FACULTAD DE CIENCIAS ECONÓMICAS Y DE ADMINISTRACIÓN

IECON INSTITUTO DE ECONOMÍA

UNIVERSIDAD DE LA REPÚBLICA URUGUAY

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INSTITUTO DE ECONOMÍA
Serie Documentos de Trabajo

Febrero, 2022
DT 01/2022

ISSN: 1510-9305 (en papel)
ISSN: 1688-5090 (en línea)

Las autoras agradecen a la Comisión Sectorial de Investigación Científica (CSIC), que financió la encuesta a economistas (SUE) utilizada en este estudio y apoyó la realización de esta investigación. Agradecen también a Jorge Xavier (Universidad de la República), Alejandro Cid (Universidad de Montevideo), Néstor Gandelman (Universidad ORT) y Emiliano Tealde (Universidad Católica del Uruguay) cuyo apoyo también hizo posible la realización de la encuesta a economistas.

Forma de citación sugerida para este documento: Amarante, V., Bucheli, M. y Pérez, T. (2022) "Gender differences in opinions about market solutions and government interventions: the case of Uruguayan economists". Serie Documentos de Trabajo, DT 01/2022. Instituto de Economía, Facultad de Ciencias Económicas y Administración, Universidad de la República, Uruguay.

Gender differences in opinions about market solutions and government interventions: the case of Uruguayan economists

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Resumen

Este documento explora las diferencias de puntos de vista entre hombres y mujeres economistas graduados en Uruguay, en relación a sus opiniones sobre las soluciones de mercado y las intervenciones del gobierno. Al igual que en la evidencia internacional, el apoyo a proposiciones más orientadas hacia el mercado es menor entre las mujeres, pero las magnitudes de las brechas son pequeñas. Examinamos el rol de la edad, el entorno familiar, la exposición a las discusiones económicas (aproximadas por la educación de posgrado, lectura de blogs o prensa y entorno académico) y rasgos de personalidad (aversión al riesgo, optimismo y preferencias por competencia) para explicar las brechas de género. Nuestros resultados indican que hay una relación positiva entre las diferencias en las preferencias por competencia y las opiniones pro-mercado. Sin embargo, las diferencias de género se mantienen después de controlar por las variables explicativas, aunque sus magnitudes son muy pequeñas. De todas maneras, los resultados indican que un balance de género, i.e. la inclusión de mujeres en los debates públicos y en la toma de decisiones, mejoraría la diversidad de perspectivas en economía.

Palabras clave: brechas de género, opiniones sobre economía, economistas

Código JEL: A11; H00; Z00

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Abstract

This paper explores the differences in views between male and female Uruguayan economists regarding their opinions about market solutions and government interventions. In line with international evidence, the support to statements more market-oriented is lower among women than men, but the magnitudes of the gaps are small. We examine the role of age, family background, exposure to economic discussions (proxied by postgraduate education, reading of blogs and press and academic environment), and personality traits (risk aversion, optimism, and preferences for competition) to explain the gender gaps. Our results indicate that there is a positive relationship between gender differences in competitiveness and pro-market opinions. However, the gender difference remains significant after controlling for explanatory variables, though the magnitudes are mild. In any case, the findings indicate that achieving gender balance through the inclusion of women in public debates and decision-making positions would improve the diversity of perspectives in economics.

Keywords: gender gap, economic opinions, economists

JEL Classification: A11; H00; Z00

1. Introduction

Evidence about public opinion in the USA suggests that women are more likely to support government interventions in the economy and question the net advantages of free markets and free trade (Kamas and Preston, 2019; Mansfield, Mutz, and Silver, 2015). Studies for Latin America indicate higher preferences among men for trade liberalization (Melgar, Rossi, and Rovegno, 2005; Melgar, Milgram, and Rossi, 2009) and lower support among women for economic integration and international trade (Rodríguez, Stein, Vlaicu, and Gonzalez, 2019; Barral Verna, Basco, and Garnero, 2020). In line with these results, Drope and Chowdhury (2014) find evidence for lower support among Latin American women for free trade, especially among better-educated ones.

A strand of the literature focuses on economists' opinions. Unlike public opinion, this group is more homogeneous and has specialization in economics so that we may expect less dissensus. Most of the evidence relies on economists in developed countries and, like public opinion studies, also captures a gender difference in pro-market support (May, McGarvey, and Whaples, 2014; McGarvey and Kucera, 2018; Stastny, 2010; De Benedictis and Di Maio, 2011). According to Caminal and Rodriguez (2003), Spain is an exception to this pattern. In Latin America, up to our knowledge, the only evidence about economists' opinions refers to Mexico, where according to Urzúa (2007), disagreements are not gender-related except that women are more skeptical than men of the advantages of free trade.

An interesting aspect of studying gender differences in economists' opinions in Latin America is that female participation in Economics is higher than in developed countries (Lora and Ñopo, 2009). In the Uruguayan case, women share increased from 15% at the beginning of the 60s to 48% in the last five years. We may wonder whether there is a gender gap in opinions in a society where the gender selection bias in the career option has weakened and vanished recently. Our study aims to contribute to the knowledge about economists' gender differences in views by providing evidence for Uruguay. Specifically, we analyze twelve statements related to the free market and government interventions using a survey carried out in 2021. We measure gender gaps and examine the role of age, family background, exposure to economic discussions (proxied by postgraduate education, reading of blogs and press and academic environment), and personality traits (risk aversion, optimism, and preferences for competition) to explain them.

2. Literature review

Based on an opinion survey of economists in the USA, May, McGarvey, and Whaples (2014) conclude that women and men support similar central precepts and methodological approaches. Still, there are systematic gender differences in some core issues. Men are more likely than women to interpret that inequality comes mainly from human capital and preferences and support the free market. When faced with policy issues, men are more confident in the market solutions and assign a higher cost to public interventions than women. In turn, women are more supportive of government interventions such as labor regulations or equal opportunity policies. May, McGarvey, and Kucera (2018) come to similar conclusions in a study of economists for 18 European countries based on a similar survey. Stastny (2010) finds that women economists tend to be more interventionists than men economists in the Czech Republic. In the Italian case, De Benedictis and Di Maio (2011) find that women are more likely to favor an active role of the State. In contrast, men are more prone to support liberalization and the reduction of union-labor power.

There is also contradictory evidence. Caminal and Rodriguez (2003) do not find gender differences in opinions in a survey carried out to Spanish economists. In Latin America, where evidence is scarce, a study for Mexico arises to similar findings. Urzúa (2007) concludes that dissensions among economists are not gender-related except that women are more skeptical than men of the advantages of free trade. In turn, Andere and Canche (2019) analyze Mexican consensus among economists, but they do not assess gender differences.

Some studies explore the potential sources of gender differences in support of free markets and government interventions. We present a review of the ones close to our research.

2.1 Exposure to Economics views

In a study of gender differences in public opinion about attitudes toward free trade, Mansfield, Mutz, and Silver (2015) present a brief review of the literature that emphasizes the role of exposure to Economic courses. As the economic principles presented in the standard Economic texts argue that free trade is beneficial, gender gaps in trade preferences may result from men being more likely than women to take Economic classes. As long as education on Economics provides views to assert the free market gains, we may adapt this argument to explain gender differences in attitudes toward the support to market solutions to the detriment of government interventions.

However, these hypotheses deserve more discussion in our study. First, when focusing on economists, as in our paper, the exposure to undergraduate Economics courses is homogenous, so that we may expect less dissensus. On the other hand, economists may differ in several dimensions, such as postgraduate education and exposure to Economics views in the media. Supporting this hypothesis, Caplan (2002) finds that economists share distinctive beliefs attributable to education and economic training.

This hypothesis and evidence raise the question about the role of exposure to the discipline in gender differences in opinions.

Another relevant issue is that the exposure relevance relies on the hypothesis that education and economic training shape opinions. But we cannot discard a bias in selecting disciplines that results in the recruitment of the most affiliated to the mainstream. If people perceive education in Economics as pro-free markets, then pro-government regulations will mistrust the formal curricula. Moreover, self-selection serves to explain the female underrepresentation in Economics in the USA and Europe. Indeed, women may be reluctant to the discipline due to the emphasis on finance and mathematics (Bansak and Starr, 2010) and the androcentric perspective of the standard theoretical models (England, 1993).

2.2 Personal traits: competitiveness, risk aversion, and optimism

Another quoted source of higher female support for government interventions is the existence of gender differences in psychological attributes and preferences. One of them is competitiveness, defined as a general tendency to select competitive environments. Most of the experimental economic studies on this issue indicate that men are, on average, more competitively inclined than women (Croson and Gneezy, 2009; Gneezy and Rustichini, 2004; Niederle & Vesterlund, 2007). The literature provides several reasons behind this pattern. We present a summary of the ones most relevant to this study.

The literature usually confronts the role of nature or nurture in explaining a pure effect of preferences on shaping competitiveness (Niederle and Verstelund, 2007; Mansfield, Mutz and Silver 2015; Bertrand, 2011). Thus, on the one hand, gender differences in competitiveness may come from a female preference for cooperation due to reproductive reasons, as proposed by evolutionary psychology's perspective. On the other hand, nurture explanations rely on raising practices based on social norms that tolerate more competitive behavior for the boys. Thus, women display stronger dislikes for competitive situations (or more risk aversion) because the prevailing gender identity norms indicate it.

Besides, we may argue that avoiding competence responds to social penalties. As long as social norms are consistent with a competitive masculine but not feminine stereotype, women may suffer higher costs and fewer rewards when they favor competitive over non-competitive environments. Consequently, the punishment for violating sex-stereotyped social norms promotes competitiveness among men but not women. Giving support to this hypothesis, Bowles, Babcock, and Lai (2007) provide experimental evidence that the cost of initiating a negotiation, a crucial trait in competition, is higher for women than men. Besides, based on an economic experiment, Babcock, Recalde, Versterlund, and Weingart (2017) argue that social expectations make women more likely to engage in tasks with low potential for promotion in work. Thus, women have reasons to promote institutional arrangements

that do not require individual negotiation and competitiveness to obtain promotions, wages increases, and other benefits.

Additionally, we can track at least three competitiveness-related traits in the economic literature used to explain dissensus about free markets: overconfidence, risk aversion, and optimism.

The link between overconfidence and competitiveness is easy to understand relatively straightforward. The higher overconfidence is, the higher the expected benefits of competition are. Thus, overconfident persons would support free markets under the expectation of high success. The evidence about gender differences in over is mixed. In a revision of the literature, Buser et al. (2020) conclude that findings support that men are, on average, more confident than women this conclusion. However, evidence is mainly related to financial decisions and is more significant when referring to tasks perceived as "masculine" domains. On the contrary, a review of Sent and van Staveren (2019) is less conclusive and points out that its magnitude is small when finding a gender difference.

We also easily accept that risk-takers are more prone to enter into a competition. Besides, overconfidence shapes the likelihood of taking risks. So we expect a positive correlation between the three traits. Thus, if gender differences in risk aversion prevail, we may expect to find gender differences in competitiveness and, ultimately, in opinions about free markets. Based on a survey of ten experimental studies, Croson and Gneezy (2009) conclude that women are more risk-averse than men though the result is weak. On the same line, Charness and Gneezy (2012) assemble a set of fifteen experiments and find that women are more financially risk-averse than men. Byrnes, Miller, and Schafer (1999) arrive at similar conclusions in a meta-analysis of studies using self-reported and observed behaviors. Buser et al. (2020) report that evidence based on self-reports assessed in surveys mainly supports that men take more risks than women. However, Eckel and Grossman (2008) review the results from experimental measures of risk aversion and conclude that although the findings from field studies suggest that women are more risk-averse than men, the results of laboratory experiments are less conclusive. Similarly, Sent and van Staveren (2019) compile studies that cast doubts on the robustness of risk-aversion gender gaps.

Finally, the relationship sign of optimism and competitiveness, and optimism and support to free markets, are ambiguous. Optimist people may not need government intervention because related problems are not severe. On the other hand, an optimistic person may over evaluate the success of a policy. The dominating effect may be captured by evidence. In a study for Italian economists, De Benedictis and Di Maio (2011) find that optimism positively correlates with the preference for the market as an allocative mechanism. However, its effect on opinions weakens when controlling for other variables.

3. Data and methods

3.1 Data

Our research uses data from an online survey applied to Uruguayan economists (from now on, SUE). To gather this information, we contacted graduates in Economics from Uruguayan universities since 1980.

Some contextual information is important at this point. The Economics degree was born as a specialization within the academic curricula of the Public Accounting degree at the Uruguayan public university in 1954. The public university remained the only place to study Economics until 1995 when private universities incorporated the career into their degrees and gradually became relevant actors in the production of economists in Uruguay. Nowadays, three private universities account for around 25% of graduates in Economics (average in the last five years).

To contact as many economists as possible, we followed two strategies. In the case of the public university, we had access to the roster of graduates, which provided the email addresses for the youngest cohorts at the time of their graduation. We made every possible effort to update and complete email addresses for older cohorts. In the case of private universities, we did not have access to the data to contact their graduates. Still, their Economics departments agreed to help us with our research, and they directly got in touch with their graduates by email.

All economists received the same information. The first communication asked to collaborate with our research by filling in an online survey. The email explained that we were carrying out a research project aiming to know some characteristics of economists' labor markets and their opinion about a wide range of economic and policy issues. We also clarified that the answers were anonymous, and once the questionnaire was closed, we would lose the identification of the respondent.

In the second communication, we asked to fill the online survey, which remained open from 1rst February 2021 to 30th April 2021. Five weeks after the second communication, we sent a reminder email to graduates from the public university. Meanwhile, two of the three private universities sent a reminder around six weeks after the second communication.

The number of graduates in Economics between 1980 and 2021 is 3307. The number of sent emails is lower, 3199, due to deaths or impossibility of contact. The number of persons who filled the questionnaire is 900, so the response rate is 28%. We assess that this level is successful when comparing international evidence and considering that, unlike our case, previous studies draw samples from economists that show some degree of commitment to the discipline. For example, using samples of economics association members, Fuller and Geider Stevenson (2003) for USA and Benedictis and Di Maio (2011) for Italy had response rates of 30.8% and 33%, respectively. Andre and Canche (2019) surveyed professors of Mexican economics departments, and 20.1% filled the questionnaire.

Table 1 reports the available characteristics of alive graduates and our database. The sample appears not to be biased in gender and cohort, so we may conclude that there is no age bias. But graduates of private universities and underrepresented in the sample. There are two other potential biases that we cannot check. We guess economists unrelated to the discipline and or migrated are less likely to fill the questionnaire. Thus, we must restrict our conclusions to economists living in Uruguay who have some identity with their profession.

Table 1. Rate of response of the survey to Uruguayan economists. In percentages.

Group	Proportion in graduates	Proportion in sample	Response rate
Total	100.0	100.0	27.3
Public sector	77.2	83.7	29.6
Private sector	22.8	16.3	19.5
Graduates 1980-1999	13.6	12.8	25.7
Graduates 2000-2020	86.4	87.0	27.5
Women	47.5	48.3	27.8
Men	52.5	51.3	26.7
Other gender	n.d	0.3	n.d

Source: Authors' calculations based on SUE

3.2 The questionnaire

The questionnaire inquires opinions about an array of topics. This study focuses on twelve of them supporting the free market presented in Table 2. We may distinguish free-market economists from other thought schools through three types of views. First, core precepts are different. In this study, we choose two statements referring to market efficiency. Second, eight propositions inquire about support to market solutions and government interventions. Finally, two statements oppose the preference for incentives and personal choice restrictions.

Respondents inform their degree of agreement using a five-point Likert-type scale, and there is the possibility of marking "I don't know". In some of them (1 to 4, 11, and 12 in Table 2), the questionnaire offers a statement, and the answer ranges from "I totally agree (1)" to "I totally disagree (5)". In other ones (6 to 10), the questionnaire asks about the support to policies, and the answers range from "I firmly oppose (1)" to "I firmly support (5)". In this study, we order all opinions so that a higher number

indicates that the individual highly relates free markets and efficiency, is more confident in market solutions, or is more favorable to incentives over regulations. In Table 2, we specify the cases in which we reverse the order of the original answer. We estimated Conbrach's alpha to have an insight into the inner consistency of these twelve statements at the individual level. We obtained a value of 0.78. There is no consensus about the recommended cutoff, but a magnitude over 0.7 is usually used in the literature to conclude that items are correlated (Lance et al., 2006).

Table 2. Opinions related to the support of the free market and government interventions.

Variable name	Phrasing of opinion	Reverse order
Market efficiency		
1. Free market efficiency	Market solutions are the most efficient way to allocate resources in most circumstances	
2. Consumer protection efficiency	Consumer protection laws generally reduce economic efficiency	
Market solution0073		
3. Public production	The best way to promote economic growth is that the government not to carry out productive activities	
4. Temporary protection	It is desirable to implement temporary selective policies to protect the nascent industry from import competition	X
5. Greenhouse gas emissions	The government should be more active in controlling greenhouse gas emissions	X
6. Unions	*(Support to)* Significantly limit the power of unions	
7. Dismissal costs	*(Support to)* Make layoffs more flexible	
8. Exchange rates	*(Support to)* Impose restrictions on the purchase and sale of foreign currency in the case of a balance of payment crisis	X
9. Capital movements	*(Support to)* Establish restrictions on international capital movements	X
10. P2P	*(Support to)*Promote the use of peer to peer loan platforms -also known as fintech or 'financial uber'-	
Personal choices		
11. Contaminant emissions	Taxing on polluting emissions is better than imposing maximum permissible levels to reduce pollution	
12. Retirement	Modify the replacement rates is better than increasing the minimum retirement age to postpone the retirement age	

We show some basic statistics about our data in Table 3. In the first seven opinions, the proportion of answers 1 and 2 is higher than the sum of 4 and 5, suggesting that economists tend not to support free-market views. On the other hand, there is a preference for market solutions in peer-to-peer lending platforms and international openness-related variables (exchange rate and capital movements). Finally, views on personal choices present the highest level of dissensus.

Table 3. Distribution of opinions

Variable	Cases	Percentage of responses					
		No opinion	1	2	3	4	5
Market efficiency							
1. Free market efficiency	898	0.4	12.1	31.5	18.5	30.3	7.1
2. Consumer protection efficiency	872	1.3	11.7	55.6	18.1	12.2	1.1
Market solutions							
3. Public production	872	0.8	24.7	45.9	16.5	9.3	2.9
4. Temporary protection	872	2.1	5.8	46.8	27.1	13.6	4.6
5. Greenhouse gas emissions	834	4.0	22.4	57.8	11.9	2.6	1.3
6. Unions	828	0.8	34.2	22.9	18.7	15.7	7.6
7. Dismissal costs	828	0.8	30.1	24.9	20.9	18.4	5.0
8. Exchange rates	828	5.3	1.0	11.2	17.0	25.1	40.3
9. Capital movements	828	3.6	3.3	18.7	16.9	27.2	30.3
10. P2P	828	21.1	3.4	7.7	20.2	30.7	16.9
Personal choices							
11. Contaminant emissions	851	7.8	5.4	24.3	22.8	30.1	9.6
12. Retirement	835	13.5	3.8	24.9	30.3	24.6	2.9

Note: 1 indicates strong disagreement or opposition; 5 indicates strong agreement or support.

Source: Authors' calculations based on SUE

For some specific items, a significant percentage of respondents do not inform their position, either by not responding or selecting the answer indicating they had no opinion. According to Table 3, the incidence of not expressing views is high when proposing promoting peer-to-peer lending platforms (21.1% of economists). We interpret that this result reflects the lack of knowledge of the technology.

We add these two choices to estimate gender differences, considering that both cases mean that the individual refrains from expressing an opinion. A probit estimation shows that, on average, the likelihood of not choosing a position about a statement is 2.9 percentage points higher for women than men (see Table A1 in Annex). This result holds for six opinions, but we assess that the gap' magnitude is relevant only in opinion 10 (14.4 percentage points), raising the question of whether it responds to gender differences in the knowledge of finances or technology.

We also perform a probit estimation to explore potential gender differences in selecting the extreme choices (1 and 5). We find that, on average, the likelihood of extreme response is 2.4 percentage points higher for men than women (Table A1 of the Annex). We capture a similar gendered pattern in six opinions.

3.3 Method

Our goal is to analyze the gender difference in opinions and factors that may explain them. We follow a strategy consisting in estimating a model for each statement, in which the coefficient of a dummy gender variable measures the gap of interest. The inclusion of explanatory variables allows us to analyze whether different factors change the gender coefficient. Thus, for each opinion, we perform sequential estimations, beginning by one that only includes the gender dummy and ending with the following complete model:

$$Y_i = \beta_0 + \beta_1 Female_i + \beta_2 Age_i + \beta_3 Back_i \sum_{i=1}^{4} \delta_i Expos_i + \sum_{i=1}^{3} \gamma_i Pers_i + \varepsilon_i \qquad (1)$$

The subscript i denotes the economist and Y the opinion. The estimated parameter of β1 is the gender gap. When we only include the variable Female, the estimated β1 indicates the size of the raw gap.

The basic model contains age (Age) and family background (Back). We include age in logarithms combining the influence of both cohort and life-cycle effects. The variable Back seeks to proxy the family economic background in childhood. Specifically, we build a set of three dummy variables that distinguish if the father completed tertiary educational level or secondary level, or finally, has lower education.

To analyze whether the gender gap is due to the exposure to Economic views (vector Expos) we consider four variables. We proxy formal training by two binary variables: one takes value 1 if the individual has a Master's degree and zero if not; the other takes

value 1 when they have Ph.D. level and zero if not. Besides, we measure informal exposure to economic discussions through two dummy variables. One of them refers to the habit of reading specialized press or blogs. The questionnaire asks about this activity frequency in two answers that distinguish if it is an international or national media. The available answers are three: regularly, occasionally, or never. Our variable is a dummy that takes value 1 if the economist regularly reads international or national specialized press or blog. Finally, the fourth measure of exposure is a dummy variable that indicates whether the individual has or had labor links with the academic sector in the past.

The vector Pers contains three variables whose aim is to reflect non-cognitive aspects or personality traits. Specifically, we tried to capture risk-taking, optimism, and competitiveness (disposition to select competitive environments) through self-perception questions included in the survey.

Regards to risk, the survey proposes two questions: "Do you consider yourself someone who generally takes risks in the arena of labor decisions/sports? For each one, respondents have to declare their extent of agreement on a five-point Likert-type scale, with anchors ranging from: "It does not represent me at all" (1) to "It totally represents me" (5). Based on this information, we build a proxy of risk-taking as the average value of the two answers.

The survey uses the same options to express the degree of agreement to four other statements. Two of them belong to the six items of the Life-Orientation Test Revised (LOT-R, Scheier et al., 1994) broadly used to measure individual optimism. The statements are: "In uncertain times, I usually expect the best", which is positively valence and increases with optimism, and "I hardly ever expect things to go my way", negatively valence, representing pessimism. We reverse the order of the last one and build a variable equal to the average of the two answers; this variable increases with optimism.

Finally, we use two questions to capture preferences for competition: "I like to measure myself in competitive situations" and "I seldom feel motivated to compete against another person". We reverse the last one, and we proxy competitiveness as the average value of the scores.

A literature review indicates that authors make different options regarding the estimation model when the dependent variable is Likert-type. We opt to report the results of an OLS estimation, which is more intuitive to interpret the estimated parameters, as in the studies by May, McGarvey, and Whaples (2014) and May, McGarvey and Kucera (2018). We are aware of the critics of resorting to OLS when it is impossible to know whether the answers in the scale respond or do not to equally spaced perceptions of agreement. Thus, we also report the results obtained with ordered probit estimations as a robustness check.

We have already argued that self-selection in the sample may arise from migrants and graduates who do not self-identify as economists. Consequently, we hold that our sample provides a good illustration of economists' ideas. However, we do a robustness

check consisting of re-estimating the model after reweighting the data. The weights aim to maintain the universe proportions of age groups, gender, and university (public or private).

4. Results

4.1 Gender differences

In Table 4, we report the coefficients of the female variable of our estimates (see R2 in Table A2 of the Annex). A negative value indicates that women are less prone to support the statement labeled in the "Statements" Column.

In Column (1), we show each statement's raw average gender gap. In four cases, we do not find a statistically significant gender difference. One corresponds to a core precept about market efficiency ("Consumer protection laws generally reduce economic efficiency") and another one relates to market solutions and government intervention ("The best way to promote economic growth is for the government not to carry out productive activities"). The other two refer to statements about restrictions to personal choice.

Thus, there is a statistically significant average gender gap in eight of the twelve cases. Their magnitudes vary from 0.15 to 0.54. Based on them, we may classify the opinions into three groups. One of them elicits the highest gender gap: the core precept holding that "Market solutions are the most efficient way to allocate resources in most circumstances." It suggests that women are reluctant to assume competitive markets and according to the rule of thumb of Cohen's d, the size of the difference goes from small to medium (d=0.45). A second group relates to three opinions about market regulations: controlling greenhouse gas emissions, promoting peer-to-peer loan platforms, and making flexible layoffs. Their gender differences vary from 0.24 to 0.27, and the Cohen's d test (0.20 to 0.26) suggests that these gender differences are small. In the third group, gender differences are mild, and Cohens'd vary from 0.13 to 0.16. They refer to the support to limit union power and the constraints' rejection in three international-related markets: temporary rules protecting new industries and restrictions in foreign currency markets and international capital movements.

Table 4. Unconditional and conditional gender gap in opinions. OLS estimations

Statements	(1)	(2)	(3)	(4)	(5)
		Market efficiency			
Free market efficiency N=891	-0.536***	-0.522***	-0.533***	-0.457*** ††	-0.477***
Consumer protection efficiency N=858	0.075	0.067	0.064	0.082	0.080
		Market solutions			
Public production N=862	-0.107	-0.103	-0.097	-0.055††	-0.059
Temporary protection N=851	-0.152**	-0.151**	-0.139**	-0.116* †	-0.115*
Greenhouse gas emissions N=798	-0.237***	-0.235***	-0.224***	-0.210***	-0.200***
Unions N=818	-0.170*	-0.163*	-0.165*	-0.110†	-0.120
Dismissal costs N=818	-0.246***	-0.234***	-0.235***	-0.172** ††	-0.183**
Exchange rates N=781	-0.158**	-0.149**	-0.134*	-0.123	-0.116
Capital movements N=795	-0.150*	-0.145*	-0.117	-0.084††	-0.064
P2P N=652	-0.273***	-0.278***	-0.280***	-0.233*** ††	-0.241***
		Incentives vs. constraints			
Contaminant emissions N=782	0.083	0.077	0.067	0.088	0.074
Retirement N=720	0.056	0.052	0.029	0.029	0.007
Controls					
Age	No	Yes	Yes	Yes	Yes
Father' education	No	Yes	Yes	Yes	Yes
Exposure to Economic views	No	No	Yes	No	Yes
Personal traits	No	No	No	Yes	Yes

*** p<0.01, ** p<0.05, * p<0.1 testing the coefficient is equal to zero.

†† p<0.05, † p<0.1 testing the coefficient in (1),(3),(4) or (5) is equal to coefficient in (2).

Source: Authors' calculations based on SUE

Comparing these magnitudes with the international literature is challenging because the statements are not the same. However, we interpret that the gender gap is a bit lower than the one obtained by May et al. (2014) for the US. In their study, the authors standardize the dependent variable. So, they report the average difference in female economists' responses relative to males in standard deviation units. When replicating this conversion for the average of the "Market solutions" block, we find a mean scaled response of -0.18, whereas May et al. (2014) report a value of -0.24 for the US. Both measures are notably lower than those yielded by May et al. (2018) for the European Union (-1.90 on average).

In Columns (2) to (5) of Table 4, we show the average gender difference when adding controls. In the estimation corresponding to Column (2), we introduce the age and father's education as covariates. We call this estimation the basic model. This controlled gender gap does not significantly change compared with the raw difference reported in Column (1).

In Column (3), we add the variables that capture the exposure to Economic views. The signs of the female dummy variable do not change, and the magnitudes are not significantly different from the basic model. The only exception is supporting international capital movements restrictions that lose statistical significance. Consequently, we do not find that exposure to Economic views shapes gender differences in opinions.

In Column (4), we introduce an index of competitiveness, optimism, and risk aversion to the basic model. We pass from eight significant negative signs of the female variable in the basic model to four. In these four cases, the magnitude of the gap declines. So, women's more oriented intervention position weakens or vanishes when we control by personality traits.

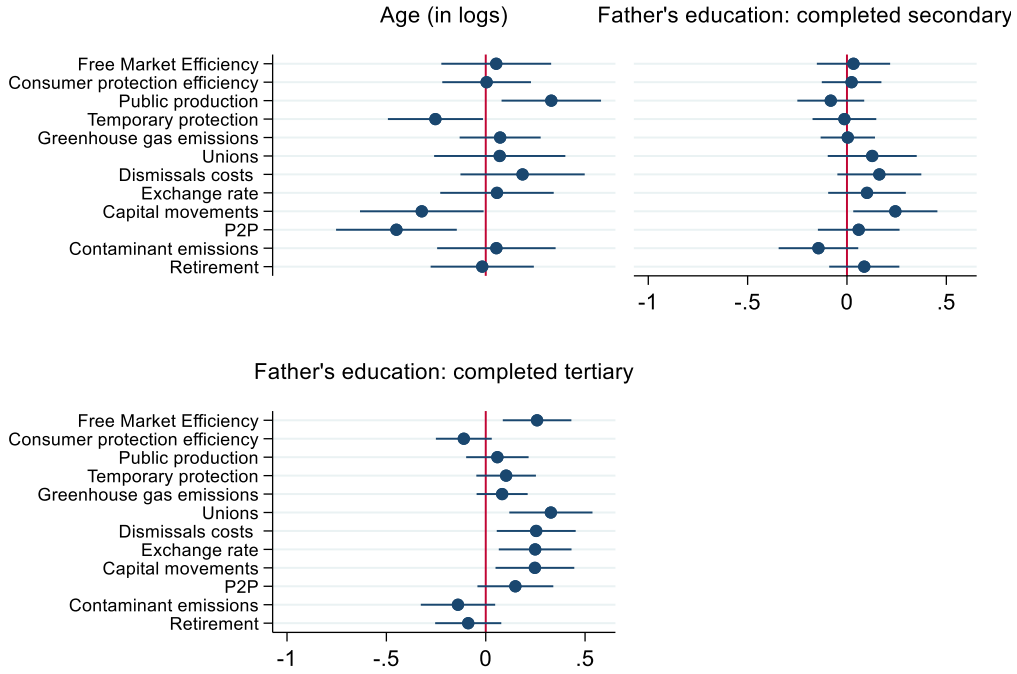
We finally report the full model in Column (5) that does not change the above comments.

4.2 Age and family backgrounds

Age and father's education are not relevant sources explaining gender differences in opinions. Indeed, the introduction of these controls does not significantly affect the gender coefficients of the basic model estimations. We focus on this result by analyzing the gender differences in characteristics and the estimated coefficients of the variables under the full model.

Figure 1 reports the estimated age and father's education coefficients under the full model. The variables do not always affect the outcomes. The most visible pattern is that economists whose father has completed tertiary educational level are more prone to support pro-market views.

Figure 1. Estimated coefficients of age and father's education and 95% confidence intervals. Full model.



Source: Authors' calculations based on SUE

But none of the controls introduced in the basic model differ between women and men. Consequently, the gender gap is similar when considering the raw information and the basic model. Indeed, the average age of women (36.4) and men (37.5) is not statistically different, and the same happens with the variable that reflects father's education.

4.3 Exposure to Economics views

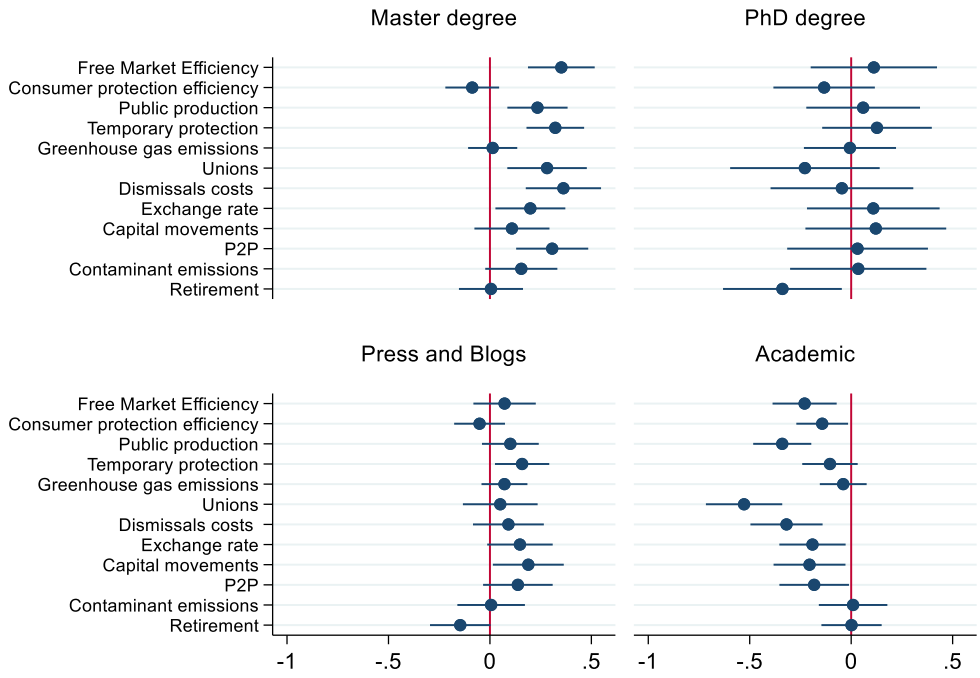
The introduction of exposure to Economics controls in the basic model does not significantly affect the gender gap, as already shown. We focus on this result by analyzing the coefficients of the four exposure-related variables in the full model (Figure 2) and the gender difference in these variables (Table 5).

In most opinions, having a Master's degree is related to higher support of free markets. This association has no relevant impact on the gender coefficients because the proportion of graduates from Master's programs is higher for women (43%) than men (39%), but this difference is not statistically significant. Having a Ph.D. degree is much less frequent than having a Master's among all economists (6.5% of women and 6.7% of men), and once again, there is no gender gap in this achievement. In any case, different

opinions related to government intervention do not correlate with being a Ph.D. graduate.

Reading specialized press and blogs is correlated with a positive sign in most opinions, but the confidence interval is too wide to exclude null correlation. So we cannot attribute an effect in the gender gap of this variable, although the proportion of economists reading Economics media is higher among men than women (66.2% and 50.5%). As already mentioned, we built this variable based on a questionnaire that inquired whether the surveyed person accessed Uruguayan or foreign media separately. As shown in Table 5, the gender difference holds for both international and national press and blogs.

Figure 2. Estimated coefficients exposure-related variables and 95% confidence intervals. Full model.



Source: Authors' calculations based on SUE

Table 5. Incidence of exposure to Economic views. In percentages

Variable	Male	Female	Female-Male	Cohen's d
Master degree	39.5	43.1	3.6	0.07
Ph.D. degree	6.7	6.5	-0.3	0.01
Reading specialized press/ blogs	66.2	50.5	-15.7***	0.32
National media	58.6	45.4	-13.2***	0.27
Foreign media	43.6	24.9	-18.7***	0.40
Present or past academic work	49.0	46.3	2.7	0.05

*** p<0.01, ** p<0.05, * p<0.1

Cohen's d: absolute value of the effect size of the gender difference

Source: Authors' calculations based on SUE

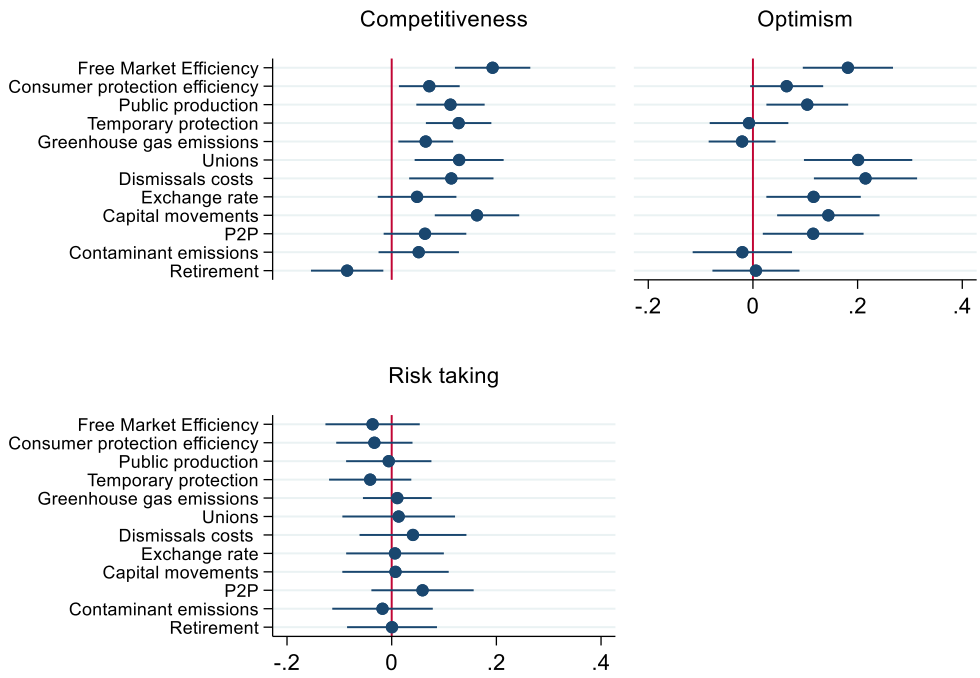
Finally, having past or present links with the academic sector is negatively correlated with the statements except for personal decisions, and the coefficient is statistically significant for most opinions. However, the introduction of this covariate does not affect the gender gap because the proportion of women and men with academic tasks is similar (49% and 46%, respectively).

The sign of the Academic coefficient on opinions merits attention. Many arguments about gender differences (in economic views and career choice) rely on the free-market support and free trade of formal education. Our findings suggest that these thoughts may not be predominant in the Economics career in Uruguay, which would have two effects. First, the career could attract more women in Uruguay, explaining the difference in female share compared with other countries. As a counterpart, the self-selection in the discipline would be different than in the hypothesis of international studies. Second, as long as education shapes opinions, the exposure to the career would have a pro-government intervention effect.

4.4 Personal traits: competitiveness, risk aversion, and optimism

The introduction of competitiveness, risk-taking, and optimism proxies reduce the controlled gender gap in support of market solutions vis a vis government interventions, as shown in section 3.1. Once again, we analyze the coefficient of the covariates in the full model (Figure 3) and the average characteristics of women and men (Table 6) to explore our findings.

Figure 3. Estimated coefficients personal traits variables and 95% confidence intervals. Full model.



Source: Authors' calculations based on SUE

Table 6. Average score of competitiveness, optimism, and risk-taking index

Variable	Male	Female	Female-Male	Cohen's d
Competitiveness	3.40	3.13	-0.27***	0.25
Optimism	3.53	3.47	-0.05	0.06
Risk-taking	3.27	2.93	-0.34***	0.41
Working career	3.20	3.07	-0.13*	0.13
Sports	3.32	2.76	-0.56***	0.49

*** p<0.01, ** p<0.05, * p<0.1

Cohen's d: absolute value of the effect size of the gender difference

Source: Authors' calculations based on SUE

The overall findings indicate that competitiveness explains views gender differences. As reported in Table 6, men and women exhibit an average competitiveness score a bit

higher than the neutral point 3. The index is higher for men, though the magnitude is small according to Cohen's d test. Besides, the estimated coefficients shown in Figure 3 suggest that a higher propensity to accept competitive environments is positively associated with pro-market orientation in most opinions. The only exception is related to the option of restrictions rather than incentives to encourage retirement.

We also find that the optimism index is slightly higher than the neutral point and positively related to free-market solutions support. This relation appears to be notably stronger compared to competitiveness in the cases of restricting unions' power, decreasing dismissal costs, and neglecting interventions in the markets of the exchange rate, international capitals, and financial services. However, the contribution to explaining gender differences is low or null because, as reported in Table 6, the average optimism score is similar for women and men.

Finally, the risk-taking index is higher than the neutral point for men but lower for women. There is a gender gap both in career-related and sports-related decisions. Despite this difference, risk-taking does not explain gender differences in views because it is unrelated to opinions, as illustrated in Figure 3.

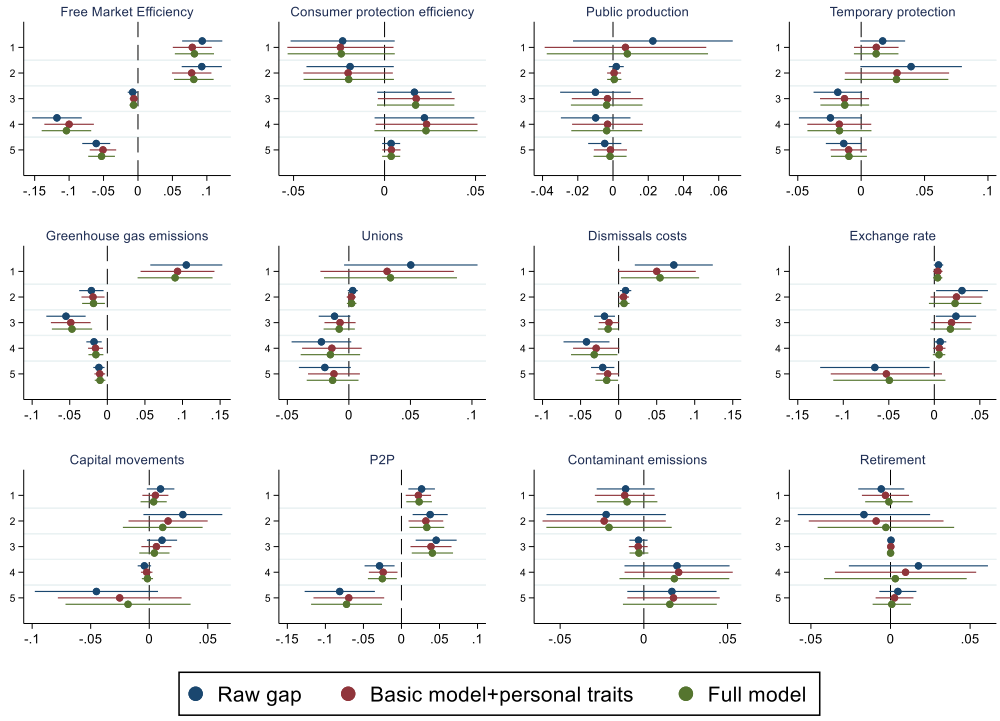
4.5 Robustness checks

Averages and OLS estimations in the analysis treat scores as cardinal levels of measurement, though they are ordinal data. A relevant criticism of this treatment is that the researcher attributes the same distance between the categories. Therefore, we analyze the robustness of our results by estimating an ordered probit model. We calculate the marginal effects valued at the average dependent variables for each outcome, using the specifications of Columns (1), (4), and (5) of Table 4. We show the results in Figure 4.

The main conclusions related to the raw gaps hold when using ordered probit estimation. So, the results are robust to the modelization. First, in the cases of non-significant and mild-sized average gaps, we cannot reject the hypothesis of the new estimated marginal effects being null.

Second, in the four statements in which the averages indicate that men are more pro-market than women, the ordered probit estimations also do it. Women are 10 percentage points more likely than men to disagree (answer 2 in the scale) and 12 percentage points less likely to agree (answer 4) with the statement "Market solutions are the most efficient way to allocate resources in most circumstances". The support to promoting peer-to-peer loan platforms also indicates a clear, robust result: the effects of the female variables are positive for answers 1 and 2, and negative for answers 4 and 5. The results of support to control greenhouse emissions are slightly different: the female effect is positive for strong agreement (10 percentage points), but the most negative impact corresponds to the neutral point. Regarding the support of diminishing dismissal costs, men are 10 percentage points more likely than women to declare strong agreement.

Figure 4. Average marginal effects of being female after estimating ordered probit models and 95% confidence intervals.



Source: Authors' calculations based on SUE

However, there is a different result in one aspect. In Figure 4 we see that the likelihood of response varies when introducing personal traits controls in the same way as in OLS estimations. But the confidence intervals of the marginal effects overlap. We know that this result is sensitive to the values at which the marginal effects are calculated. Anyway, we interpret that the contribution of personal traits to explain the gender gap may be a bit weaker than the reported by OLS estimations.

As a second robustness check, we re-estimate the OLS estimations after weighing. Table 7 reports the female coefficients of Columns (1) and (5) of Table 4 and the new estimated parameters. The gender differences are a bit higher when weighing, but the crucial findings remain.

Table 7. Raw and controlled (full model) gender gaps. OLS estimations

Opinions	Raw gap		Full model gap	
	Simple	Weighed	Simple	Weighed
Free market efficiency	-0.536***	-0.550***	-0.477***	-0.486***
Consumer protection efficiency	0.075	0.069	0.080	0.074
Public production	-0.107	-0.149**	-0.059	-0.091
Temporary protection	-0.152**	-0.202***	-0.115*	-0.169**
Greenhouse gas emissions	-0.237***	-0.240***	-0.200***	-0.205***
Unions	-0.170*	-0.206**	-0.120	-0.161
Dismissal costs	-0.246***	-0.284**	-0.183**	-0.222**
Exchange rates	-0.158**	-0.157**	-0.116	-0.112
Capital movements	-0.150*	-0.149*	-0.064	-0.063
P2P	-0.273***	-0.310***	-0.241***	-0.287***
Contaminant emissions	0.083	0.086	0.074	0.063
Retirement	0.056	0.058	0.007	0.014

Source: Authors' calculations based on SUE

5. Conclusions

Our study of the case of Uruguayan economists finds a gender difference in opinions in four out of twelve statements supporting pro-market views. These gender differences, which indicate that women are less pro-market than men, do not vanish when adding different control variables. In particular, exposure to Economics does not play a relevant role in the gender gap in these opinions, whereas personal traits, particularly gender differences in competitiveness, explain part of the gender differences in opinions.

Two results draw our attention when facing our results with theoretical perspectives and findings for developed countries. First, we do not find evidence suggesting that formal education in Economics shapes pro-market views. Given that links with academic institutions reduce the likelihood of market solutions support in our data, we argue that career teaching does not have a unique voice asserting the free market gains in Uruguay. This feature may be related, at least partially, to the higher female share among economists in Uruguay when compared to developed countries.

Secondly, gender gaps in support of free-market are slightly lower in our study than in the US case and much smaller than in the European case. We may speculate that this finding is related to the previous one. Indeed, self-selection in the career may be weakly related to the dominant view and rely on other issues, such as worrying about development or growth. In any case, the proper explanation of these aspects is still a research question.

Finally, a possible reason for the persistence of the detected gender gaps after control variables are included, is that females may be more likely to experience the adverse effects of market solutions. Indeed, because of labor discrimination and segregation, women are more prone to dealing with its consequent economic hardship. However, our data do not allow us to explore the relevance of this argument. In any case, our results suggest that achieving gender balance through the inclusion of women in public debates and decision-making positions may imply broader perspectives and more diversity, enhancing higher quality public policies.

References

Andere, Jorge Luis & Canché Escamilla, Jorge Luis (2019). Entendiendo el consenso en la profesión económica en México. *Análisis económico*, *34*(86), 9-34.

Babcock, Linda; Recalde, Maria; Vesterlund, Lise & Weingart, Laurie. (2017). Gender Differences in Accepting and Receiving Requests for Tasks with Low Promotability. *American Economic Review*, Vol. 107(3), pp. 714-47.

Bansak, Cynthia & Starr, Martha (2010). Gender differences in predispositions towards economics. *Eastern Economic Journal,* 36(1): 33-57.

Barral Verna, Ángeles; Basco, Ana Inés & Garnero, Paula. (2020). El Tetris de apoyo a la integración: Piezas y huecos de la brecha de género. *Nota técnica Nº IDB – TN - 2059*. Washington, D.C.: IADB. Available at: https://publications.iadb.org/publications/spanish/document/El-Tetris-del-apoyo-a-la-integracion-Piezas-y-huecos-de-la-brecha-de-genero.pdf

Bertrand, Marianne. (2011). New perspectives on Gender. In *Handbook of Labor Economics*, volume 4B, edited by Ashenfelter, Orley and Card, David. Elsevier, chapter 17, 1543-1590.

Bowles, Hannah Riley; Babcock, Linda & Lai, Lei. (2007). Social incentives for gender differences in the propensity to initiate negotiations: Sometimes it does hurt to ask. *Organizational Behavior and Human Decision Processes*, 103(1): 84-103.

Buser, Thomas; Grimalda, Gianluca; Putterman, Louis & van der Weele, Joël. (2020). Overconfidence and gender gaps in redistributive preferences: Cross-Country experimental evidence. *Journal of Economic Behavior & Organization*, *178*, 267-286

Byrnes, James P.; Miller, David C., & Schafer, William D. (1999). Gender differences in risk taking: A meta-analysis. *Psychological bulletin*, *125*(3), 367.

Caminal, Ramón & Rodriguez, David. (2003) La opinión de los economistas académicos en España: ¿consenso o segmentación? En *Moneda y Crédito (217)*, 257-33.

Caplan, Bryan (2002). Systematically biased beliefs about economics: robust evidence of judgemental anomalies from the survey of americans and economists on the economy. *The Economic Journal*, 112. 1-26.

Charness, Gary & Gneezy, Uri. (2012). Strong evidence for gender differences in risk taking. *Journal of Economic Behavior & Organization*, *83*(1), 50-58.

Croson, Rachel & Gneezy, Uri. (2009). Gender differences in preferences. *Journal of Economic literature* 47(2): 448-474.

De Benedictis, Luca & Di Maio, Michele. (2011). Economists' views about the economy. Evidence from a survey of Italian economists. *Rivista italiana degli economisti*, *16*(1), 37-84.

Drope, Jeffrey & Chowdhury, Abdur. (2014). Economic (In)Security and Gender Differences in Trade Policy Attitudes. *William Davidson Institute Working Papers Series wp1067*, William Davidson Institute at the University of Michigan.

Eckel, Catherine & Grossman, Philip (2008). Sex and risk: experimental evidence. In: *Handbook of Experimental Economic Results*, Plott, Charles & Smith, Vernon (Eds.), vol.1. Elsevier, New York.

England, Paula (1993), The separative self: androcentric bias in neoclassical assumptions. In: *Beyond economic man feminist theory and economics*, Nelson, Julie A.; Ferber, Marianne, (Eds.), Chicago: University of Chicago Press, 37–53.

Gneezy, Uri & Rustichini, Aldo. (2004). Gender and Competition at a Young Age. *The American Economic Review*, 94(2): 377-381.

Kamas, Linda & Preston, Anne. (2019). Can empathy explain gender differences in economic policy views in the United States? *Feminist Economics*, *25*(1), 58-89.

Lance, Chuck; Butts, Marcus M., & Michels, Lawrence C. (2006). The sources of four commonly reported cutoff criteria: What did they really say? *Organizational research methods*, *9*(2), 202-220.

Lora, Eduardo & Ñopo, Hugo. (2009). La formación de los economistas en América Latina. *Revista de Análisis Económico*, Vol. 24, Nº 2, pp. 65-93

Mansfield, Edward D.; Mutz, Diana C. & Silver, Laura R. (2015). Men, women, trade, and free markets. *International Studies Quarterly*, 59(2): 303-315.

May, Ann Mari; McGarvey, Mary G. & Kucera, David. (2018). Gender and European Economic Policy: A Survey of the Views of European Economists on Contemporary Economic Policy. *Kyklos* 71(1): 162-183

May, Ann; McGarvey, Mary G. & Whaples, Robert. (2014). Are disagreements among male and female economists marginal at best: A survey of AEA members and their views on economics and economic policy, *Contemporary Economic Policy* 32(1): 111-132.

Melgar, Natalia; Rossi, Máximo & Rovegno, Laura. (2005) Las preferencias individuales por el proteccionismo en "economías pequeñas", ¿fundamento racional? *Documento de Trabajo. Facultad de Ciencias Sociales, Departamento de Economía, Documento No. 07/05*. Universidad de la República. Available at https://hdl.handle.net/20.500.12008/2024 (Accesed: 23 November 2021).

Melgar, Natalia; Milgram, Juliette & Rossi, Máximo. (2009) The role of macroeconomic performance in individual's attitudes towards protectionism. *Documento de Trabajo, Facultad de Ciencias Sociales, Departamento de Economía, Documento No. 08/09*. Universidad de la República. Available at https://www.colibri.udelar.edu.uy/jspui/bitstream/20.500.12008/2125/1/DT%20E%202009-08.pdf (Accesed: 23 November 2021).

Niederle, Muriel & Vesterlund, Lise. (2007). Do Women Shy Away from Competition? Do Men Compete Too Much? *The Quarterly Journal of Economics*, 122(3): 1067-1101.

Rodríguez Chatruc, Marisol; Stein, Ernesto; Vlaicu, Razvan & Zuluaga Gonzalez, Víctor. (2019). Las causas de un amplio apoyo. Actitudes frente al comercio exterior. *Revista de Integración y Comercio*, I&C N°45, Año 23. INTAL-BID.

Sent, Esther Mirjam; & van Staveren, Irene. (2019). A feminist review of behavioral economic research on gender differences. *Feminist Economics*, *25*(2), 1-35.

Stastny, Daniel (2010). Czech Economists on Economic Policy: A Survey, *Econ Journal Watch*, 7(3): 275-287.

Urzúa, Carlos. (2007). Consensus and dissension among Mexican economists. *CEPAL Review*.

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Table A 1. Probit estimations of no opinion and extreme response. Gender coefficients and marginal effects at means (standard errors in parentheses).

Opinion	No opinion		Extreme response	
	Coefficient	Marginal effect	Coefficient	Marginal effect
All questions	0.250***	0.0289***	-0.0783*	-0.0240*
	(0.0843)	(0.00958)	(0.0432)	(0.0132)
1. Free market efficiency	-	-	0.129	0.0348
	-	-	(0.101)	(0.0274)
2. Consumer protection efficiency	0.253	0.0111	-0.385***	-0.0780***
	(0.177)	(0.00812)	(0.116)	(0.0233)
3. Public production	0.431**	0.0153**	-0.225**	-0.0746**
	(0.189)	(0.00832)	(0.0973)	(0.0322)
4. Temporary protection	0.303*	0.0233*	-0.237*	-0.0420*
	(0.159)	(0.0118)	(0.124)	(0.0219)
5. Greenhouse gas emissions	0.0752	0.0108	0.212**	0.0666**
	(0.125)	(0.0179)	(0.103)	(0.0321)
6. Unions	0.360**	0.0126*	-0.0669	-0.0261
	(0.161)	(0.00708)	(0.0933)	(0.0364)
7. Dismissal costs	0.151	0.00696	0.0442	0.0164
	(0.152)	(0.00695)	(0.0949)	(0.0352)
8. Exchange rates	0.408***	0.0649***	-0.191**	-0.0750**
	(0.127)	(0.0200)	(0.0970)	(0.0381)
9. Capital movements	0.434***	0.0568***	-0.130	-0.0476
	(0.136)	(0.0177)	(0.0982)	(0.0360)
10. P2P	0.453***	0.144***	-0.335***	-0.106***
	(0.0969)	(0.0307)	(0.114)	(0.0361)
11. Contaminant emissions	0.0904	0.0174	0.128	0.0304
	(0.116)	(0.0222)	(0.115)	(0.0275)
12. Retirement	0.00973	0.00254	0.0386	0.00541
	(0.104)	(0.0270)	(0.146)	(0.0205)

Notes: The control variables in the estimations are: age, family background, exposure to Economic views, and personal traits. The "All questions" estimations also include fixed effects of opinions and use clustered standard errors by individuals. In opinion 1, there are only 4 cases of no opinion and the estimation failed.

Source: Authors' calculations based on SUE

Table A2. Adjusted R squared of estimations reported in Table 4

Statements	(1)	(2)	(3)	(4)	(5)
Market efficiency					
Free market efficiency N=891	0.052	0.063	0.097	0.122	0.146
Consumer protection efficiency N=858	0.002	0.010	0.026	0.023	0.038
Market solutions					
Public production N=862	0.003	0.012	0.051	0.044	0.074
Temporary protection N=851	0.006	0.013	0.053	0.037	0.071
Greenhouse gas emissions N=798	0.024	0.027	0.030	0.035	0.037
Unions N=818	0.004	0.016	0.063	0.056	0.095
Dismissal costs N=818	0.010	0.021	0.055	0.068	0.094
Exchange rates N=781	0.005	0.016	0.035	0.032	0.047
Capital movements N=795	0.004	0.022	0.039	0.061	0.072
P2P N=652	0.016	0.031	0.061	0.056	0.079
Incentives vs. constraints					
Contaminant emissions N=782	0.001	0.005	0.010	0.008	0.013
Retirement N=720	0.001	0.006	0.021	0.017	0.030
Controls					
Age	No	Yes	Yes	Yes	Yes
Father' education	No	Yes	Yes	Yes	Yes
Exposure to Economic views	No	No	Yes	No	Yes
Personal traits	No	No	No	Yes	Yes

Source: Authors' calculations based on SUE