30 relative to male score of 81.5. The score for younger students is 80.9, higher than that for older students at 77.5. Similarly, the average score for management/marketing majors is slightly lower at 80.3 as compared to other majors at 81.7.

Table 6: Mean Scores (percent)			
S. No.	Characteristic/Sub-Group/ Variable	Sample Size	Mean Scores (Standard Errors)
(1)	(2)	(3)	(4)
A	All Respondents	57	80.52 (2.76)
B.1	U. S. Citizens	45	77.83 (1.82)
B.2	Non U. S. Citizens	12	90.61 (4.16)
C.1	Democrats	10	81.17 (5.07)
C.2	Republicans	22	81.18 (2.47)
D.1	Females	25	79.30 (2.50)
D.2	Males	32	81.48 (2.57)
E.1	Younger Students (below 25 years of age)	50	80.94 (1.79)
E.2	Older Students (over 25 years of age)	7	77.54 (7.63)
F.1	Management/Marketing	47	80.27 (12.25)
F.2	Others	10	81.71 (19.64)

Table7: Equality of Mean Scores between different sub - groups in Pre - and Post - samples		
S. No.	Characteristic/Sub-Group/Variable	Test of Differences in Mean Knowledge Scores in Pre - Sample: t - statistics (probability)
(1)	(2)	(3)
A.	U. S. versus Non - U. S. Citizens	3.10 (0.00)
B.	Democrats versus Republicans	0.002 (0.99)
C.	Males versus Females	0.59 (0.56)
D.	Younger versus Older Students	0.61 (0.54)
E.	Management/Marketing versus Other Majors	0.30 (0.76)

Table 7 provides the results of equality tests of mean scores between different categories. We find a statistical difference only between US and non-US citizens in terms of average test scores.

REGRESSION RESULTS

The following regression model is used to analyze attitudes towards foreign trade in the post sample:

$$ATT = f(DVy, DVr, DVus, DVf, DVm, KNOW, SCORE)$$

where
ATT: attitude score for all respondents in the post-sample.
DVy: 1 if student is below 25 years of age, 0 otherwise.
DVr: 1 if student considers oneself a Republican, 0 otherwise.
DVus: 1 if student is a US citizen, 0 otherwise.
DVf: 1 if student is a female, 0 otherwise.
DVm: 1 if student is a management/marketing major, 0 otherwise.
KNOW: knowledge score for all respondents on test in the post-sample.
SCORE: Raw scores in International Trade course.

We apply the standard ordinary least squares procedure to estimate the model. The interpretation of the constant term is important as it represents the average for older students, non-Republicans, non-US citizens, and males. Thus all comparisons are made to this typical student.

Our results show that the coefficient for younger students is positive, but statistically insignificant. In this case, the sign of the coefficient is inconsistent with our earlier findings (although the statistical (in)significance is consistent with our earlier finding). Respondents who identify themselves as Republicans have a mean attitude score lower than non-Republicans (i.e., Democrats and independent/undecided); however, this estimated coefficient is not statistically significant. Female students have a lower mean attitude score than male students and this coefficient is statistically different from zero at the 90% level. In our earlier survey findings, we observe a higher raw attitude score for male students relative to female students, but do not find statistical difference between the two genders.

In the case of US citizens, we find that the mean attitude score is greater than that of non-US citizens and these mean scores are significant at the 95% confidence level. Finally, the mean attitude score of management/marketing majors

is higher than that of other majors, and this difference is statistically significant at the 95% level. Both these results (sign as well as the level of significance) are consistent with our earlier findings.

Table 8: Regression Results

S. No.	Variable	Coefficient (t - statistic)
(1)	(2)	(3)
A.	Constant	2.57 * (3.74)
B.	DVy	0.20 (0.81)
C.	DVr	-0.19 (-1.11)
D.	Dvus	0.48* (2.07)
E.	DVf	-0.29** (-1.73)
F.	DVm	0.44 * (1.95)
G.	KNOW	-0.13* (-2.17)
H.	SCORE	0.02* (2.17)
I.	R2	0.34
J.	Adj R2	0.24
K.	F- Statistic	3.59

Note:
* represents significant at 90 % level of confidence.
** represents significant at 80 % level of confidence.

The coefficient associated with knowledge is negative and significant at the 95% level, indicating that more knowledge about international trade issues has a negative impact on attitudes towards foreign trade. Finally, the coefficient associated with scores (performance) in international trade class is positive and significant, indicating that better understanding of international trade issues has a positive impact on attitudes towards trade.

SUMMARY AND CONCLUSIONS

This study is based on the expectation that a basic course in international trade, which exposes students to the concepts of foreign trade and its consequences (both positive and negative), would result in a positive change in overall attitudes. We also posit that attitudes depend on the characteristics and attributes of the respondents. Our results confirm the expectation that a course in international trade results in a positive or favorable change in attitudes. At a disaggregated level, our results confirm that attitudes toward trade are related to various attributes and demographics of the students.

We initially expected that better information (or basic knowledge) about the world and issues related to foreign trade would lead to higher mean attitude score. However, our results show that basic knowledge regarding global issues leads to a lower mean attitude score. Thus, increased knowledge about trade does not necessarily imply a better understanding of trade issues.

We expected that better performance in international trade course (as reflected by raw scores on exams, quizzes, etc.), reflecting better understanding of issues relating to foreign trade, would have a positive impact on attitudes towards foreign trade. Our results indicate that strong performance in an international trade course leads to a more positive change in attitudes toward foreign trade.

This study is based on responses of students to a questionnaire administered to a class at a small regional university. It will be interesting to extend this study to other institutions, both in the US and overseas.

ENDNOTES

1. PSU is a regional university in the state of Kansas and offers bachelors and masters degrees, with an overall enrollment of about 6,700 students. The bachelors and masters degree programs from the College of Business, which has 1700 students, are accredited by the AACSB International. More important, the College of Business has been the recipient of a Title VIB Business and International Education (BIE) grant from the Department of Education three consecutive terms beginning in 2001. Among other activities, the BIE grant has resulted in the development and implementation of a new International Business major and an International Business concentration in the MBA program, provision of outreach activities to local businesses, and the development of study abroad programs and sister-school ties in various countries in Central Asia, Central America, South America, and Asia.

2. Includes seven double majors and so the total number of majors may be greater than the total number of respondents.

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