Consumer Preferences for Migrant and Native Workers: Evidence from a Large-Scale Experiment

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The Role of Consumer Preferences

- Do consumers have a preference for native workers?

- How does demand for native vs. migrant workers vary with price?

What we do

- We advertise the services of a **cleaning company** to over 2% of all households in Denmark.

- We randomize whether the available operator is a **migrant or a native**.

- All workers meet the **same quality standards**.

- We randomly vary the **price** (and the **customer rating**).

- We measure differences in **demand** (callbacks).

What we find

- **On average, demand for a migrant worker is significantly lower than demand for an equivalent native**.

- **The gap grows with price, since demand for a migrant falls more steeply than demand for a native**.

- **Little evidence of quality concerns:** demand is higher for natives even when their ratings are lower.

- Consistent with a stylized model where consumers have a **lower willingness to pay** for migrants.

Our contributions to the literature

- We experimentally shed light on **the role of consumer preferences** in driving labor-market disparities. (Holzer and Ihlanfeldt, 1998; Leonard et al., 2010; Doleac and Stein, 2013; Hurst et al., 2021; Kline et al., 2022).

- We contribute to the literature on the consequences of migration for the labor markets of receiving countries (e.g., Cortes, 2008; Ottaviano and Peri, 2012; Dustmann et al., 2013; Foged and Peri, 2016; Peri, 2018) by demonstrating that natives and migrants are **imperfect substitutes in the eye of consumers**.

- We inform the discussion on attitudes towards migration (Hainmueller and Hopkins, 2014; Barone et al., 2016; Tabellini, 2020; Caselli et al., 2020; Haaland and Roth, 2020; Alesina et al., 2021; Bursztyn et al., 2021; Fouka et al., 2022; Calderon et al., 2022) by shedding light on **the trade-offs consumers are willing to make**.

Road map

Road map

1 Intro

2 **Experimental design**

3 Sampling and Measurement

4 Results

5 Conclusions

Experimental design

Experimental design

Experimental design

We are specialised in:

- **Cleaning services** – floor cleaning, vacuuming, window cleaning, etc.
- **Garden work** – lawn mowing, hedge trimming, pruning, etc.
- **Other tasks** – tidying up, car cleaning, etc.

Our four operators are carefully trained to complete the given tasks competently, efficiently and within the agreed time!

Mohammad	Fatima	Peter	Anne
4.9 ★★★★★ (156)[1]	4.8 ★★★★★ (149)	4.9 ★★★★★ (155)	4.8 ★★★★★ (160)

MOHAMMAD is our operator in your area

"Mohammad is convenient, polite, and efficient" - Birgitte, 43

"Great work on time, Mohammad!" - Ole, 52

Basic services

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Common standards

We are specialised in:

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- **Garden work** – lawn mowing, hedge trimming, pruning, etc.
- **Other tasks** – tidying up, car cleaning, etc.

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A diverse workforce

We are specialised in:

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Precise information about quality

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MOHAMMAD is our operator in your area

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Varying the price

Call MOHAMMAD: [PHONE NUM]

120 DKK per hour incl. VAT

Call MOHAMMAD: [PHONE NUM]

160 DKK per hour incl. VAT

Varying quality

Peter	Fatima	Mohammad	Anne
4.9 ★★★★★ (156)[1]	4.8 ★★★★★ (145)	3.6 ★★★★ (155)	4.8 ★★★★★(169)

Peter	Fatima	Mohammad	Anne
3.6 ★★★★ (156)[1]	4.8 ★★★★★ (145)	4.9 ★★★★★ (155)	4.8 ★★★★★(169)

We give consumers **an explicit choice between the two workers**.

Road map

Our sample

Our sample
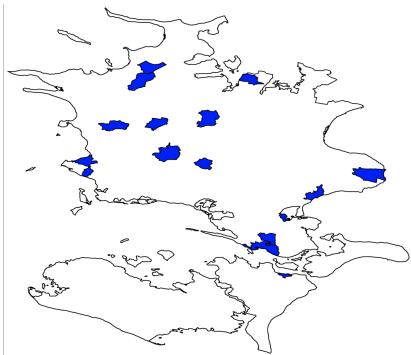
(a) Sjælland
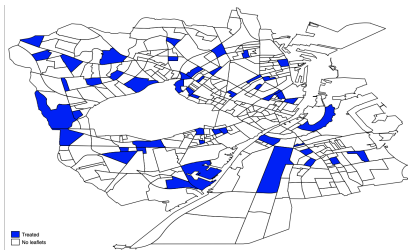
(b) Copenhagen

Measuring demand

- 56,000 leaflets, over 2% of Danish households Treatments

- Demand measured as callback rate for native vs. migrant

- We count multiple calls from the same number as one contact (but results are robust to different approaches).

- We assign contacts through the website by means of leaflet-specific promotional codes.

- Pre-registered trial

Road map

Demand for a migrant relative to a native **by area**
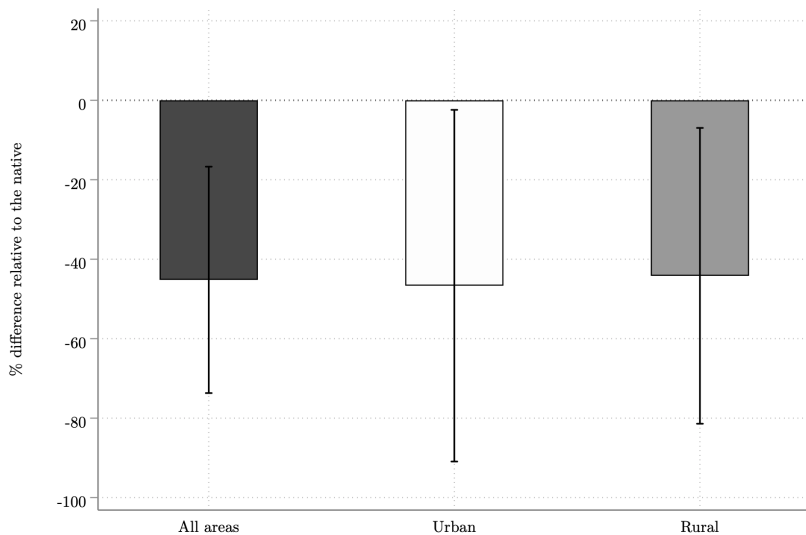
Demand for a migrant relative to a native **by price**
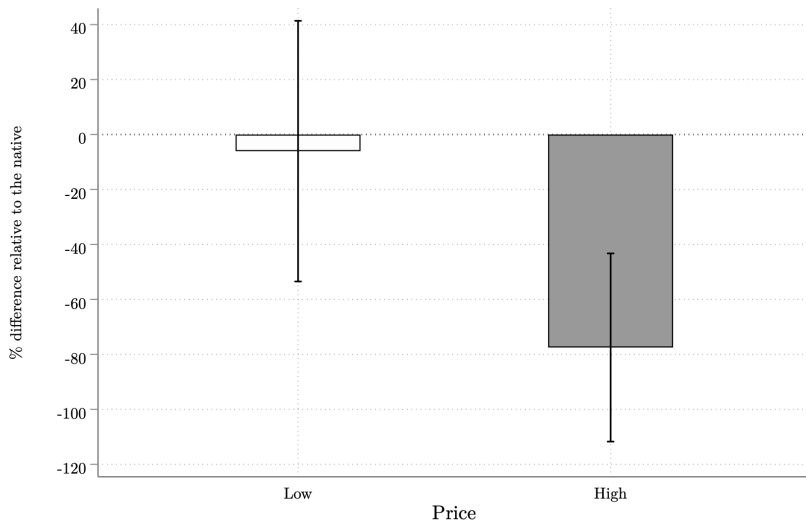
Demand for a migrant relative to a native **by price**
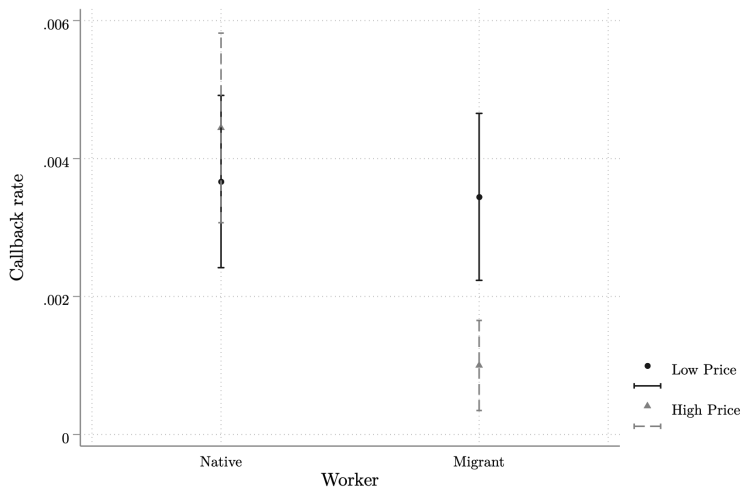
Demand for a migrant relative to a native **by quality**
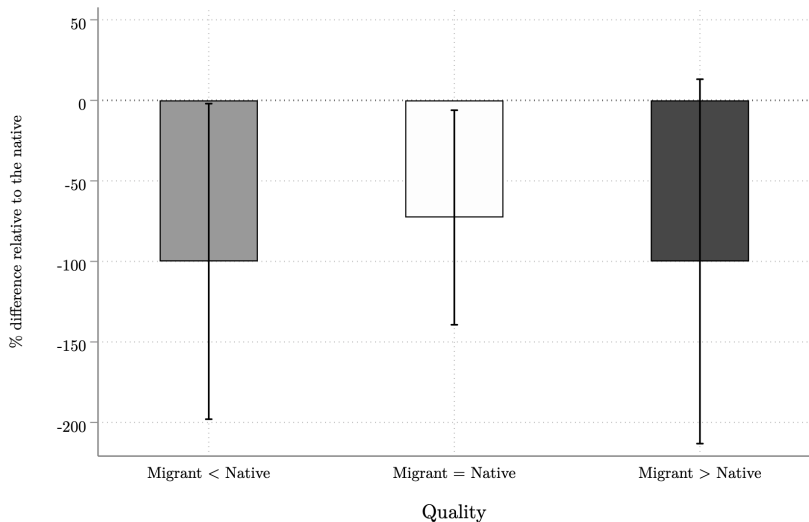
A stylized theoretical framework

Let θ_i^N and θ_i^M be consumer i's willingness to pay for a native (N) and a migrant (M) respectively, such that:

$$log(\theta_i^N) \sim \mathcal{N}(\mu_N, \sigma^2),$$
$$log(\theta_i^M) \sim \mathcal{N}(\mu_M, \sigma^2).$$

In this simple framework:

$$\theta_i^N > P_N \Rightarrow \text{Hires the Native}$$
$$\theta_i^M > P_M \Rightarrow \text{Hires the Migrant}$$

and does not hire otherwise.

Intuition

- As the price falls, the proportion of consumers with sufficient willingness to pay to hire a migrant approaches the proportion of consumers with sufficient willingness to pay to hire a native.

- In the limit, as the price goes to 0, *all* consumers who receive the leaflet and need a cleaner should be willing to hire both workers.

- **This is not to say that consumers are indifferent at low prices. When given a choice, in fact, they prefer the native.**

Simulating the Model for $\mu_N > \mu_M$

Robustness
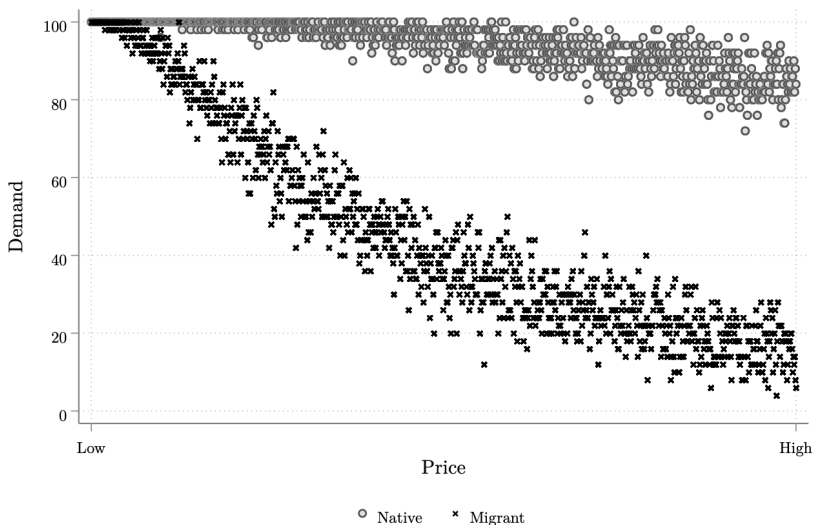
- Do customers pay attention to the ratings? [Figure]

- Is the low price "too low" for a native?

- Alternative ways of counting calls: including multiple calls from the same number and those who contacted both workers

- Testing for attention discrimination by means of contacts via the website

Road map

To sum up

- We conduct **a large-scale experiment** to investigate consumer preferences for native vs. migrant workers.

- We find that **demand for migrants is significantly lower than demand for equivalent natives**.

- However, **the gap is sensitive to (and increases with) price**.

- Even when migrants have stronger quality signals, consumers prefer natives.

- We conclude that natives and migrants are **imperfect substitutes** in the eye of consumers.

Thank you!

References I

Alberto Alesina, Elie Murard, and Hillel Rapoport. Immigration and preferences for redistribution in Europe. *Journal of Economic Geography*, 21(6):925–954, 03 2021. doi: $10.1093/\mathrm{jeg}/\mathrm{lbab}002$.

Guglielmo Barone, Alessio D'Ignazio, Guido de Blasio, and Paolo Naticchioni. Mr. Rossi, Mr. Hu and politics. The role of immigration in shaping natives' voting behavior. *Journal of Public Economics*, 136(C): 1–13, 2016.

Leonardo Bursztyn, Thomas Chaney, Tarek Alexander Hassan, and Aakaash Rao. The Immigrant Next Door: Long-Term Contact, Generosity, and Prejudice. NBER Working Papers 28448, National Bureau of Economic Research, Inc, February 2021.

References II

Alvaro Calderon, Vasiliki Fouka, and Marco Tabellini. Racial Diversity and Racial Policy Preferences: The Great Migration and Civil Rights. *The Review of Economic Studies*, forthcoming, 05 2022. doi: 10.1093/restud/rdac026.

Mauro Caselli, Andrea Fracasso, and Silvio Traverso. Globalization and electoral outcomes: Evidence from Italy. *Economics & Politics*, 32(1): 68–103, 2020. doi: 10.1111/ecpo.12147. URL https://onlinelibrary.wiley.com/doi/abs/10.1111/ecpo.12147.

Patricia Cortes. The effect of low-skilled immigration on U.S. prices: Evidence from CPI data. *Journal of Political Economy*, 116(3):381–422, 2008. ISSN 00223808. doi: 10.1086/589756.

Jennifer L. Doleac and Luke C.D. Stein. The Visible Hand: Race and Online Market Outcomes. *The Economic Journal*, 123(572):F469–F492, 2013. doi: 10.1111/ecoj.12082.

Christian Dustmann, Tommaso Frattini, and Ian P. Preston. The effect of immigration along the distribution of wages. *Review of Economic Studies*, 80(1):145–173, 2013. ISSN 00346527. doi: 10.1093/restud/rds019.

Mette Foged and Giovanni Peri. Immigrants' effect on native workers: New analysis on longitudinal data. *American Economic Journal: Applied Economics*, 8(2):1–34, 2016. ISSN 19457790. doi: 10.1257/app.20150114.

Vasiliki Fouka, Soumyajit Mazumder, and Marco Tabellini. From Immigrants to Americans: Race and Assimilation during the Great Migration. *The Review of Economic Studies*, 89(2):811–842, 06 2022. doi: 10.1093/restud/rdab038.

References IV

Ingar Haaland and Christopher Roth. Labor market concerns and support for immigration. *Journal of Public Economics*, 191:104256, 2020. doi: https://doi.org/10.1016/j.jpubeco.2020.104256.

Jens Hainmueller and Daniel J Hopkins. Public attitudes toward immigration. *Annual Review of Political Science*, 17, 2014.

Harry J. Holzer and Keith R. Ihlanfeldt. Customer Discrimination and Employment Outcomes for Minority Workers. *The Quarterly Journal of Economics*, 113(3):835–867, 08 1998. doi: 10.1162/003355398555766.

Erik Hurst, Yona Rubinstein, and Kazuatsu Shimizu. Task-Based Discrimination. NBER Working Papers 29022, National Bureau of Economic Research, Inc, July 2021.

Patrick Kline, Evan K Rose, and Christopher R Walters. Systemic Discrimination Among Large U.S. Employers. *The Quarterly Journal of Economics*, 137(4):1963–2036, 06 2022. doi: 10.1093/qje/qjac024.

References V

Jonathan S Leonard, David I Levine, and Laura Giuliano. Customer Discrimination. *The Review of Economics and Statistics*, 92(3): 670–678, 08 2010. doi: $10.1162/\text{REST\_a\_00018}$.

Gianmarco I.P. Ottaviano and Giovanni Peri. Rethinking the effect of immigration on wages. *Journal of the European Economic Association*, 10(1):152–197, 2012. ISSN 15424766. doi: $10.1111/\text{j}.1542\text{-}4774.2011.01052.\text{x}$.

Giovanni Peri. Did immigration contribute to wage stagnation of unskilled workers? *Research in Economics*, 72(2):356–365, 2018. ISSN 10909443. doi: $10.1016/\text{j.rie}.2017.02.005$. URL `http://dx.doi.org/10.1016/j.rie.2017.02.005`.

Marco Tabellini. Gifts of the Immigrants, Woes of the Natives: Lessons from the Age of Mass Migration. *The Review of Economic Studies*, 87 (1):454–486, 05 2020. doi: $10.1093/\text{restud}/\text{rdz027}$.

Table: Differences in callback rates between migrant and native

A. Pooling both prices, same worker quality

	Migrant	Native	Difference	S.E.
All areas	0.0022	0.0041	-0.0018***	0.0006
Urban	0.0016	0.0030	-0.0014**	0.0007
Rural	0.0030	0.0054	-0.0024**	0.0010

B. Different prices, same worker quality

	Migrant	Native	Difference	S.E.
Low Price	0.0034	0.0037	-0.0002	0.0009
High Price	0.0010	0.0044	-0.0034***	0.0008

C. Same price, different worker quality

	Migrant	Native	Difference	S.E.
Migrant < Native	0.0000	0.0008	-0.0008**	0.0004
Migrant = Native	0.0006	0.0022	-0.0016**	0.0007
Migrant > Native	0.0000	0.0006	-0.0006*	0.0003

D. Same price, different quality between two natives (robustness)

	Native 1	Native 2	Difference	S.E.
Native 1 > Native 2	0.0026	0.0000	0.0026***	0.0007

Back

Table: Number of leaflets and other information by treatment

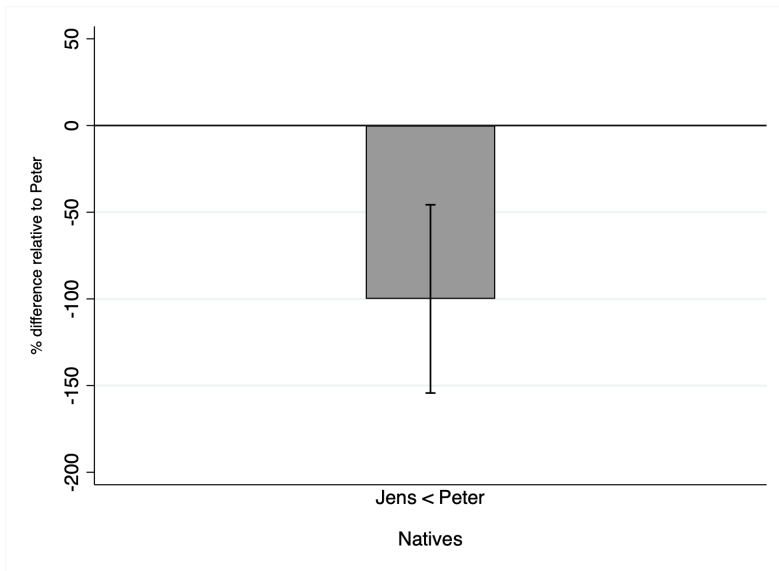| Treatment	Number	Copenhagen	Price (DKK)	Worker 1 (Stars)	Worker 2 (Stars)
1	5,000	Yes	120	Migrant (4.9)	
2	5,000	Yes	160	Migrant (4.9)	
3	5,000	Yes	120	Native (4.9)	
4	5,000	Yes	160	Native (4.9)	
5	4,000	No	120	Migrant (4.9)	
6	4,000	No	160	Migrant (4.9)	
7	4,000	No	120	Native (4.9)	
8	4,000	No	160	Native (4.9)	
9	2,500	Yes	120	Migrant (4.9)	Native (4.9)
10	2,500	Yes	120	Native (4.9)	Migrant (4.9)
11	2,500	Yes	120	Migrant (4.9)	Native (3.6)
12	2,500	Yes	120	Native (3.6)	Migrant (4.9)
13	2,500	Yes	120	Native (4.9)	Migrant (3.6)
14	2,500	Yes	120	Migrant (3.6)	Native (4.9)
15	2,500	Yes	120	Native 1 (4.9)	Native 2 (3.6)
16	2,500	Yes	120	Native 2 (3.6)	Native 1 (4.9)

Back

Table: Number of callbacks (calls and emails) by treatment

Treatment	Callbacks Total	Callbacks No multiple calls	Callbacks Emails only
1	22	9	2
2	8	7	1
3	14	13	5
4	24	17	3
5	33	22	5
6	4	2	0
7	33	20	4
8	28	23	7
9	9	3	1
10	19	11	1
11	3	0	0
12	5	3	0
13	9	4	2
14	4	0	0
15	27	13	4
16	9	0	0

Back

Demand for a native relative to another native