Online Appendix A

A1 Ability

To exclude the possibility of a gender difference in ability in our sample, we conducted a between-participants test in which we measured ability by asking participants to engage in the ball-tossing task without letting them choose their compensation scheme (see Appendix B for the Instructions). A total of 84 participants (42 women) that belonged to the same participant pool as in the main experiment, took part in this separate test in Fall 2013, after participating in an unrelated laboratory experiment. Participants were asked to complete the task for no incentives. We do not find significant gender differences in performance in this task in our sample. This result is in line with previous research using the same task (Gneezy, Leonard, and List, 2009). On average, women completed 2.12 tosses successfully (SD=1.25), while men completed 2.40 tosses successfully (SD=1.62). The distribution of the number of successful tosses for each gender is displayed in Figure 2. The performance distributions of men and women are not statistically different (z=-0.547, p=.584 Mann-Whitney). This suggests that differences in choice of competitive scheme are not driven by gender differences in ability to perform this particular task.

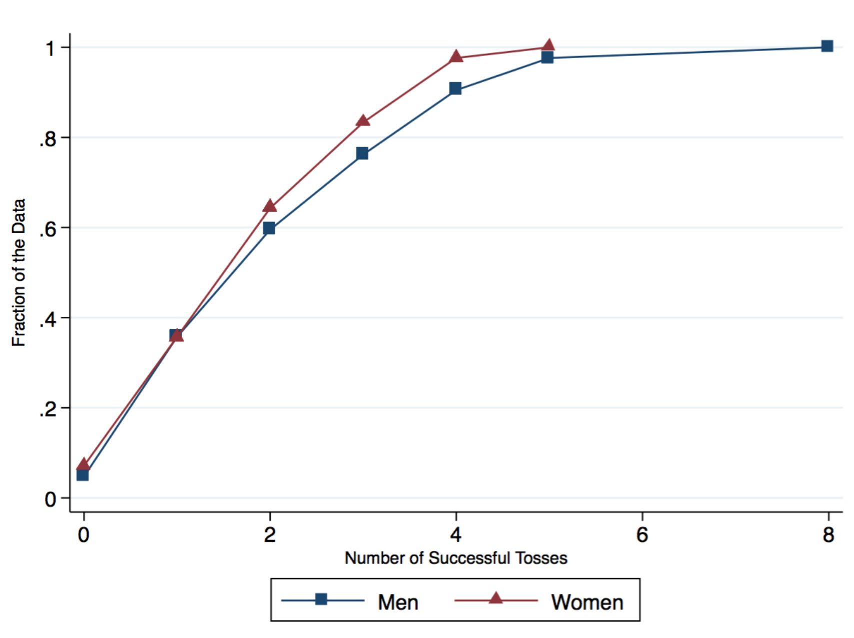

Figure A1. Empirical CDF of number of successful tosses by Gender

A2. The binary measure in previous literature

Table A1 below reports the fraction of men and women who selected the tournament incentive scheme in prior experiments.

Table A1. The Gender Gap in Tournament Entry in Previous Literature

	Tournament Entry Decisions		
	% of Men	**% of Women**	**Task**
Niederle and Versterlund (2007)	73%	35%	Math task: adding numbers
Gneezy, Leonard and List (2009_	50%	29%	Ball-tossing (Massai Society)
Healy and Pate (2011)	81%	28%	NV task
Dohemn and Falk (2011)	62.3%	37.3%	Math task
Ertac and Szentes (2011)	60%	30%	NV task
Niederle, Segal and Vesterlund (2013)	73.8%	31%	NV task
Balafoutas and Suttter (2012)	64%	30.6%	NV task
Dargnies (2012)	84.6%	51.3%	NV task
Shurchkov (2012)	44%	19%	NV task
	39%	30%	Word task
Gupta, Poulsen and Villeval (2013)	60%	34%	Maze-solving task
Andersen, Ertac, Gneezy, List and Maximiano (2013)	67%	19%	Ball-tossing task (Massai Society sample of adolescents. No gap in a sample of children)
Sutter and Rutzler (2014)	40%	19%	Variation of NV task (Sample of children)
Grosse, Reiner, and Dertwinkel-Kalt (2014)	36.7%	11.8%	NV task
	25%	15%	Word task
Wozniak, Harbaugh. & Mayr (2014)	54%	31%	NV (results are similar for a word task)
Buser, Niederle, and Oosterbeek (2014)	49%	23%	NV task (sample of adolescents)
Buser, Dreber and Mollerstrom (2015)	52%	28%	NV task
Almås, Cappelen, Salvanes, Sørensen, and Tungodden (2015)	51.6%	32.2%	NV task

A3 Demographics

Table A2. Demographics of the sample

	Panel A: Extensive Margin (Binary choice measure)				**Panel B: Intensive Margin** (Linear combination measure)			
	All	Men	Women	p-value	All	Men	Women	p-value
N	126	55	71		84	40	44	
Age	21.02 (2.46)	21.64 (3.05)	20.56 (1.80)	.05	20.95 (1.93)	20.78 (1.91)	21.12 (1.95)	.36
Ethnicity:								
Asian	53.97%	45.45%	60.56%	.11	69.05%	70.0%	68.18%	1
Caucasian	23.02%	25.45%	21.13%	.67	11.90%	12.50%	11.36	1
Hispanic	11.11%	14.55%	8.45%	.39	11.90%	15.00%	9.09%	.51
Other	6.35%	7.27%	5.63%	.73	4.76%	2.50%	6.82%	.62
NA	5.55%	7.27%	4.23%	.70	2.38%	-	4.54%	.50
English Second Language	20.63%	14.55%	25.35%	.18	46.43%	32.50%	59.09%	.02
GPA	3.30 (.442)	3.30 (.400)	3.31 (.474)	.72	3.21 (.396)	3.10 (.332)	3.31 (.426)	.03
Major:								
Engineering and Math	23.02%	32.73%	15.49%	.03	21.43%	35.00%	9.09%	.00
Natural Sciences	29.37%	23.64%	33.80	.24	26.19%	20.00%	31.82%	.32
Social Sciences	32.54%	30.91%	33.80%	.85	44.05%	35.00%	52.27%	.13
Other majors	10.3%	5.45%	14.08%	.15	5.95%	7.50%	4.55%	.67
NA	4.8%	7.27%	2.82%	.40	2.38%	2.50%	2.27%	1

Notes: The table reports the average values by gender for the two measures. The p-values are reported from Mann-Whitney tests for continuous variables and Fisher exact tests for categorical variables.

Table A2 reports the demographics variables for all participants. Panel A reports the statistics for participants in the Extensive Margin measure treatment. The descriptive statistics reported in the table reveal that, in our sample, men and women do not differ in most of the demographic variables. Some differences are that women in the Extensive Margin measure treatment were on average about a year younger than men, were less likely to major in technical fields, and were more likely to be of Asian ethnicity than men, though not significantly so. In Table A3 we include demographic controls in all the regression specifications reported in Table 2 in the main text. Note that by including these controls we lose some observations due to some missing data for ethnicity (N=7), major (N=6) or GPA (N=2). Below we discuss how including demographics controls affect the gender gap in tournament entry.

Age. Subject's average age was 21.05. The age distribution in this treatment differs across genders (z=1.96, p=.05, Mann-Whitney), though this difference is entirely driven by 4 outliers (all men) who were between 28 and 32 years old. When excluding these outliers, we observe no gender difference in the participants' age distribution (MW, z=1.32, p=0.188). As shown in table A3, when we include age as a control variable, we see that the gender gap in tournament entry does not change in any of the regression specifications and that age does not correlate with tournament entry. Alternatively, if we limit our regression analysis only to participants that are younger than the median age (21), we observe a gender gap of 37.4 percentage points; if we limit the analysis to individuals who are 21 or older, we observe a gender gap of 34.5 percentage points (analysis available upon request). These results suggest that the gender gap in tournament entry we observed in our data is not driven by a difference in men and women's age.

Ethnicity and language. Out of the 126 participants who participated in the binary measure treatment, 53.97% were Asian, 23.02% were White, 11.11% were Hispanic or Latino while the remaining subjects had either a mixed ethnicity (6.35%) or did not fill out ethnicity in the survey (5.55%). This sample is representative of student population were the experiment was conducted. Further, 79.37% of the participants indicated that English was their native language while the remaining participants (20.63%) indicated another language. Since Asians are the largest ethnic group in our sample, in the analyses reported in Table A2 we add to the model a dummy variable coded as 1 if subjects indicated to be of an Asian ethnicity, and zero otherwise. We also control for whether subjects were native English speakers. As shown in Table A3, controlling for these variables in the regression model leaves a substantial gender gap in competitiveness. We also observe that subjects of Asian ethnicity were less likely to select into the tournament, though this result is not statistically significant at any conventional level.

Major. Participants came from a variety of departments: 23% were students in technical fields such as engineering, computer science or mathematics, 29% majored in biology, chemistry or other sciences, 32.5% majored in social sciences like economics, psychology, sociology or political sciences, 10.3% were students from other majors (humanities, communication, history, arts, and undeclared majors), and the remaining 6.4% did not indicate a major. The only gender difference that we observe in our data with respect to the self-reported major is that a smaller proportion of women came from technical fields (p=.03, Fisher exact). The results reported in Table A3 show that controlling for major does not substantially affect the size of the gender gap in competitiveness in any of the regression specifications. None of the major dummies correlate with tournament entry.

GPA. We find no gender differences in GPA between subjects in our sample (z=-.36, p=.718)[1]. Further, GPA is not correlated with tournament entry nor it affects the gender gap if included in the regression model (column 8).

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[1] Note that GPA was only collected for the 84 individuals from whom we collected the measures of confidence, risk and ambiguity. Of these, 2 participants did not report it.

Table A3. Probit Regression of Tournament Entry

Choice of Tournament	(1)	(2a)	(2b)	(3)	(4)	(5)	(6)	(7)	(8)
Female	-.399*** (.075)	-.435*** (.090)	-.429*** (.102)	-.430*** (.101)	-.371*** (.101)	-.346** (.106)	-.347*** (.113)	-.373*** (.116)	-359*** (.112)
Gender composition	-.001 (.037)	.002 (.035)	.006 (.034)	-.006 (.034)	-.007 (.046)	-.014 (.047)	-.014 (.048)	-.002 (.046)	-.014 (.044)
Expected performance				-.002 (.026)					
Confidence winning					.011** (.005)	.010* (.005)	.010** (.005)	.010** (.005)	.010** (.005)
Self-reported risk						.016 (.036)	.017 (.035)	.016 (.034)	.014 (.034)
Risk aversion							.047 (.031)	.051 (.032)	.056* (.033)
Ambiguity aversion								-.021* (.012)	-.020* (.012)
Age		.001 (.020)	.006 (.024)	.006 (.024)	-.002 (.029)	-.001 (.028)	-.000 .028	-.005 (.026)	-.005 (.026)
Asian		-144 (.091)	152 (.106)	-.154 (.106)	-.187 (.130)	-182 (.128)	-.174 (.129)	-184 (.128)	-.149 (.121)
Non-native speaker		.019 (.111)	-.037 (.119)	-.035 (.117)	.032 (.177)	.066 (.183)	.092 (.186)	.044 (.179)	.027 (.170)
GPA									-.091 (.121)
Year dummy	Y	Y	Y	Y	Y	Y	Y	Y	Y
Major controls	N	Y	Y	Y	Y	Y	Y	Y	Y
Observations	126	119	83	83	83	82	79	79	77
Pseudo R^2	.166	.236	.284	.285	.364	.363	.368	.389	.384

*** p<.01, ** p<.05, * p<.10

Note: The table presents marginal effects estimated from probit regression. Dependent variable: Choice of tournament (1 tournament and 0 piece-rate). Gender composition refers to the women to men ratio in each session. Expected performance refers to the estimated number of successful tosses. Confidence of winning refers to subjects' expected likelihood of winning against a random opponent from the same session. Self-reported Risk refers to the self-reported willingness to take risks. Risk aversion refers to the incentivized measure of risk. Ambiguity aversion refers to the incentivized measure of ambiguity. Age refers to subjects' age (the variable is demeaned). Asian is a dummy variable coded as 1 for subjects of Asian ethnicity. Non-native speaker is dummy variable coded as 1 if subjects were not English native, and zero otherwise. GPA refers to the demeaned self-reported GPA. Major-dummies are dummy variables for the following majors Engineering and Math, Social Science, and the residual majors (which include Literature, Art, Communication, and undeclared), with Science as the baseline. Marginal effects are estimated at a man from a 2012 gender-balanced session, and at the mean for all the other variables. Robust standard errors are in parenthesis.

Demographic Variables and Competitiveness on the Intensive Margin

Panel B of Table A2 presents the descriptive statistics for the participants of the Intensive Margin treatment. The data reveal that men and women in our sample do not differ in most of the demographics. However, women in this treatment were more likely not to be English native speakers, less likely to major in technical fields and more likely to major in the social sciences. Further, their average GPA that was higher than that of men. In Table A4 we include demographic controls in all the regression specifications reported in Table 3 in the main text. Similarly to the binary measure (extensive margin) treatment, by including demographic controls in the regressions we lose some additional observations due to some missing data for ethnicity (N=2), major (N=2) or GPA (N=5). Below we discuss how including demographics controls affect the gender gap in tournament allocation.

Age. We find no significant differences in men and women's age distributions in this sample. Further, age does not correlate with tournament allocation in any of the regression specifications.

Ethnicity and language. As shown in Panel B of Table A2, out of the 84 participants who participated in binary version of the experiment, 69.05% were Asian, 11.90% were Caucasian, 11.90% were Hispanic or Latino while the remaining subjects had either a mixed ethnicity (4.76 %) or did not fill out ethnicity in the survey (2.38%). The mix of ethnicities is similar to the one of the sample from the binary measure. We do not find differences in the proportion of men and women across ethnicities. Further, 46.43% of our subjects were not English natives. Of those, the majority were women (p=.02, Fisher Exact). In table A4 we report the results of OLS regressions in which we include a dummy variable indicating whether subjects were of Asian ethnicity, as well as a control dummy variable for whether subjects were English natives. None of the variables correlate with tournament allocation. Importantly, controlling for these variables does not substantially affect the gender gap in tournament allocation.

Major. Participants came from a variety of departments: 21.43% were students in technical fields such as engineering, computer science or mathematics, 26%.19 majored in biology, chemistry or other sciences, 44.05% majored in social sciences, 5.95% indicated other majors (including undeclared majors), and 2.38% did not report their major. The result in Table A4 shows that including such variables does not substantially affect the size of the gender gap in competitiveness. None of these variables correlates with tournament allocation.

GPA. In this sample, there is a significant gender differences in GPA between subjects in our sample (z=-2.159, p=.031, Mann-Whitney) with women having a higher GPA than men. We find that adding GPA to the model does not substantially affect the female coefficient, which remains large and significant. When adding this variable to the model the coefficient of the self-reported risk variable does not substantially change but becomes not significant, possibly because (in contrast with the binary data) GPA and self-reported risk are negatively correlated in this sample (r=-.28, p=.015). When self-reported risk is not included in the model, we also find that GPA is negatively correlated with tournament allocation, though the Female coefficient remains large.

Table A4. OLS Regression of Tournament Allocation

Points allocated to tournament	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Female	-31.15***	-37.63***	-34.48***	-23.08***	-19.48**	-15. 65**	-19.21***	-16.93**
	(5.17)	(6.30)	(6.46)	(7.33)	(7.31)	(7.19)	(7.32)	(7.71)
Gender composition		14.11**	12.61*	8.34**	4.22	3.59	3.07	3.92
		(5.73)	(6.28)	(4.23)	(4.66)	(4.64)	(4.58)	(4.65)
Expected performance			3.26**					
			(1.46)					
Confidence winning				.622**	.504***	.572***	.511***	.511***
				(0.131)	(.143)	(.141)	(.141)	(.144)
Self-reported Risk					3.18*	3.19*	3.29*	2.82
					(1.65)	(1.68)	(1.77)	(1.86)
Risk aversion							.373	-.102
							(1.19)	(1.21)
Ambiguity aversion							-.907	-.743
							(.570)	(.598)
Age		1.48	1.60	1.10	.802	.899	1.41	1.63
		(1.55)	(1.46)	(1.22)	(1.27)	(1.27)	(1.40)	(1.35)
Asian		-6.10	-5.54	-3.40	-3.33	-5.21	-5.22	-5.69
		(6.30)	(6.02)	(5.18)	(5.26)	(5.49)	(5.34)	(5.08)
Non-native speaker		3.73	5.11	4.20	4.00	4.12	3.33	2.13
		(5.82)	(5.66)	(5.00)	(5.01)	(5.17)	(5.44)	(5.74)
GPA								-10.24
								(6.24)
Constant	66.43***	57.43***	41.28***	19.41	9.93	-.625	15.32	18.46
	(4.07)	(9.97)	(13.81)	(13.15)	(15.02)	(17.45)	(20.43)	(21.26)
Year dummy	N	Y	Y	Y	Y	Y	Y	Y
Major dummies	N	Y	Y	Y	Y	Y	Y	Y
Observations	84	81	81	81	80	76	75	73
R^2	.311	.391	.432	.521	0.545	0.581	0.601	0.610

*** p<.01, ** p<.05, * p<.10

Note: The table presents OLS estimates. Dependent variable: points allocated to the tournament. Gender composition refers to the women to men ratio in each session. Expected performance refers to the estimated number of successful tosses. Confidence of winning refers to subjects' expected likelihood of winning against a random opponent from the same session. Self-reported risk refers to the self-reported willingness to take risks. Risk aversion refers to the incentivized measure of risk. Ambiguity aversion refers to the incentivized measure of ambiguity. Asian is a dummy variable coded as zero if subjects were of Asian ethnicity and zero otherwise. Non-native speaker is dummy variable coded as 1 if subjects were not English native, and zero otherwise. Major-dummies are dummy variables for the following majors Engineering and Math, Social Science, and the residual majors (which include Literature, Art, Communication, and undeclared), with Science as the baseline. Robust standard errors are in parenthesis.

A4. Analysis on the restricted sample of subjects from gender balanced sessions.

Table A5 and Table A6 report the regression results for the sample of participants from gender balanced sessions for the extensive (N=84) and intensive margin (N=72) of competitiveness respectively. The regressions show that the results for these participants are in line with the analyses we report in the main text, where we control for the women to men ratio.

Table A5. Probit Regression of Tournament Entry (gender balanced sessions)

Choice of Tournament	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Female	-.366*** (.056)	-.352*** (.073)	-.467*** (.145)	-.413*** (.133)	-.412*** (.142)	-.429*** (.056)	-.426*** (.157)	-.485*** (.170)	-.491*** (.161)
Expected Performance			-.004 (.028)			.			
Confidence Winning				.009* (.005)	.010** (.005)	012** (.006)	.011** (.006)	.011* (.006)	.011* (.006)
Self reported Risk					-.029 (.051)	.036 (.053)	-.027 (.053)	-.015 (.044)	-.017 (.046)
Risk Aversion						.075* (.044)	.070 (.044)	.073 (.046)	.078 (.051)
Ambiguity Aversion							-.014 (.015)	-.012 (.013)	-.012 (.014)
Age								-.044 (.028)	-.045 (.029)
Asian								-.098 (.121)	-.077 (.119)
Non-native speaker								.073 (.214)	0.67 (.225)
GPA									-.034 (.169)
Year dummy	N	N	Y	Y	Y	Y	Y	Y	Y
Major dummies	N	N	N	N	N	N	N	Y	Y
Observations	84	60	60	60	59	59	59	58	56
Pseudo R2	.217	.261	.275	.344	.343	.391	.398	.482	.472

*** p<.01, ** p<.05, * p<.10

Note: The table presents marginal effects estimated from probit regression for the restricted sample of subjects from gender balanced sessions. Dependent variable: Choice of tournament (1 tournament and 0 piece-rate). Confidence of winning refers to subjects' expected likelihood of winning against a random opponent from the same session. Self-reported Risk refers to the self-reported willingness to take risks. Risk aversion refers to the incentivized measure of risk. Ambiguity aversion refers to the incentivized measure of ambiguity. Major-dummies are dummy variables for the following majors Engineering and Math, Social Science, and the residual majors (which include Literature, Art, Communication, and undeclared), with Science as the baseline. Marginal effects are estimated at a man in a 2012 gender-balanced session, and at the average for all the other variables. Robust standard errors are in parenthesis.

Table A6. OLS Regression of Tournament Allocation

Points allocated to tournament	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Female	-32.64***	-32.64***	-28.46***	-18.81***	-15.40**	-13.02*	-16.12**	-17.31**	-15.98*
	(5.57)	(5.53)	(5.53)	(6.70)	(7.00)	(6.68)	(6.93)	(8.16)	(8.13)
Expected Performance			4.01***						
			(1.33)						
Confidence Winning				.612***	.489***	.555***	.514***	.489***	.503***
				(.135)	(.151)	(.149)	(.149)	(.158)	(.160)
Self-reported Risk					3.24**	3.20*	3.12*	3.64*	2.75
					(1.61)	(1.61)	(1.75)	(1.91)	(1.97)
Risk Aversion						.353	.419	.142	.127
						(1.26)	(1.24)	(1.50)	(1.52)
Ambiguity Aversion							-.649	-.799	-568
							(.597)	(.633)	(.664)
Age								1.20	1.62
								(1.81)	(1.76)
Asian								-6.81	-6.18
								(6.57)	(6.29)
Non-native speaker								2.32	1.57
								(6.24)	(6.47)
GPA									-10.09
									(6.91)
Constant	65.19***	61.24***	38.88***	22.67**	9.11	1.76	13.09	17.69	22.17
	(4.29)	(5.17)	(8.81)	(10.86)	(13.74)	(18.29)	(22.04)	(23.50)	(23.63)
Year dummy	N	Y	Y	Y	Y	Y	Y	Y	Y
Major dummies	N	N	N	N	N	N	N	Y	Y
Observations	72	72	72	72	70	66	65	63	61
R^2	.329	.348	.410	.476	.507	.541	.551	.563	.563

*** p<.01, ** p<.05, * p<.10

Note: The table presents OLS estimates for the restricted sample of subjects from gender balanced sessions. Dependent variable: points allocated to the tournament. Expected performance refers to the estimated number of successful tosses. Confidence of winning refers to subjects' expected likelihood of winning against a random opponent from the same session. Self-reported risk refers to the self-reported willingness to take risks. Risk aversion refers to the incentivized measure of risk. Ambiguity aversion refers to the incentivized measure of ambiguity. Major-dummies are dummy variables for the following majors Engineering and Math, Social Science, and the residual majors (which include Literature, Art, Communication, and undeclared), with Science as the baseline. Robust standard errors are in parenthesis.

A5. Analysis on the restricted sample of participants with no difference in performance

As we report in the main text, in the binary measure (extensive margin) treatment we find that men perform better than women under the tournament (MW test, z=2.277, p=.02) and marginally better than women under the piece rate (z=1.717, p=.09). Both results become insignificant if we exclude the top 11.6% of the observations who perform 5 or more successful tosses (MW test, z =1.438, p=.15 for the tournament; MW test, z = 1.289, p=.20 for the piece rate). Importantly, if we exclude these observations and regress tournament on female we find that females are still 35.5 percentage points less likely to select the tournament than men. The regression results are illustrated in Table A7 below. Similarly, in the linear-measure (intensive margin) treatment we find that men perform marginally better than women (z=1.85, p=.064), though this difference becomes insignificant if we exclude subjects (5.95%) who perform more than 5 tosses (z = 1.335, p=.182). Further, if we run the analysis on the restricted sample of participants who display no difference in performance, we still find that women allocate 29.8 fewer points to the tournament than men. The regression results are reported in Table A8 below.

Table A7. Probit Regression of Tournament Entry (restricted sample)

Choice of Tournament	(1)	(2a)	(2b)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Female	-.355*** (.051)	-.376*** (.086)	-.394*** (.112)	-.399*** (.113)	-.368** (.106)	-.365*** (.107)	-.358*** (.111)	-.419*** (.138)	-.436*** (.153)	-.407*** (.144)
Gender composition		-.002 (.041)	-.006 (.037)	-.006 (.039)	-.015 (.052)	-.022 (.053)	-.022 (.052)	-.003 (.050)	.008 (.045)	-.009 (.040)
Expected Performance				.008 (.027)						
Confidence Winning					.008** (.004)	.009** (.004)	.009** .004	.010** (.005)	.009* (.005)	.009* (.005)
Self-reported Risk						-.021 (.033)	-.021 (.032)	-.030 (.031)	-.008 (.030)	-.011 (.029)
Risk Aversion							.037 (.029)	.042 (.031)	.038 (.031)	.042 (.033)
Ambiguity Aversion								-.028* (.015)	-.029* (.015)	-.027* (.014)
Age									-.006 (.023)	-.003 (.022)
Asian									-.246* (.130)	-.206* (.119)
Non-native speaker									.083 (.178)	.050 (.163)
GPA										-.099 (.116)
Year dummy	N	Y	Y	Y	Y	Y	Y	Y	Y	Y
Major dummies	N	N	N	N	N	N	N	N	Y	Y
Observations	106	106	72	72	72	71	69	69	68	66
Pseudo R2	.136	.150	.228	.229	.300	.301	.310	.355	.438	.433

*** p<.01, ** p<.05, * p<.10

Note: The table presents marginal effects estimated from probit regression for the restricted sample of subjects with no differences in performance. Dependent variable: Choice of tournament (1 tournament and 0 piece-rate). Gender composition refers to the women to men ratio in each session. Expected performance refers to the estimated number of successful tosses. Confidence of winning refers to subjects' expected likelihood of winning against a random opponent from the same session. Self-reported Risk refers to the self-reported willingness to take risks. Risk aversion refers to the incentivized measure of risk. Ambiguity aversion refers to the incentivized measure of ambiguity. Major-dummies are dummy variables for the following majors Engineering and Math, Social Science, and the residual majors (which include Literature, Art, Communication, and undeclared), with Science as the baseline. Marginal effects are estimated at a man in a gender balanced 2012 session, and at the average for all the other variables. Robust standard errors are in parenthesis.

Table A8. OLS Regression of Tournament Allocation (restricted sample)

Points allocated to tournament	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Female	-29.78***	-31.09***	-27.89***	-17.03***	-13.44**	-11.25*	-14.81**	-18.38**	-15.93*
	(5.51)	(5.51)	(5.83)	(6.13)	(6.21)	(5.88)	(6.24)	(8.30)	(8.74)
Gender composition		14.50**	13.33*	8.99	4.62	4.60	4.63	3.24	4.22
		(6.35)	(6.93)	(4.35)	(4.67)	(4.43)	(4.35)	(4.71)	(4.89)
Expected Performance			2.45		.				
			(1.51)						
Confidence Winning				.664***	.528***	.590***	.537***	.505***	.503***
				(.123)	(.140)	(.137)	(.138)	(.147)	(.150)
Self-reported Risk					3.48**	3.44**	3.27*	3.44*	2.97
					(1.51)	(1.51)	(1.66)	1.83	(1.92)
Risk Aversion						.424	.506	.310	-.243
						(1.09)	(1.08)	(1.20)	(1.22)
Ambiguity aversion							-.722	-.837	-.646
							(.582)	(.599)	(.634)
Age								1.57	1.90
								(1.55)	(1.51)
Asian								-4.96	-5.82
								(5.51)	(5.27)
Non-native speaker								3.34	2.17
								(5.70)	(5.97)
GPA									-11.16
									(6.67)
Constant	65.06***	46.67***	33.84**	10.43	.295	-7.26	6.03	13.66	16.82
	(4.43)	(8.78)	(12.79)	(11.09)	(12.57)	(17.09)	(20.81)	(21.72)	(22.75)
Year dummy	N	Y	Y	Y	Y	Y	Y	Y	Y
Major dummies	N	N	N	N	N	N	N	Y	Y
Observations	79	79	79	79	78	74	73	71	69
R^2	.282	.326	.350	.479	.519	.555	.566	.578	.588

*** p<.01, ** p<.05, * p<.10

Note: The table presents OLS estimates for the restricted sample of subjects with no difference in performance. Dependent variable: points allocated to the tournament. Gender composition refers to the women to men ratio in each session. Expected performance refers to the estimated number of successful tosses. Confidence of winning refers to subjects' expected likelihood of winning against a random opponent from the same session. Self-reported risk refers to the self-reported willingness to take risks. Risk aversion refers to the incentivized measure of risk. Ambiguity aversion refers to the incentivized measure of ambiguity. Major-dummies are dummy variables for the following majors Engineering and Math, Social Science, and the residual majors (which include Literature, Art, Communication, and undeclared), with Science as the baseline. Robust standard errors are in parenthesis.

A6. The Gender Gap across the Two Measures of Competitiveness

Table A9 reports the fraction of men, women and the women to men ratio in the binary measure as well as in the top x percentile of the distribution of competitiveness in the linear measure (empirical CDF). As shown in the table, the women to men ratio is much smaller above the 75th percentile of the distribution than at the median. Conversely, the proportion of men and women at the median of the distribution is identical to the proportion of men and women who choose to compete in the binary measure.

Table A9. Women to Men ratio in the Binary and Linear Measure

	Binary	**Linear**						
	Tournament choice	*Percentile*						
		1th	*10th*	*25th*	*50th*	*75th*	*90th*	*95th*
t to tournament	-	$t \geq 0$	$t \geq 15$	$t \geq 30$	$t \geq 50$	$t \geq 70$	$t \geq 90$	$t = 100$
Fraction of Men	0.78	1	0.98	0.90	0.78	0.53	0.28	0.18
Fraction of Women	0.32	1	0.86	0.66	0.32	0.05	0	0
Women to Men Ratio	**0.41**	**1**	**0.88**	**0.73**	**0.41**	**0.09**	**0**	**0**

Note: Fraction of Men refers to the fraction of men who chose a tournament allocation that is equal or greater than *t* out of all men in the treatment. Fraction of Women refers to the fraction of women who chose a tournament allocation that is equal or greater than *t* out of all women in the treatment. Women to Men Ratio refers to Fraction of Women divided by Fraction of Men.

In the analysis reported in the main text we investigate whether the proportion of men and women among the competitive participants varies across the two measures, and find that the gender gap observed at the median of the distribution of competitiveness in the continuous measure does not differ from the gap observed in the binary measure. However, at the 75th percentile of the distribution the gender gap widens substantially. It is important to mention, however, that the fractions of men and women are not always balanced in these comparisons. If we run the same tests only for the observations from gender balanced sessions (N=84 in the extensive margin measure and N=72 in the intensive margin one) we find a similar result. When we compare the fraction of women and men above the 50th percentile of the distribution of tournament allocation with the fraction of men and women who compete in the extensive margin elicitation, we find no difference in the proportions (p=1.0, Fisher exact, two-sided). However, we find a statistical difference in the proportions if we compare subjects above the 75th percentile of the tournament allocation distribution to those who selected into the tournament in the extensive margin measure (p=.05, Fisher exact, two-sided).

Table A10 illustrates the fraction of men and women across the four quartiles of the distribution of competitiveness.

Table A10. Women to Men ratio across the quartiles of the distribution of tournament allocation

	Extensive Margin	***Intensive Margin***			
	Tournament choice	*1st-25th*	*25th-49th*	*50th-75th*	*75th-99th*
t to tournament	-	$t<25$	$25\leq t<50$	$50\leq t<70$	$t\geq 70$
Fraction of Men	0.78	.10	0.13	0.25	0.53
Fraction of Women	0.32	.34	0.34	0.27	0.05
Women to Men Ratio	**0.41**	**3.4**	**2.62**	**1.08**	**0.09**

As shown in the table, we see high women to men ratios in the first two quartiles of the distribution. Only 23% of the men are below the median of the distribution. In the third quartiles of the distribution we see that the fraction of men and the fraction of women are about the same, with a women to men ratio of 1.08 to 1. Instead, we see that more than half of the men (53%) are in the top quartile of the distribution, whereas only 5% of the women are in this quartile. On this quartile of the distribution the women to men ratio is 0.09. Overall, we observe a higher proportion of women in the first and second quartiles of the distribution (p=.01 and p=.02, Fisher exact), while a higher proportion of men in the top quartile (p<.001, Fisher exact).

Determinants of the top and bottom 25th percentiles of the competitiveness distribution. In this section, we explore whether confidence and risk preferences can predict whether participants end up in the top (bottom) tail of the distribution of competitiveness based on the number of points allocated to the tournament in the intensive margin measure. For this purpose, we regress these measures on a dummy variable coded as 1 when a participant is in the top (bottom) 25th percentile of the competitiveness distribution. Table A11 reports the results of the probit regressions. Column 1 (of Panel A) shows that participants who are more confident about their likelihood of winning are also more likely to be in the top 25th percentile of the competitiveness distribution. Considering participants' gender in addition to confidence confirms that more confident participants are more likely to be among the most competitive participants (Column 2) and shows that women are 50 percentage points less likely to be in the top 25% of the distribution. Column 3 and 4 show that risk loving individuals are also more likely to be among the most competitive participants. Table A11 (Panel B) reports the analyses on the participants who are in the bottom 25th percentile of the competitiveness distribution (32% of the women and 10% of the men). Column

1 shows that confident participants are less likely to be among the least competitive participants. Considering participants' gender (Column 2) does not improve the fit of the model. When controlling for confidence, women are not less likely to be among the least competitive participants then men, though a significant gender gap of 15 percentage points is detected in a regression that only includes gender. Risk averse participants are not more likely to be among the least competitive participants (Columns 3 and 4).

These results show that the gender composition of the top 25th percentile of the competitiveness distribution in our data cannot be accounted only by differences in confidence and attitude toward risk between men and women. In other words, confidence and propensity to risk seem to explain only part of the gender gap among the most competitive individuals. On the other hand, the gender composition of the bottom 25th percentile of the competitiveness distribution in our data is exclusively determined by differences in confidence between men and women.

Table A11 – Determinants of the Most and Least Competitive Participants

	Panel A DV: Top 25th percentile				**Panel B** DV: Bottom 25th percentile			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
Female		-.504***		-.451**		-.012		-.039
		(.188)		(.190)		(.091)		(.106)
Confidence	.015***	.016***	.011***	.013***	-.012***	-.013**	-.011***	-.013**
	(.003)	(.004)	(.003)	(.004)	(.003)	(.005)	(.003)	(.005)
Self-reported Risk			.053**	.066*			-.022	-.028
			(.025)	(.038)			(.024)	(.030)
Observations	84	84	82	82	84	84	82	82
Pseudo R^2	.32	.42	.35	0.43	.37	.37	.38	.38

*** p<.01, ** p<.05, * p<.10

Note: The table presents marginal effects estimated from probit regression. The dependent variable in Panel A is a dummy variable coded as 1 if participants are in the top 25% of the distribution of tournament allocations, and zero otherwise. The dependent variable in Panel B is a dummy variable coded as 1 if participants are in the bottom 25% of the distribution of tournament allocations, and zero otherwise. Marginal effects are estimated at a man, and at the mean for all the other variables. Robust standard errors are in parenthesis.

Online Appendix B

Instructions

Ability

Welcome to the experiment. The experiment is simple. We will keep anonymous any and all information that we receive from you during this session. Please read the following instructions carefully.

Thank you for your participation. In this study, you will be asked to participate in a ball-tossing task.

In this task, you will toss a tennis ball into a small bin 10 feet away. You will have 10 opportunities to toss the ball. The toss must be underhand. A successful toss is a toss that lands in the bin and stays in the bin. The task itself will be completed now, and we will record your results individually; that is, no other participants will observe your performance in this task.

Competitiveness on the Extensive Margin Measure

Welcome to the experiment. The experiment is simple and if you will follow the instructions you may earn a considerable amount of money that will be paid to you, privately and in cash, at the end of the experiment. We will keep anonymous any and all information that we receive from you during this session. Please read the following instructions carefully.

Thank you for your participation. In this study, you will be asked to participate in a ball-tossing task, and to choose how you would like to be compensated.

In this task, you will toss a tennis ball into a small bin 10 feet away. You will have 10 opportunities to toss the ball and you will be paid according to your success. The toss must be underhand. A successful toss is a toss that lands in the bin and stays in the bin. The task itself will be completed at the end of the session, and we will record your results individually; that is, no other participants will observe your performance in this task.

You are now asked to select how you would like to be paid for the completion of this task by filling out the bottom of this sheet. This sheet will be collected before the start of the ball-tossing task.

You may choose to be paid by piece-rate or by participating in a tournament. You may choose only one.

A. The piece-rate option pays $1.00 for each successful ball toss

B. The tournament option pays $3.00 for each successful ball toss if you have more successful tosses than a randomly chosen participant in the room. If you have fewer successful tosses than that participant, you will be paid zero for this part of the experiment. In case the two of you tie, you will be paid $1.00 for each successful toss.

Please select how you would like to be paid now, by circling the desired option below.

I would like to be paid by:

Piece-Rate Tournament

Competitiveness on the Intensive Margin Measure

Welcome to the experiment. This experiment is simple and if you follow the instructions you may earn a considerable amount of money that will be paid to you, privately and in cash, at the end of the experiment. We will keep anonymous any and all information that we receive from you during this session. Please read the following instructions carefully.

Thank you for your participation. In this study, you will be asked to participate in a ball-tossing task, and to choose how you would like to be compensated.

In this task, you will toss a tennis ball into a small bin 10 feet away. The toss must be underhand. You will have 10 opportunities to toss the ball and you will be paid according to your success. A successful toss is a toss that lands in the bin and stays in the bin. The task itself will be completed at the end of the session, and we will record your results individually; that is, no other participants will observe your performance in this task.

The decision you are asked to make is how you would like to be paid for the completion of this task. You will make this decision before the start of the ball-tossing task.

You are endowed with 100 points and asked to choose the portion of this amount (between 0 and 100 points, inclusive) that you wish to invest in a tournament. The rest of the 100 points will be invested in a piece-rate compensation scheme.

The payments for each point invested in the options are as follows:

A. The piece-rate option pays 1 cent per point for each successful toss
B. The tournament option pays 3 cents per point for each successful toss if you have more successful tosses than a randomly chosen participant in the room. If you have fewer successful tosses than that participant, you will be paid zero for this part of the experiment. In case the two of you tie, you will be paid 1cent per point for each successful ball toss.
C.

We now ask you to choose how many of the 100 points you would like to invest in option A (the piece-rate) and how many in option B (the tournament). Please remember that the two numbers should add up to 100 points.

I would like to invest:

________________ points in option A ________________points in option B

Appendix C

Additional measures –Instructions

Confidence Questionnaire

Please complete the following questions. Raise your hand when you are finished. This form will be collected prior to the start of the timed task.

How many successful tosses do you think you will make?

____

What do you believe is the probability that you will have more successful tosses than a randomly selected opponent? Please give a percentage from 0-100.

____

Risk Assessment
Please answer the following question using a 1-10 scale, where *1=completely unwilling* and *10=completely willing*:
Rate your willingness to take risks in general: ____________________

____

Incentivized Risk Aversion Elicitation

Instructions for Task H

In addition to the Instructions, this envelope contains a Decision Sheet. Please look on to your Decision Sheet as you read these Instructions to ensure that you understand the procedure of the experiment. If you have a question at any point, please raise your hand.

The Decision Sheet contains 10 separate Decisions numbering 1 through 10. Each of these Decisions is a choice between "Option A" and "Option B". One of these decisions will be randomly selected to determine your earnings. A ten-sided die will be used to determine the payoffs. After you have made your choice, this die will be rolled twice: once to select one of the 10 Decisions to be used, and then again to determine your payoff for the Option associated with that decision, either A or B, given your choice at that decision.

To choose an Option for each decision, you will make one choice in the "Switch" column on the right. This choice indicates that you would like to switch from Option A to Option B, and will signify whether Option A or Option B is used to determine your earnings for each of the 10 decisions. For each decision **before** your choice, Option A will be used for payment. For each decision **after** your choice, including the decision where the choice was made, Option B will be used.

For example, if the die roll outcome is 6, Decision No. 6 will determine payment.

1. If your "Switch" number is **after** Decision No. 6, then Option A be used to determine your payoff. You will have a 6/10 chance of earning 200 tokens, and a 4/10 chance of earning 160 tokens.
2. If your "Switch" number is **before or at** Decision No. 6, then Option B will be used to determine your payoff. You will have a 6/10 chance of earning 385 tokens, and a 4/10 chance of earning 10 tokens.

Namely, once we select a decision to determine your earnings, if that decision came **before** your choice to switch, Option A will be used. If that decision came **after** or **at** your choice, Option B will be used.

Please look at Decision 3 at the top of the Decision Sheet. Option A pays 200 tokens with a chance of 3/10, and 160 tokens with a chance of 7/10. Since each side of a ten-sided die has an equal chance of being the outcome in a throw, this corresponds to Option A paying 200 tokens if the throw of the die is 1, 2 or 3, and 160 tokens if the throw of the die is any other number (4 through 10). Option B pays 385 tokens if throw of the die is 1, 2 or 3, and 10 tokens if the throw of the die is any other number (4 through 10). The other Decisions are similar, except that as you go down the table, the chances of the higher payoff for each Option increase. For Decision 10 in the bottom row, no die will be needed since each Option pays the highest payoff for sure. Your choice there is between 200 tokens and 385 tokens.

Once you are done with both tasks H and T, you will proceed to another room where an experimenter will flip a coin. If the outcome is Heads, the experimenter will throw a ten-sided die to select which of the ten Decisions will be used. The die will then be thrown again to determine your earnings for the Option you chose for the selected Decision. Earnings in tokens will be converted to dollars such that 20 tokens = $1, so if your payoff was 200 tokens you would earn $10. This will be added to your previous earnings, and you will be paid in cash when finished.

Please raise your hand if you have any questions. If you do not have any questions, please proceed to the Decision Sheet and mark your choices.

Decision Sheet

Please indicate at which decision you would like to switch from Option A to Option B by putting a check mark in the box of the Switch column. You should have 1 check mark. For any decisions before this check mark, Option A will be used to determine payment. For any decisions after and including the check mark, Option B will be used.

NO.	**Option A**	**Option B**	**Switch**
1	1/10 chance of 200 tokens 9/10 chance of 160 tokens	1/10 chance of 385 tokens 9/10 chance of 10 tokens	
2	2/10 chance of 200 tokens 8/10 chance of 160 tokens	2/10 chance of 385 tokens 8/10 chance of 10 tokens	
3	3/10 chance of 200 tokens 7/10 chance of 160 tokens	3/10 chance of 385 tokens 7/10 chance of 10 tokens	
4	4/10 chance of 200 tokens 6/10 chance of 160 tokens	4/10 chance of 385 tokens 6/10 chance of 10 tokens	
5	5/10 chance of 200 tokens 5/10 chance of 160 tokens	5/10 chance of 385 tokens 5/10 chance of 10 tokens	
6	6/10 chance of 200 tokens 4/10 chance of 160 tokens	6/10 chance of 385 tokens 4/10 chance of 10 tokens	
7	7/10 chance of 200 tokens 3/10 chance of 160 tokens	7/10 chance of 385 tokens 3/10 chance of 10 tokens	
8	8/10 chance of 200 tokens 2/10 chance of 160 tokens	8/10 chance of 385 tokens 2/10 chance of 10 tokens	
9	9/10 chance of 200 tokens 1/10 chance of 160 tokens	9/10 chance of 385 tokens 1/10 chance of 10 tokens	
10	10/10 chance of 200 tokens 0/10 chance of 160 tokens	10/10 chance of 385 tokens 0/10 chance of 10 tokens	

Incentivized Ambiguity Aversion Elicitation

Instructions for Task T

In addition to the Instructions, this envelope contains a Decision Sheet. Please look on to your Decision Sheet as you read these Instructions to ensure that you understand the procedure of the experiment. If you have a question at any point, please raise your hand.

The Decision Sheet contains 20 separate Decisions numbering 1 through 20. Each of these Decisions is a choice between drawing a ball from "Urn A" or "Urn B". One of these decisions will be randomly selected, depending upon a roll of a one 20-sided die, to determine your earnings. You will select a color, Red or Black, and this will be your **Success Color**. Once a decision is selected, your earnings will be determined by whether the ball drawn from the Urn matches your Success Color.

You will make one choice in the "Switch" column on the right. This choice indicates that you would like to switch from drawing a ball out of Urn A to drawing out of Urn B. Making a choice to switch means that every decision **before** your choice, a ball will be drawn from Urn A. For each decision **after** your decision, including the decision where the choice was made, a ball will be drawn from Urn B.

For example, if the die roll is 9, Decision No. 9 will determine payment.

1. If your "Switch" number is **after** Decision No. 9, a ball will be drawn from Urn A, and if the color of the ball matches the Success Color, then you will 200 tokens. If it does not match, you will earn 0 tokens.
2. If your "Switch" number is **before or at** Decision No. 9, a ball will be drawn from Urn B, and if the color of the ball matches the chosen Success Color, then you will earn 228 tokens. If it does not match, you will earn 0 tokens.

Namely, once we select a decision to determine your earnings, if that decision came **before** your choice to switch, a ball will be drawn from Urn A. If that decision came **after** or **at** your choice, a ball will be drawn from Urn B.

In each of the 20 decisions, Urn A has 50 Red balls and 50 black balls, and pays 200 tokens if the ball drawn from Urn A matches your Success Color, and 0 tokens if it does not match. Since each color has a ½ chance of being drawn, this means that drawing from Urn A pays 200 tokens with a chance of ½, and pays 0 with a chance of ½.

Urn B, on the other hand, has an unknown number of Red and Black balls (with a total of 100 balls). It pays a positive amount if the ball drawn from Urn B matches your Success Color, and 0 tokens if it does not match. Since the chance of each color being drawn is unknown, the chance of Urn B paying a positive number of tokens is unknown as well. The only difference between the 20 options is the amount paid when a ball matching your Success Color is drawn from Urn B.

When you have made your choice to switch, please place these instructions and your Decision Sheet back into the envelope marked T. Once you are done with both tasks H and T, you will proceed to another room where an experimenter will flip a coin. If the outcome is Tails, the experimenter will throw one 20-sided die to select which of the 20 decisions will be used. The experimenter will then draw a ball from the Urn you had selected for that Decision to determine your payoff. Earnings in tokens will be converted to dollars such that 20 tokens = $1, so if your payoff was 200 tokens you would earn $10. You will then be paid in cash.

Please raise your hand if you have any questions. If you do not have any questions, please proceed to the Decision Sheet and mark your choices.

Decision Sheet

My Success Color is (please circle one): **Red** **Black**

Please indicate at which decision you would like to switch from Urn A to Urn B by putting a check mark in the box of the Switch column. You should have 1 check mark total. For any decisions before this check mark, a ball will be drawn from Urn A. For any decisions after and including the check mark, a ball will be drawn from Urn B.

	Urn A	**Urn B**	
No.	**50 Red balls, 50 Black balls**	**? Red balls, ? Black balls**	**Switch**
1	200 tokens if Chosen Color 0 tokens if not	164 tokens if Chosen Color 0 tokens if not	
2	200 tokens if Chosen Color 0 tokens if not	172 tokens if Chosen Color 0 tokens if not	
3	200 tokens if Chosen Color 0 tokens if not	180 tokens if Chosen Color 0 tokens if not	
4	200 tokens if Chosen Color 0 tokens if not	188 tokens if Chosen Color 0 tokens if not	
5	200 tokens if Chosen Color 0 tokens if not	196 tokens if Chosen Color 0 tokens if not	
6	200 tokens if Chosen Color 0 tokens if not	204 tokens if Chosen Color 0 tokens if not	
7	200 tokens if Chosen Color 0 tokens if not	212 tokens if Chosen Color 0 tokens if not	
8	200 tokens if Chosen Color 0 tokens if not	220 tokens if Chosen Color 0 tokens if not	
9	200 tokens if Chosen Color 0 tokens if not	228 tokens if Chosen Color 0 tokens if not	
10	200 tokens if Chosen Color 0 tokens if not	236 tokens if Chosen Color 0 tokens if not	
11	200 tokens if Chosen Color 0 tokens if not	244 tokens if Chosen Color 0 tokens if not	
12	200 tokens if Chosen Color 0 tokens if not	252 tokens if Chosen Color 0 tokens if not	
13	200 tokens if Chosen Color 0 tokens if not	260 tokens if Chosen Color 0 tokens if not	
14	200 tokens if Chosen Color 0 tokens if not	268 tokens if Chosen Color 0 tokens if not	
15	200 tokens if Chosen Color 0 tokens if not	276 tokens if Chosen Color 0 tokens if not	
16	200 tokens if Chosen Color 0 tokens if not	284 tokens if Chosen Color 0 tokens if not	
17	200 tokens if Chosen Color 0 tokens if not	292 tokens if Chosen Color 0 tokens if not	
18	200 tokens if Chosen Color 0 tokens if not	300 tokens if Chosen Color 0 tokens if not	
19	200 tokens if Chosen Color 0 tokens if not	308 tokens if Chosen Color 0 tokens if not	
20	200 tokens if Chosen Color 0 tokens if not	316 tokens if Chosen Color 0 tokens if not	