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Customer Discrimination in the Fast Food Market? Experimental Evidence from a Swedish University Campus

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Abstract

This paper studies customer discrimination against fictive male and female food truck owners with Arabic names on a Swedish University campus using a web-based experiment. Students at a Swedish university campus were asked to participate in a market survey and state if they think it is a good idea to have a food truck establishment on the campus. Further, they were also asked about their own beliefs, and their beliefs about others' willingness to pay for a baguette and a kebab sold by the food truck on the campus. Four names—one male Swede, one female Swede, one male Arab, and one female Arab—were randomly assigned to the food truck. We found no evidence of customer discrimination against food truck owners with Arabic names. In fact, the respondents were slightly more positive to a food truck establishment run by an Arabic male than by a Swedish male. We conclude that our results are representative in an environment with relatively young and highly educated customers and that customer discrimination may vary across different markets. More research in this area is needed.

Keywords: Customer discrimination, Self-employment, Immigrants, Sweden

JEL Codes: J15, J16, J79.

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1. Introduction

The share of the self-employment sector that consists of foreign-born individuals has increased in several OECD countries during recent decades, and a large body of literature has paid attention to self-employment and entrepreneurship among immigrants. The studies propose explanations for why there are differences in self-employment rates between immigrants and natives.¹

Self-employed immigrants may encounter certain obstacles in their businesses. Such obstacles may include the existence of discrimination from customers, financial institutions and suppliers. The concept of customer discrimination occurring when customers prefer to buy goods and services from co-ethnics was first introduced by Becker (1957). Borjas and Bronars (1989) present a theoretical model regarding customer discrimination and self-employment, but the prevalence of customer discrimination has received relatively little empirical attention, and research regarding customer discrimination against self-employed immigrants is very limited.

Two early studies documented the existence of customer discrimination in professional sports. Kahn and Sherer (1988) found that in the U.S. National Basketball League, home spectator attendance grew according to the percentage of white players on the field, which was interpreted as customer discrimination. Nardinelli and Simon (1990) found that baseball cards featuring non-white players commanded lower prices than cards featuring white players when they were sold in the United States, which suggests the existence of customer discrimination.

Neumark (1996) conducted a field experiment and found that women were discriminated against when they applied for jobs as waitresses in high-priced restaurants in Philadelphia. Neumark suggested that the positive relationship between the proportion of male guests and male waiters in the restaurants were driven by the existence of customer discrimination. In another study, Holzer and Ihlanfeldt (1998) documented customer discrimination with the help of a survey among employers in four metropolitan areas in the United States. They found that the ethnic composition of an establishment's customers affected the ethnic composition of those hired, especially in jobs that involved contact with customers.

Leonard, Levine and Guillano (2010) tested for customer discrimination in the United States by matching data from retail stores with data on the demographics of each store's community. The results showed some increase in sales when the workforce more closely resembles that of potential customers, but the effect was small in magnitude. In France, Combes et al. (2016) found that customer discrimination contributes to the low share of African immigrants employed in occupations involving customer contact.

Using an online field experiment, Doleac and Stein (2013) studied the occurrence of customer discrimination by selling iPods through local online classified advertisements throughout the United States. Each advertisement features a photograph including a dark- or light-skinned hand, and the results revealed that black sellers receive fewer and lower offers than white sellers.

¹ For studies from the U.S., see e.g. Borjas (1986), Yuengert (1995), Fairlie and Meyer (1996), Fairlie (1999), Hout and Rosen (2000) and Robb and Fairlie (2009). For a study from Australia, see Le (2000). For studies from European countries, see e.g., Clark and Drinkwater (2000) and Clark, Drinkwater & Robinson (2017) for the UK, Constant and Zimmermann (2006) for Germany, Hammarstedt (2001, 2004, 2006) and Andersson & Hammarstedt (2010) for Sweden.

In a more recent study, Bar and Zussman (2017) studied customer discrimination against Arab workers in the Israeli market for labor-intensive services. Using surveys, field data and natural experiments, they found evidence of customer discrimination since Jewish customers preferred to receive services from firms employing Jewish rather than Arab workers. Further, they also found that customer preferences affect firms' hiring decisions.

Thus far, customer discrimination has been documented in previous research but knowledge regarding the extent to which customers discriminate against self-employed immigrants is scarce. In this paper, we aim to fill this knowledge gap by conducting an experiment in order to investigate customer discrimination against self-employed immigrants with Arabic names in Sweden. In the experiment, we let students at a Swedish University campus participate in a market survey and answer questions about whether they believe a food truck establishment on the campus is a good idea. Furthermore, the students are also asked about their own willingness and their beliefs about other students' willingness to pay for a baguette and a kebab sold by the food truck.

We are able to study customer discrimination since four different names—representing one Swedish male, one Swedish female, one Arabic male and one Arabic female—were randomly assigned to the sign of the food truck. This enabled us to study the extent to which there are differences between the different food truck owners regarding the extent to which the students are positively reactive to the food truck establishment. Furthermore, we examined if the students' willingness to pay varies according to the name of the food truck owner.

Our study contributes to the literature on customer discrimination since we conduct a direct test of customer discrimination against self-employed immigrants from the Middle East in the fast-food market. Our empirical study is conducted in Sweden, which is a suitable testing ground for such a study since self-employment among immigrants from this region has increased during recent decades.² Furthermore, Sweden is also an interesting testing ground for this purpose because previous research has documented that self-employed immigrants from non-European countries report that they are discriminated against by customers, and also run higher risks of having bank loan applications rejected or being charged higher interest rates on such loans than self-employed natives.³ Finally, previous research has shown that individuals with Arabic names are discriminated against in the labour market as well as in the housing market in Sweden.⁴

Our results reveal no customer discrimination against food truck owners with Arabic names. In fact, the respondents in the experiment were slightly more positive regarding a food truck run by an Arabic male than by a Swedish male. We acknowledge that the external validity is limited, since our results are representative in an environment with relatively young and highly educated customers and for self-employed immigrants selling certain types of goods. Our results highlight the fact that customer discrimination may vary across different markets and underline the importance of more research in this area.

² In 2018, around 17 percent of Sweden's total population was born outside Sweden. The share of immigrants originating from the Middle East has increased during recent decades, and in 2018 around 5 percent of Sweden's total population was born in countries in the Middle East. High self-employment rates in the retail, trade and restaurant sectors has been documented among immigrants from the Middle East; see Andersson & Hammarstedt (2015) and Aldén & Hammarstedt (2017).

³ See Aldén & Hammarstedt (2016).

⁴ See Carlsson & Rooth (2007), Ahmed & Hammarstedt (2008).

The remainder of the paper is organized as follows: Section 2 presents the experimental method. The results are presented in Section 3, while Section 4 contains the conclusions and a discussion.

2. Experimental method

2.1 Participants

A total of 1,406 students at Linköping University voluntarily participated in the experiment, which was conducted in February 2018. Invitations to participate in the experiment were sent through the university's official student information email system. We only invited students from one of four campuses at Linköping University, Campus Valla, to participate in the experiment since it was framed specifically for this campus. Fifty-nine percent of the participants were women. Almost 11 percent reported that they were born outside Sweden, and the ages ranged from 18 to 68 years ($M = 25$, $SD = 6.52$).

2.2 Materials and Procedures

We constructed eight cases of small business establishments regarding which participants were asked to report their opinions. Participants were told that the purpose of the study was to gain knowledge about students' views and attitudes about various possible new establishments of small businesses, with sales directed toward students at Campus Valla, Linköping University. The type of businesses that were presented to the students were baguette food truck, kebab food truck, pasta food truck, salad food truck, corner shop, hairdresser, second-hand shop, and cinema. These cases were presented to participants in a random order. Two of these six cases (the baguette and the kebab food truck) were used for the purpose of this study and will be explained in detail below. The rest of the cases served as experimental filler in order to minimize detection risk.

In the baguette and kebab food truck cases, we first stated the nature of the business and presented participants with a picture of the food truck. In the case of the baguette food truck, we stated (English translation):

The food truck depicted below is planning to sell baguettes at Linköping University. You will be able to choose the content and toppings of your sandwich, such as cheese, ham, turkey, or tuna, yourself. We ask you to help us with the pricing of the baguettes.

In the case of the kebab food truck, we stated (English translation):

The food truck depicted below is planning to establish at Linköping University campuses. The food truck will prepare meals containing kebab with Swedish meat or falafel.

After the above statements, we asked participants three specific questions regarding each business case. First, we asked participants whether they thought the establishment of the particular food truck was a good idea or not. They had the option to answer yes or no to this question. Second, we asked participants to state their willingness to pay for a typical baguette sandwich and a kebab/falafel meal, respectively, including a drink, on a scale ranging from 0

to 100 SEK. Third, we asked participants to state what they believed other students in general would be willing to pay for a typical meal, including a drink, on a scale ranging from 0 to 100 SEK. The participants' answers to these three questions constituted our dependent variables.

For our main independent variables, we randomly manipulated the ethnicity and sex of the owner using the picture that depicted the particular food truck. In the case of the baguette food truck, we used the following food truck names to manipulate ethnicity and sex: Pelles Baguetter, Abduls Baguetter, Lottas Baguetter, and Fatimas Baguetter. Pelle and Lotta are typical Swedish-sounding names while Abdul and Fatima are typical Arabic-sounding names. Further, Pelle and Abdul are typical male-sounding names while Lotta and Fatima are typical female-sounding names. Similarly, in the kebab food truck context, we used Jockes Kebabgrill, Annas Kebabgrill, Mohammeds Kebabgrill, and Sakinas Kebabgrill as food truck names. Here, Jocke and Anna have Swedish connotations and Mohammed and Sakina have Arabic connotations; Jocke and Mohammed are typical male names and Anna and Sakina are typical female names.

A note on the type of food sold by the food truck is in order. We used two different types of cuisines, baguette and kebab/falafel, in order to test for customer discrimination. We considered a baguette sandwich as more of a neutral cuisine with neither Swedish nor Arabic associations. Kebab/falafel, however, has a clear Middle Eastern association. The purpose of this was to scrutinize whether the context itself had any impact on the dependent variable and whether the nature of the context induced any potential ethnic and sex differences in outcomes.

Upon reflecting on and completing the eight small-business establishment cases, participants answered a small set of questions related to background variables, such as age and sex. It took about 15 minutes to complete the entire experiment. The experiment was administered in Qualtrics. Complete instructions for the entire experiment are available upon request.

3. Results

3.1 Survey answers

Table 1 and Table 2 present the participants' answers regarding the food truck establishments. Both tables show small differentials regarding the name of the food truck owner. Regarding the establishment of a food truck selling baguettes, almost 86 percent of the respondents felt positive about a food truck opened by owners with typical Swedish names (male and female), while almost 89 percent of the respondents felt positive about a food truck opened by an owner with a typical Arabic name. As for the respondents' own willingness, and beliefs about others' willingness to pay, there were very small differences.

Table 1. Survey answers for the establishment of a food truck selling baguettes.

	Share with positive answers	Reported individual willingness to pay for a baguette (SEK)	Reported individual willingness to pay (among individuals with positive answers) for a baguette (SEK)	Reported answer on others' willingness to pay for a baguette (SEK)	Number of individuals
Swedish male	85.9	44.0	46.2	48.7	348
Swedish female	85.9	44.6	46.1	48.2	333
Arabic male	88.8	44.3	45.5	49.1	365
Arabic female	88.3	44.2	45.8	48.3	360

Regarding the food truck selling kebabs, almost 90 percent of respondents felt positive about an establishment by a male with an Arabic name, while around 85 percent felt positive about an establishment by an owner with a Swedish male name. Somewhat more than 88 percent of the respondents reported that they felt positive about a food truck opened by a Swedish or an Arabic female. Furthermore, the respondents also answered that their willingness to pay for a kebab was somewhat higher when the owner of the food truck was a Swedish female than when the owner was a Swedish male or a person with an Arabic name.

Thus, from our survey answers, we are not able to document any customer discrimination against self-employed individuals with Arabic names planning to establish a food truck on the university campus.

Table 2. Survey answers for the establishment of a food truck selling kebab.

	Share with positive answers	Reported individual willingness to pay for a kebab (SEK)	Reported individual willingness to pay (among individuals with positive answers) for a kebab (SEK)	Reported answer on others' willingness to pay for a kebab (SEK)	Number of individuals
Swedish male	85.5	56.6	58.1	49.2	345
Swedish female	88.5	58.7	59.4	49.0	339
Arabic male	89.7	55.6	57.3	48.3	378
Arabic female	88.4	56.9	59.1	48.0	344

3.2 Estimation results

In this section, we estimate regression models in which the propensity of being positive toward the food truck opening, the individual's willingness to pay and the individual's beliefs about others' willingness to pay constitute the outcome variables. The propensity of being positive toward the food truck establishment is estimated with the help of a linear probability model, in which the outcome variable takes the value 1 if the respondent has answered that

he/she is positive toward the food truck establishment and zero otherwise. The individual's willingness to pay and the individual's beliefs about others' willingness to pay (in its logarithmic form, SEK) is estimated with the help of OLS-regressions in which only individuals who have reported a positive value on willingness to pay is included in the estimations.

All estimations include dummy variables for the name of the food truck owner (a Swedish male constitutes the reference group). Our initial estimations only include these variables as explanatory variables. Moreover, we also conduct estimations that include a set of control variables. We include dummy variables for the name of the food truck owner (a Swedish male constitutes the reference group). We control for the respondents' age, gender, if the respondent has a partner or not, if the respondent combined studies with work, the number of semesters that the respondent has studied at the university and whether the respondent is foreign-born or not.

The results for a food truck establishment selling a baguette are presented in Table 3. The results without controls are very much in line with those presented in Table 1 and reveal no statistically significant differences between the names of food truck owners. Furthermore, the results remain stable when we add the set of controls in the estimations. Thus, our results do not reveal customer discrimination against self-employed individuals with Arabic names who are planning to establish a food truck selling baguettes on the university campus.

Table 3. Estimates of the propensity of being positive toward the food truck establishment and willingness to pay for a baguette (standard errors within parentheses).

	Positive answer		Individual willingness to pay		Others' willingness to pay	
Constant	0.859*** (0.018)	0.992*** (0.142)	3.733*** (0.022)	3.958*** (0.174)	3.853*** (0.018)	4.112*** (0.140)
Swedish female	0.000 (0.026)	0.001 (0.026)	0.039 (0.032)	0.037 (0.032)	-0.007 (0.026)	-0.007 (0.025)
Arabic male	0.028 (0.025)	0.027 (0.025)	0.031 (0.031)	0.022 (0.031)	-0.004 (0.025)	-0.007 (0.025)
Arabic female	0.024 (0.025)	0.023 (0.025)	0.019 (0.031)	0.014 (0.031)	-0.019 (0.025)	-0.021 (0.025)
Age		-0.007 (0.009)		-0.012 (0.012)		-0.016* (0.089)
Agesq		0.000 (0.000)		0.000 (0.000)		0.000 (0.000)
Female		-0.041** (0.019)		-0.079*** (0.023)		-0.050*** (0.018)
Partner		0.018 (0.020)		0.014 (0.024)		0.033* (0.020)
Work		-0.014 (0.019)		-0.007 (0.767)		-0.024 (0.019)
Semesters		-0.002 (0.003)		0.001 (0.004)		0.009 (0.003)
Foreign born		-0.001 (0.029)		-0.145*** (0.036)		-0.061** (0.029)
Number of individuals	1,406	1,406	1,378	1,378	1,401	1,401
R ²	0.002	0.007	0.001	0.024	0.000	0.022
Controls	No	Yes	No	Yes	No	Yes
H ₀ : Swedish female = Arabic male = Arabic female	$F = 0.74$ $p = 0.475$	$F = 0.59$ $p = 0.553$	$F = 0.21$ $p = 0.814$	$F = 0.27$ $p = 0.764$	$F = 0.20$ $p = 0.821$	$F = 0.21$ $p = 0.811$

***) Statistically significant at 1-percent level. **) Statistically significant at 5-percent level.
*) Statistically significant at 10-percent level.

The results for the food truck planning to sell kebabs are presented in Table 4. In this case, the results indicate that the respondents are more positive toward a food truck established by an individual with a male Arabic name than toward a food truck established by a male with a Swedish name. The estimated differential amounts to somewhat more than 4 percentage points (the magnitude is similar to the differential presented in Table 2) and is statistically significant at the 10-percent level. However, our results reveal no statistically significant differences between the other names of food truck owners in this regard.

Table 4. Estimates of the propensity of being positive toward the food truck establishment and willingness to pay for a kebab (standard errors within parentheses).

	Positive answer		Individual willingness to pay		Others' willingness to pay	
Constant	0.855*** (0.017)	1.025*** (0.138)	4.016*** (0.017)	4.257*** (0.132)	4.075*** (0.017)	4.357*** (0.129)
Swedish female	0.030 (0.025)	0.031 (0.025)	0.035 (0.024)	0.023 (0.024)	0.004 (0.024)	-0.010 (0.023)
Arabic Male	0.042* (0.024)	0.043* (0.024)	0.002 (0.024)	-0.003 (0.023)	-0.005 (0.023)	-0.012 (0.023)
Arabic female	0.029 (0.025)	0.030 (0.025)	0.007 (0.024)	0.003 (0.024)	-0.010 (0.024)	-0.014 (0.023)
Age		-0.011 (0.009)		-0.013 (0.009)		-0.016* (0.009)
Agesq		0.000 (0.000)		0.000 (0.000)		0.000 (0.000)
Female		-0.024 (0.018)		-0.092*** (0.017)		-0.077*** (0.017)
Partner		0.033* (0.019)		-0.004 (0.018)		-0.006 (0.018)
Work		0.036** (0.018)		0.017 (0.018)		-0.001 (0.017)
Semesters		-0.001 (0.003)		0.006** (0.003)		0.012*** (0.003)
Foreign born		-0.015 (0.003)		-0.126*** (0.027)		-0.091*** (0.026)
Number of individuals	1,406	1,406	1,377	1,377	1,397	1,397
R ²	0.002	0.009	0.002	0.046	0.000	0.046
Controls	No	Yes	No	Yes	No	Yes
H ₀ :	$F = 0.18$	$F = 0.19$	$F = 1.12$	$F = 0.66$	$F = 0.18$	$F = 0.01$
Swedish female =	$p = 0.834$	$p = 0.824$	$p = 0.327$	$p = 0.517$	$p = 0.833$	$p = 0.988$
Arabic male =						
Arabic female						

***) Statistically significant at 1- percent level. **) Statistically significant at 5-percent level.

*) Statistically significant at 10-percent level.

Finally, our results reveal no statistically significant differences in the reported willingness to pay depending on the name of the food truck owner. Thus, our results reveal no customer discrimination against self-employed individuals with Arabic names. Instead, male self-employed immigrants seem to be at an advantage, since potential customers reported that they are slightly more positive toward a food truck establishment by an Arabic male than by a Swedish male.

4. Conclusions

We conducted an experiment in order to study customer discrimination against self-employed immigrants with Arabic names active in the fast-food market. The experiment was conducted at a Swedish university campus. Students were asked about their opinions about a planned food truck opening and also about their own willingness, and their beliefs about others' willingness to pay for goods sold by the food truck.

Four names, one indicating a typical male Swede, one a typical female Swede, one a typical male Arab, and one a typical female Arab, were randomly assigned to the food truck. Our results revealed no customer discrimination against food truck owners with Arabic names. Furthermore, no difference was found between male and female food truck owners. The only statistically significant result that emerged from the experiment was that the respondents in the survey felt slightly more positive toward a food truck established by a male with an Arabic name than toward one established by a male with a Swedish name.

Our results differ from the results in previous research regarding customer discrimination, since most previous studies documented the existence of customer discrimination. However, the external validity in these types of studies is limited since they are only representative of a certain group of customers in a certain market. Thus, one conclusion from our study is that we have shown that the existence of customer discrimination is likely to vary across different markets and in different contexts.

We acknowledge that the external validity is limited in our study as well. It is reasonable to believe that customer discrimination against self-employed immigrants varies across different markets in Sweden. It is also likely that the existence of customer discrimination affects different groups of immigrants differently, and that more research in this area therefore is needed.

Our results are also of interest for Sweden's integration policy. The share of self-employed immigrants originating from countries in the Middle East has increased during recent decades. Previous research has shown that individuals with Arabic names are discriminated against in the Swedish labour and housing market.⁵ Furthermore, self-employed immigrants from non-European countries run higher risks of having loan applications turned down by banks and are also charged higher interest rates on bank loans than self-employed natives. Besides this, they also more often than natives report that they are discriminated against by banks, customers and suppliers.⁶ However, our study reveals no existence of customer discrimination against self-employed immigrants with Arabic names. Therefore, more research in this area is clearly needed in order to improve our understanding of immigrant self-employment in Sweden and to identify which obstacles certain groups of self-employed immigrants encounter in their businesses.

⁵ See Carlsson & Rooth (2007) and Ahmed & Hammarstedt (2008).

⁶ See Aldén & Hammarstedt (2016).

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