



Culture and Gender difference In willingness To Compete

竞争意愿的性别和文化差异

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(预注册)

作者: Karen Evelyn Hauge, Andreas
Kotsadam and Anine Riege

汇报人: 孙腾

小组: 西方经济学

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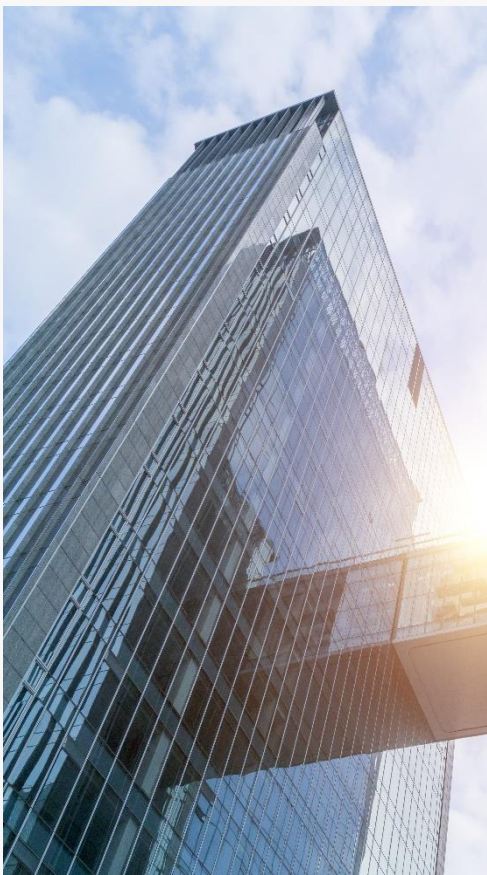
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PART 01

介绍

Introduction



自然资源假说

The resource hypothesis

拥有更多资源会减少特定性别的抱负和目标的障碍，从而增加偏好的性别差异。



社会角色假说

The social role hypothesis

在性别平等度较高的社会，偏好的性别差异更小甚至会消失。

实证例子：(Gneezy et al., 2009)

跨国比较存在的问题



01

除文化因素外，各国制度和禀赋不同也会对实证结果产生影响



02

各国参与者的选择可能对结果存在偏见



03

在各国实验的开展存在不同

The epidemiological approach identifies the effect of culture while keeping institutions constant by comparing outcomes of individuals living in the same economic and institutional environment, but whose cultural beliefs, norms and preferences are potentially different due to different migration histories (Fernández, 2011; Giuliano, 2020). Using a classic competition experiment, we collected data online from 1,943 Norwegians with parents born in 59 different countries. As a proxy for ancestral culture, we use FLFP in the parents' countries of birth (following, for instance, Fernández and Fogli, 2009). Our participants are born in Norway and other studies from Norway typically find a strong assimilating convergence from the first generation to the second (e.g., Finseraas *et al.*, 2020). As such, all individuals in our sample face (comparatively) similar formal institutions, schools and labour markets, while differing in their cultural heritage from their parents. In other words, migration separates ancestral culture from the institutions that caused it.

实验结论和贡献

Experimental finding and contribution

结论：父母来自性别更加平等国家的人性别差距更小，女生竞争意愿更强，男生竞争意愿更弱

1.特殊性别态度会影响移民到挪威的程度

2.关于研究样本选取问题

3.过度采样性别平等程度较低的国家中，大部分国家为穆斯林信仰，无法排除信仰和平等性别

规范

贡献：使用流行病学方法记录文化信仰和价值在竞争意愿性别差异传递的重要性（关于竞争意愿的文化信仰和价值的传递）、实验在国内完成、预注册方法



PART 02

实验设计及数据

Experimental design and data

实验设计及数据

Experimental design and data

总共进行三轮实验和一个调查问卷，每轮实验要求被试者在90s时间内尽可能多的完成任务，所有被试者有50挪威克朗的出场费和随机所得（在一到三轮测试中或调查问卷中随便选择一个作为随即所得），为选择出满意的被试池和样本规模，作者选择放宽一些限制，选择采用线上实验的方式，线上实验也被证明可以复制常规实验的结果，实验通过短信的方式招募，招募时间为2019年5月到8月。

1	0	1	1	0
0	1	0	0	0
1	1	0	0	1
1	0	1	0	1
0	1	0	1	1

四组当中表现最好的人可以每个任务获得20挪威克朗，第二轮过后，被试者被要求猜其在小组当中的排名，猜对的给5挪威克朗

第一轮

第二轮

第三轮

在90s时间内数5*5方格中的1和0的数量，每完成一个任务可获得5挪威克朗

被试者做同样的数数字任务，但需要被试者选择支付方式（第一种或第二种），结束过后做一个调查问卷，目的在于测量一些控制变量，例如对自身表现、风险规避和利他主义等，接下来告知被试者哪一轮被选出，发放报酬。

⁴ The first text message read: 'The University of Oslo and the Frisch Centre invite you to a research study. Contribute to research and earn 50-400 NOK. Voluntary, approx. 20 min'. Text message 2 (sent simultaneously with text message

1) read: 'Read more about the research here: [Link](#). Participate here (phone/tablet/computer): [Link](#)'. The reminder sent out two days later read: 'We remind you about the invitation to participate in a research study. Your response is important for the research. Participate here: [Link](#)'.

实验变量及问题设定

Experimental variables and problem setting

They can choose up to five characteristics out of 13. The 13 characteristics are independence; feeling of responsibility; imagination; tolerance and respect for other people; thrift, saving money and things; determination, perseverance; religious faith; unselfishness; obedience; politeness; gender equality; willingness to compete and hard work. We also ask

Table 1. *Definitions of Variables.*

(1) Variable	(2) Question	(3) Coding
Risk	In general, how willing are you to take risks?	1 = not willing to take risk at all; ... 10 = very willing to take risk
Self-confidence	Guess of how well they performed in the counting task relative ... to the other group members	1 = first place; 4 = fourth place continuous
Guess r1	How many tasks do you think you solved in round 1	
Control	To what extent do you think your result in part 1 is due to controllable ... (i.e., effort) versus uncontrollable (i.e., chance and difficulty) factors?	1 = no control; 10 = full control
Gender attitudes scale	The average of these three variables: Being a housewife is just as fulfilling as working for pay On the whole, men make better political leaders than women do A university education is more important for a boy than for a girl	0: strongly agree; 1: agree; 2: do not know; 3: disagree; 4: strongly disagree 0-4 (as above) 0-4 (as above) 0-4 (as above)
Control	How much freedom of choice and control in life you have over the ... way your life turns out	1: none at all, 10: a great deal
Make parents proud	One of my main goals in life has been to make my parents proud	As gender attitudes
Live with parents	Do you live with your parents?	1: yes, 0: no
Voted	Did you vote at the last election?	1: yes, 0: no
Important to self	Which characteristics, if any, do you consider to be especially ... important to encourage children to learn at home?*	1: listed characteristic; 0: did not list
... Gender equality		1: listed characteristic; 0: did not list
... Religion		1: listed characteristic; 0: did not list
... Willingness to compete		1: listed characteristic; 0: did not list
... Hard work		1: listed characteristic; 0: did not list
... Obedience		1: listed characteristic; 0: did not list
Important to parents	Which characteristics, if any, did your parents emphasise in your childhood?*	1: listed characteristic; 0: did not list
... Gender equality		1: listed characteristic; 0: did not list
... Religion		1: listed characteristic; 0: did not list
... Willingness to compete		1: listed characteristic; 0: did not list
... Hard work		1: listed characteristic; 0: did not list
... Obedience		1: listed characteristic; 0: did not list

实验策略和假说

Experimental strategy and Hypotheses

$$Compete_{ic} = \beta Female_i + \delta Country_c + \lambda Culture_c \times Female_i + \chi X_i + \epsilon_{ic}.$$

$Comete_{ic}$ 表示拥有c国背景的个体i的竞争意愿

假设 β 为负, 即女性竞争意愿少于男性

$Culture_c$ (log FLFP)性别平等准则

X_i 为出生年的固定效应

如果 β 为负, λ 为正(负), 证明来自性别平等度较高国家的竞争意愿的性别差异更小(大)

文化变量是否对男或者女的竞争意愿有影响

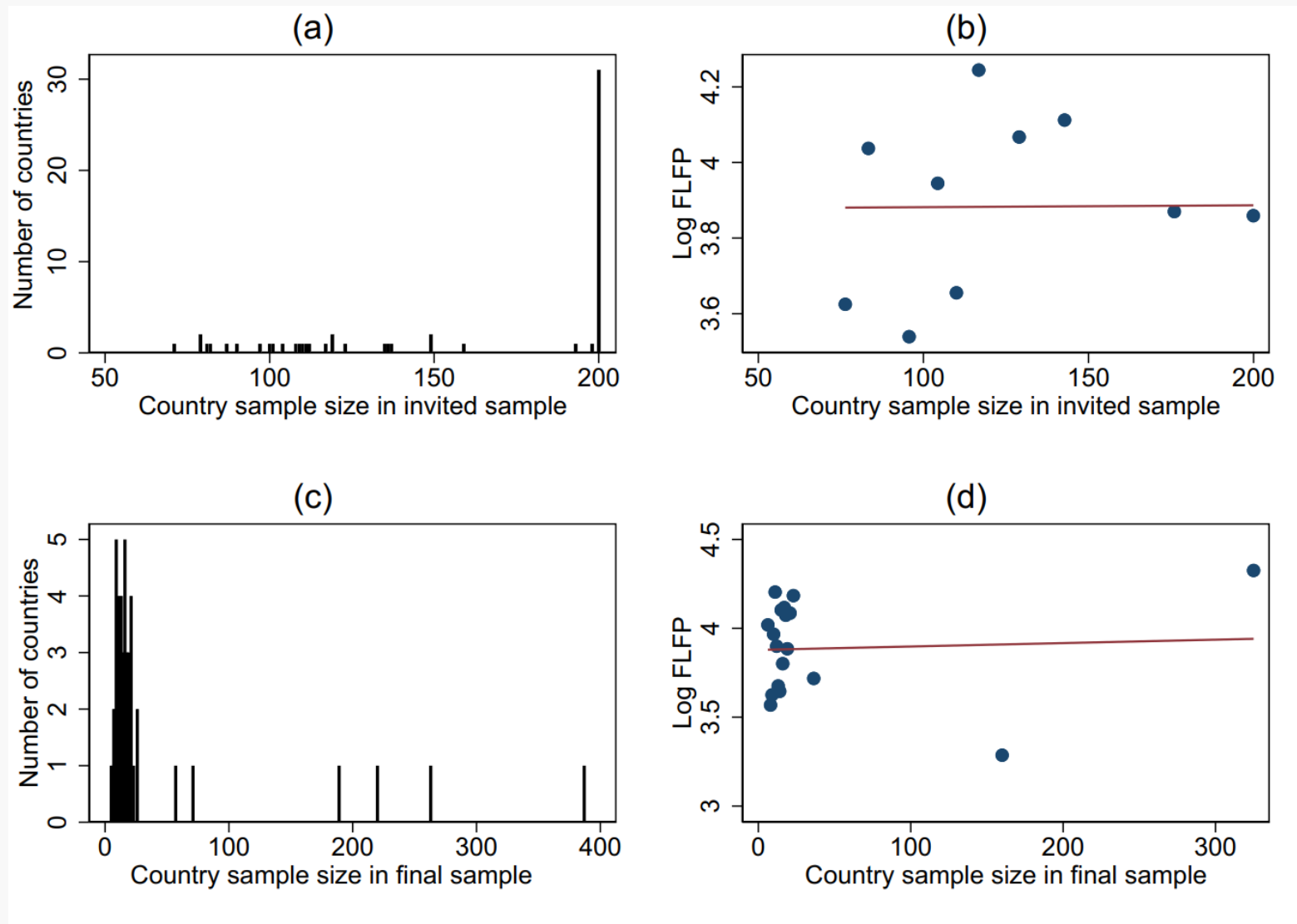
Our study population includes people born in Norway between 1980 and 2000 with at least one parent born outside of Norway in one of 59 different countries. We chose the 59 ancestral countries with the highest number of individuals recorded in the Population Register in Norway. The age group has a parent generation with a fair share of immigrants from various ancestral countries, giving us enough potential participants to recruit from. In addition, restricting the age of the study population to be between 19 and 39 years old ensures that people in the sample are not too different from each other, while also avoiding adolescence and menopause, both of which affect WTC (Andersen *et al.*, 2013; Flory *et al.*, 2018). See Online Appendix Table A.1 for a list of countries and sample sizes in our study.

We aimed at recruiting up to 40 participants from each country background: 20 women and 20 men. We intended to invite a random draw of 200 people from each country-gender cell, but not all country backgrounds had 200 people with phone numbers registered in the Population Register. The smallest group had 71 people, and with expected response rates below 28%, our goal would not be possible. Therefore, we invited all people available from countries with fewer than 200 people registered with a phone number, and a random draw of 200 people from countries with more than 200 people registered with a phone number.

The distribution of the invited sample sizes by parental country of birth is shown in Figure 2. Panel (a) shows that we invited a random draw of 200 individuals from 31 country backgrounds, while there are considerably fewer individuals from some country backgrounds. Panel (b) shows that the sample sizes by country background seem unrelated to our main measure of *Culture*. Additionally, we oversampled individuals at the tails of the FLFP distribution to increase power (List *et al.*, 2011).⁸ In total, 1,943 consenting respondents completed the competition experiment (round 3). The distribution of background country sample sizes in the final sample is illustrated in panels (c) and (d) of Figure 2.

样本选择

Sample choose





PART 03

实验结果

Experimental results

实验表现和竞争意愿的性别差异

Gender difference in performance and WTC

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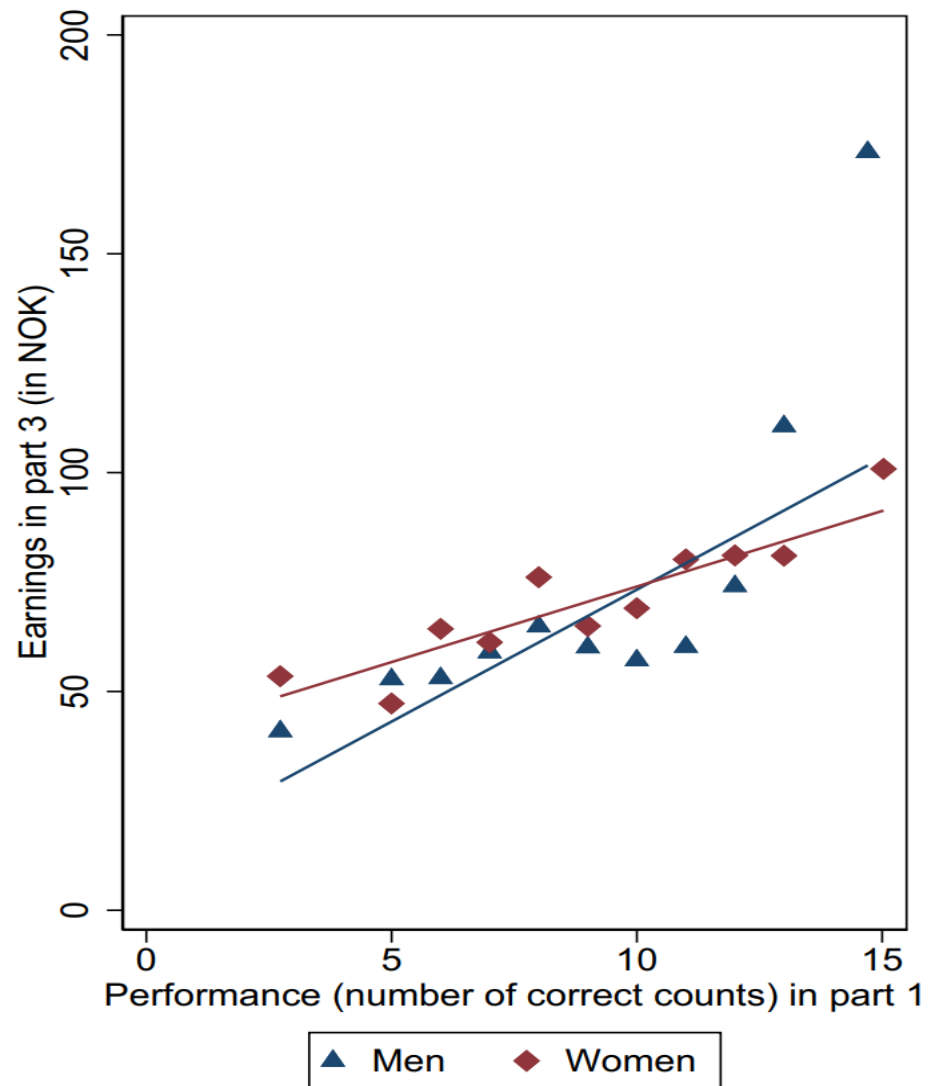
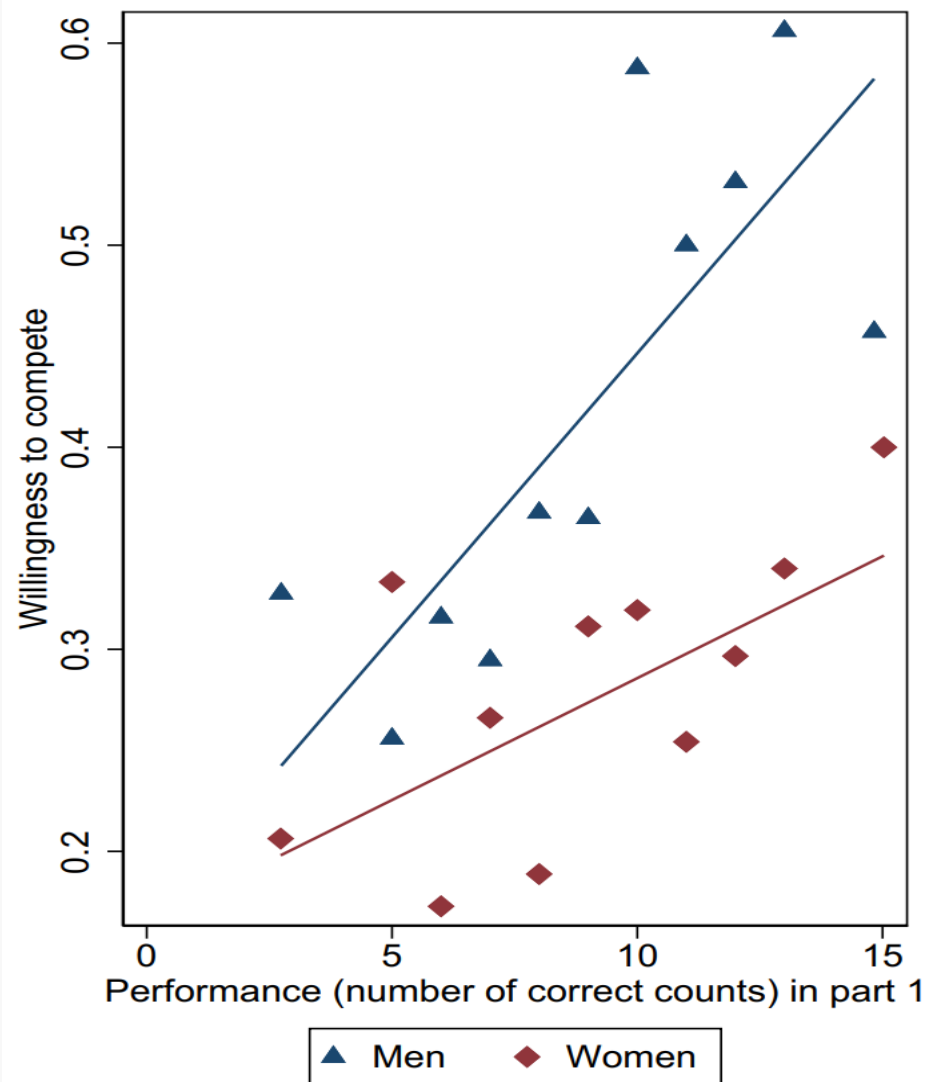
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Table 3. *Effect of Gender and Culture on Performance and WTC.*

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Performance piece rate	Performance competition	Compete	Compete	Compete	Compete	Compete
Female	0.108 (0.128)	0.156 (0.129)	-0.139*** (0.022)			-0.140*** (0.015)	-0.139*** (0.015)
Log FLFP				0.021** (0.009)	-0.022* (0.012)		-0.022* (0.012)
Female × Log FLFP						0.046*** (0.012)	0.044*** (0.012)
Mean dep. var. for men	8.73	10.02	0.41				
Mean dep. var. in sample				0.27	0.41	0.33	0.33
No. of observations	1,943	1,943	1,943	1,067	876	1,943	1,943
R^2	0.00	0.00	0.02	0.00	0.00	0.06	0.02
Sample	All	All	All	Women	Men	All	All
Country FEs	No	No	No	No	No	Yes	No
Mean FLFP						57.78	57.78
SD FLFP						24.17	24.17

实验表现和竞争意愿的性别差异

Gender difference in performance and WTC



文化对竞争意愿的影响

The effect of culture on WTC

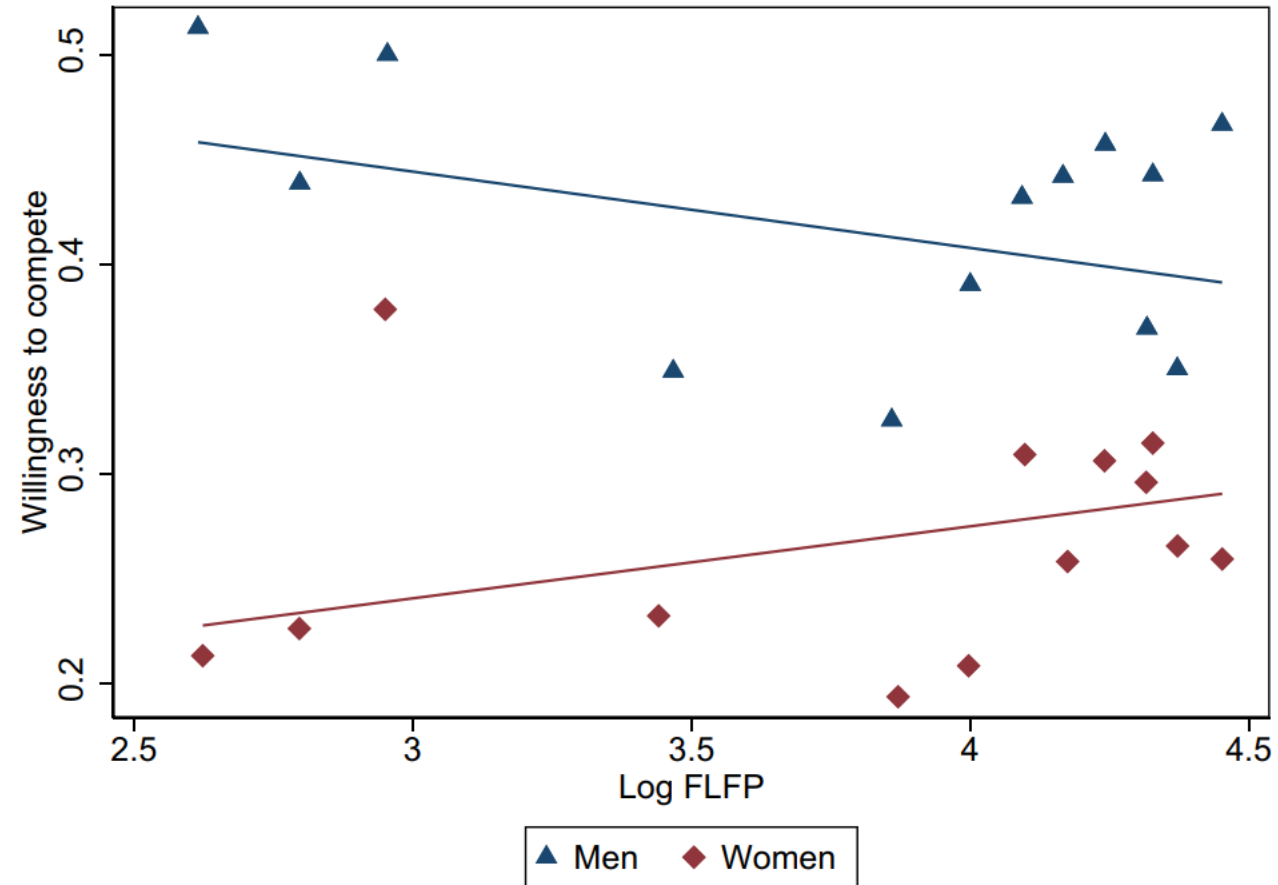


Fig. 4. Relation between Culture and WTC.

父母原籍国文化是否被内化

Is parental ancestral culture internalized?

Table 4. *Correlations with Ancestral Country Measures.*

	Correlation with WVS values in ancestor country	Correlation with log FLFP
Gender attitudes scale	0.15**	0.10**
Control	0.07	0.16***
Make parents proud	0.35***	0.25***
Live with parents	0.89***	-0.13***
Voted	NA	0.01
<i>Important to self</i>		
Gender equality	NA	-0.02*
Religion	0.30***	-0.08***
Willingness to compete	NA	-0.02***
Hard work	0.11**	-0.05***
Obedience	0.20***	-0.02*
<i>Important to parents</i>		
Gender equality	NA	0.00
Religion	NA	-0.17***
Willingness to compete	NA	-0.00
Hard work	NA	-0.02
Obedience	NA	-0.03

父母原籍国文化是否被内化

Is parental ancestral culture internalized?

Table 5. *Effect of Culture on WTC, Split by One or Both Parents Born Abroad.*

	(1) Compete	(2) Compete
Female	-0.135** (0.051)	-0.102*** (0.021)
Female × Log FLFP	-0.015 (0.078)	0.078*** (0.017)
Mean dep. var. in sample	0.35	0.32
No. of observations	1,075	816
R^2	0.08	0.11
Sample	One	Both



PART 04

替代解释

Alternative explanation

个人层面的一般因素

General factors at the individual levels



Table 6. *Effects of Culture on WTC, with Individual-Level Controls.*

	(1)	(2)	(3)	(4)	(5)	(6)
	Compete	Compete	Compete	Compete	Compete	Compete
Female	-0.141*** (0.021)	-0.143*** (0.021)	-0.106*** (0.021)	-0.134*** (0.022)	-0.108*** (0.022)	-0.110*** (0.017)
Performance under piece-rate pay	0.019*** (0.004)				0.006 (0.005)	0.006 (0.006)
Performance under competitive pay		0.022*** (0.004)			0.006 (0.005)	0.006 (0.005)
Believe 2nd			-0.211*** (0.028)		-0.203*** (0.029)	-0.211*** (0.024)
Believe 3rd			-0.338*** (0.029)		-0.323*** (0.031)	-0.326*** (0.031)
Believe 4th			-0.337*** (0.037)		-0.316*** (0.040)	-0.318*** (0.037)
Risk				0.020*** (0.005)	0.014** (0.005)	0.016** (0.006)
Control					-0.006 (0.005)	-0.008 (0.006)
Guess r1					0.000 (0.002)	-0.000 (0.003)
Female × Log FLFP						0.053*** (0.019)
Mean dep. var. for men	0.41	0.41	0.41	0.41	0.41	0.34
No. of observations	1,943	1,943	1,942	1,906	1,883	1,883
R ²	0.03	0.04	0.09	0.03	0.11	0.14
Country FEs	No	No	No	No	No	Yes

Table 8. *Effects of Gender and Culture on Response Rates.*

	(1) Response rate	(2) Response rate	(3) Response rate	(4) Response rate
Log FLFP	-0.001 (0.012)	0.008 (0.008)		0.008 (0.008)
Female × Log FLFP			-0.010 (0.019)	-0.009 (0.018)
Female			0.016 (0.027)	0.017 (0.026)
Mean dep. var. in sample	0.10	0.09	0.10	0.10
No. of observations	1,243	1,015	2,258	2,258
R^2	0.00	0.03	0.34	0.04
Sample	Women	Men	All	All
Country FEs	No	No	Yes	No
Mean FLFP			56.56	56.56
SD FLFP			24.74	24.74

Table 9. *Effect of Culture on WTC, Split by Answering the Survey Before or After the Reminder.*

	(1) Compete	(2) Compete	(3) Compete	(4) Compete	(5) Compete	(6) Compete
Female	-0.166*** (0.026)	-0.075* (0.039)	-0.075* (0.039)	-0.164*** (0.021)	-0.080*** (0.030)	-0.073** (0.028)
After reminder			0.076** (0.036)			0.079*** (0.027)
After reminder × Female			-0.091* (0.047)			-0.092** (0.037)
Female × Log FLFP				0.049*** (0.017)	0.042** (0.016)	0.038** (0.017)
After reminder × Log FLFP						0.044*** (0.016)
After reminder × Female × Log FLFP						0.009 (0.027)
Mean dep. var. in sample	0.43	0.36	0.41	0.34	0.32	0.33
No. of observations	1,361	582	1,943	1,361	582	1,943
R^2	0.03	0.01	0.02	0.07	0.10	0.06
Sample	Late	Early	All	Late	Early	All
Country FEs	No	No	No	Yes	Yes	Yes
Mean FLFP				57.64	58.10	57.78
SD FLFP				24.65	23.00	24.17

实验选择

Selection into the experiment

$$\begin{aligned}
 X_{ics} = & \alpha Sample_s + \beta Female_i + \delta Culture_c + \psi Culture_c \times Sample_s \\
 & + \kappa Female_i \times Sample_s + \mu Culture_c \times Female_i \\
 & + \lambda Culture_c \times Female_i \times Sample_s + \chi YoB_i + \epsilon_{ics},
 \end{aligned}$$

Table 11. *Tests of Differential Selection.*

Panel A. Selection tests using demographic variables						
	(1) Married	(2) Divorced	(3) Widow	(4) Single	(5) No. siblings	(6) HH size
Sample	0.036*** (0.010)	-0.001 (0.002)	-0.000 (0.000)	-0.035*** (0.010)	0.158*** (0.050)	0.046 (0.051)
Female	0.037*** (0.003)	0.009*** (0.001)	0.000*** (0.000)	-0.046*** (0.003)	0.007 (0.011)	0.059*** (0.014)
Log FLFP	-0.035** (0.015)	-0.005*** (0.001)	-0.000 (0.000)	0.040** (0.016)	-0.401*** (0.097)	-0.164*** (0.043)
Log FLFP × Sample	0.009 (0.007)	0.001 (0.003)	0.000 (0.000)	-0.010 (0.007)	0.040 (0.053)	-0.038 (0.060)
Female × Log FLFP	-0.008** (0.004)	-0.003*** (0.001)	0.000 (0.000)	0.011** (0.004)	-0.058*** (0.015)	-0.012 (0.019)
Female × Sample	-0.042*** (0.011)	0.001 (0.003)	-0.000*** (0.000)	0.042*** (0.011)	-0.080 (0.052)	-0.118* (0.062)
Log FLFP × Female × Sample	0.001 (0.008)	0.009** (0.003)	-0.000 (0.000)	-0.010 (0.008)	0.030 (0.057)	-0.053 (0.054)
Mean dep. var. in sample	0.12	0.02	0.00	0.86	2.17	2.61
No. of observations	137,900	137,900	137,900	137,900	137,930	119,395
R ²	0.17	0.03	0.00	0.21	0.08	0.11

以挪威为例，男性竞争意愿更强，女性竞争意愿相较于男性较弱；在父母性别更加平等的国家当中，男女生竞争意愿差距更小，制度和文化的相互影响也会对竞争意愿产生影响



感谢聆听!

THANKS!