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论文题目：Smiling in Bureaucracy and Marketplace: Exploring the Relationship between Gender Socialization and Organizational Structure

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论文摘要： This research examines the gendered differences in emotion display in the hierarchy and market, focusing on the prevalence of smiling as a key indicator. Through an AI-based analysis of more than 5,000 ID photographs from Chinese local consultative congresses, the study finds that female government officials exhibit a higher frequency of smiles compared to their male counterparts, relative to other occupation groups. We hypothesize that societal expectations and gendered norms determine emotional expression within hierarchical and market-based systems, putting more pressure on women to display a happy face inside hierarchies. We then test the hypothesis using a survey experiment online in China (N=1020) and find supportive evidence. The findings contribute to our understanding of how gender and social context shape emotion displayed in the market versus hierarchies.

关键词： Smiling; Gender socialization; Organizational structure; Cultural norms; Emotion Display.

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论文正文:

1. Introduction

Extensive experimental evidence has been amassed on the gender differences in preferences, personality traits, and emotional displays, all of which likely contribute to gender disparities in the labor market (see review articles by Croson and Gneezy (2009) and Brody and Hall (2010)). It has long been argued that sex role socialization, occurring in various social institutions such as family, education, religions, etc, plays an important role in shaping preferences and behaviors by creating gendered stereotypes and reinforcing society's expectations and norms (Crocoran and Courant 1985). However, limited work is done on how different types of economic structures affect gender socialization. Fafchamps (2011) points out that, economic development involves a structural transformation in the way people are allocated to tasks, which requires changes in norms and attitudes. If so, we would expect to see different gender norms in different domains of economic institutions. This paper attempts to study how the gender norm differs in two fundamental organizational structures: hierarchies vs. markets.

We focus on smiles as an indicator of gender socialization. Society traditionally expects that men should be firm, confident, and have the leadership qualities, while women should be gentle, caring, and have amiable qualities. Smiles are one of the major non-verbal expressions to show friendliness and/or obedience. Some researchers suggest that smiles in women may reflect false positivity that is aligned with social expectations, rather than their true emotional state (Briton & Hall, 1995; Bugental, Love, & Gianetto, 1971). Therefore, we examine the gender difference in smiles as an indicator of gender socialization.

Considering that hierarchical organizations typically place a greater emphasis on obedience compared to market-oriented settings where participants enjoy more equal footing, it is reasonable to hypothesize that societal expectations regarding female smiling would be more pronounced within hierarchical structures. Consequently, it follows that the gender disparity in smile expressions would likely be less pronounced among individuals operating within market-oriented environments. In essence, in environments where

hierarchy is less prominent and individuals possess a more equitable status, the pressure or societal expectation for females to engage in excessive smiling may be diminished, leading to a reduced gender discrepancy in smiling behaviors. We will test this hypothesis by combining observational studies and an online experiment.

We start by examining smiles in ID photographs of individuals from bureaucratic organizations and marketplaces. We collect online photos of 5,122 representatives from the Chinese People's Political Consultative Conference (CPPCC) and identify facial attributes using AI techniques from Microsoft Azure FACE API.

Our analysis reveals that, overall, females tend to smile more in these photos than males. Notably, this gender disparity in smiling is more pronounced among government bureaucrats compared to those in other occupations such as entrepreneurs, professionals, and so on.

Could the differences between these two types of organizational structures be attributed to social expectations? To investigate this possibility, we conducted an online survey experiment. In this experiment, we presented respondents with 20 pairs of photos and assigned them to one of two randomly selected vignettes: one associated with market settings and the other with hierarchical organizations. The photo pairs in my inventory were carefully matched based on AI-generated facial attributes, ensuring that each pair was identical in terms of key control variables and the six primary emotions, which include anger, contempt, disgust, fear, sadness, and surprise. The primary objective of this experimental setup was to assess our hypotheses. Specifically, we aimed to determine whether the only noticeable differences between the photos in each pair were the variations in smiling levels.

In summary, our findings strongly indicate that traditional gender expectations play a significant role in influencing the gender-based differences in smiling between markets and hierarchical organizational settings. Our research reveals that respondents are more inclined to select the face with a higher degree of smiling, particularly when presented with the hierarchy vignette, and this trend is especially pronounced for women.

The rest of this paper is organized as follows. Section 2 reviews relevant pieces of literature. Section 3 introduces the data. Section 4 presents the empirical strategy. Section 5 reports the results. Section 6 concludes.

2. Literature Review

This paper contributes to the existing literature on the economic impacts and determinants of gender norms. Recent research has convincingly demonstrated that gender norms exert a substantial influence on a wide range of economic choices and outcomes, as documented in various studies (e.g., Hauge et al. 2023). Specifically, gender norms have been identified as potential barriers to women's employment in developing countries, as highlighted by Jayachandran (2021). An expanding body of empirical work has delved into diverse factors that contribute to the formation, reinforcement, and transformation of these gender norms. For example, some studies have explored the historical context of production technology and its impact on shaping attitudes toward gender roles. Pioneering research by Alesina, Giuliano, and Nunn (2011, 2013) has shown that historical factors, such as the use of ploughs, have enduring effects on fertility decisions and gender role attitudes. Additionally, other studies have examined how the interplay between marriage dynamics and labor market incentives influences women's economic choices, as exemplified by the work of Bursztyn, Fujiwara, and Pallais (2017). This study extends the current literature by demonstrating that different organizational structures can play distinct roles in shaping social expectations related to gender norms.

Furthermore, the findings in this paper also contribute to a related body of literature that explores how the evolution of economic institutions, including increased market participation, influences the development of preferences and social norms. Bowles (1998) developed a model illustrating the role of the fundamental economic institutions, the market, in the formation of cultural norms and preference. Fafchamps (2011) emphasizes that economic development often involves changes in economic structures, with one notable feature being greater market participation, which requires changes in social norms in different domains. Previous research has provided evidence that increased market participation can alter social preferences, such as other-regarding preferences, as seen in the work of Berlot and Fafchamps in 2015. However, there is limited evidence regarding

how market participation specifically impacts gender norms. The findings from this study suggest that, to the extent that the market participants have more equal standing than those in hierarchies, the traditional gender norm is less pronounced in the market environment.

3. Data and Summary Statistics

For the empirical analysis, a total of 5,122 pictures were selected from diverse regions across nine provinces in China in 2020. The data collection process began with the acquisition and organization of more than 5,000 ID-style photographs of members, with approximately 24.3% being female, from the Chinese People's Political Consultative Conference (CPPCC). This data was sourced from five provinces and four cities in China, which are unique in offering photographs of all incumbent members of their local CPPCC with accompanying occupation information. These regions include Sichuan Province (四川省), Anhui Province (安徽省), Heilongjiang Province (黑龙江省), Qinghai Province (青海省), Shanxi Province (山西省), as well as Huai'an City (淮安市), Shanghai City (上海市), Nanjing City (南京市), and Guangzhou City (广州市).

CCPCC members are categorized into five occupation groups. These occupation groups represent various segments of the population. The "Professional" group includes individuals with specialized skills and education. "Government (Gov.)" consists of party-state jobs, and primary leadership roles. "Business" encompasses entrepreneurs. "Democratic Parties (Dem. Parties)" comprises members of a few small political parties that are allowed to exist by the ruling Chinese communist party. Lastly, the "Ordinary People (Ord. People)" category represents the general populace, those who are not classified by specific professions or political affiliations but form the majority of society. In reality, the ordinary people category includes a large number of government officials and bureaucrats such as city mayors, public sector employees at various levels, entrepreneurs, and professionals. Therefore, based on the information of their job titles, we reclassified those in the "Ordinary People" group and dropped those with missing job information. We also dropped religious clergies from our sample, such as monks, tulkus, and so on, because they are predominantly male. Our sample consists of 3770 members after this processing. We found that the majority of the "Official People" can be classified into the other four groups. Those who are really qualified for "Ordinary People" only totals

In our data collection process, we employed Microsoft Azure FACE API to estimate various facial attributes from the photos. This included determining the individual's age, and gender, and assessing their emotional state across eight primary emotions: anger, contempt, disgust, fear, happiness, neutrality, sadness, and surprise. Additionally, the AI system provided estimations for other facial features, such as the presence of "glasses," the assessment of being "bald," the presence of a "moustache," "beard," "sideburns," as well as the application of "eye Makeup" and "lip Makeup." These comprehensive data points were gathered to establish a statistical foundation for subsequent analytical processes.

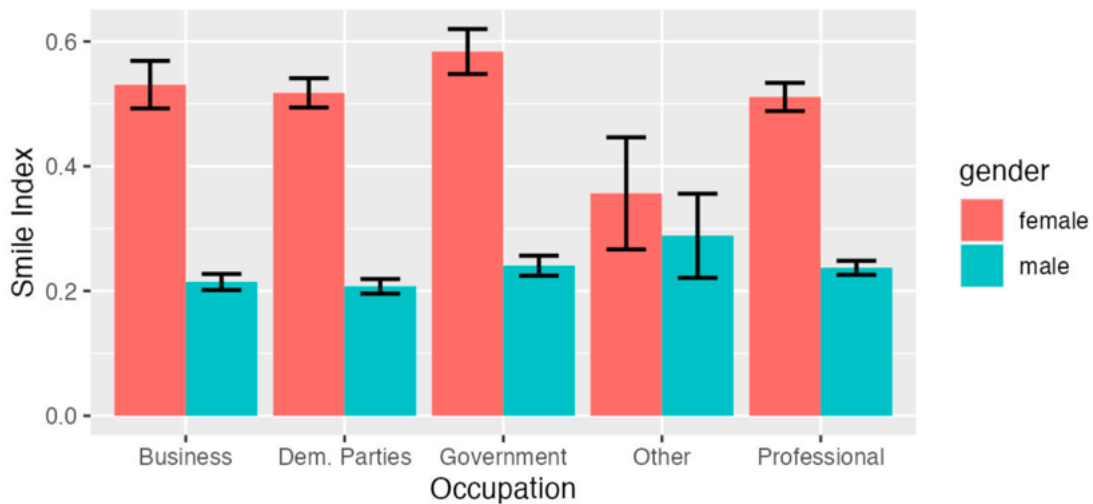
Table 1: Summary Statistics

Statistic	N	Mean	St. Dev.	Min	Max
age.ai	3,770	40.370	6.717	21	63
female	3,770	0.271	0.444	0	1
eyeglass	3,770	0.366	0.482	0	1
smile	3,770	0.296	0.378	0.000	1.000
anger	3,770	0.0001	0.001	0.000	0.047
contemp	3,770	0.003	0.015	0.000	0.427
disgust	3,770	0.0002	0.009	0.000	0.444
fear	3,770	0.0001	0.003	0.000	0.143
neutral	3,770	0.693	0.375	0.000	1.000
sadness	3,770	0.006	0.039	0.000	0.805
surprise	3,770	0.001	0.010	0.000	0.222
bald	3,770	0.078	0.049	0.000	0.600
moustache	3,770	0.078	0.051	0.000	0.600
beard	3,770	0.076	0.043	0.000	0.100
sideburns	3,770	-0.835	4.456	-15.800	15.600

In Table 1, we have summarized the data. From this table, we can deduce that the mean age inferred by AI is 40 years. Approximately 27.1% of the photos feature individuals who are female. Eyeglasses appear in approximately one third of the photos. Notably, the primary emotion most easily detectable in these photos is smile. However, it is important to understand that these ID photos are not intended to display strong emotions like anger, sadness, or contempt, which explains why these emotions are not prominently expressed

and the indexes for those emotions take a small value close to 0.

We show the average Smiling Scores categorized by occupation and gender in Figure 1. Our results revealed a consistent pattern: females across all occupations displayed notably higher levels of smiling compared to their male counterparts, aligning with established theories regarding gender roles in emotional expression. In fact, the average smiling score for females tended to be approximately two to three times higher than that of males. Moreover, we observed that women working in the government sector exhibited significantly more smiling than women in other occupations, implying an amplification of gender stereotypes related to emotional expression within hierarchical social settings.



Note: Members of the Chinese People's Political Consultative Conference (CPPCC) fall into five occupation groups: "Professional," "Government (Gov.)," "Business," "Democratic Parties (Dem. Parties)," and "Ordinary People." Standard error bars (plus or minus one standard error) are plotted. The gender is estimated by AI techniques. Data source: official government websites.

Figure 1. Average Smiling Scores of 3,770 CPPCC Members by Occupation and Gender

4. Methodology: Observational Study and Experimental Design

We first examine whether the gender difference in smiling index is bigger in the hierarchical structure than that in the market-oriented organizations using the observational data. Next, we design a survey experiment to examine whether social expectations towards

the two genders are different for hierarchical and less hierarchical structures. The methodologies for the two parts are described as follows.

4.1 Model for the Observational Study

We drop the 54 cases that do not fall into one of the four major occupation categories: government, democratic parties, business, and professionals. We consider that business people and professionals work in relatively more market-oriented workplaces while the government is more hierarchical. Therefore, we estimate the following regression:

$$\begin{aligned}
 y_{ic} = & \beta_0 + \beta_1 Female_{ic} + \beta_2 I(Government)_{ic} + \beta_3 I(DemParty)_{ic} \\
 & + \beta_4 Female_{ic} * I(Government)_{ic} + \beta_5 Female_{ic} * I(DemParty)_{ic} \\
 & + X\gamma + \lambda_c + \epsilon_{ic} \quad (1)
 \end{aligned}$$

Where y_i is the outcome variable indicating the smilingness of individual i . We use smile index multiplied by 100 (smile*100) and the logged term of (1+smile*100) as the outcome variable. $Female_i$ an indicator for individual i being female. $I(government)_i$ and $I(DemParty)_i$ are the indicators for individual i belonging to the “government” category and the “democratic parties” category, respectively. The reference group is therefore the “business and professionals” categories. X is a vector of controls including age, wearing eyeglasses or not, having beard or not, having moustaches or not, being bald not. λ_c is the regional fixed effects. The standard errors are clustered at the region level.

If females tend to display more smiling, we would expect β_1 to be positive. If the hierarchical structure in the government tends to strengthen gender stereotypes, we would expect β_4 to be positive.

4.2 Design for the Experiment

To examine the social expectation regarding smiling, we first create pairs of photos that exhibit close resemblance in all attributes except for the happiness/smiling emotion. While also matching on the other six primary emotions and specific control variables, we followed a systematic approach. we organized my dataset with all relevant attributes that we tried to precisely match for a given photo pair, including "region," "age," "gender," "anger," "contempt," "disgust," "fear," "sadness," "surprise," "glasses," "bald," "moustache," "beard," "sideburns," "eye makeup," "lip Makeup."

Next, we found all pairs of photos in my inventory that matched the above attributes, ensuring that each pair exactly matches in terms of the above control variables and the six primary emotions: anger, contempt, disgust, fear, sadness, and surprise. Our goal was to maintain consistency in these factors across the pairs. Of course, we remove all pairs that consist of the same photos.

We left the happiness/smiling emotion out when we did the matching. This introduces random variation in the "happiness" emotion within each pair. We calculated the absolute difference in "happiness" scores between the two photos. In the pairing process for our experiment, if Photo A and Photo B formed a pair, Photo B and A also constituted a pair. To prevent redundancy, we randomly selected and retained only one of these pairs. Because the order of photos within a pair was randomized, whether the first photo exhibited more smiling or less smiling than the second photo was entirely random. This approach was designed to maintain the experiment's randomness and minimize any potential bias associated with the order of photos within each pair.

One noteworthy consideration is the "neutral" emotion, which is highly negatively correlated with "happiness." Thus, we avoided explicitly matching the "neutral" emotion, allowing for natural variations in happiness levels while keeping other emotions and control variables comparable within a photo pair.

The above matching procedure results in 14,869 pairs of photos. Out of these initially gathered matched pairs, a random selection of 100 photo pairs was made, maintaining an equal distribution between men and women. It's important to acknowledge the inherent limitations of AI techniques, as they can occasionally introduce errors when estimating certain attributes like age and the presence of eyeglasses. Additionally, it's worth noting that AI's analysis is constrained to facial features alone and doesn't account for factors such as clothing or backgrounds in the photos.

To ensure the comparability and reliability of the selected photo pairs, a rigorous manual verification process was undertaken. During this manual review, specific criteria were applied. Photos featuring individuals in uniforms were excluded, as were photos of individuals from minority groups. Pairs with a significant age difference between the

photos were omitted from consideration, as were pairs with mismatched photo sizes. Furthermore, pairs in which the presence or absence of eyeglasses did not match were also removed from the sample.

Following this meticulous manual review, the sample size was refined to a total of 42 photo pairs. Among these pairs, 17 featured men, while the remaining pairs featured women. This comprehensive process was implemented to curate a final set of photo pairs that would be well-suited for the intended analysis, taking into account potential errors and inconsistencies that may have arisen during the AI-assisted data collection phase.

The experiment employed vignette studies, which involve brief descriptions of situations or individuals (vignettes). These vignettes are typically presented to respondents as part of surveys, aiming to solicit their judgments and assessments of these depicted scenarios. In our experiment, we utilized two distinct vignettes for this purpose.

Our survey was conducted on QQ Survey, one of the largest online survey platforms in China, in early September 2023 (N = 1020). The unit of analysis is the photo pair-respondent cell. We began by collecting basic background information from survey participants. Subsequently, we provided all survey participants with the following instructions: "On the next page, you will see 20 sets of photos with expressions. Please carefully read the vignette for each set and select one appropriate photo from each set."

Participants in the survey were randomly assigned to one of two different questions or vignettes:

Vignette 1: In this scenario, an employee of a specific company finds themselves in a negotiation room, attentively listening to a business competitor speaking. Respondents were asked to identify the photo that best represents the expression of this company employee.

Vignette 2: In this alternative scenario, a government worker is situated in their office, attentively listening to their leader speaking. Survey participants were tasked with selecting the photo that best captures the expression of this government worker.

It's important to note that Vignette 1 represents a market setting, while Vignette 2 represents a hierarchy setting. Each survey respondent was then presented with 20 randomly selected photo pairs from our inventory of 42 pairs. For each photo pair, the respondent was required to choose one photo as the correct answer. Once the respondents had made selections for all 20 pairs, the survey concluded.

5. Results

5.1 Observational Results

In this subsection, we present the results from estimating Equation (1). The results are reported in Table 2. Column (1) shows the result using $\text{smile} \times 100$ as the outcome variable while column (2) shows the result using $\log(1 + \text{smile} \times 100)$ as the outcome variable.

Column (1) of Table 2 confirms our observation from Figure 1. Females' smiling index is on average 0.33 points higher than that of males. The difference is statistically significant at the 5% level. To put this into context, referencing Table 1, this difference roughly corresponds to about 87% of a standard deviation in happiness emotion. The coefficients on the occupation indicators $I(\text{government})_i$ and $I(\text{DemParty})_i$ are not significantly different from zero, showing that males do not exhibit different smiling patterns across different occupations. However, the coefficient on the interaction terms $\text{Female} * I(\text{government})_i$ is significantly positive, showing that the female-male difference in smiling is indeed larger in the more hierarchical government than in the market-oriented occupations.

The result using the logged terms (column (2) of Table 2) is consistent with that in column (1). The coefficient on the interaction terms $\text{Female} * I(\text{government})_i$ shows that the gender difference in smiling index is 29.4% higher in government than among business people and professionals.

To examine whether there exists regional difference in the smiling pattern, we further divide our sample into two groups based on the level of economic development. The more developed groups include samples taken from Shanghai, Nanjing and Guangzhou, while

the rest are classified into the less-developed groups. We re-estimate Equation (1) using the two subsamples separately. The results are reported in columns (3) and (4) of Table 2.

Table 2. Smiling by Occupation and Gender

	<i>Dependent variable:</i>			
	Smile*100		Log(1+smile*100)	
	All (1)	All (2)	Underdeveloped (3)	Developed (4)
female	33.481*** (6.168)	2.336*** (0.383)	1.773** (0.516)	2.944*** (0.346)
female × <i>I</i> (Government)	5.611** (1.675)	0.294** (0.100)	0.403** (0.153)	0.013 (0.117)
female × <i>I</i> (Dem.parties)	2.071 (3.196)	0.074 (0.158)	0.069 (0.266)	0.115 (0.097)
<i>I</i> (Government)	0.805 (1.385)	0.037 (0.065)	−0.031 (0.048)	0.194 (0.168)
<i>I</i> (Dem.parties)	−2.060 (1.411)	−0.046 (0.071)	−0.086 (0.090)	0.055 (0.136)
age.ai	0.350** (0.107)	0.032*** (0.007)	0.021** (0.006)	0.051*** (0.007)
eyeMakeup	6.397 (3.928)	0.339* (0.176)	0.330 (0.301)	0.325** (0.093)
lipMakeup	8.182*** (1.764)	0.481*** (0.089)	0.617*** (0.065)	0.276** (0.095)
bald	−6.461 (29.328)	−0.987 (1.421)	−2.409 (1.645)	0.591 (2.311)
eyeglass	−2.925** (1.114)	−0.050 (0.056)	−0.028 (0.062)	−0.093 (0.115)
moustache	−14.632 (31.843)	0.159 (1.956)	−0.539 (3.911)	1.643* (0.639)
female × age.ai	−0.131 (0.179)	−0.024** (0.009)	−0.017 (0.013)	−0.028** (0.007)
Region Dummies	Yes	Yes	Yes	Yes
Observations	3,716	3,716	2,305	1,411
R ²	0.151	0.149	0.115	0.184

*p<0.1; **p<0.05; ***p<0.01. Std. errors. clustered at region level

Column (3) of Table 2 shows the results for less developed regions while column (4) for the developed regions. It is interesting that, only in the less developed regions, the female-male difference in smiling index is significantly larger in the government than in other occupations. It is possible that those regions are more influenced by the traditional norms.

It is worth noting that, in all the four columns of Table 2, we find a positive correlation between the presence of lip makeup and eye makeup with the smiling index. This observation is understandable as wearing lip and eye makeup can be seen as another way of conforming to female stereotypes.

We also investigated the correlation between the emotion of smiling and other emotion index. The correlation matrix of indexes for emotions such as smile, anger, contempt, disgust, fear, surprise, and neutral is shown in Table 3. Smiling index has a strong negative correlation with the index for neutral emotion (correlation coefficient as high as 0.99). The smiling index has a close-to-zero correlation coefficient with nearly all other emotion indexes.

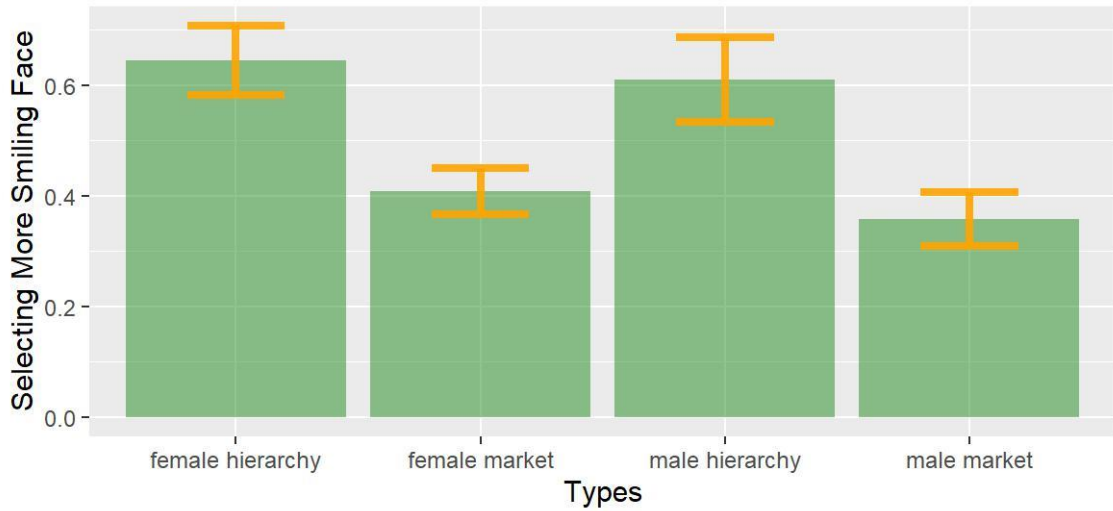
Table 3. The Correlation Matrix of Emotions

	smile	anger	contemp	disgust	fear	surprise	neutral
smile	1.00	-0.03	-0.07	-0.02	-0.03	-0.06	-0.99
anger	-0.03	1.00	0.03	0.16	0.01	0.02	0.02
contemp	-0.07	0.03	1.00	0.09	0.03	-0.01	0.03
disgust	-0.02	0.16	0.09	1.00	0.14	0.01	-0.02
fear	-0.03	0.01	0.03	0.14	1.00	0.20	0.00
surprise	-0.06	0.02	-0.01	0.01	0.20	1.00	0.03
neutral	-0.99	0.02	0.03	-0.02	0.00	0.03	1.00

5.2 Experimental Results

In this subsection, we present the results of our experiments. Notably, we found that over 60% of the respondents opted for the more smiling faces in Vignette 1, while in contrast, less than 40% of the respondents selected the more smiling faces in Vignette 2. This outcome suggests that Chinese respondents perceive a greater need for individuals to exhibit more smiles as subordinates within hierarchical settings.

Furthermore, our analysis unveiled an intriguing gender-based disparity that corroborates our earlier observations in the observational studies in the previous subsection. Specifically, the percentage of respondents selecting the more smiling faces was consistently higher for female photos compared to male photos, irrespective of whether it was in Vignette 1 or Vignette 2. This underscores the notion that respondents tend to anticipate a higher degree of smiling from females in hierarchical environments.



Note: data source is our own experiment.

Figure 2. Average Respondent Choices by Vignette and Gender in Photos

We further examine the observed pattern using regression analysis. For each of the two genders, we estimate the following regression model:

$$\begin{aligned}
 Selected_{ig} = & \beta_0 + \beta_1 treat_g + \beta_2 treat_g * smile_{ig} + \beta_3 smile_{ig} \\
 & + \beta_4 smile_{paired}_i + \epsilon_{ig}
 \end{aligned}
 \tag{2}$$

Where $Selected_i$ is an indicator for individual i of group g being selected by survey respondents for the described job; $treat_{ig}$ is an indicator for the photo of individual i being assigned to the treatment group, i.e., the group with vignette 2 describing the government job; $smile_{ig}$ is the smiling index of individual i , while $smile_{paired}_{ig}$ is the smiling index of the individual who is paired up with individual i . To avoid the repetition of observations, we run the regression at the pair level, with individual i being the one with relatively higher smiling index in each pair.

Table 4: The Experimental Results

	<i>Dependent variable:</i>			
	Selected			
	<i>Males</i>		<i>Females</i>	
	(1)	(2)	(3)	(4)
<i>treat</i>	0.108 (0.075)	0.085 (0.081)	-0.100 (0.087)	-0.079 (0.090)
<i>smile:treat</i>	0.023 (0.133)	0.078 (0.140)	0.205* (0.113)	0.213* (0.110)
<i>smilepaired</i>	0.006 (0.063)	0.018 (0.063)	-0.136** (0.054)	-0.130** (0.052)
<i>smile</i>	-0.105 (0.077)	-0.120 (0.085)	-0.189** (0.077)	-0.193** (0.076)
<i>onstant</i>	0.395*** (0.053)		0.680*** (0.080)	
Region Dummies	No	Yes	No	Yes
Observations	401	401	619	619
R ²	0.018	0.082	0.017	0.060

*p<0.1; **p<0.05; ***p<0.01

Std. errors are clustered at respondent level.

The results of estimating Equation (2) are reported in Table 4. Columns (1) and (2) show the results for males, respectively without and with regional fixed effects. The coefficients on $treat_g$ and $treat_g * smile_{ig}$ are statistically insignificant. It suggests that the social expectations for males' smiling pattern do not depend much on whether they work in the government or in the market-oriented job. Columns (3) and (4) show the results for females, respectively without and with regional fixed effects. In contrast to the results for males, the coefficients on $treat_g * smile_{ig}$ are positive and statistically significant at the 10% level. This finding suggests that females with bigger smiles are more likely to be considered as suitable for the government job.

Overall our experimental results are consistent with our hypothesis that social expectations for female emotion displays are different for the government jobs and the market-oriented jobs. More specifically, females more aligned with the stereotype --- with higher smiling index --- are more likely to be considered as suitable for working in the hierarchical

environment. This finding complements the results from our observational study, suggesting different social expectations are likely to be one driver for the gender difference in smiling in the government.

6. Conclusions

In conclusion, this research delves into the gendered differences in emotion expression within hierarchical and market-based organizational structures, with a particular focus on the prevalence of smiling as a key indicator. By leveraging AI-based analysis of over 5,000 ID photographs from Chinese local consultative congresses, we have identified noteworthy patterns. Specifically, our study reveals that female government officials exhibit a higher frequency of smiles compared to their male counterparts, particularly when contrasted with individuals from other occupation groups. We propose that societal expectations and gender norms are pivotal in shaping emotional expression within these distinct contexts, placing more pressure on women to display cheerful countenances within hierarchical settings.

To further investigate this hypothesis, we conducted an online survey experiment in China, which provided supportive evidence for our claims. These findings significantly contribute to our understanding of how gender dynamics and social contexts interplay to influence emotion display within market-oriented and hierarchical organizations.

Our study, in the context of the existing literature, fills a gap in the research on how different economic structures impact gender socialization. Economic development necessitates shifts in norms and attitudes as individuals are allocated to tasks in new ways, making it pertinent to explore variations in gender norms within different domains of economic institutions. Our focus on smiles as an indicator of gender socialization aligns with societal expectations, shedding light on how these expectations manifest in distinct organizational environments.

Considering that hierarchical organizations place a stronger emphasis on obedience, while market-oriented settings promote more equitable interactions, it is logical to posit that societal expectations regarding female smiling would be more pronounced within

hierarchical structures. Our analysis supports this assertion, showing a greater gender disparity in smiling among government bureaucrats compared to individuals in other occupations.

In essence, our study underscores the nuanced relationship between gender, social expectations, and organizational context. The pressure or societal expectation for females to engage in excessive smiling appears to diminish in environments where hierarchy is less prominent, leading to a reduced gender discrepancy in smiling behaviors.

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说明

1. 论文的选题来源、研究背景

The inspiration of the topic originates from the real-life observations that females tend to display smiles more often than males. I learned from Professor Chen that scholars long hypothesize that the gender differences in emotion displays are partly due to the different social expectations towards the two genders, which could evolve over time and vary across different domains of the economic institutions. I am particularly interested in how social expectations differ in two fundamental organizational structures --- hierarchy and market.

2. 每一个队员在论文撰写中承担的工作以及贡献.

I work on the project by myself. Under the guidance of Professor Heng Chen, I reviewed the literature, employed Microsoft Azure FACE API to estimate various facial attributes from the photos, conducted a simple experiment, and write the draft.

3. 指导老师与学生的关系，在论文写作过程中所起的作用，及指导是否有偿.

I came to know Professor Chen through the introduction of my family member. I am really grateful to Professor Chen. He helped me refine my idea and led me through the relevant literature. He also revised my empirical model and experimental design and gave a great amount of valuable suggestions on my writing. He did all those free of charge.

4. 他人协助完成的研究成果。

I conducted the online experiment on QQ Survey platform. It was easy to administer without others' help.