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The Belief that Market Transactions are Mutually Beneficial: A Comparison of the Views of Students in Economics and Other Disciplines

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The Belief that Market Transactions are Mutually Beneficial: A Comparison of the Views of Students in Economics and Other Disciplines

(November 2014)

Abstract: Using a survey of a large group of first and final year students of different disciplines to study their belief in the existence of mutual benefits of market transactions, we observe significant differences between economics and business students on the one hand, and, on the other hand, students of other disciplines. These differences increase over time, due partly to economics students increasingly supporting the belief and partly to other students, in particular psychology students, increasingly disagreeing with it. The beliefs of economics students are more homogeneous at the end of their studies. We, therefore, report evidence of both a selection effect and an effect of studying different disciplines that goes beyond initial self-selection.

Keywords: formation of economic beliefs; learning; self-selection; market transactions; economics majors. •

JEL codes: A13, A20, B40, D01, D63.

The notion that market transactions are mutually beneficial lies at the core of mainstream contemporary economics. It is explicitly emphasized in many textbooks and courses at various stages of economics' curricula. To cite a few popular examples, the idea that market transactions must be mutually beneficial explicitly appears in Nordhaus and Samuelson (2009, chapter 5) and Stiglitz and Walsh (2014, chapter 1). The latter write explicitly that "people benefit from voluntary exchange" (Stiglitz and Walsh, 2014, p. 15). The idea appears in Mankiw's (2014, p. 9) ten principles of economics as "trade can make everyone better off". Stiglitz (1997, p. 55) even writes that "economists do not have much patience with [these] objections" to that notion. At higher levels, although the notion remains central to any welfare analysis, it is often taken for granted. Hillman (2009, p. 4), who explicitly emphasizes it in the introduction of his graduate public finance textbook, stands as

an exception. He specifically recalls that if a transaction does not make those involved better off, they can always choose not to engage in it in the first place. Unsurprisingly, the belief that transactions make everyone better off is consensual among economists, as Blaug (1996) remarks. One may even argue that it is a defining feature of the profession.¹

While the majority of economists share the belief, it would be presumptuous to assume that the consensus among economists, if any, is shared by other groups of people. First, as Blaug (1996) recalls, the belief is value laden, because it rests on the value judgment that individuals are the best judges of their own welfare. Second, lay people have been found to be less pro-market than professional economists, for instance by Caplan (2002), which suggests a smaller confidence in market transactions. Similarly, O’Roark (2012) observes that Congressmen with an economics major are more likely to vote in favor of free trade.

If the belief in beneficial transactions is so central to economics, one may wonder whether students of economics share it, and whether other students do too. Indeed, economics students have been found to perform differently in experiments, for example by Marwell and Ames (1981) and Carter and Irons (1991), and to respond differently to surveys, by Frey (1986), Rubinstein (2006), or Allgood et al. (2012). A natural question is to ask where these differences come from. Several studies find evidence of self-selection (Carter and Irons 1991, Yezer et al. 1996, Frank and Schulze 2000, Gandal and Roccas 2005, and Frey and Meier 2003). Frank et al. (1993), Haucap and Just (2010), Cipriani et al. (2009) also report evidence of an additional learning effect.

However, none of the studies that have underlined that the preferences and behaviors of economists are, or become, different, has considered one of the cornerstone principles of the discipline: that market exchange is beneficial, which is the focus of the present paper. Thanks to a large survey of students at Université libre de Bruxelles (ULB), we can compare the prevalence across academic disciplines and years of study of the belief that market transactions benefit participants. We therefore contribute to the literature by not limiting the scope of our investigation to the impact of economics and encompassing the impact of other disciplines. Moreover, we also measure how they may differ between the first week and the final year of study.

To do so, the next section describes the design of the survey. Section 3 looks at differences across disciplines, whilst section 4 focusses on differences observed within disciplines over time. Section 5 concludes.

SURVEY AND ADMINISTRATION

The key question of the survey was designed to capture the agreement of respondents with the idea that market transactions are beneficial. It was framed in such a way that it was equally accessible to all respondents, regardless of their familiarity with the economic jargon. After a series of trials, we asked students to answer the following question on a one-to-seven scale, with one corresponding to total agreement and seven to total disagreement:²

Question 1: “In general, do you think that when two individuals exchange a good or a service for money, it is that it makes them both better off?”³

An important feature of the question is that it abstracts from value judgments. Specifically, survey respondents are asked to report their degree of agreement with the idea that two individuals engaging in a market transaction are both made better off from their own point of view. Haferkamp et al. (2009) have shown that preferences for various policies were driven by both fairness and efficiency considerations. Comparing lay people and economists, they found that economists not only differed in the evaluation of both dimensions, but also that they put more weight on the efficiency criterion than lay people. Our question is framed in a way that abstracts from fairness, to focus specifically on the belief in the efficiency of market transactions.⁴

Finally, respondents were also asked to state their gender, their age, and whether the current year was their first year at the university. Gender deserves special attention, because survey evidence, reported in Walstad (1997), Caplan (2001), and Roos (2007), suggests that men’s answers to questions dealing with economic issues tend to be closer to those of economists than those of women. Austin and Wilcox (2007) moreover find that women believe less than men in the law of supply and demand.

The survey took place during the 2006-2007 academic year at Université libre de Bruxelles (ULB). To avoid students answering what they thought would please their professors, the same standardized speech was systematically made before handing out blank questionnaires. It emphasized the following points: 1. the survey was designed purely for scientific purposes by scientists from ULB and other universities studying decision-making; 2. it was completely anonymous; 3. it was not an exam; and 4. there was no such thing as a “good” answer. Moreover, the colleagues in whose course or exam the survey was administered were asked not to comment it, but simply to introduce a “scientific survey”.

Three waves of the survey were undertaken. The first took place amongst first year undergraduate students, during the first two weeks of the academic year, in early September. The point was to administer the questionnaire to students who had not yet experienced teaching.⁵ The second wave of the survey was administered to the same students as in the previous wave, but, at the end of their first academic year, in May-June. The third wave was administered to students at the end of their final year at the university, again in May-June. Practically, the first wave was administered during lectures, whilst the other two were carried out at the end of exams.

The aim of the three waves was to observe differences in students' average preferences between the beginning and the end of their studies. The first two waves allowed the assessment of the impact of one year of higher education. The third was aimed at assessing the difference between first-year and final-year students.⁶ Due to time constraints, the students who responded to the third wave did not belong to the same cohort as those who responded to the first two, but they were enrolled in the same departments. Moreover, the admission procedure remained unchanged over the period of study. Specifically, students could freely register in the department of their choice at the beginning of their first year, provided they had successfully completed their secondary education. All the students in the study also studied in similar conditions, and attended lectures in large theaters as well as smaller classes. Given the organization of the curriculum, they were all exposed to the core principles of their discipline during their first year at the university.

We could not match the individual questionnaires taken in the first and second waves, because university regulations forbid the identification of questionnaires. As a result, the differences that we observe across waves within departments may be a mix of a pure learning effect and a selection effect due to students with particular beliefs dropping-out or having failed intermediary exams. What matters, however, is that we can compare the beliefs of an average student just enrolled in a given department with the beliefs of an average student who has spent one academic year, respectively four academic years, in that department. The difference measures the overall effect of the academic system on the beliefs of students who end up being labeled, for instance, economists or psychologists. One should note that the same caveat applies to most of the literature on the self-selection versus learning effects of economics or education in general, because they usually do not trace individual students over time, and can therefore not distinguish between pure learning and selection after registration.⁷ The effect that we observe could thus also be referred to as learning, according to the standard practice in the literature.

Finally, we undertook the survey in as many departments as possible.⁸ In the first wave we carried out the survey in six departments - economics, psychology, social sciences, sciences, law, and the business school.⁹ In the second wave, we had to eliminate the sciences department. We will therefore not consider that group of students in our analysis. Finally, we could administer the third wave to psychology, law, and economics students.

Overall, we ended up with more than 2500 exploitable questionnaires. By the standards of the related literature, this is a large sample. For instance, the sample used by Cipriani et al. (2009) amounts to 1500 students.

Table 1 displays the descriptive statistics of the answers to Question 1 in each wave of study and discipline, while descriptive statistics for each variable and each wave are provided in Table A1 in the appendix.¹⁰ Table 1 shows that the number of students in each discipline decreases across waves. This is due to the fact that students who receive low grades in classes during the first year often skip exams, either to repeat their first year or drop out. Mean answers range from 2.615 to 3.602. That suggests that students tend to “rather agree” with the proposition in general. However, there are differences across disciplines and across waves of the survey within disciplines.

**** Insert Table 1 around here ****

DIFFERENCES ACROSS DISCIPLINES

To test the existence of a selection bias, one must compare the differences across disciplines in the first week that students spend at the university. The relevant information can be found in the first column of Table 1. This column shows that economics and business students are those who on average agree the most with the proposition that market transactions make those who take part in them better off. T-tests confirm that the mean answers of economics students are smaller than those of other students, well beyond the ten-percent level of significance, business students being the only exception. Conversely, psychology students and social sciences students are those who least support the proposition. In both instances, t-tests show that the difference is significant.¹¹

As students self-select in a discipline according to their prior beliefs or preferences, they may form homogeneous groups. The standard deviations of answers of students in the first week of students’ first year at the university are described in the first column of Table 1.

This column does not seem to display any specific pattern. The second column of Table 1 shows that, at the end of the first year, the answers of economics students are more dispersed than those of the students of other fields. The difference is moreover always statistically significant. This finding is reminiscent of Klein and Stern (2006), who report that the variance of answers of members of the American Economic Association to questions pertaining to state intervention tend to be larger than those of any other discipline. Conversely, in the last year of the bachelor, economics students appear to be the most homogeneous group, as the third column of Table 1 shows. The difference between economics and law students is significant at the one-percent level, unlike the difference between economics students and psychology students.

As answers to Question 1 are ordinal variables, we used an ordered logit model to study individual answers. The main explanatory variable here is the respondent's discipline. We, therefore, defined a dummy variable for each discipline; economics being the reference category. Control variables were a dummy variable for female students, the respondent's age, and a dummy variable equal to one if the current year was not the respondent's first year at the university. We estimated a separate regression for each wave of the survey, to compare students across disciplines at different points in time. To maximize the number of disciplines, we first ran the regressions for the first two waves of the survey: the beginning and the end of the first year. We then turned to the final year, which obliged us to restrict our sample to economics, law, and psychology.

The results of the first set of estimations are reported in Table 2.¹² In all regressions, Wald Chi squares are significantly different from zero, at least at the five-percent level of significance, which means that the hypothesis that all coefficients are jointly zero can always be rejected. The left panel of the table reports the results of the regression pertaining to the beginning of the first year. We observe that the coefficients of the law, psychology, and social sciences dummies are all positive and statistically significant, at least at the ten-percent level; while the coefficient of the business school dummy is insignificant. In other words, students enrolled in law, psychology, and social sciences tended to answer more negatively than economics students, while business school students did not significantly differ from economics students.

**** Insert Table 2 around here ****

When gender, age, and previous enrolment at the university are controlled for, they are not significant. Strikingly, the law and psychology dummies lose significance. This suggests that the difference between economics on the one hand and law and psychology on the other is likely driven by self-selection according to the characteristics that we control for.¹³ Conversely, the social sciences dummy remains positively significant at the one-percent level. The selection effect of first year students in economics versus social sciences is therefore irreducible to gender, age, or having already studied at the university.

The right panel of Table 2 studies the differences between students of the five disciplines at the end of their first year in higher education. The results are predominantly similar to those obtained for the beginning of the year. Specifically, we observe that business students do not significantly differ from economics students, while social sciences students disagree significantly more than economics students with the statement that transactions can make everyone better off. Two new findings appear. Firstly, law students at the end of the first year are no longer significantly different from economics students. Secondly, psychology students are now significantly different from economics students.¹⁴ The findings suggest changes during the first year; whilst law students end up closer to economics students, psychology students drift away from them.

Table 3 tests the long run effect of studying a topic. The method remains the same. We estimate an ordered logit model for each wave of the survey. The only difference is that we restrict the sample to the three disciplines for which we have data over the three waves of the survey: economics, law and psychology.

**** Insert Table 3 around here ****

The left panel of Table 3 confirms that law and psychology students differ from economics students when they start their studies, insofar as economics students tend to agree more with the statement that market transactions make those involved better off. Like in Table 2, those dummies lose significance when the characteristics of students are controlled for. Column (3.2) of the table provides evidence that these differences are driven by a gender bias across the three sections. The gender dummy is indeed now significantly positive, indicating that female respondents tend to put less confidence in market transactions. The central panel of Table 3 focusses on the end of the first year. It reports positive and statistically significant coefficients for the psychology and female dummies. The coefficient of the law dummy is insignificant. Again, this suggests a convergence between law and

economics students, and a divergence between psychology and economics students, during the first year.

A novel result of Table 3 appears in the right panel, which studies students in their final year. The coefficients of the law and psychology dummies are now always positive, at least at the ten-percent level. Table 3, therefore, confirms that students who specialized in law and psychology tend to differ from economics students at the end of their studies. Conversely, the coefficient of the gender dummy fails to be significant. A possible interpretation is that studying a topic for three to four years or more has an impact on students' opinions that compensates initial gender biases.

To gauge the economic significance of the self-selection in different disciplines, we computed the marginal effect of studying social sciences rather than economics implied by regression (2.2). Social sciences is the only discipline with a significant effect in this regression that focusses on students in their first week, and controls for their individual characteristics. As the estimated model is non-linear, the marginal impact is different for each value of the dependent variable. To be succinct, let us focus on answers 2 and 6, corresponding respectively to a strong agreement and a strong disagreement with the statement that market transactions benefit those involved. The effect is estimated taking a median-aged male student specializing in economics as the reference category. For such a student, the estimated probability to choose answer 2 is 24.4 percent. If this student had selected social sciences instead of economics, his probability to signal his agreement with the statement by choosing that answer would have been 5.14 percentage points lower. For the same student studying economics, the estimated probability to choose answer 6 is 3.5 percent, but it would be 1.87 percentage points larger if he had selected social sciences. The impact of studying a given topic is, therefore, not only statistically, but also quantitatively, significant.

The upshot of this section is that we find evidence that students who have selected different disciplines exhibit different degrees of agreement with the proposition that market transactions benefit those involved. Economics and business students typically tend to agree more with the proposition than psychology, law, and social sciences students.¹⁵ These results are in line with the selection bias already reported in the literature, for instance by Carter and Irons (1991), Yezer et al. (1996), Frank and Schulze (2000), Gandal and Roccas (2005), and Frey and Meier (2003).

DIFFERENCES WITHIN DISCIPLINES ACROSS WAVES OF THE SURVEY

While students self-select into different disciplines, thus being different right from the start, one may wonder whether these differences increase over time, as students are exposed to different topics which may affect their beliefs or prompt them to change discipline. The first two columns of Table 1 reveal no significant difference in mean answers between the beginning and the end of the first year of study. Psychology students, however, contradict the general finding, because they agree less with the proposition that market transactions benefit those who are involved at the end of the first year than at the beginning of the first year, and the difference is significant at the one-percent level of confidence.

The first and last columns of Table 1 allow comparing the mean answers of first-week students with the mean answers of students of the same field in the final year. The comparison is possible for economics, law, and psychology. Final year economics students agree more with the statement of Question 1 than their younger fellows, and the difference is significant at the ten-percent level. On the other hand, final year psychology students agree less with the statement than their first week fellows, and the difference in the two means is significant at the one-percent level. We observe no significant differences between first-week and final-year law students.

Being exposed to a discipline may prompt students' beliefs to become more homogeneous. We therefore compare the variances of answers of students of the same discipline at the beginning of the first year and in the final year. The striking result revealed by Table 1 is that economics stands out as the only discipline whose study resulted in a significant reduction of the variance of students' answers. The variance of answers of economics students at the end of the final year of the bachelor is significantly lower than the variance of their first-week fellows. This result suggests that studying economics reduces the heterogeneity of opinions regarding the impact of market transactions, even though it takes more than a single year to do so.

We run a separate regression for each discipline. The key explanatory variables are dummy variables capturing the waves, the reference category being students at the beginning of their first year.

Table 4 displays the results of the regressions run for the three groups of students for which three waves are available, each panel being devoted to another discipline.¹⁶ The right-panel is devoted to economics students. The results that it displays qualify the results obtained

by comparing average answers. Specifically, both dummy variables capturing years of study are statistically insignificant. In other words, the individual answers of economics students at the beginning of their first year cannot be distinguished from individual answers either at the end of the first year or at the end of the bachelor. The only variable that appears significantly in the regression is the age of the respondent, which exhibits a negative coefficient, significant at the ten-percent level; implying that older students tend to agree more with the proposition that market transactions benefit those involved.

**** Insert Table 4 around here ****

The findings for law students are similar to those for economics students. Their individual answers do not seem to differ across waves, as the coefficients of the wave dummies are statistically insignificant. However, one may remark that the female dummy is now robustly positive and significant at the one-percent level. Female law students are accordingly more reluctant than their male fellows to agree with the statement of Question 1.

Psychology students again contrast with the other two groups. The coefficients of both year dummies are indeed positive and statistically significant at least at the ten-percent level. They are robust to including control variables. Moreover, the magnitude of the coefficient of the end of first year dummy is similar to the magnitude of the coefficient of the final year dummy; implying that the bulk of the effect is obtained after the first year, and persists until the final year. This finding confirms the finding obtained with aggregate answers that the effect is faster among psychology students than among other students. Finally, the female bias observed so far is also present among psychology students.

To illustrate the magnitude of the effect of studying a given discipline, we computed the marginal effect of being at the end of the first year and in the final year instead of the beginning of the first year for psychology students. We again focus on answers 2 and 6, corresponding respectively to a strong agreement and a strong disagreement with the statement that market transactions benefit those involved. The estimated probability to tick answer 2 implied by regression (4.2) for a median-aged male psychology student at the beginning of the first year is 22.7 percent. That probability is 6.08 percentage points lower than at the beginning of the first year if the student is at the end of the first year. The probability is 6.72 percentage points lower than at the beginning of the first year for a similar student in his final year. The probability to strongly agree with the statement is therefore lower the longer students have spent studying psychology. The magnitude of these estimates

is lower than the marginal impact of being female. The probability to tick answer 2 is indeed only 4.91 percentage points lower for female respondents.

By the same token, the estimated probability to strongly disagree and tick answer 6 implied by regression (4.2) for a median-aged male psychology student at the beginning of the year is 2.53 percent. That probability is 1.96 percentage points larger than at the beginning of the first year if the student is at the end of his first year. The probability is 2.23 percentage points larger than at the beginning of the first year for a similar student in his final year. The probability to strongly disagree with the statement is therefore larger the longer students have spent studying psychology. Again, the magnitude of these estimates is larger than that of the marginal impact of being female, which only amounts to a 1.51 percentage point increase in the probability to tick answer 6.

The results of this section point to an effect of higher education on students' perceptions of market transactions that goes beyond the initial self-selection effect. Specifically, we find some evidence that the agreement of economics students with the statement that market transactions make those involved better off is larger for students in the last year than at the beginning of the first year. Moreover, we observe that economics students in the final year give more homogeneous answers than economics students at the beginning of the first year.

However, economics is not the only discipline that seems to affect the beliefs of students about market transactions. We report strong evidence that the agreement of psychology students with the statement that market transactions make those involved better off is lower for students at the end of the first year or in the final year than at the beginning of the first year. Other disciplines therefore also affect beliefs about market transactions.

CONCLUSION

The belief that market transactions are mutually beneficial is central to economics. This paper documents the extent to which students adhere to that belief and how specializing in different disciplines affects it. The first finding is that students specializing in different disciplines already differ with respect to that belief at the very start of their studies. Typically, students of economics and management science agree more than students of psychology, law, or other social sciences with the idea that market transactions make those involved better off. Our survey, therefore, provides confirming evidence of a self-selection bias into those disciplines.

Moreover, the survey provides some evidence of differences within disciplines over time. This effect takes two guises. Firstly, the difference between economics students and other students in general tends to be larger in the final year of study than at the beginning of the first year. A novel finding of the study is that changes are not only observed among economics students. We admittedly find some evidence that final year economics students are more confident in the mutual benefits of market transactions than their first year fellows. However, the strongest and most robust evidence is obtained for psychology students, whose confidence diminishes after one year of study and remains lower until their final year. We also find some evidence that final year law students tend to disagree more than students who have just started the same studies. Therefore, changes are observable in several disciplines and are not confined to economics. The speed of the effect may differ across disciplines. The effect is observable after only one year in psychology, whereas it materializes in economics and law when comparing final year students with students at the beginning of the first year. The finding that the change can be slow may explain the difficulty of previous studies to find evidence of learning. They may simply have considered too short a time frame for learning to appear in students' answers.

Secondly, we observe that the answers of economics students tend to become more homogeneous over time. This effect is only observed in economics; pointing to some specificity of economics teaching. One may easily argue that, since the presumption that market transactions make everyone involved better off is central to economics, the exposure of students to that presumption is massive; whereas other disciplines only incidentally tackle it. It may, therefore, not be surprising that the views of economics students over the belief tend to converge.

The constraints that the study had to meet prevent us from distinguishing between a pure learning effect and a selection after registration effect, due to drop-outs or lack of success in exams. The differences that we observe may therefore be the sum of the two effects. In any case, the fact that we observe significant differences within disciplines across years of study is evidence that something more than self-selection is at work. In other words, what a typical first-year economist or psychologist believes differs from what a typical graduate economist or psychologist believes. Determining the relative roles of learning, success in exams, drop-outs, and broader socialization processes is food for future research.

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TABLE 1: Descriptive Statistics of the Answer to Question 1 by Year of Study and Field of Specialization

		Beginning of the first year	End of the first year	Final year
Economics	Mean	2.82	2.97	2.62
	Median	2.5	2.5	2.5
	Standard deviation	1.56	1.74	1.23
	Number of observations	197	135	143
Law	Mean	3.03	2.95	3.25
	Median	2.5	2.5	3
	Standard deviation	1.51	1.39	1.70
	Number of observations	354	144	51
Psychology	Mean	3.06	3.47	3.60
	Median	3	3	3
	Standard deviation	1.49	1.51	1.40
	Number of observations	231	117	54
Social sciences	Mean	3.25	3.26	
	Median	3	3	
	Standard deviation	1.66	1.53	
	Number of observations	345	105	
Business	Mean	2.93	2.93	
	Median	2.5	2.5	
	Standard deviation	1.57	1.48	
	Number of observations	422	154	

TABLE 2: Differences in Beliefs Between Disciplines. Ordered Logit Estimates, Five Disciplines.

Dependent Variable: Answer to Question 1

	Beginning of the first year		End of the first year	
	(2.1)	(2.2)	(2.3)	(2.4)
Law	0.287* (1.821)	0.156 (0.921)	0.179 (0.755)	0.162 (0.608)
Psychology	0.364** (2.148)	0.215 (1.155)	0.806*** (3.146)	0.845*** (2.917)
Social Sciences	0.5*** (3.022)	0.481*** (2.724)	0.527** (2.049)	0.468* (1.652)
Business	0.117 (0.732)	-0.008 (0.049)	0.107 (0.434)	0.188 (0.696)
Female		0.127 (1.274)		0.119 (0.733)
Age		-0.016 (1.149)		-0.004 (0.251)
Not the first year		-0.141 (1.191)		-0.164 (1.068)
Observations	1549	1445	655	571
Wald Chi ²	13.19**	20.43***	17.43***	18.15**
Pseudo R ²	0.00226	0.00362	0.0066	0.00831

Notes: The reference category in each year is economics. Absolute robust z-statistics in parentheses. *** p<0.01, ** p<0.05, * p<0.1

TABLE 3: Differences in Beliefs Between Disciplines. Ordered Logit Estimates, Three Disciplines.

Dependent variable: Answer to Question 1.

	Beginning of the first year		End of the first year		Final year	
	(3.1)	(3.2)	(3.3)	(3.4)	(3.5)	(3.6)
Law	0.295* (1.789)	0.119 (0.668)	0.173 (0.75)	0.112 (0.421)	0.681** (2.030)	0.672* (1.822)
Psychology	0.379** (2.139)	0.155 (0.777)	0.778*** (3.091)	0.704** (2.423)	1.225*** (4.607)	1.226*** (4.067)
Female		0.348** (2.361)		0.406* (1.956)		0.355 (1.376)
Age		-0.0176 (0.736)		0.009 (0.261)		-0.054 (1.367)
Not the first year		-0.004 (0.026)		-0.047 (0.230)		-1.249 (0.975)
Observations	782	733	396	348	248	231
Wald Chi ²	4.857*	9.093**	12.88***	18.66***	22.21***	24.87***
Pseudo R ²	0.00169	0.00335	0.00806	0.0133	0.0209	0.0278

Notes: The reference category in each year is economics. Absolute robust z-statistics in parentheses. *** p<0.01, ** p<0.05, * p<0.1

TABLE 4: Differences in Beliefs Within Disciplines. Ordered Logit Estimates, Three Disciplines.

Dependent Variable: Answer to Question 1.

	Economics		Law		Psychology	
	(4.1)	(4.2)	(4.3)	(4.4)	(4.5)	(4.6)
End of 1 st year	0.0654 (0.289)	-0.0278 (0.113)	-0.0219 (0.133)	0.0441 (0.253)	0.574 (2.772) ***	0.620 (2.815) ***
Final year	-0.0950 (0.551)	0.00241 (0.00806)	0.232 (0.782)	0.549 (1.368)	0.666 (2.760) ***	0.684 (1.949) *
Female		0.0512 (0.291)		0.540 (3.163) ***		0.504 (2.130) **
Age		-0.0999 (1.693) *		-0.0271 (0.517)		0.00427 (0.198)
Not the first year		0.283 (1.243)		-0.225 (1.033)		0.0451 (0.182)
Observations	475	430	549	507	402	375
Wald Chi ²	0.613	5.236	0.692	14.72	11.74	17.94
Pseudo R ²	0.000316	0.00320	0.000373	0.00759	0.00711	0.0117

Notes: Absolute robust z-statistics in parentheses. *** p<0.01, ** p<0.05, * p<0.1

NOTES

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¹ The working paper version of the present paper refers to the reaction that one of the authors elicited in a casual policy discussion with a friend of his, by simply mentioning that a key issue was whether transactions made those involved better off: “This is an economist’s argument!” (Goossens and Méon 2010).

² The scale featured cells, each one corresponding to an integer value of the answer. Many students, however, precisely ticked the line separating two cells. We considered that the value of their answers corresponded to the mean of the two adjacent integers. Our results are, however, robust to dropping those observations.

³ The questionnaire was drafted in French. The question’s exact wording was “En général, pensez-vous que lorsque deux personnes s’échangent un bien ou un service contre de l’argent, c’est qu’elles y trouvent toutes les deux leur avantage ?”.

⁴ In another question, we followed Kahneman et al. (1986) and Frey and Pommerehne (1993) and asked respondents to choose how to allocate a scarce good, de-icing salt after an unexpected cold-wave, from a menu of mechanisms. We observed that those who disagree more with the statement that market transactions can be beneficial were less likely to choose to increase the price of de-icing salt, which is what the market mechanism implies. They were conversely more likely to choose to allocate de-icing salt by a random procedure or by asking public servants to choose the allocation. Those correlations suggest that our question indeed assesses the belief of respondents in the efficiency of market transactions. The results can be found in Goossens and Méon (2010).

⁵ This is particularly true for economics, which is not taught at all in secondary schools in Belgium.

⁶ At that time, the standard higher education curriculum in Belgium was organized over four years. The first two were called “candidature”, the final two were called “licence”. Final year students can therefore be considered as graduate students.

⁷ Cipriani et al. (2009), Bauman and Rose (2011) are recent exceptions.

⁸ Getting colleagues’ approval to administer the survey during their lectures or exams was also challenging. When first contacted, one of them simply replied that he “despised economists”. Some other colleagues were also difficult to convince, but their reluctance was due to a concern that the survey would take time and disturb their lectures or exams. To sketch a faithful picture, one must also say that some colleagues very congenially agreed. In any case, none expressed discontent with the survey, or economics, while the survey was being administered.

⁹ The social sciences department pools together sociology, anthropology, and political science. The curriculum of the first year is the same for all students in that department. The sciences department pooled together mathematics, physics, chemistry, and computer science. By the end of the first year, students were scattered across those disciplines, which is why we could not administer the second wave of the survey. In the first wave, the beliefs about market transactions of sciences students proved to be similar to those of students of social sciences. Those results can be found in the working paper version of this paper.

¹⁰ Bar charts plotting the distribution of answers and additional tables including t-test matrices for mean answers and variances and marginal effects are reported in Goossens and Méon (2010). The working paper also features a more detailed discussion of the literature.

¹¹ The magnitude of differences in mean answers across disciplines in the first year is larger than the difference in mean answers across genders. Specifically, the mean answer of male students is 2.99 while it is 3.10 for female students. A t-test shows that the difference across genders is significant at the one-percent level.

¹² As we estimate logit models, only the signs but not the magnitudes of the coefficients can be directly interpreted. Systematically reporting marginal effects would be impractical, because the dependent variable has seven modalities, implying that one would have to report seven coefficients for each independent variable. We therefore report marginal effects for specific regressions in Goossens and Méon (2010), and discuss them at the end of this section.

¹³ Gender is the most likely culprit. To wit, 80.3 percent of first year psychology students and 63.5 percent of first year law students but only 38.6 percent of economics students are female. The proportion of female students in each section remains stable across waves of the survey.

¹⁴ This is reminiscent of the finding of Scott and Rothman (1975) that psychology students tended to be more liberal than economics students after one term of studying their topic.

¹⁵ Strikingly, this ranking of students is similar to the ranking of academics reported by Berggren et al. (2009).

¹⁶ We also ran regressions for the five groups for which only two waves are available, but the results for economics, law and psychology students are qualitatively the same. We could observe no significant effect for social sciences and business students at the end of the first year. We do not report those regressions to save on space, but they are available upon request.