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Student Attitudes Towards the Market System: An Inquiry and Analysis

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It is common knowledge that individuals hold significantly different attitudes and beliefs concerning the legitimacy of market endeavors. Social philosophers have observed attitudes that range from those who believe that profit-seeking market activity is morally defensible and religiously redemptive (Weber, Harrison, Sowell) to be the observation that certain groups believe that even the simplest form of middleman activity is corrupt. In an attempt to understand and predict the differentials in economic growth between countries, there has also been a focus on human capital variables, such as education and native intellect. In recent years there has been an expansion into 'social capital' attributes, such as trust and belief in the efficacy of free enterprise as predictors of economic success. In the research reported here, we study student attitudes and their academic achievement in learning economics. On the assumption that student attitudes toward the market system will vary in significant and predictable ways, we hypothesize that a student's attitude toward the legitimacy of market activity may have an association with that student's ability to learn economic principles. It may be that students who view market activity as morally wholesome will be better able to learn and recite economic truths. It may also be the case that students who do well in economics classes come to view economic forces in a happier light. It is also possible that student self-selection on the basis of grades received will lead to students taking higher level economics classes who are more favorably disposed toward market activity. Whatever the precise nature

of the association between student attitudes and student learning, we note below that such associations do indeed exist. We also note and report significant differences in attitudes between demographic sub-categories and between classes of students, as well as changes in attitudes over the time elapsed between our first survey of student attitudes (1992) and our most recent (1999).

Values and economic prosperity

The ability to build a predictive model of economic prosperity has engaged scholars for years. Initially the role of culture and psycho-social differences (social capital) had been assumed away from a "leaner" predictive statement using quantitative variables to economic success. However, recent differentials in the economic prosperity of countries, and an impressive global embracing of capitalism have led many scholars to a reexamination of the role of culture. Social capital variables have been utilized as predictors of economic performance by Gray (1996), Glasser and Glendon (1998), Grier (1997), Harrison (1992), and Knack and Keefer (1997).

Scholarly research in economic development and in the history of economic thought has explored the role of social liberties (freedom) and institutional structures (freedom of contract, stable money) as prerequisites for economic propriety (Boettke, 1999; Harrison, 1992). Boettke explored the theoretical arguments for including socio-cultural variables as factors to explain differences in a country's economic growth. He also concurred with many other scholars that although it is difficult to measure qualitative differences in culture and attitudes, these variables add significantly to the explanation of a country's economic propensity. Harrison (1992) observed that much of the development differences in South American countries could be attributed to differences in values stemming from religious and other cultural traditions.

In the field of economic education, research on values and attitudes has focused on the notion of attitudes as an important "non-cognitive domain." The attitudinal research in economic education has focused on:

- The development of attitudinal inventories that are normed and tested for reliability and validity (Soper and Walstad, 1983; O'Brien and Ingels, 1987).
- Research measuring student's attitude towards the study of economics, and attitudinal changes after taking an economics course (Whaples, 1995).
- Assessment of attitudes towards market fairness based on students' evaluation of content specific cases of economic activities such as market pricing (Seligman and Schwartz, 1997).

Research focus

Our research began in 1992 with the development of an attitudinal survey (Breeden and Lephardt, 1993) and an assessment of students' attitudes towards the market system in Principles of Microeconomics classes. In 1999, we resurveyed by mail the 1992 group and surveyed another 240 students in Principles of Microeconomics, Applied Microeconomics and MBA Managerial Economics classes.

We explored differences in attitudes toward the free market system between different categories of students by testing for differences in means (Smith, 1985, p. 389) for sex, race, religious background, major, and work. We also tested for longitudinal changes in students' attitudes between 1992 and 1999. Additionally, we assessed differences between students at different stages of their university business education (Principles of Micro, Applied Micro, and MBA Managerial).

Methodology

We administered an attitude inventory (Breeden and Lephardt, 1993, copy attached) to 140 students in the Fall of 1992 (nineteen item survey), and 228 students in Fall, 1999 (both during the first week of class).

Survey instrument

The first step in the development of the survey instrument was to ask undergraduate students a short number of open-ended questions about their attitudes and beliefs toward the market system. Students were asked for a list of major strengths and major weaknesses of the market economy. They were also asked to define what they understood a market economy to mean. From students' responses to this open-ended survey, and based on our combined experience of forty years of classroom teaching of economics, we developed a list of twenty questions surveying attitudes toward the market.

Subsequent to our initial development of the instrument and over the approximately seven years between initial development and the present, we have taken a number of steps to establish instrument validity. First, the instrument was distributed to our colleagues in the Economics Department for review and criticism. The comments were overwhelmingly positive and indicated that our colleagues thought that the instrument would accomplish its goal. Second, we did a test-retest to check the consistency of responses. The results of the test-retest yielded high correlations for virtually all the questions, giving us confidence that students understood the questions and were answering in a consistent and not arbitrary way. Third, in the Fall of 1993, we presented the survey and some tentative findings at the annual meetings of the (then) Joint Council on Economic Education for further peer review and for constructive comment. Finally, we performed 'alpha' tests on the two question groups, the nine 'pro-market' set and the eleven 'anti-market' set of questions. The scores given for Chronbach's alpha were .78 for the pro-market group and .81 for the anti-market questions indicating a reasonable association for the question groups. Establishing survey instrument validity is an on-going project but, based

on our efforts to date, we feel confident that our survey measures attitudes toward the market in a coherent manner.

Survey sample

In 1999 a follow-up survey was sent to 107 individuals who had participated in the fall of 1992. Out of 140 original surveyed students, 107 were sent surveys based on alumni office current addresses (four badly addressed were returned, yielding 38 replies, a response rate of 36%). The assessment included 16 demographic variables and the 20-item attitude inventory. Table 1 presents a summary of the demographic characteristics of all students surveyed. As the Table shows, our students are largely Catholic and Caucasian. The percentage of business majors increased from 30% in 1992 Principles of Microeconomics class (required of business majors but open to all university students) to 97% in Applied Micro, which is almost completely business majors.

Results: differences between students

The analysis of student responses to the attitude inventory yielded a number of interesting and statistically significant means differences between groups and over time.

1992 Micro Principles compared to 1999 Micro Principles

Finding: "Overall students are pro-market, slight increase over time."

There are four means with statistically significant differences between the entire classes of 1992 and 1999 Micro Principles students (Table 2). The 1999 Micro Principles students' attitudes were more pro-market in questions 2, 4, 10 and less in question 7. Noteworthy is the pro-market attitudes. The one 'less' pro-market attitude has to do with

Table 1. Student Demographic Characteristics

	Micro Principles 1992	Micro Principles 1999	Applied Micro 1999	MBA Managerial Econ 1999	Matched Returns 1999
TOTAL*	140	92	76	60	38
Males	65	57	41	39	17
Females	75	35	35	21	21
Catholic	95	64	62	32	30
Protestant	24	18	11	18	4
Other	17	10	4	10	2
H.S. Econ	57	51	31	na**	14
Caucasian	109	82	62	53	29
Black	12	0	4	0	4
Other	14	10	10	6	5
Bus. Major	41	37	74	25	11
P-T Work	89	53	54	na	na

*Sub-category data may not add up due to missing data ** not applicable.

Table 2: Mean Percent Agreement Comparison 1992 MICRO PRINCIPLES TO 1999 MICRO PRINCIPLES		
In my opinion, a free market system ...	1992	1999
1 leads to unfair/unequal distribution of income	44.60	44.46
2 encourages a maximum of personal freedom and choice	77.15	
3. encourages unethical (cut-throat) business behavior	56.28	60.65
4. leads to quality and technical advances	78.91	
5. leads to insufficient provision of important public services	46.47	48.55
6. provides opportunities and incentives for success	80.44	80.77
7. encourages greed and materialism	63.89	
8. allows equal access to economic opportunities	51.39	56.33
9. leads to inflation	56.05	54.39
10. raises the living standard for the average person	60.38	
11. leads to monopolies	57.64	60.04
12. leads to efficient allocation of resources	49.13	54.40
13. encourages the abuse of natural resources	60.04	62.73
14. leads to excessive unemployment risks for workers	53.51	50.96
15. leads to excessive risk of business failure	54.50	57.10
16. requires much government control to be efficient	45.65	51.73
17. allows unfair foreign competition	45.50	45.72
18. maximizes consumer choice for products and services	81.12	78.29
19. provides consumers the goods and services they want	80.12	82.54
20. provides employment opportunities for all who desire	na	69.66

1992 Micro Principles (n=140) 1999 (n=92) *significant at .05 ** significant at .01

Shaded cells: Direction of change less pro-market Numbers indicate percent agreement on scale 0-100%

the market encouraging greed and materialism, a popular theme among Ethics and Theology instructors which are core curriculum requirements at this University. The remaining means of the 1999 Micro Principles students display the same order of magnitude as the 1992 strong agreement on many of the questions (2, 4 6, 19) that indicates Micro Principles students.

Matched 1992 to 1999 responses

Finding: "Slightly increased pro-market attitudes"

The longitudinal sample consisted of the thirty-eight returned questionnaires (1999) matched to the original 1992 responses to evaluate means differences over time. After seven years the attitudes of the respondents continued to be strongly pro-market on all questions although only four were statistically significant. There was a statistical difference for four questions (raising the living standards, leads to excessive employment risk, requires much government control and allows unfair competition) all in the direction of indicating a more pro-market attitude. Our interpretation is that the former 1992 students have concrete experience and knowledge of the workings of the market that validated their originally strong pro-market attitudes. It is also possible that the results reflect a self-selection process of those responding to the follow-up questionnaire.

Micro Principles—Declared Business Majors: 1992 to 1999

Finding: "Strong Decline in pro-market attitudes among Business Majors"

One of the most notable subgroup categories was the Business Major comparison between the 1992 and 1999 sample (Table 3). In this group, 9 out of 20 means differences are statistically significant at the 99% level of confidence. What is startling is that 8 of the means indicate there is a pervasive decline in positive attitudes towards the market in the declared business major sub-category. In searching for answers to this change, we considered changes in curriculum and there were none.

Table 3: Mean Percent Agreement Comparison
1992 BUSINESS MAJORS V. 1999 BUSINESS MAJORS

In my opinion, a free market system ...	1992	1999
1. leads to unfair/unequal distribution of income	41.6	40.9
2. encourages a maximum of personal freedom and choice	80.9	
3. encourages unethical (cut-throat) business behavior	47.1	
4. leads to quality and technical advances	83.3	
5. leads to insufficient provision of important public services	44.2	
6. provides opportunities and incentives for success	85.7	
7. encourages greed and materialism	59.0	
8. allows equal access to economic opportunities	50.8	70.6*
9. leads to inflation	51.0	59.7
10. raises the living standard for the average person	62.3	
11. leads to monopolies	57.1	66.2
12. leads to efficient allocation of resources	57.8	59.8
13. encourages the abuse of natural resources	47.8	54.2
14. leads to excessive unemployment risks for workers	47.6	57.7
15. leads to excessive risk of business failure	50.5	52.1
16. requires much government control to be efficient	42.4	56.0
17. allows unfair foreign competition	39.5	47.4
18. maximizes consumer choice for products and services	86.0	
19. provides consumers the goods and services they want	84.4	81.0
20. provides employment opportunities for all who desire	na	79.2

1992 Business Major (n=41) 1999 Business Major (n=37)
*significant at .05 ** significant at .01 SHADED CELLS: DIRECTION OF CHANGES LESS PRO-MARKET

We considered changes in background knowledge of economics acquired through high school instruction. In our 1992 study of attitudes, we found statistically significant differences between students with high school economics and those without. In 1992 high school economics was associated with pro-market attitudes in three questions. In the current student samples, high school economics had no statistical impact on attitudes. Other explanations could include the economic and media environment at the time of data collection or a general decline in pro-market attitudes during periods of economic prosperity as predicted by North and Hayek. Nevertheless, the responses of 1999 declared business majors reflect a majority attitude that the market is unethical, produces greed and materialism and leads to insufficient provision of important public services. This is surprising and we think a significant finding that needs serious and deeper investigation.

Micro Principles 1999 compared to Applied Micro 1999 & MBA Managerial Econ 1999

Finding: "The more economics courses taken, the greater pro-market the attitudes."

Based only on the recent data we collected in 1999, we compared attitudes of students in different stages of business education. Table 4 compares the attitudes of the 1999 Micro Principles classes to Applied Micro and MBA Managerial Economics. The means differences were significant, predictable, and in the direction of increased pro-market attitudes. The greatest attitude difference is between students in the Principles and MBA classes. The means of 14 or 20 questions between the Principles and MBA classes are statistically significant at the 99% level and the direction is pro-market for the MBA students in all questions. The applied Microeconomic students are also more pro-market than the Principles students (7 of the 20 questions).

Our statistical tests establish an association between levels of economics courses and levels of pro-market attitudes. The possible explanations for this association at the undergraduate level include a

Table 4: Mean Percent Agreement Comparison: 1999 Sample
MICRO PRINCIPLES TO APPLIED MICROECONOMICS
MICRO PRINCIPLES TO MBA MANAGERIAL ECONOMICS

In my opinion, a free market system ...	Principles Micro	Applied Micro	MBA Managerial
1. leads to unfair/unequal distribution of income	44.46	44.6	40.4
2. encourages a maximum of personal freedom and choice	82.73	81.9	
3. encourages unethical (cut-throat) business behavior	60.65		
4. leads to quality and technical advances	84.62	84.5	
5. leads to insufficient provision of important public services	48.55		
6. provides opportunities and incentives for success	80.77	84.0	
7. encourages greed and materialism	72.33		
8. allows equal access to economic opportunities	56.33	51.8	61.0
9. leads to inflation	54.39	53.0	
10. raises the living standard for the average person	68.15	61.9	70.0
11. leads to monopolies	60.04		
12. leads to efficient allocation of resources	54.40	52.4	
13. encourages the abuse of natural resources	62.73	61.5	55.5
14. leads to excessive unemployment risks for workers	50.96	45.9	
15. leads to excessive risk of business failure	57.10	54.2	
16. requires much government control to be efficient	51.73		
17. allows unfair foreign competition	45.72		
18. maximizes consumer choice for products and services	78.29	80.0	
19. provides consumers the goods and services they want	82.54	79.5	86.1
20. provides employment opportunities for all who desire	69.66		74.0

Micro Principles (n=92); Applied Microeconomics (n=76); MBA Managerial Economics (n=60)

** significant at .01 * significant at .05

SHADED CELLS : DIRECTION OF CHANGE IS MORE PRO-MARKET with Micro Principles as the baseline

natural self-selection process as the more pro-market students are included to take more economics courses in connection with further business education. MBA students are more pro-market than principles students, partly because they know more of the workings of the market system and partly because their pre-existing, pro-market orientations may have made them more likely to end up working in the private sector, pursuing graduate business degrees.

Given the above explanations and the fact that our survey and statistical tests do not establish a causal linkage from learning to attitudes, the findings of Table 4 may or may not be consistent with the findings of Whaples (1995). Whaples found that economics courses change students' opinions regarding the fairness of the free market.

Demographic sub-categories: sex, race, religion, part-time work

Finding: "Males, Caucasians, and non-Catholics are more pro-market"

Differences between sub-categories means within each of the classes were tested for statistical significance. We evaluated Catholic vs. non-Catholic, males vs. females, Caucasian vs. non-Caucasian, part-time work vs. no work. Table 5 is a summary of the statistically significant means differences. Although caution must be exercised, these comparisons tend to be rather stereotypic (with the exception of MBA's), but the implications are still important. Generally speaking, females are less pro-market than males (8 out of 12), Catholics are less pro-market than non-Catholic (4 out of 5 after dropping out the MBA means) and non-Caucasians are less pro-market than Caucasians (9 out of 9). These findings are consistent with Harrison's (1992) emphasis on religious values, Sowell's (1994) emphasis on race and culture and the Peterson, Kozmetsky and Albaum (1991) research on gender and attitudes towards capitalism. Question 5 "leads to insufficient provision of public services" has the greatest number of mean differences between sub-groups. Our tentative explanation is that in economics

Table 5: Means Comparison

STATISTICALLY SIGNIFICANT DIFFERENCES IN SUB-CATEGORIES
Comparisons were made between subgroups in the same class

In my opinion, a free market system ...	Sub-groups with means*	Year and Class
Q1. leads to unfair/unequal distribution of income	**Females (53) Males (39) **** **Non-Caucasian (69) Caucasian (39)**	1999 Principles 1999 Intermediate
Q3. encourages unethical(cut-throat) business behavior	**Males (54) Females (38)** **Work part-time (58) No work (39)** **Caucasian (47) Non-Caucasian (63)**	1999 MBA 1999 Intermediate 1992 Principles
Q4. leads to quality and technical advances	**Males (90) Females (78)**	1999 Intermediate
Q5. leads to insufficient provision of important public services	**Females (46) Males (34)** **Males (72) Females (58)** **Non-Caucasian (63) Caucasian (47)** **Non-Caucasian (58) Caucasian (36)** **Catholic (23) Non-Catholic (45)** **Part-time work (51) No- part-time (39)**	1999 Intermediate 1999 Principles 1992 Principles 1999 Intermediate 1999 MBA 1992 MBA
Q6. provides opportunities and incentives for success	**Males (88) Females (79)** **Caucasian (86) Non-Caucasian (76)**	1999 Intermediate 1992 Principles
Q7. encourages greed and materialism	**Catholic (64) non-Catholic (51)** **No HS Econ (67) HS Econ (60)**	1992 Principles 1992 Principles
Q8. allows equal access to economic opportunities	**Non-Catholic (60) Catholic (52)**	1992 Principles
Q9. leads to inflation	**Non Catholic (64) Catholic (52)**	1999 Principles
Q10. raises the living standard for the average person	**Males (68) Female (55)** **Caucasian (64) non-Caucasian (49)**	1999 Intermediate 1992 Principles
Q11. leads to monopolies	**Work part time (56) No work (38)** **Non-Catholic (48) Catholic (32)** **No HS Econ (61) HS Econ (52)**	1999 Intermediate 1999 MBA 1992 Principles
Q12. leads to efficient allocation of resources	**Caucasian (57) Non-Caucasian (44)** **Males (70) Females (54)**	1992 Principles 1999 MBA
Q13. encourages the abuse of natural resources	**non-Catholic (64) Catholic (48)**	1999 MBA
Q14. leads to excessive unemployment risk	**Non-Caucasian (61) Caucasian (42)** **Males (35) Females (19)**	1999 Intermediate 1999 MBA
Q15. leads to excessive risk of business failure	**Catholic (57) Non-Catholic (45)**	1999 Principles
Q16. requires much government control to be efficient	**Catholic (59) Non-Catholic (46)** **No HS Econ (51) HS Econ (51)**	1999 Principles 1992 Principles
Q17. allows unfair foreign competition	**Non-Caucasian (56) Caucasian (40)**	1992 Principles
Q18. provides consumers they good and services they want	**Males (85) Female (74)** **Catholic (95) Non- Catholic (85)**	1999 Intermediate 1999 MBA
Q19. maximizes consumer choice for products and services	**Females (84) Males (76)** **Catholic (91) Non- Catholic (81)**	1999 Principles 1999 MBA
Q20. provides employment opportunity for all who desire	**Males (66) Females (52)**	1999 Intermediate

***Numbers indicate mean percent agreement**

**** all means differences reported are significant at 95% or greater**

BOLDED SUB-CATAGORY INDICATES LESS PRO MARKET ATTITUDE

courses, an emphasis on market failure conveys a memorable understanding of the undersupply of public goods.

It is interesting to note that the MBA students' direction of attitudes did not reflect the same stereotypic attitude observed in the undergraduate economics classes. A tentative observation is that MBA students are already highly pro-market and that apparently Catholic MBA students (more pro-market 4 out of 4 questions) have reduced the cognitive dissonance of Catholic doctrine and their attitudes regarding market activities.

The Relationship between attitudes and grades

Finding: "Students receiving higher grades showed more 'pro-market' attitudes"

We are interested in the relationship between students' attitudes and grade achievement. We performed six different tests of means differences on the 1999 Micro Principles and Applied Micro student survey data. Sections of a given level were combined and partitioned into high and low grade groupings, whenever there was a minimum sufficient sample size in both the high and low groups. We had three sets of groupings per level, A and AB versus lower grades; A, AB and B versus lower grades; and A, AB, B and BC versus lower.

Overall, there were strong differences consisting of 18 significant means differences based on level of course. The pattern revealed by the differences was striking; all 18 of the differences reflected students with stronger pro-market attitudes in the higher-grade group. The results displayed in Table 6 are the 'A-BC vs. C and below' grouping. In this grouping, six significant differences in means are seen with all of them showing higher grades associated with more pro-market attitudes. The interesting question is the one we are not in a position to answer: What is the nature of the association between attitudes and grades? Does a better understanding of market forces reflect a level of intelligence that also performs better on economics examinations? Does a more pro-market attitude result in a higher grade because of the biases

Table 6 : Mean Percent Agreement Comparison
1999 MICRO PRINCIPLES BY GRADE RECEIVED

In my opinion, a free market system ...	A-BC	C and below
1. leads to unfair/unequal distribution of income	[illegible]	54.6
2. encourages a maximum of personal freedom and choice	83.1	82.1
3. encourages unethical (cut-throat) business behavior	59.7	63.4
4. leads to quality and technical advances	85.9	84.6
5. leads to insufficient provision of important public services	43.0	53.3
6. provides opportunities and incentives for success	82.1	78.9
7. encourages greed and materialism	[illegible]	78.4
8. allows equal access to economic opportunities	55.5	52.4
9. leads to inflation	52.3	53.4
10. raises the living standard for the average person	71.0	66.2
11. leads to monopolies	[illegible]	67.5
12. leads to efficient allocation of resources	55.1	51.5
13. encourages the abuse of natural resources	61.3	65.0
14. leads to excessive unemployment risks for workers	[illegible]	63.0
15. leads to excessive risk of business failure	54.1	63.0
16. requires much government control to be efficient	[illegible]	58.6
17. allows unfair foreign competition	[illegible]	51.7
18. maximizes consumer choice for products and services	77.6	80.0
19. provides consumers the goods and services they want	81.7	85.4
20. provides employment opportunities for all who desire	71.9	67.2

Grades A-BC (N=45) Grades C and below (N=34)
*significant at .05 ** significant at .01 SHADED CELLS: THIS GRADE GROUP MORE PRO-MARKET

of the economics instructor? Do students' anti-market prejudices impair their ability to learn about market forces? All we can say for the moment is that an association exists between pro-market attitudes and higher grades in economics courses. We are presently expanding our research to include high school social studies teachers and students.

Conclusion

Differences in attitudes

The research reported here evaluated the association between attitudes of subgroups of students (at various levels of economics: Principles, Applied and MBA level) and produced some interesting and significant results. First, when looking at means differences between levels of instruction, attitudes become more pro-market at higher levels of economics courses. Further, within each level of instruction, higher grades were associated with more pro-market attitudes. This model shows greater explanatory power for the principles and applied microeconomics, which can be in part explained by the reduced opportunity for variation in letter grade at the MBA level. In the Micro Principles model, seven attitudinal variables were significant, although two were counter-intuitive in sign. In addition, the Applied Micro class, sex became a significant variable, where being female carried a one-half lower grade point. Given the fact that females as a sub-category hold significantly less pro-market attitudes when looking at means' differences, the interplay of gender, attitudes, and grade achievement is likely to be significant and in need of further research and explanation.

Longitudinal changes in attitudes

When evaluating the statically significant mean differences over time and the demographic sub-categories within a class, there were several noteworthy observations. Perhaps the most surprising and disconcerting was the means differences between the 1992 and the 1999 declared business majors in the principles class. We were anticipating the direction of change in attitudes to be toward more pro-market given the run of economic prosperity, but eight of the nine statistically different means indicated a pervasive drop in pro-market attitudes. We have hypothesized that perhaps the attitudes that are being promulgated

in the K-12 curriculum have become increasingly less positive towards the market, or perhaps the recent events in the media have influenced attitudes (e.g., Microsoft anti-trust litigation). It is also possible that fears of Hayek, North and others that anti-market attitudes increase during periods of relative prosperity are well founded.

Overall

Overall, we find generally pro-market attitudes among business students with students in more advanced business classes having the most pro-market attitudes. We also find several interesting differences in student attitudes between subgroups of students based on demographic characteristics. The significant decline in pro-market attitudes among business students from 1992 to 1999 is by far the most disturbing result. While our tests have not established that the positive association between pro-market attitudes and the level of business education is causal, it does suggest an important relationship and will be explored in future research.

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