Discriminating attitudes and prejudices in the Mexican labour market: Evidence from experimental vignettes

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Motivation, aim and contribution

Motivation

- ▶ Mexico's labour market discrimination is anecdotally known to be rife.
- ▶ Become a hotly debated topic in Mexican and an important political battleground.
- ▶ BUT...public policy lags well behind the political debate.
- ▶ Partly because only a handful of rigorous studies on labour market discrimination in Mexico exist.

Aim of the study

To bridge the gap, we implement two **experimental vignettes with factorial design** to shed light on how attitudes/prejudices affect stated **employment** and **wage setting** decisions.

Experimental vignettes. . . what's that?

- ▶ A hypothetical story presented to a person (Alexander and Becker 1978, Rossi and Anderson 1982, Rossi and Berk 1985).
- ▶ Contains an event of interest and includes key elements (description of the characters, events, costs) that are experimentally changed.
- ▶ After the story is presented, the respondent is asked to express their opinions or judgements.
- ▶ As in our case, in some studies the respondent is asked to take hypothetical actions that affect a third person welfare.

- ▶ Using vignettes is a way of knowing true perceptions, attitudes and opinions of a given person when the situation or the topic are controversial and subject to potential desirability bias (Edwards 1953).

- ▶ Have been used in the past to study discrimination in the labor market (Neumark 2018).

Research question

- How demographic characteristics of (hypothetical) workers affect stated employment and wage setting decisions among (real) management and operative personnel of a random sample of 560 Mexico City's service sector firms, net of a measure of individual productivity?

Previous work on labour market discrimination in México

- ▶ Observational studies to assess how much wage or wage gap is explained by variation of observed chars.
  - ▶ Levasseur 2020.
  - ▶ Campos-Vazquez and Medina-Cortina 2019.
  - ▶ Canedo 2019.
  - ▶ Aguilar-Rodriguez et al. 2018.
  - ▶ Orraca et al. 2016.
  - ▶ Arceo-Góomez and Campos-Váazquez 2014.
  - ▶ Popli 2013.
  - ▶ Atal et al. 2010.
- ▶ Experimental studies
  - ▶ Arceo-Gomez and Campos-Vazquez (2014). Correspondence experimental study. Send 1000s of CVs to companies recruiting personnel via internet ads. Randomly vary sex, marital status and phenotype (photo). Outcome: call-back interview [yes / no].

Our contribution

The present paper is different from the work of Arceo-Gomez and
Campos-Vazquez (2014) in three areas:

- ► Different experimental design (*experimental vignettes applied
  to real workers in real firms*) aimed to detect discriminatory
  attitudes that affect **dismissing probabilities** and **wage
  setting**.
- ► We investigate how different such discriminatory attitudes are
  among **managers** and **operative** workers.
- ► We explore the role of **beauty** and **migration**.

Data

We use experimental data from 560 employees in 344 medium and large service firms, which were interviewed as a part of a survey that we designed for studying job market discrimination in the service sector of Mexico City.

- ▶ The sample is representative of the set of all medium and large service firms and their employees that were operating during the study time in Mexico City.
- ▶ The sample has a probabilistic stratified two-stage cluster design, where firms are selected in the first stage (PSUs) and employees are selected in the second stage (SSUs).
- ▶ Fieldwork spanned six months, starting in November 2017 and ending in May 2018

Design of the experimental vignettes

Sex variation

Hair and skin color variation

Face symmetry variation

Figure: Worker's profile characteristics that vary with the picture

Figure: Hypothetical workers pictures

Text of first profile of vignette 1

In what follows, I will give you the tablet so that you can take decisions about some worker profiles. Before you do so, I would like to tell you about the context in which you should take such decisions.

RAPSIC is a Mexican fizzy drink corporation located in the state of Guanajuato. Last year the company suffered an important fall in profits. Its actions lost 30% of their value.

The company is shutting down two production plants and has no option but to cut wages for some of its employees.

Imagine you are the head of human resources and your work involves cutting wages to save the company.

In what follows I will give you the tablet. Please, carefully read each of the following two profiles and decide the wage cut that each employee should take.

Image: {**Andrés** / **Andrea**}
Post: sub-director of sells.
Age: 25.
Nationality: Mexican.
Place of birth: {**San Salvador, El Salvador** / **Ciudad de México** / **Tuxtla Gutiérrez, Chiapas** / **San Francisco, California**}.
Annual review: signed {**20**/**30**} contracts with retail stores and supermarkets. This performance is slightly {**below**/**above**} the performance of previous employees in the same post.

Previous experience: coordinated the 2015 electoral campaign "go out and vote" of the {*PAN / PRI / PRD / INE*} in the county of Cortazar.

Other: Lives with {**boyfriend Manuel** / **girlfriend Manuela**} in the north of the city of León.

Approximately, how much wage would you cut for this worker?
Response options: (A) 0% − 25%, (B) 26% − 50%, (C) 51% − 75%, (D) 76% − 100%}.

Follow-up question:
- [Programming: if option A is chosen, ask] How much between 0% − 25%? Response options: (a) 0%, (b) 5%, (c) 10%, (d) 15%, (e) 20%, (f) 25%.
- [Programming: if option B is chosen, ask] How much between 26%-50%? Response options: (a) 26%, (b) 30%, (c) 35%, (d) 40%, (e) 45%, (f) 50%.
- [Programming: if option C is chosen, ask] How much between 51% − 75%? Response options: (a) 51%, (b) 55%, (c) 60%, (d) 65%, (e) 70%, (f) 75%.
- [Programming: if option D is chosen, ask] How much between 76% − 100%? Response options: (a) 76%, (b) 80%, (c) 85%, (d) 90%, (e) 95%, (f) 100%.

Now suppose that instead of a wage cut, you are asked to fire {25%/50%/75%} of the labor force. What recommendation would you do regarding this worker? Response options: (1) **To fire**; (2) **Not to fire**.

Text of second profile of vignette 1

In what follows, I will give you the tablet so that you can take decisions about some worker profiles. Before you do so, I would like to tell you about the context in which you should take such decisions.

RAPSIC is a Mexican fizzy drink corporation located in the state of Guanajuato. Last year the company suffered an important fall in profits. Its actions lost 30% of their value.

The company is shutting down two production plants and has no option but to cut wages for some of its employees.

Imagine you are the head of human resources and your work involves cutting wages to save the company.

In what follows I will give you the tablet. Please, carefully read each of the following two profiles and decide the wage cut that each employee should take.

Image: {**Eric** / **Érica** }
Post: sub-director of purchases.
Age: 28.
Nationality: Mexican.
Place of birt: {**Guatemala**, **Ciudad de México** / **Monterrey, Nuevo León** / **Chicago, Illinois**}.
Annual review: Reduced firm's expenses in {**15%**/**40%**}. This percentage is slightly {**below**/**above**} the reduction in expenses attained by previous employees in the same post.

Previous experience: Worked in an car agency in México City.

Other: Lives with {**boyfriend Daniel** / **girlfriend Daniela**} in the south of the city of León, {*is member of a liberal group that advocates the depenalisation of abortion / is a member of conservative group against the depenalisation of abortion / is a member of a group of photography*.}

Approximately, how much wage would you cut for this worker?
Response options: (A) 0% − 25%, (B) 26% − 50%, (C) 51% − 75%, (D) 76% − 100%.

Follow-up question:

- ▶ [Programming: if option A is chosen, display] How much between 0% − 25%? Response options: (a) 0%, (b) 5%, (c) 10%, (d) 15%, (e) 20%, (f) 25%.
- ▶ [Programming: if option B is chosen, display] How much between 26%-50%? Response options: (a) 26%, (b) 30%, (c) 35%, (d) 40%, (e) 45%, (f) 50%.
- ▶ [Programming: if option C is chosen, ask] How much between 51% − 75%? Response options: (a) 51%, (b) 55%, (c) 60%, (d) 65%, (e) 70%, (f) 75%.
- ▶ [Programming: if option D is chosen, ask] How much between 76% − 100%? Response options: (a) 76%, (b) 80%, (c) 85%, (d) 90%, (e) 95%, (f) 100%.

Now suppose that instead of a wage cut, you are asked to fire {25%/50%/75%} of the labor force. What recommendation would you do regarding this worker? Response options: (1) **To fire**; (2) **Not to fire**.

Text of first profile of vignette 2

Again, I will give you the tablet so that you can take decisions about some worker profiles. Before you do so, I would like to tell you about the context in which you should take such decisions.

COMSA is a livestock feed firm located in the state of Yucatán. Last year the company had an important surge in its profits. Its actions raised 250% and two new production plants were open.

As incentive, the company has decided to increase the wage of some employees.

Imagine you are the head of human resources and your work involves deciding what wage increase should receive each employee without damaging the company.

In what follows I will give you the tablet. Please, carefully read each of the following two profiles and decide the wage raise each employee should have.

Image: {**Eugenio** / **Eugenia**}.
Post: production and quality control coordinator.
Age: 31.
Nationality: Mexican.
Place of birth: {**Tegucigalpa, Honduras** / **Ciudad de México** / **Culiacán, Sinaloa** / **San Francisco, California**}.
Annual review: Increased production in {**10%** /**20%**}. This performance is slightly {**below**/**above**} the performance of previous employees in the same post.
Previous experience: worked in a pharmaceutics distribution firm in the city of Campeche.
Other: until last year was a member of the {*youth action committee of the PRI* / *youth action committee of the PAN* / *youth action committee of the PRD*}. Lives with {**boyfriend Víctor** / **girlfriend Victoria**} in the north of the city.

Approximately, how much would you raise? Response options: (A) 0% − 25%, (B) 26% − 50%, (C) 51% − 75%, (D) 76% − 100%.

Follow-up question:

► [Programming: if option A is chosen, ask] How much between 0% − 25%? Response options: (a) 0%, (b) 5%, (c) 10%, (d) 15%, (e) 20%, (f) 25%.

► [Programming: if option B is chosen, ask] How much between 26%-50%? Response options: (a) 26%, (b) 30%, (c) 35%, (d) 40%, (e) 45%, (f) 50%.

► [Programming: if option C is chosen, ask] How much between 51% − 75%? Response options: (a) 51%, (b) 55%, (c) 60%, (d) 65%, (e) 70%, (f) 75%.

► [Programming: if option D is chosen, ask] How much between 76% − 100%? Response options: (a) 76%, (b) 80%, (c) 85%, (d) 90%, (e) 95%, (f) 100%.

Text of second profile of vignette 2

Again, I will give you the tablet so that you can take decisions about some worker profiles. Before you do so, I would like to tell you about the context in which you should take such decisions.

COMSA is a livestock feed firm located in the state of Yucatán. Last year the company had an important surge in its profits. Its actions raised 250% and two new production plants were open.

As incentive, the company has decided to increase the wage of some employees.

Imagine you are the head of human resources and your work involves deciding what wage increase should receive each employee without damaging the company.

In what follows I will give you the tablet. Please, carefully read each of the following two profiles and decide the wage raise each employee should have.

Image: {**Andrés** / **Andrea**}.
Post: coordination of logistics and distribution.
Age: 23.
Nacionality: Mexican.
Place of birth: {**Bogotá, Colombia**/ **Ciudad de México**/ **Hermosillo, Sonora**/ **Boston, Massachusetts**}.
Annual review: Reduced the transportation time of products in {**10%** / **40%**}. This performance is slightly {**below**/**above**} the performance of previous employees in the same post.
Previous experience: worked in the postal service of the city of San Luis Potosí.
Other: {*collaborates sporadically with the independent blog "Return to the left"* / *collaborates sporadically with a local cinema blog* / *collaborates sporadically with a local blog of the newspaper "El financiero"*}. Lives with {**boyfriend Marcelo** / **girlfriend Marcela**} in the city center of Mérida, Yucatán.

Approximately, how much would you raise? Response options: (A) 0% − 25%, (B) 26% − 50%, (C) 51% − 75%, (D) 76% − 100%.

Follow-up question:

- ▶ [Programming: if option A is chosen, ask] How much between 0% − 25%? Response options: (a) 0%, (b) 5%, (c) 10%, (d) 15%, (e) 20%, (f) 25%.
- ▶ [Programming: if option B is chosen, ask] How much between 26%–50%? Response options: (a) 26%, (b) 30%, (c) 35%, (d) 40%, (e) 45%, (f) 50%.
- ▶ [Programming: if option C is chosen, ask] How much between 51% − 75%? Response options: (a) 51%, (b) 55%, (c) 60%, (d) 65%, (e) 70%, (f) 75%.
- ▶ [Programming: if option D is chosen, ask] How much between 76% − 100%? Response options: (a) 76%, (b) 80%, (c) 85%, (d) 90%, (e) 95%, (f) 100%.

Methods of analysis

Dismissing probability in bad times

Let dismiss$^*_{ij}$ be a latent variable representing the i-th random disutility of keeping the j-th worker at work

$$\text{dismiss}^*_{ij} = \beta_1 + \beta_2 \text{female}_{ij} + \beta_3 \text{skin tone}_{ij} + \beta_4 \text{symmetric face}_{ij}$$
$$+ \beta_5 \text{sexual orientation}_{ij} + \beta_6 \text{high productivity}_{ij}$$
$$+ \beta_7 \text{need to fire}_{ij} + u_{ij},$$

We do not observe directly dismiss$^*_{ij}$. What we observe is

$$\text{dismiss}_{ij} = \begin{cases} 1 \text{ if dismiss}^*_{ij} > 0 \\ 0 \text{ otherwise.} \end{cases}$$

By design $D(u|\mathbf{x}) = D(u)$. We use linear probability models fitted by Pooled OLS. Use of LPM to estimate ATEs of experimental treatments on binary outcomes has been strongly advocated in the literature because coefficients deliver direct estimators of the ATEs and can easily fit models with fixed effects Gomila (2021).

Wage cut in bad times

For analysing decisions on wage reduction we fit the following linear regression model:

$$\text{wage cut}_{ij} = \beta_1 + \beta_2\text{female}_{ij} + \beta_3\text{skin tone}_{ij} + \beta_4\text{symmetric face}_{ij}$$
$$+ \beta_5\text{sexual orientation}_{ij} + \beta_6\text{high productivity}_{ij} + u_{ij}$$

We condition to an explicit measure of productivity. The model is estimated by pooled OLS and standard errors are clustered at the firm level.

Wage increase in good times

Similarly, for analysis of decisions on wage increments we fit the following linear regression:

$$\text{wage rise}_{ij} = \beta_1 + \beta_2 \text{female}_{ij} + \beta_3 \text{skin tone}_{ij} + \beta_4 \text{symmetric face}_{ij}$$
$$+ \beta_5 \text{sexual orientation}_{ij} + \beta_6 \text{high productivity}_{ij} + u_{ij}$$
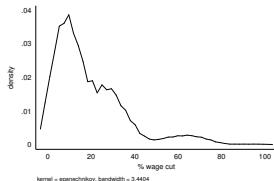
As before, the model is fit by OLS and standard errors are clustered at the firm level.

Results and conclusions

Would you fire the worker?
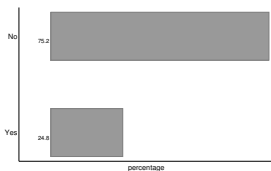
What percentage of wage would you cut?
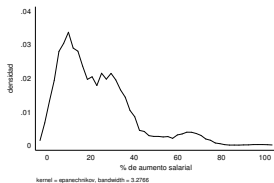
What percentage of wage would you rise?

Figure: Distribution of response variables

Results

Table: Marginal effects from pooled OLS regression models (all sample)

	Dismiss	Wage cut	Wage rise
Female	-0.035	-1.098	-0.678
	(0.026)	(1.049)	(1.061)
Homosexual	-0.020	-1.270	0.366
	(0.026)	(0.980)	(1.001)
Symmetric face	-0.043*	-1.971*	-0.039
	(0.024)	(1.055)	(0.992)
White skin	0.012	0.819	2.016*
	(0.027)	(0.961)	(1.113)
Mexico other	0.039	0.265	-1.941
	(0.037)	(1.429)	(1.711)
Cental/South America	0.112***	2.592*	-2.632*
	(0.037)	(1.481)	(1.578)
USA	0.039	1.702	-0.656
	(0.035)	(1.373)	(1.559)
Productivity	-0.170***	-2.230**	9.607***
	(0.025)	(0.969)	(1.079)
Need to fire	0.000		
	(0.000)		
N. of obs	1,055	1,055	993
N. of clusters	335	335	333
R^2	0.05	0.01	0.08

Table: Marginal effects from pooled OLS regression models (operatives)

Wage	Dismiss	Wage cut	Wage rise
Female	-0.045	-1.495	-0.802
	(0.036)	(1.320)	(1.559)
Homosexual	-0.045	-1.756	0.582
	(0.036)	(1.228)	(1.494)
Symmetric face	-0.089***	-2.597**	0.105
	(0.034)	(1.222)	(1.546)
White skin	-0.038	1.596	2.280
	(0.035)	(1.254)	(1.649)
Mexico other	0.060	1.547	-2.799
	(0.049)	(1.804)	(2.685)
Cental/South America	0.106**	2.631	-3.370
	(0.049)	(1.764)	(2.310)
USA	0.050	2.458	-0.409
	(0.047)	(1.961)	(2.292)
Productivity	-0.123***	-3.006**	9.217***
	(0.036)	(1.220)	(1.641)
Need to fire	-0.000		
	(0.001)		
N. of obs	537	537	506
N. of clusters	283	283	281
R^2	0.05	0.03	0.07

Table: Marginal effects from pooled OLS regression models (managers)

	Dismiss	Wage cut	Wage rise
Female	-0.027	-0.819	-0.535
	(0.039)	(1.744)	(1.305)
Homosexual	0.008	-0.927	0.160
	(0.038)	(1.539)	(1.338)
Symmetric face	0.001	-1.298	-0.151
	(0.035)	(1.696)	(1.315)
White skin	0.066*	-0.187	1.897
	(0.038)	(1.532)	(1.383)
Mexico other	0.016	-0.838	-0.543
	(0.055)	(2.211)	(2.022)
Cental/South America	0.128**	2.849	-1.638
	(0.055)	(2.360)	(1.918)
USA	0.032	1.000	-0.908
	(0.050)	(2.087)	(1.758)
Productivity	-0.224***	-1.519	9.694***
	(0.038)	(1.516)	(1.379)
Need to fire	0.001		
	(0.001)		
N. of obs	518	518	487
N. of clusters	266	266	263
R^2	0.08	0.01	0.10

Conclusions

- Evidence of attitudes/prejudices that increase the dismissing probability of migrants from Central and South America in hard times; both among managers 13% and operatives 10%.

- Operatives give lower probability of dismissal −9% and lower wage cuts −2.6% to workers with symmetrical faces. No "beauty" effect is found for managers.

- Further investigation is need to determine if the discriminatory attitudes/perceptions that we find are explained by taste or statistical discrimination—which is rather hard to determine.

The end. Thanks!