

Can a Soft Skill Signal Mitigate Hiring Discrimination? Evidence from Malaysia

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Firms make two important decisions in the job market: the skills that are demanded and who to hire.

1. There is an increasing demand for soft skills in the labor market (Heckman and Kautz, 2012; Weidmann and Deming, 2021), and better ratings on soft skills are positively associated to employment and wages (Heller and Kessler, 2022).
2. Hiring based on worker's productivity is efficient. However, there is an abundant literature suggesting the presence of discrimination in labor markets (Bertrand and Duflo, 2017; Neumark, 2018).

We conduct a correspondence study in Malaysia, a context with previously documented hiring discrimination, to answer the following research questions:

1. Is there ethnic and gender discrimination in the labor market?
2. Are soft skills demanded by firms?
3. Can soft skills attenuate the discrimination gap?
4. Is the discrimination of statistical or taste-based nature?

1. We add to the literature unpacking discrimination into statistical or taste-based (Ewens et al., 2014; Bartoš et al., 2016; Kaas and Manger, 2012; Edelman et al., 2017; Bosch et al., 2010).
2. We add to the literature studying soft skills in the labor market (Heller and Kessler, 2022; Weidmann and Deming, 2021; Deming, 2021).
3. Few papers have examined pathways for individual applicants to independently overcome discrimination. We provide novel evidence on the value of signaling soft skills in job applications.

- Multiple ethnicities: Bumiputera 69% (mostly Malay), Chinese 23%, Indians 7%, others 1%.
 - Lee and Khalid (2016) find that Malay are 18 p.p. less likely to receive callbacks for interviews than Chinese.
- Gender gaps in labor force participation (25 p.p.) and earnings (Women earn between 70% and 83% of men earnings).
- We use a job platform that advertises jobs in the private sector.

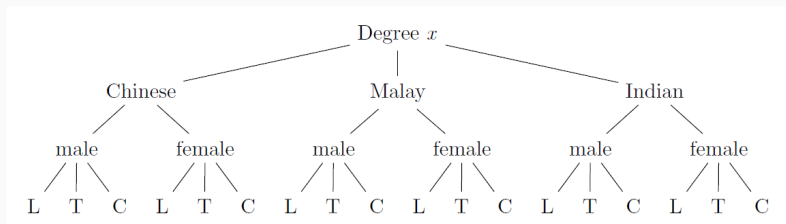
Correspondence Experiment

- We use company location and size to conduct a **stratified randomization** that assigns one of the fictitious profiles to each job ad varying the following characteristics:
 1. Ethnicity (Chinese, Indian, Malay)
 2. Gender (Female, Male)
 3. Soft skill (Leadership, Teamwork, None)
- Our final sample is $N = 2,994$.
- We use 5 fields of specialization: Accounting, Business, Computer Science, Electrical Engineering, and Mechanical Engineering.

Profile creation

We created 90 different profiles. For each of 5 fields of specialization 'x', we have 6 profiles per ethnicity, we split those in 2 genders and then in 3 soft skills: Leadership (L), Teamwork (T) and a Control (C).

Description of profiles for a given degree



A Sample Resume

First Name		Last Name	
Phone: +60 12		Gender:	
Email:			
EXECUTIVE SUMMARY			
Fresh Bachelor of Accounting graduate with previous internship experience in PwC Malaysia. Currently pursuing Chartered Financial Analyst (CFA) Level I Certification. Demonstrated ability to contribute to teams.			
TECHNICAL SKILLS		- Microsoft Visual Basic - QuickBooks - SQL	
PERSONAL SKILLS		- Teamwork - Collaboration - Communication	
EDUCATION		Bachelor of Accounting (2022) University of Malaya Kuala Lumpur	
PRE-PROFESSIONAL EXPERIENCE		Intern PwC Malaysia (Jul 2022 – Sep 2022) Compile and analyze financial statements. Create a budget aligned with company financial goals. Collaborate as part of a team to prepare relevant internal report.	
		Barista Starbucks Malaysia (Oct 2021 – Jul 2022) Serve customer with variety of beverages and meals. Greet customers, take orders, and complete customer transactions on the cash register. Work collaboratively with other employees.	
ACHIEVEMENTS / RESPONSIBILITIES		- Book Club - Photography Club - Running - Baking	
LANGUAGES		English, Bahasa Melayu, Mandarin	
REFERENCES		Available upon request.	

Ethnicity

Gender

Soft Skill

A Model of Discrimination with Signals

- The employer predicts productivity θ based on a signal x (e.g. soft skill)

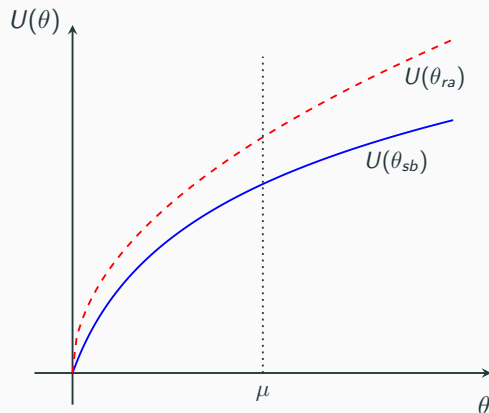
$$\theta_{ig} = \mu + \gamma x_{ig} \quad (1)$$

- The employer hires the applicant i that maximizes expected utility as a function of predicted productivity $\hat{\theta}_{ig}$:

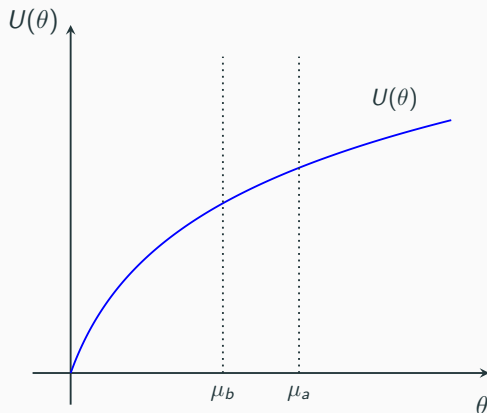
$$\max E[U(\hat{\theta}_{ig})] \quad (2)$$

A Model of Discrimination with Signals

Utility functions under discrimination where θ is the worker's productivity



(a) Taste-based



(b) Statistical

A Model of Discrimination with Signals

- The discrimination gap between applicant r of ethnicity a and applicant s of ethnicity b be denoted as Γ_d :

$$\Gamma_d(x) = U(\theta_{ra}(x)) - U(\theta_{sb}(x)) \quad (3)$$

- We can also define the skill gap:

$$\begin{aligned} \Gamma_s^a(x) &= U(\theta_{ra}(x)) - U(\theta_{ra}(0)) \\ &= U(\mu_a + \gamma_a x) - U(\mu_a) \end{aligned} \quad (4)$$

- Defining the analogous $\Gamma_s^b(x)$, we can regroup terms and get the following identity:

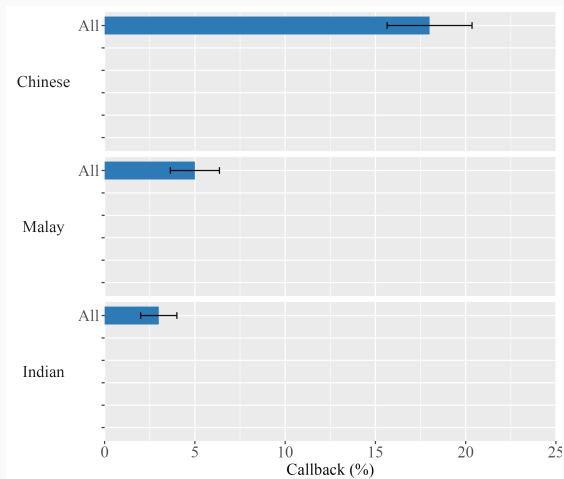
$$\Gamma_s^a(x) - \Gamma_s^b(x) \equiv \Gamma_d(x) - \Gamma_d(0) \quad (5)$$

A Model of Discrimination with Signals

- **Taste-based discrimination:** A productivity-enhancing signal x unambiguously increases the discrimination gap: $\Gamma_d(x)$.
- **Statistical discrimination:** When $\mu_a \geq \mu_b$ and $\gamma_a \leq \gamma_b$, a productivity-enhancing signal x for the disadvantaged group b ($\gamma_b > 0$) decreases the discrimination gap relative to the non signal case for every $x > 0$: $\Gamma_d(x) < \Gamma_d(0)$.
- Observing a productivity enhancing signal $x > 0$ reducing the discrimination gap $\Gamma_d(x) < \Gamma_d(0)$ indicates **statistical discrimination**, as it is inconsistent with taste-based discrimination.

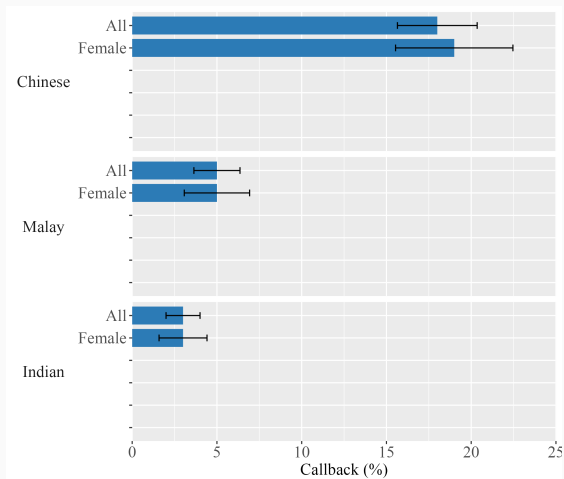
Results: Callback Rates by Ethnicity

Candidates with Chinese sounding names have a 18% callback rate, Malay 5%, and Indian 3%.



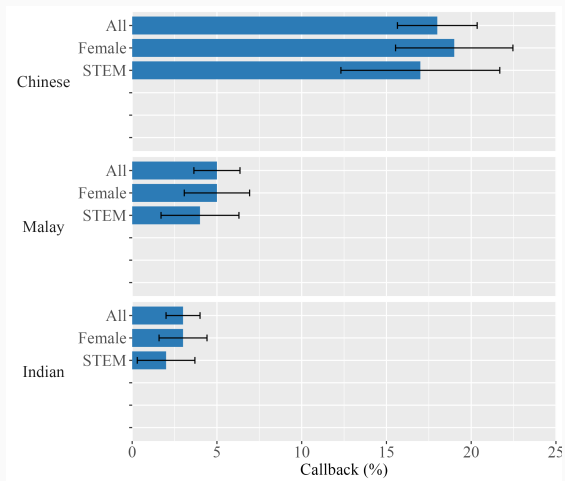
Results: Callback Rates by Ethnicity

There are no differences by gender. We find no evidence of gender discrimination.



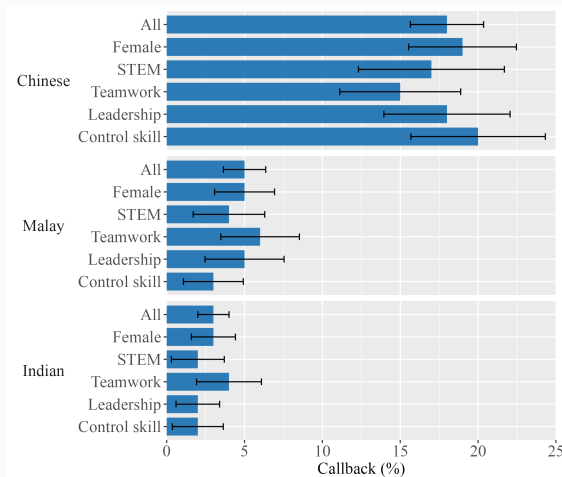
Results: Callback Rates by Ethnicity

The gap among STEM applicants does not significantly change.



Results: Callback Rates by Ethnicity

Malay and Indian applicants who signaled teamwork skills are 6 and 7 p.p. more likely to be contacted. The result is null for the leadership skill.



Conclusions:

- We find evidence of ethnic discrimination in Malaysia. Malay and Indian sounding names are 11-14 p.p. less likely to be contacted than Chinese sounding names.
- We find no evidence of gender-based discrimination.
- Soft skills on their own are not associated with callback rates.
- We find that signaling a teamwork soft skill attenuates the discrimination gap by 34-43%.

Conclusions:

- For a subset of the data we are able to show that discrimination against candidates with Malay and Indian-sounding names is concentrated in Chinese-managed and Chinese-owned firms.
- The results are consistent with the model of statistical discrimination we present.
- The results are suggestive of opportunities for disadvantaged populations to practice and demonstrate teamwork skills.

Q & A

Link to the document:



Thank you!

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