Uncovering sophisticated discrimination with the help of credence goods markups – evidence from a natural field experiment[¶]

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Abstract

Credence goods – such as repair and health-care services – are characterized by profound information asymmetries between less-informed customers and better-informed expert sellers. These information asymmetries open the door for fraudulent behavior on the seller side. In a pre-registered natural field experiment, we vary in one dimension the seller's perception of whether the service is an ordinary or a credence good service and in the second dimension whether the customer is a member of a minority or a member of the majority. This allows us to measure the size of the induced credence goods markup and to address the question whether it interacts systematically with discrimination. We document the existence of a large credence goods markup, on average. Moreover, we find that members of the minority pay a sizeable discriminatory markup if the good is perceived as a credence good but not if it is perceived as an ordinary good. Our results show that sellers engage in sophisticated discrimination where informational asymmetries are used to hide discriminatory (fraudulent) behavior. With the help of an ex-post survey we derive a possible explanation for our results.

Keywords: natural field experiment, credence goods, discrimination, expert services, credence goods markup, discriminatory markup

JEL classification: C93, D82, J15

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1. Introduction

There are currently over 70 million displaced persons globally – more than in any other period since World War II (McAuliffe and Khadria 2019). Families forced to leave their homes face many challenges in their search for a secure and dignified existence, such as gaining access to goods and services, housing, jobs and educational opportunities. Anti-immigrant prejudice and discrimination add to these challenges and are thus of major concern within many host societies. Most empirical research investigating discrimination against immigrants is focusing on the housing and labor market and the evidence from product and service markets is surprisingly scarce. Furthermore, most empirical research on discrimination focuses on markets for ordinary or search goods (see Section 2 for details). The present paper addresses this gap and introduces a novel design that allows to investigate the effects of informational asymmetries between sellers and buyers on discrimination in service markets. By comparing the prices of an ordinary goods service to the prices of the same service in a credence goods context our natural field experiment makes it possible to uncover otherwise difficult-to-observe discrimination against Syrian refugees in a market for credence goods in Turkey.[1] Uncovering discrimination in credence goods markets seems especially important because the size of those markets is huge and the market characteristics make it relatively easy to conceal such behavior. The benefit of our novel design is that it can easily be adjusted to other potential objects of discrimination (race, gender, age, sexual orientation, etc.) and to different credence goods markets.

Credence goods markets are characterized by profound information asymmetries between customers lacking the expertise required to assess which product or service best fits their needs and expert sellers possessing the required expertise. Important examples are, among others, the market for health care services, where the doctor is better informed than the patient about the appropriate treatment given the symptoms of the patient; the market for car repair

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[1] The Syrian Arab Republic and Turkey are natural candidates for studying discrimination since they are the origin and the host of the largest number of refugees globally over the past years. The UNHCR estimates that up to now 6.5 million Syrians left their homes and Turkey hosts 3.6 million refugees in total (https://www.unhcr.org/figures-at-a-glance.html, accessed on the 7th of July 2023).

services, where the mechanic is better informed than the car owner about the appropriate repair; and the market for financial advice, where the adviser can better assess which product fits the customer's needs best.

The information asymmetries in markets for credence goods open the door to different forms of fraud and misbehavior on the experts' side.[2] In this paper we address the question of whether such fraud interacts systematically with discrimination in markets for credence goods. To address this question, we conduct a natural field experiment in the Turkish market for cellphone repairs.[3] Our main instrument is the manipulation of the seller's perception of whether the service under consideration is an ordinary good or a credence good service. This is done via the following treatment manipulation: In the ordinary goods environment a mystery shopper enters a repair store with a broken device and asks to change the specific part that causes the problem; in the credence goods context the mystery shopper enters a repair store with a broken device and asks for a repair, mentioning that he has no clue which kind of repair is needed to fix the problem. By comparing the average price across the two goods characteristics (keeping the customer type constant) we compute the additional amount the customer must pay when he is uninformed about the appropriate repair. We term this additional amount the "credence goods markup" because it represents the amount due to the customer having less information about the appropriate repair than the seller.[4]

In a second treatment dimension, we employ mystery shoppers with different ethnic backgrounds – Turks and Syrian Arabs. By comparing the average price across the two customer groups (keeping the service type constant) we compute the additional amount a

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[2] According to Darby and Karni (1973) and Dulleck and Kerschbamer (2006) the main fraud dimensions in markets for credence goods are (i) *overprovision* – the customer gets a more expensive treatment or service than he actually needs; (ii) *underprovision* – the customer receives a treatment or service that does not solve his problems; and (iii) *overcharging* – the customer is charged for a more expensive service than was actually provided.

[3] The term 'natural field experiment' has been introduced by Harrison and List (2004). They distinguish between three variants of field experiments – an artefactual field experiment is the same as a conventional lab experiment but with a non-standard subject pool; a framed field experiment is the same as an artefactual field experiment but with field context added in some important parts of the instructions; and a natural field experiment is the same as a framed field experiment but where the subjects do not know that they are in an experiment.

[4] It might be argued that attributing the whole credence goods markup to intentional misbehavior is an exaggeration as a non-trivial diagnosis effort is potentially an important component of this markup. This is correct, of course. However, in our case, where the manipulation is fairly easy to detect and the credence goods markup varies substantially across expert providers and treatments, it seems safe to conclude that intentional misbehavior is a major driver of the markup.

customer must pay as a member of the immigrant minority – as compared to a member of the majority group. We term this additional amount the "discriminatory markup", because it represents the amount due to the customer being a member of the immigrant minority rather than a member of the local majority.

Our main hypothesis is that there is a non-trivial interaction between the credence goods markup and the discriminatory markup. Specifically, our pre-registered ex ante hypothesis consists of three parts: (i) there is a positive credence goods markup, on average (over the two customer types); (ii) there is a positive discriminatory markup, on average (over the two service types); and (iii) there is a higher discriminatory markup for the credence goods service than for the ordinary service. The three parts of our ex ante hypothesis are based on the following considerations: (i) In theory, repair services are credence goods for customers who are unable to self-diagnose their problem but ordinary goods for customers who know what they need (see Dulleck and Kerschbamer 2006). If sellers exploit the asymmetric information, then prices are higher in the credence goods context than in the ordinary goods context on average, resulting in a positive credence goods markup. (ii) Based on the findings in the large and still growing literature on discrimination (we summarize parts of this literature in Section 2), we would expect that customers who are considered as "in-group" by a given seller are treated better than customers who are considered as "out-group". If this is the case, and if the discrimination takes place via the price, then it results in a positive discriminatory markup, on average. (iii) Following the logic of Zitzewitz (2012) fraudulent or discriminatory behavior is something that expert sellers would prefer to conceal rather than reveal. In the ordinary good case it is harder to conceal fraud because customers have a good sense of what the price should be. Under such conditions, sellers are more constrained over pricing. As a result, both consumer groups pay (roughly) the same price even though some sellers would prefer to discriminate. In the credence good context, however, fraud may well go undetected because customers are unable to assess their needs. In this context, sellers have the discretion to charge over some range. How sellers

use that discretion depends on their social preferences towards the customer. For instance, some sellers might feel less guilt if they defraud a member of the immigrant minority than if they defraud a member of the local majority. If sellers act in accordance with these incentives then their behavior results in a higher discriminatory markup for the credence good than for the ordinary good service.

Our data strongly support the existence of a large credence goods markup – it amounts to about 40% of the price of the ordinary good, on average. The size of the discriminatory markup is much smaller – it amounts to about 17% of the price paid by a member of the majority and is only statistically significant with a parametric test. Turning to our main hypothesis – the interaction between credence goods markup and discriminatory markup – we uncover a sizeable discriminatory markup for the credence goods service but no discriminatory markup for the ordinary service. Together these findings point to the existence of a sophisticated form of discrimination in the market under consideration – a discrimination that takes place almost exclusively in the market segment where sellers can hide behind the preexisting information asymmetry. Consequently, this form of discrimination is difficult to detect by the party affected and difficult to uncover empirically. This means that the real extent of discrimination against immigrants is probably much larger than the literature suggests as credence goods markets have not been investigated so far. If this is the case, it is necessary to consider new approaches that have the potential to reduce the sophisticated form of discrimination uncovered here as existing anti-discrimination policies often require that discrimination is relatively easy to observe in order to have an effect. We make corresponding suggestions in the conclusion. To contextualize our findings, we supplement our field experiment with an ex-post survey, which offers a potential explanation for the observed results.

The rest of the paper is organized as follows: We review the related literature in Section 2. Section 3 presents our experimental design and motivates the four treatments constituting a

2x2 factorial design. Our main results are presented and discussed in Section 4. Finally, section 5 concludes the paper.

2.   Related literature

According to Zitzewitz (2012) natural field experiments are a promising tool to uncover behavior that agents would prefer to conceal. Misbehavior in credence goods markets is well documented with the help of this instrument: The pioneering natural field study by Schneider (2012) investigates the impact of reputational concerns on fraudulent behavior in the US market for car repairs and reports that although the overall level of under- and overprovision is pervasive, reputation does not help much to improve efficiency. The studies by Balafoutas et al. (2013) and Balafoutas et al. (2017) are both conducted in the Greek market for taxi rides and they show that passengers who are perceived as foreigners are taken on significantly longer detours and billed significantly more than local riders (Balafoutas et al. 2013), and that passengers whose expenses are reimbursable by their employer are significantly more likely to pay higher-than-justified prices (Balafoutas et al. 2017). The studies by Lu (2014) and Kerschbamer et al. (2016) point in a similar direction as Balafoutas et al. (2017) although the experiments are conducted in completely different markets: Lu (2014) finds that doctors act out of self-interest by prescribing unnecessary or excessively expensive drugs to insured patients. Similarly, Kerschbamer et al. (2016) show that the repair price of computers increases by 80% if the customer reveals to the expert that an insurance company will cover the cost of the repair. The study of Anagol et al. (2017) examines the Indian market for life insurance and shows that life insurance agents react to material incentives by overwhelmingly recommending unsuitable, strictly dominated products that provide high commissions to them. Finally, Gottschalk et al. (2018) study the market for dental care and report significantly less overprovision recommendations for uninformed patients with higher socio-economic status.

The above studies have in common that they examine the effects of different treatment variations (i.e., suggesting the chance for repeated business, varying the information level of the customer, mentioning that the bill will be reimbursed by a 3rd party, …) on the level of the different fraud dimensions within a credence goods market context. The experimental design in the present paper differs from previous studies in that our treatment manipulation changes the market context from an ordinary good to a credence good context. This enables us to compare experts' provision and charging behavior across these two market environments and to calculate the resulting credence goods markup.[5]

On the dimension of discrimination, there is a huge and still growing body of work – see the excellent review by Bertrand and Duflo (2017). Within this literature our paper is most closely related to field studies examining discrimination in product and service markets: The study by Ayres and Siegelmann (1995) is an early example of an audit study investigating race and gender discrimination in bargaining for a new car. The authors find that white males are quoted lower prices than white women and blacks (men or women). List (2004) examines the behavior of buyers and sellers in a sports cards market and documents discrimination against women and black males relative to white males. Doleac and Stein (2013) examine racial discrimination in online marketplaces for iPods. The authors report that an iPod presented by a dark-skinned hand receives, on average, fewer and lower offers than the same product presented by a light-skinned hand. In a similar fashion Nunley et al. (2011) study racial discrimination by simultaneously selling identical products on eBay under different racially identifying names. The authors detect a discriminatory pattern that is in line with in-group favoritism (i.e., white names receive higher bids for distinctively "white" products and black names receive higher

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[5] The paper that comes closest to ours in this respect is Balafoutas et al. (2013). In their experiment on the cheating behavior of taxi drivers in Athens the authors let some passengers (the "locals") only state the destination and others (the "nonlocal-natives") state the destination and ask the driver whether he knows the destination, adding as an explanation for asking that they are not familiar with the city. While the treatment with the nonlocal-natives clearly induces a credence good context the treatment with the locals is somewhat ambiguous as the interpretation by the driver depends on her or his beliefs: it is plausible that the driver believes that the passenger stating only the destination is a local who knows the city very well (in this case the ride would be considered as an ordinary good), but it is equally plausible that the driver believes that the passenger has less than perfect knowledge about the optimal route (in this case the ride would be considered as a credence good). Our treatment manipulation is cleaner in this regard by leaving almost no room for speculation on the side of the expert service provider.

bids for distinctively "black" products). Zussman (2013) conducts a field experiment on racial discrimination in the Israeli online market for used cars and finds discrimination against Arab buyers and sellers when it comes to different measures of response rates. Castillo et al. (2013) examine gender differences in bargaining outcomes in a market for taxi rides and find that male passengers are treated worse by male drivers.

Almost all of the above summarized studies have in common that they examine potential discrimination in ordinary product or service markets.[6] Even in the study of Castillo et al. (2013) – investigating the market for taxi rides in Lima, Peru – the good can hardly be interpreted as a credence good because taxi rides are the most common means of transportation for households in Lima (implying that most customers know the shortest route to their destination quite well) and because bargaining over the fare for the ride takes place before the ride is actually taken (implying that the typical credence goods problems in the market for taxi rides – overtreatment in the form of taking detours and overcharging in the form of charging for items that are included in the fare – are not an issue in this market). Our study complements and extends previous work on discrimination by examining a credence goods context in addition to the ordinary goods context. As we have seen, this is important because it enables us to detect a sophisticated form of discrimination by expert providers which would be hard – if not impossible – to detect otherwise.

3.   Experimental design and background information on migration to Antalya

3.1   Experimental design

We conducted our natural field experiment in the Turkish city of Antalya from July 2018 until October 2018. Four male undercover mystery shoppers – two Turks and two Syrian Arabs – were hired and trained by a Turkish fieldwork coordinator who supervised the data collection

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[6] The studies of Ayres and Siegelmann (1995) and Zussman (2013) are exceptions as used cars are usually considered as experience goods. By contrast, we study discrimination in a market for credence goods. For a discussion about the differences between experience goods and credence goods see Dulleck et al. (2011).

and also acted as a mystery shopper.[7] To minimize the risk of undesired gender, complexion, age or similar effects the mystery shoppers were all between 25 and 35 years old, casually dressed, male, medium-sized and short haired – see Table A1 in Appendix A for the individual characteristics of the mystery shoppers.[8]

The shops for our natural field experiment were selected as follows: We first compiled a list of all repair shops in the city of Antalya (without its surrounding suburbs) using information from exploratory tours in the streets of Antalya and available online (Google, city directory, etc.). Then we assigned to each shop a specific number and used a random number generator to match the shops to our four treatments (described below), subject to having basically the same number of observations for each of the treatments. In the last step, we randomly matched the Turkish and Syrian mystery shoppers to the corresponding treatments.[9] The locations of the visited shops are illustrated in Figure A3 in Appendix A and Table A4 in the same appendix presents balance checks in various dimensions.[10]

Before the start of the experiment, we bought 24 identical, refurbished and perfectly working smartphones (Apple iPhone 5s) for an average price of 900 TRY.[11,12] The smartphones were manipulated as follows (and the manipulation was repeated after every repair shop visit): First, we drained the battery of the phone until the phone switched off. Then we mechanically destroyed the port of the phone which is used to charge the battery. As a result, the mobile is

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[7] Anticipating the discussion in Subsection 4.3, we emphasize already here that none of our mystery shoppers has a Kurdish background. We included the fieldwork coordinator in the data collection process as we considered it as important that the person we communicate with has an exact idea about what goes on in the data generating process.

[8] We control for the potential influence of individual characteristics of the mystery shoppers in a regression model – see Table 3 in Subsection 4.2. Furthermore, Table A2 in Appendix A shows the average price for each mystery shopper grouped by treatment.

[9] Because of the various time constraints of the mystery shoppers it was not possible to have also a balanced sample in this dimension.

[10] We conducted an ex-ante power analysis focusing on the discriminatory markup in the credence goods context with the following assumptions: We estimated a repair price of 110 TRY with a standard deviation of 40 TRY for members of the majority. For members of the minority we estimated that the repair price would increase, on average, by 20 Try to 130 TRY with a standard deviation of 50 TRY. The resulting power analysis (adjusted for a one-sided test) stated that we will get a power of 71% for a total sample size of 100 (50 observations per treatment) and that is what we preregistered.

[11] In 2018, Apple ranks as the second largest smartphone vendor in Turkey with a market share of about 17% (see https://mashable.com/article/turkey-iphone-ban-apple-hurt, accessed on the 7th of July 2023). At the same time, an iPhone 5s in 2018 is considered as a reasonable choice within the lower price segment (see https://beetelbite.com/apple-iphone-5s-in-2018/ or https://blog.beforward.jp/electronics/used-iphone-5s-be-forward.html, accessed on the 7th of July 2023). Therefore, we do not think that this phone model signals something extraordinary like a high social status to the repair shops and it is plausible that a Syrian Refugee owns such a model.

[12] The exchange rate was 10 TRY = 1.60 EURO on the 26th of October 2018.

off and it is not possible to switch it on anymore. A defective charging port is not an unusual problem; rather, it happens relatively often.[13] The correct repair procedure for this problem is to replace the charging port and charge the phone. With the help of internet tutorials and DIY repair kits, the problem could be easily self-diagnosed and self-repaired.[14]

Because of the trivial nature of the problem we expected that almost all shops would be able to repair the phone. For our research question it is essential that the problem can be identified and repaired easily by almost all mobile repair shops as we are interested in examining intentional misbehavior and not incompetence of the service provider. The fact that only about 2.5 % of the visited repair shops claim that they are not able to identify the problem confirms that we succeeded in this dimension.

The interaction between mystery shoppers and mobile repair shops was done by the mystery shoppers themselves after a training session. In the training session, the fieldwork coordinator emphasized the importance of consistency in the data collection phase and the mystery shoppers were trained to keep the interaction with the repair shops as short as possible. Additionally, we provided the mystery shoppers standardized answers for typical questions from the repair shops. In order to keep track of every transaction, the mystery shoppers were asked to collect the receipts for each repair. The mystery shoppers and the fieldwork coordinator were not informed about the specific research questions of the study and we gave them the impression that the goal of the study was to test the quality of the provided repair services. The four treatments displayed in Table 1 constitute our 2x2 factorial design:

- **MAJORITY-ORDINARY**: In this treatment (abbreviated **MAJ-ORD**), mystery shoppers from Turkey stick to the following script when dropping off the cellphone at the repair shop: *"Hi! I can't switch on my mobile phone anymore and I know that a defective charging port causes the problem. Could you please repair it?"* Here the

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[13] See https://tech.co/phones/iphone-troubleshooting-fix-common-problems#iphone-wont-charge, accessed on the 12th of July 2023.

[14] See https://www.ifixit.com/Guide/iPhone+5s+Lightning+Connector+Replacement/20261, accessed on the 12th of July 2023.

customer reveals by the script that he knows the cause of the problem and as a result the transaction arguably involves an ordinary good and not a credence good. The Turkish origin of the mystery shopper is easily identified by the shop staff based on the accent.[15] Since in this treatment the mystery shopper and the shop staff are both from Turkey, discrimination is expected to play a minor role in this treatment.

- **MAJORITY-CREDENCE**: In this treatment (abbreviated **MAJ-CRE**), mystery shoppers from Turkey stick to the following script when dropping off the cellphone at the repair shop: *"Hi! I can't switch on my mobile phone anymore and I don't know what the problem is. Could you please repair it?"* Here the mystery shopper gives the impression that he does not know the cause of the problem and as a result the transaction arguably involves a credence good and not an ordinary good as in MAJ-ORD. As a consequence, sellers might expect that fraud goes undetected and therefore charge higher prices than in MAJ-ORD. As in MAJ-ORD, ethnic discrimination is expected to play a minor role in this treatment as the shop staff and the mystery shoppers are both from Turkey.

- **MINORITY-ORDINARY**: In this treatment (abbreviated **MIN-ORD**), the script is identical to that in MAJ-ORD but the mystery shopper is now a Syrian Arab refugee. The fact that the mystery shopper is a Syrian Arab refugee is easily learned by the shop staff for at least two reasons: First, our Syrian mystery shoppers speak in broken Turkish and exhibit a specific accent. [16] Second, the mystery shoppers state their names in the course of the transaction and Syrian Arab names are systematically different to Turkish/Kurdish ones. Since in this treatment the mystery shopper and the shop staff

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[15] This is also true the other way around and for the sake of experimental control we decided to stop the interaction of the mystery shopper and the repair shop in case the mystery shopper realized that the shop staff was not a Turkish citizen. This seemed necessary because otherwise the distinction between immigrant and native in the expert-customer relationship could be blurred or even reversed. The resulting cancellations and shops that were not existing anymore led to a deviation from our preregistration plan with respect to the number of observations (163 instead of 200).

[16] We recorded each mystery shopper reciting the script and Turkish native speakers confirmed that the Arabic accent is immediately noticeable and that it is easy to distinguish the Turkish and Syrian mystery shoppers. Given that our mystery shoppers communicated with the repair shops in broken Turkish it seems plausible that the mystery shoppers are perceived as immigrants who are in Turkey for a longer period of time as it is not usual that Syrian Arabs are able to speak Turkish immediately.

belong to different ethnic groups, ethnic discrimination could play a role. However, the room for discrimination is limited because fraudulent behavior is difficult to hide in an ordinary goods market.

- **MINORITY-CREDENCE**: In this treatment (abbreviated **MIN-CRE**), the script is identical to that in MAJ-CRE, but mystery shoppers are again Syrian Arab refugees – as in MIN-ORD. Compared to MAJ-CRE prices are expected to be higher, on average, because discrimination is predicted to play a role in MIN-CRE but not in MAJ-CRE. Compared to MIN-ORD the room for exploitation is expected to be larger because fraudulent behavior can easily be hidden behind the pre-existing information asymmetry regarding the appropriate repair.

Table 1: The four treatments

customer type	service type	
	ORDINARY	**CREDENCE**
	MAJ-ORD	*MAJ-CRE*
MAJORITY	majority customer	majority customer
	ordinary goods market	credence goods market
MINORITY	*MIN-ORD*	*MIN-CRE*
	minority customer	minority customer
	ordinary goods market	credence goods market

Based on our four treatments we employ the following identification strategy:

- By comparing the average repair price across the two **ORD** treatments with the average repair price across the two **CRE** treatments we identify the average credence goods markup across the two customer types.

- By comparing the average repair price across the two **MAJ** treatments with the average repair price across the two **MIN** treatments we identify the average discriminatory markup across the two service types.

- By comparing the average repair price between the *MIN-ORD* to the *MAJ-ORD* treatment and between the *MIN-CRE* to the *MAJ-CRE* treatment we identify the average discriminatory markup for each of the two service types.

After completing the data collection for our main experiment, we visited each repair shop in our sample a second time – this time asking the person in the shop to participate in a survey. The second visit was made solely by Turkish research assistants and by a different person than the first visit. The fact that we had already visited the shop for our data collection was not mentioned. The ex-post survey was conducted to elicit general characteristics of the shop staff and their attitudes towards immigration. Most of the questions on our survey are from the migration module of the European Social Survey (https://www.europeansocialsurvey.org, accessed on the 19th of May 2023). All the design features presented in this section have been preregistered prior to the data collection at https://aspredicted.org – see Appendix B for the time-stamped preregistration document.

3.2 Background information on migration to Antalya

Antalya is a major tourism hub located on Anatolia's southwestern coast with more than two million inhabitants. Thanks to its job opportunities in the agricultural, construction and tourism sector the population is growing rapidly due to internal migration. Antalya has also become a center of attraction for Turkish Kurds who migrate from the south east. In the period between

2007 and 2012, the Turkish Kurdish population in Antalya has increased by 36 percent, a rate which surpasses all other areas in Turkey. The migrants, usually from low socio-economics groups, tend to take low-paid jobs and live in unfavorable conditions.[17] As there is "anti-Kurdish sentiment" in all western Turkish cities, Turkish Kurds often try to hide their Kurdish identity after migrating. Otherwise, they face the risk of being discriminated in many areas of daily life or even being the victim of hate crimes.[18]

Turkey also faces a large inflow of refugees from Syria since the start of the Syrian civil war in 2011. Figure 1 shows that the major influx of Syrian refugees in Turkey happened before 2017. Although a clear majority of Turkish citizens were already unhappy with the arrival of Syrian refugees almost from the beginning, these feelings even hardened as the number of Syrian refugees in Turkey skyrocketed and as it became obvious that the majority of Syrian refugees will likely remain in Turkey.[19] More than 95% of Syrians in Turkey reside in urban centers. Host communities – particularly those who feel marginalized by ethnic, sectarian or ideological cleavages – perceive Syrians increasingly as an economic and political threat and the number of host community hostility toward Syrian refugees is on the rise in Turkey's metropolitan areas. Most violent incidents take place in working-class enclaves where Syrian refugees compete with locals in finding unskilled employment. Thereby, the space previously occupied mostly by Turkish Kurds who migrated from the south east to western cities to work in the informal sector is now often filled by Syrians who accept lower pay.[20] In addition, many Kurds living in western metropolitan cities have the perception that Syrians benefit from more

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[17]   See   https://www.oecd.org/cfe/regionaldevelopment/resilient-cities-antalya.pdf   and   https://www.hurriyetdailynews.com/kurds-still-migrating-to-western-turkish-cities-46198, accessed on the 12th of July 2023.

[18] See https://www.refworld.org/docid/4feadcd02.html or https://stockholmcf.org/3-kurdish-university-students-injured-in-allegedly-racist-attack-at-antalya-university/, accessed on the 12th of July 2023.

[19] See https://www.americanprogress.org/article/turkeys-refugee-dilemma/, accessed on the 17th of May 2023.

[20] Turkey has an informal sector size of about 30% (relative to the GDP) and it is estimated that about 1 million Syrians are working informally (https://www.worldeconomics.com/National-Statistics/Informal-Economy/Turkey.aspx   and   https://reliefweb.int/report/turkey/syrian-refugees-perceptions-formal-labour-market-southeast-turkey, accessed on the 12th of May 2023.

public assistance and greater social acceptance and this makes resentments towards Syrian refugees particularly acute.[21,22]

Figure 1: Distribution of Syrians under temporary protection by year
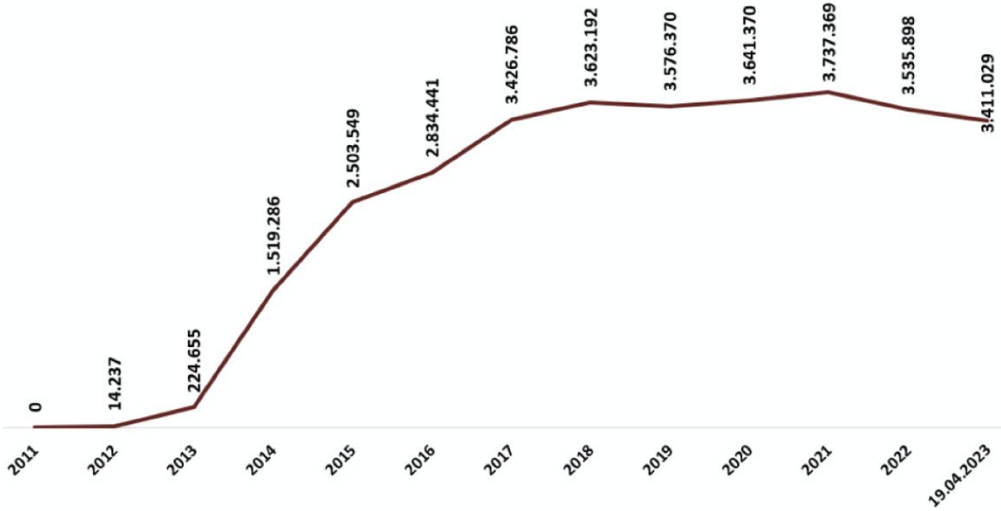
Source: Presidency of Migration Management, Ministry of Interior, Republic of Türkiye

Although the opposition party CHP is traditionally strong in Antalya this doesn't mean that this reflects rather liberal attitudes of the citizens towards immigration. Over the past years the CHP has become the representative for nationalist, anti-refugee anger in Turkey by targeting Syrians.[23] Given this context it is probably not surprising that discrimination and violence against Syrian refugees have spread from the border cities to Antalya[24] although Antalya had at the time our experiment was conducted a relatively low ratio of Syrian refugees to the city's

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[21]   See   https://www.crisisgroup.org/europe-central-asia/western-europemediterranean/turkey/248-turkeys-syrian-refugees-defusing-metropolitan-tensions, accessed on the 17th of May 2023.

[22] In addition to these reasons, there is also a broader political context why Kurds view the large influx of Syrian Arab refugees into Turkey with suspicion: 1) Many see the situation as an attempt by Turkish President Recep Tayyip Erdoğan to fundamentally alter the electoral balance in his favor via the importation of a sympathetic Sunni Arab minority. 2) Kurds fear that Turkish-backed Arab forces are engaging in a campaign of ethnic cleansing in Northern Syria, driving Kurds out and encouraging the return of Syrian Arabs to the area. Public statements by Erdoğan himself and widely publicized human rights violations against Kurds by Syrian Arab factions trained and supported by the Turkish government have provided some justification for these fears (https://www.hrw.org/news/2019/11/27/syria-civilians-abused-safe-zones, accessed on the 17th of May 2023). When interviewed by Turkey's state-run TRT network Erdoğan depicted Turkey's safe zone in Northern Syria as unsuitable for Kurds. "The people most suitable for that area are the Arabs. These areas are not suitable for the lifestyle of the Kurds," he said (Ashdown 2019).

[23] See https://www.setav.org/en/syrian-refugees-and-the-chps-culture-of-hate/, accessed on the 17th of May 2023.

[24] See https://www.opendemocracy.net/en/north-africa-west-asia/antisyrian-racism-in-turkey/ or https://stockholmcf.org/another-syrian-refugee-falls-victim-to-apparent-hate-crime/, accessed on the 17th of May 2023.

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population of 0.5% (Yitmen and Verkuyten 2019). This relatively low number of Syrian refugees (compared to other cities in Turkey) was also one of the reasons to conduct the experiment in Antalya because in the border cities the Syrian community is very large and has its own cellphone repair shops. As a result, the design feature that a Syrian refugee visits a Turkish repair shop would not have been authentic in those cities.

4.   Results

In total, we visited 163 shops, 40 for **MAJ-ORD**, 43 for **MAJ-CRE**, 39 for **MIN-ORD** and 41 for **MIN-CRE**. Out of these shops, two shops in **MAJ-ORD** refused the repair stating that they did not have enough free capacities to perform it, and four shops in **MAJ-CRE** were not able to identify the source of the problem. Since those six shops did not provide a price quote for the repair we exclude them from our dataset. This leaves us with 157 shops for the analysis.[25]

4.1   The credence goods markup and the discriminatory markup

Figure 1 and Table 2 present the average repair price for each treatment and Figure 2 displays the cumulative distribution function of the repair prices per treatment.[26] The average repair price is 95 TRY in **MAJ-ORD**, 128 TRY in **MAJ-CRE**, 103 TRY in **MIN-ORD** and 158 TRY in **MIN-CRE**. To quantify the average credence goods markup across the two customer types we compare the average repair price of the two **ORD** treatments (99 TRY) to the average repair price of the two **CRE** treatments (143 TRY). As expected the price is higher in the **CRE** treatments. The difference is economically large (44 TRY, or more than 40% of the average repair price in the **ORD** treatments) and statistically highly significant (one-sided T-test

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[25] Out of these 157 observations, 152 shops repaired the mobile successfully and as a consequence the repair price was paid to the shops. The remaining five shops (one in **MAJ-ORD**, two in **MIN-ORD** and two in **MIN-CRE**) are also included in our analysis because they still provided a diagnosis and stated a repair quote. The transactions with these shops were not completed because they did not repair the mobile within the agreed time period (three observations) or stated a price quote so high that it hurt the sentiments of our Syrian experimenters (two observations).
[26] In addition, Table A5 in Appendix A shows the min, max, mean, standard deviation, 10th, 25th, 50th, 75th, and 90th percentile for each treatment.

adjusted for unequal variances, p<0.001; one-sided Mann-Whitney U-test, p<0.001).[27] This finding is summarized in our first result:

Result 1 (credence goods markup): *The difference between the average repair price of the ordinary good and the average repair price of the credence good is economically large and statistically highly significant. The average credence goods markup across the two customer types amounts to more than 40% of the price of the ordinary good.*

To quantify the average discriminatory markup across the two service types we compare the average repair price of the two **MAJ** treatments (112 TRY) to the average repair price of the two **MIN** treatments (131 TRY). While the price is higher in the **MIN** treatments, the difference is (with 19 TRY, or about 17% of the average repair price in the **MAJ** treatments) much smaller than the difference between the two service types and it is only statistically significant with a parametric test (one-sided T-test adjusted for unequal variances, p=0.033; one-sided Mann-Whitney U-test, p=0.127). This finding is summarized in our second result:

Result 2 (discriminatory markup): *The difference between the average repair price members of the minority were charged and the average repair price members of the majority were charged is moderate and only statistically significant in a parametric test. The average discriminatory markup across the two service categories amounts to about 17% of the price paid by a member of the majority.*

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[27] We apply one-sided tests whenever we formulated directed hypotheses in Section 1.

Figure 2: Average repair price in TRY and 95% confidence intervals, conditional on treatment
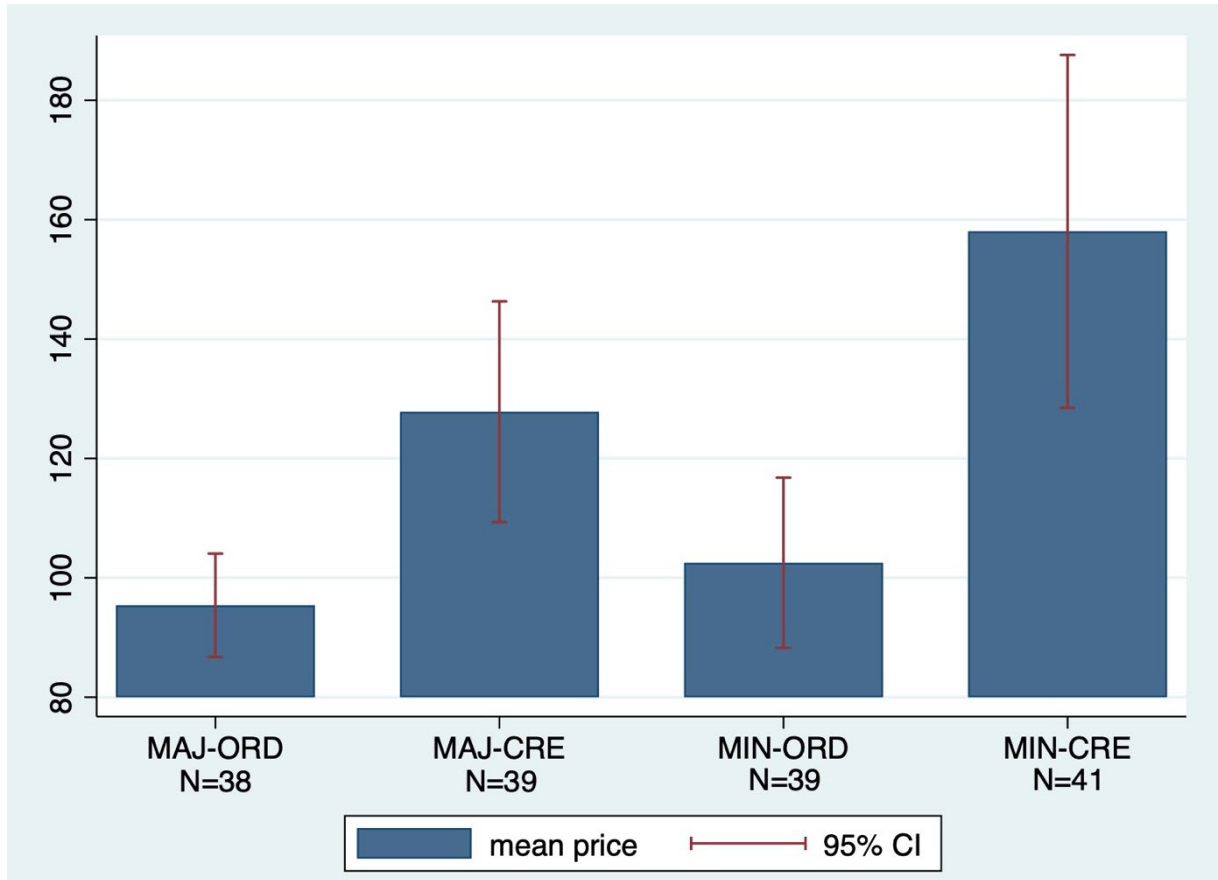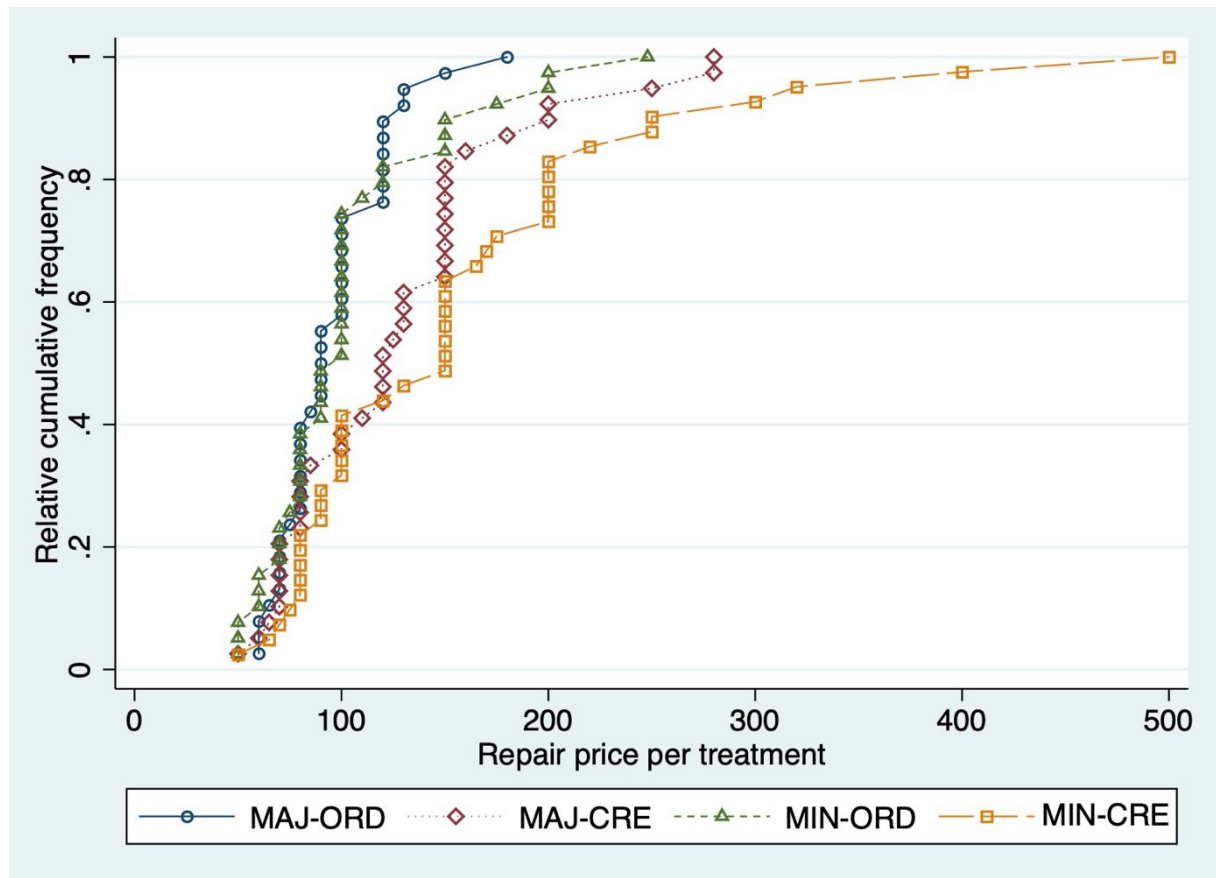

Note: MAJ-ORD stands for majority customers in an ordinary goods market; MAJ-CRE stands for majority customers in a credence goods market; MIN-ORD stands for minority customers in an ordinary goods market; and MIN-CRE stands for minority customers in a credence goods market.

Table 2: Average repair price (in TRY) and number of observations (in parentheses)

	ORD	CRE	both service types	ORD vs CRE
MAJ	95 (38)	128 (39)	112 (77)	p=0.001 T-test p=0.005 MW-test
MIN	103 (39)	158 (41)	131 (80)	p=0.001 T-test p=0.001 MW-test
both customer types	99 (77)	143 (80)	122 (157)	p<0.001 T-test p<0.001 MW-test
MAJ vs MIN	p=0.196 T-test p=0.421 MW-test	p=0.042 T-test p=0.071 MW-test	p=0.033 T-test p=0.127 MW-test	

Note: MAJ stands for majority customers; MIN stands for minority customers; ORD stands for ordinary goods market; and CRE stands for credence goods market.

Figure 3: Cumulative distribution function of repair prices (in TRY), conditional on treatment

Note: MAJ-ORD stands for majority customers in an ordinary goods market; MAJ-CRE stands for majority customers in a credence goods market; MIN-ORD stands for minority customers in an ordinary goods market; and MIN-CRE stands for minority customers in a credence goods market.

4.2   Detecting sophisticated discrimination

Disentangling the discriminatory markup across the two service categories we see (in Table 2) that the discriminatory markup is 8 TRY in **ORD** and 30 TRY in **CRE**. These figures imply a statistically significant discriminatory markup for the credence goods service (one-sided T-test adjusted for unequal variances, p=0.042; one-sided Mann-Whitney U-test, p=0.071) but not for the ordinary goods service (one-sided T-test adjusted for unequal variances, p=0.196; one-sided Mann-Whitney U-test, p=0.421).

To check the robustness of this finding Table 3 presents two OLS-regressions with the repair price as the dependent variable and dummies for **CRE** and **MIN,** as well as the interaction between these two dummies (**MIN x CRE)** as explanatory variables – keeping **MAJ x ORD**

as the (omitted) benchmark. Column 2 of Table 3 introduces in addition dummies for every individual mystery shopper. This is done to control for potential fixed effects of the individual mystery shoppers. Mystery shoppers from the Turkish majority are represented by the dummies **MAJ-MEM 2** and **MAJ-MEM 3** – keeping **MAJ-MEM 1** as the (omitted) benchmark. Members of the Syrian minority are represented by the dummy **MIN-MEM 2** - keeping **MIN-MEM 1** as the (omitted) benchmark. For both specifications, we see in the first line of Table 3 that **CRE** increases the repair price significantly. This confirms and extends **Result 1** from the previous subsection; not only on average across the two customer types, but also for the group of majority customers in isolation, the credence goods markup is large (about 33 TRY) and statistically highly significant (one-sided p-value=0.001). From the fact that the dummy for **MIN** is not significant in both specifications we conclude that there is no evidence in our data for a positive discriminatory markup in the ordinary service context. That the interaction term **MIN x CRE** increases repair prices not significantly in both specifications means that the credence goods markup for minority members is not significantly higher than the one for majority members. However, the dummies for **MIN** and **MIN x CRE** are jointly significant in both specifications at the 5% level and this supports the finding that there is a positive discriminatory markup in the credence goods context.

Regarding the dummies for the individual mystery shoppers, none of them has a significant impact on the repair price. In sum, this means that we find a large credence goods markup for both customer groups, a significant discriminatory markup in the credence goods context and no evidence for a discriminatory markup in the ordinary service context. These findings confirm our conjecture that discrimination is by far more important in markets where sellers can hide their fraudulent behavior behind the pre-existing information asymmetry. We summarize these findings in our third result:

Result 3 (interaction between discriminatory markup and credence goods markup): *Disentangling the discriminatory markup across the two service categories we find an economically large and statistically significant discriminatory markup for the credence goods service but no significant discriminatory markup for the ordinary goods service.*

Table 3. Regression analysis of repair prices

	[1]	[2]
Dependent variable (OLS regressions)		*Repair price*
Independent variables		*(in TRY)*
CRE (1=yes)	32.43***	32.91***
	(10.09)	(10.61)
MIN (1=yes)	7.12	13.32
	(8.24)	(12.63)
MIN x CRE treatment (1=yes)	23.11	21.06
	(19.12)	(19.32)
MAJ-MEM 2 (1=yes)		6.19
		(14.99)
MAJ-MEM 3 (1=yes)		-6.24
		(14.26)
MIN-MEM 2 (1=yes)		-13.12
		(14.72)
Constant	95.40***	94.91***
	(4.27)	(6.42)
# Observations	157	157
R-squared	0.144	0.150

OLS-regressions (robust standard errors) with repair price (in TRY) as dependent variable, including, as explanatory variables, a dummy for **CRE**, a dummy for **MIN**, a dummy for **MIN x CRE** and mystery shopper dummies — keeping the **MAJ x ORD** treatment, **MAJ-MEM 1** and **MIN-MEM 1** as the (omitted) benchmarks. ***, **, * denote significance at the 1%, 5%, 10% level, standard errors in parentheses.

4.3 Summary of the ex-post survey

In total, only 76 of the 157 shops in our original dataset participated in our survey. A potential explanation for the high attrition rate could be that at the time of the survey the political situation in Turkey was still tense.[28] To detect potential selection effects, Table 4 shows the repair prices and the number of observations (in parentheses) for the full sample, the surveyed subsample and the non-surveyed subsample. Comparing the repair prices between the surveyed and non-surveyed subsample, it seems that the surveyed subsample tends to discriminate less against minority shoppers in the ordinary and in the credence goods context.[29] This potential selection effect would suggest that shops who showed the highest levels of discrimination in our full sample are underrepresented in the ex-post survey. This, in turn, suggests that the results of the ex-post survey represent more a lower bound when it comes to discrimination.

Table 4: Number of observations (in parentheses) and average repair price in TRY for the full sample, the surveyed subsample and the non-surveyed subsample

	ORD	CRE	both service types
MAJ	Full (38): 95 Surveyed (17): 91 Non-surveyed (21): 99	Full (39): 128 Surveyed (21): 128 Non-surveyed (18): 127	Full (77): 112 Surveyed (38): 112 Non-surveyed (39): 112
MIN	Full (39): 103 Surveyed (22): 93 Non-surveyed (17): 115	Full (41): 158 Surveyed (16): 146 Non-surveyed (25): 166	Full (80): 131 Surveyed (38): 115 Non-surveyed (42): 145
both customer types	Full (77): 99 Surveyed (39): 92 Non-surveyed (38): 106	Full (80): 143 Surveyed (37): 136 Non-surveyed (43): 150	Full (157): 122 Surveyed (76): 113 Non-surveyed (81): 129

Note: MAJ stands for majority customers; MIN stands for minority customers; ORD stands for ordinary goods market; and CRE stands for credence goods market.

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[28] In summer 2016 there was a failed coup attempt by the Turkish military and as a consequence the Turkish government declared a state of emergency until July 2018. Although the survey was conducted shortly after the state of emergency has ended some shops indicated that they do prefer not to participate in a survey about immigration (which was and still is a political topic) in this political context.

[29] According to two-sided T-tests and Mann Whitney U-tests these differences are not statistically significant for each service type in isolation. However, a two-sided T-test reports a p-value = 0.086 when combining both service types whereas the Mann Whitney U-test is still reporting an insignificant result.

The ex-post survey exposes participants to 35 questions, which are listed in Table C1 in Appendix C. The questions elicit various demographics characteristics (questions 1-7), risk attitudes (question 8), honesty attitudes (question 9), religiosity (questions 10-12), national identification (questions 13) and attitudes towards immigration (questions 14-35). Table C1 also reports the responses to the survey questions separately for two ethnicities of sellers – Turks and Kurds. The members of both ethnicities are Turkish citizens; Turks are the majority – according to various estimates only about 15% to 20% of the Turkish population consists of Kurds (see the report of the Home Office 2018). We decided to group the survey results by the ethnicity of the seller because this part of the study was purely explorative and ethnicity turned out to be the only significant predictor for the repair price in various regression specifications. In addition, the discussion in Subsection 3.2 along with the theory of downward social comparison (see the discussion below) suggests that Turks and Kurds have different views towards immigration.

The results in Table C1 show that Kurdish and Turkish survey participants have indeed different attitudes regarding immigration. The most important differences between the two ethnicities are found in the answers to questions 6, 13, 21, 22, 29, 30 and 31. Question 6 shows that Turks attended school significantly longer than Kurds. Question 13 reveals, not surprisingly, that Turks feel significantly more attached to Turkey than Kurds. Questions 21 and 22 show that Turks express significantly more support for the view that immigrants take away jobs from the local society and that they generally take out more than they put in. Questions 29 and 30 reveal that Kurds think significantly more often that some ethnic groups are born more intelligent and harder working than others. Finally, an interesting finding is that Kurds think significantly more often that most people who apply for refugee status in Turkey are not in real fear of persecution in their home countries (see question 31). Taken together,

Turks believe more often that migration has negative consequences from an economic perspective whereas Kurds exhibit more racist attitudes in general.[30]

Table C2 in Appendix C presents the average price per treatment contingent on the ethnicity of the service provider and reveals that the average repair price is almost identical across the two ethnicities in the **ORD**-treatments but different in the **CRE**-treatments. In the latter Kurds charge significantly higher prices than Turks, on average (one-sided T-test adjusted for unequal variances, bootstrapped with 999 replications, p-value=0.040). In light of our main results, more important is the fact that Kurds add a noticeable discriminatory markup in the **CRE**-treatments (143 vs. 192 TRY), while Turks do not (121 vs. 125 TRY). This suggests that our Result 3 is mainly driven by the behavior of ethnic minority Turkish Kurds.

Evidence that points in the same direction is presented in Table C3 in Appendix C. This table presents two OLS-regressions showing that Kurdish expert providers charge a higher credence goods mark-up from members of the minority than from members of the majority while Turkish providers do not.

Taken together these results suggest that the sophisticated form of discrimination uncovered in our analysis is mainly driven by the behavior of Turkish sellers of Kurdish origin who have also different attitudes towards immigration than Turks. This would be in line with an explanation derived from social identity theory in psychology (see Tajfel and Turner 1986, for instance): minority group members – in our case Kurds – may deal with their own unfavorable position in society and with threats to their self-esteem by making downward social comparisons to other minority groups – e.g., 'we are more intelligent and hardworking than other ethnicities'. According to Wills (1981) the theory of downward social comparison posits that persons/groups experiencing negative affect can enhance their subjective well-being through comparison with lower status targets. Downward comparison can even be achieved

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[30] The stronger manifestation of general prejudices on the side of Kurds could also be partly driven by the fact that the Kurds in our sample have less years of schooling than the Turks (see Wagner and Zick 1995 for further reading).

through active derogation of another person/group, thereby increasing the psychological distance between the self and the other. In our case the self-esteem enhancing downward social comparisons seem also to come hand-in-hand with derogation and this results finally in discrimination against Syrian Arab immigrants.[31] However, due to the small sample size in the ex-post survey this potential explanation should be interpreted with caution. More research is needed in order to learn if discrimination is really driven by different ethnicities.[32]

5.   Conclusion

The present study has made two main contributions: First, by introducing a novel toolkit for the investigation of discrimination against minorities in the marketplace it has paved the way for future work in this discipline. Second, by applying the toolkit to a specific credence goods market it has shown that discriminatory behavior is by far more important in markets where sellers can hide behind a preexisting information asymmetry than in ordinary goods markets where they cannot. A complementary survey was conducted after the main experiment and exposed the expert providers visited during the main experiment to a series of questions that helped to identify potential drivers of discrimination. This toolkit can easily be adapted to different potential objects of discrimination (race, gender, age, sexual orientation, etc) and to different credence goods markets.

Uncovering discrimination in credence goods markets seems especially important because the size of those markets is huge and the potential for discrimination therefore large.[33]

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[31] The theory of downward social comparison has been applied in many different settings: The study of Branscombe and Wann (1994) demonstrates that a threat to the own national identity leads to reductions in collective self-esteem and derogation of other national groups. Cadinu and Reggiori (2002) employ the three-group paradigm in the context of a framed field experiment where different professions represent the different status groups. The authors show that a threat to the ingroup by a high-status outgroup would lead its members to increase the level of derogation of a lower-status outgroup. Finally, the study of Fein and Spencer (1997) suggests that derogating an already stereotyped target increases the self-esteem among those individuals whose self-image had been threatened.

[32] Actually, we even tried to learn from our mystery shoppers the specific ethnicities of the sellers after each shop visit. Unfortunately, it is not really possible to make distinctions amongst Turkish natives based on observables like shop name or language as many Kurds conceal their ethnicity because they are often victims of discrimination themselves (see Subsection 3.2 for a discussion). Therefore, we were only able to filter out shops with non-Turkish natives as these shops are easy to identify because of the language used.

[33] For instance, health care expenditures alone account for about 10% of GDP in a group of 16 OECD-countries (https://www.oecd.org/els/health-systems/health-expenditure.htm) and in the U.S.A., the finance sector accounts for about 8% of GDP (https://apps.bea.gov/iTable/iTable.cfm?reqid=150&step=2&isuri=1&categories=gdpxind). Links accessed on the 7th of July 2023.

At the same time uncovering discrimination in such markets is tricky as expert providers can hide behind the pre-existing information asymmetry, and have an incentive to do so since discrimination is a socially sanctioned behavior. As a consequence, the chances for the victims of discrimination to detect this kind of misbehavior on the experts' side on their own are slim. Academic research on this issue seems therefore important – not only to pin down the extent and the drivers of discrimination but also to find policy instruments to fight it.

In the present paper, we have applied the proposed toolkit to the Turkish market for cellphone repairs. Our data suggest that discrimination is by far more important in the credence goods market where the discriminatory markup is economically large and statistically highly significant than in the ordinary goods market where it is negligible.[34] This result suggests that – by focusing mostly on ordinary goods markets – the previous literature has underestimated the adverse effects of discrimination, and that discrimination of this kind may be a much more common occurrence than assumed.

While measuring the prevalence of discrimination is hard, identifying its causes is even harder, since discriminatory behavior is often the product of complex and multifaceted influences (see Pager and Shepherd 2008 for a comprehensive review of racial discrimination). At the same time, it is important to shed some light on the mechanism behind discriminatory behavior, because without understanding the drivers of discrimination it is hard to protect the victims from unequal treatment. Within the field of economics, the two most prominent explanations for discrimination in the marketplace are the taste-based theory by Becker (1957) and the statistical theory by Arrow (1973) and Phelps (1972). The taste-based theory explains discriminatory behavior with animus or racism towards a specific group. Looking back to the 50s, at the time where this theory was established, discriminatory behavior based on animus

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[34] Given that the main focus of our study was to investigate the interaction between the credence goods markup and the discriminatory markup, our study is underpowered to detect a relatively small discriminatory markup in the ordinary goods market alone. This implies that our finding of an insignificant discriminatory markup in the ordinary goods market should not be interpreted as saying that there is no such markup in this dimension. In this sense, our insignificant result when it comes to discrimination in the ordinary goods context is not necessarily in contrast with the results of the studies mentioned in Section 2 that report such an effect.

manifested itself in extreme ways – e.g., US banks refused loans to black home buyers only because of their race, shop owners barred ethnic minorities from access to their shops, etc. In these examples taste-based discrimination resulted in a monetary loss for the discriminator – which is often considered as a defining property of taste-based discrimination. By contrast, statistical discrimination is per definition consistent with the notion of profit maximization: in his pursuit of higher profits, the discriminator uses observable characteristics to make statistical inferences about the willingness to pay or the outside option of the victim; this information is then used to (third-degree) price-discriminate among customers – see Guryan and Charles (2013) for a deeper discussion. The latest psychological research blurs the sharp line between statistical and taste-based discrimination that economists tend to establish – see Bertrand and Duflo (2017) for a thorough discussion. In a similar vein, Gneezy and List (2013) argue that a taste for discrimination can combine with statistical discrimination, with very negative consequences as a result.

Our ex-post survey provides preliminary support for the conjecture that the concepts of statistical discrimination and taste-based discrimination are not necessarily mutually exclusive: The survey suggests that our discrimination result is driven by ethnic minority expert providers who, compared to ethnic majority sellers, have different attitudes towards immigration – which is an element of taste-based discrimination. At the same time, the monetary consequence of the discriminatory behavior for the discriminator is to increase the profit – which is an element of statistical discrimination.

But, can animus-based and statistical discrimination really come hand in hand? At first glance, this combination seems to lead to a contradiction: If the behavior towards the members of the minority is profit-maximizing behavior, why isn't the same behavior also applied to the members of the majority? Framed differently, why do certain sellers charge high prices only from the members of the minority and not also from members of the majority? The answer may lie in the moral costs experienced by the expert providers: Downward social comparison

through active derogation increases the psychological distance between the self and members of a low-status "outgroup". As a result, exploiting their information advantage seems to impose a lower moral cost for minority sellers if the trading partner belongs to a low-status "outgroup". In this sense, animus-based discrimination still comes at a cost, but the cost is a moral and not a material one.

Explaining our results partially with a taste for discrimination is also in line with the choice hypothesis by Gneezy et al. (2012). In a study investigating the nature and extent of discrimination against several distinct groups across several different markets, the authors find that the nature of discrimination (taste-based vs. statistical) is less driven by the particulars of the market or the minority considered, but rather by whether the object of discrimination is chosen by the individual or uncontrollable: When the object of discrimination is chosen by the individual (e.g., the decision to migrate) , the evidence suggests that the nature of discrimination is animus; by contrast, when the object of discrimination is perceived to be out of the control of the individual (e.g., gender) the underlying form of discrimination tends to be statistical. Given that all of the Kurdish experts who responded to our survey believe that most applicants for refugee status aren't in real fear of persecution in their home countries, the decision to migrate is arguably interpreted by them as a free choice. In this sense our results are in line with those in Gneezy et al. (2012).

Uncovering sophisticated discrimination in the marketplace and identifying potential drivers of it is one thing; fighting against this form of misbehavior is another. Does our research suggest any specific policy recommendations or advice for customers that are potentially helpful in this context? As this is the first study that investigates racial discrimination in a credence goods market and since the number of observations in our study is relatively low (especially when it comes to the ex-post survey), it seems important to emphasize once more that more research in this domain is needed before any policy implications can seriously be drawn. If it is really the case that our results are at least to large parts driven by downward social

comparisons, it is unlikely that there exists a quick fix for this problem and this is bad news.[35] Further, existing anti-discrimination laws are of limited help in our context as it is very difficult to collect any evidence for discriminatory behavior in credence goods markets. Therefore, the most promising approach is probably trying to increase the moral costs of discrimination – for instance, by sharing personal stories of marginalized group members through interpersonal conversations. This can be done either directly by the potential victims of discrimination in the course of the intergroup contact or indirectly through a campaign. For example, Kalla and Broockman (2020) find in a field experiment that two-way conversations in which door-to-door canvassers commit to listening and sharing personal stories, produced significant and lasting change in people's attitudes toward undocumented immigrants. In contrast, an intervention in which the door-to-door canvassers rely solely on talking points and related facts – an approach often followed in classical anti-discrimination campaigns – seems to have no effect.

Our data suggest also some other advice for customers that is potentially helpful in containing the extent of exploitation. The simplest advice would be to invest time and effort to get a reliable self-diagnosis of the problem: This transforms the credence good transaction into an ordinary goods transaction and in the market under consideration there is no evidence for discrimination against minorities in the ordinary goods arm of the experiment.[36] An alternative approach would be for customers in credence goods situations to search for an expert seller with whom they have a shared identity. However, as greater contact across groups is a reliable predictor of prejudice reduction such an approach may only serve to reinforce prejudice, reducing prospects for social change through day-to-day intergroup contact over the long-term.

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[35] The relationship between Kurds and Turks are the product of a long and complex joint history between these two ethnicities, and the possibility that Kurds may offset their unfavorable social position by discriminating against low-status outgroups seems to be rooted in basic social psychological processes. It is unlikely that an intervention from a 3rd party will change the minds of the involved people in the short term.

[36] Of course, the advice of getting informed might also be valuable for members of the majority – if they reveal that they know the source of the problem they save, on average, 33 TRY or about 35% of the price for the ordinary good. However, the cost-saving effect of becoming informed is much larger for the members of the minority than for members of the majority because the former can save not only the credence goods markup but also the discrimination markup while the latter can save only the credence goods markup.

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Appendix A

Table A1: Observable characteristics of each mystery shopper

Characteristic	Mystery Shopper				
	MAJ-MEM 1	**MAJ- MEM 2**	**MAJ-MEM 3**	**MIN-MEM 1**	**MIN-MEM 2**
Portrait					
Age	35	29	34	28	25
Height	1.72 cm	1.71 cm	1.75 cm	1.74 cm	1.69 cm

Table A2: Average repair price for each mystery shopper, grouped by
treatment and number of observations (in parentheses)

Treatment	Mystery Shopper				
	MAJ-MEM 1	**MAJ-MEM 2**	**MAJ-MEM 3**	**MIN-MEM 1**	**MIN-MEM 2**
MAJ-ORD	95 (23)	90 (9)	105 (6)	---	
MAJ-CRE	128 (29)	154 (5)	102 (5)	---	
MIN-ORD		---	---	115 (22)	86 (17)
MIN-CRE		---	---	157 (28)	160 (13)

Figure A3: Locations of the visited repair stores in each treatment

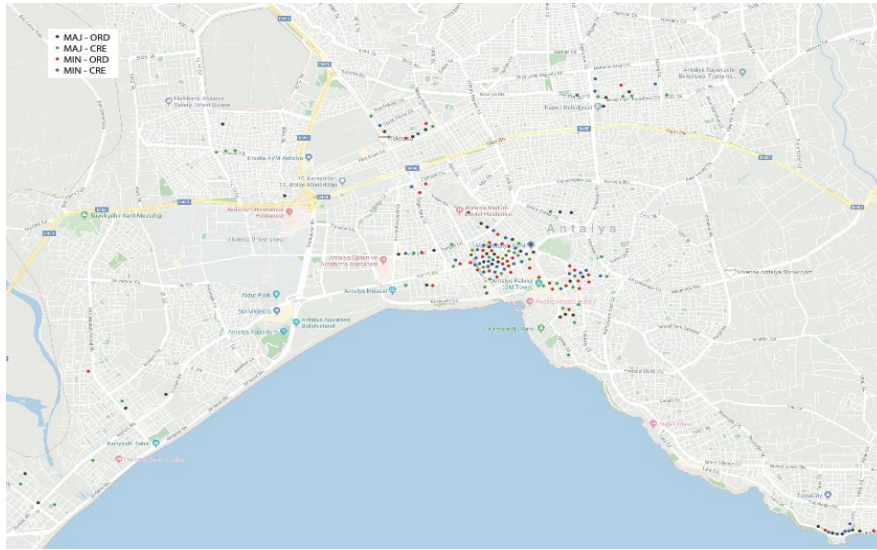*Table A4: Characteristics of visited repair shops and number of observations (in parentheses), grouped by treatment*

Shop Characteristic	Treatment				P-value
	MAJ-ORD	**MAJ-CRE**	**MIN-ORD**	**MIN-CRE**	
Number of staff present in the shop	2	1.85	1.80	2.1	p=0.7868
	(38)	(39)	(39)	(40)	Kruskal-Wallis
Year born	30.47	33.05	37.68	33.88	p=0.1379
(1) 2018 – (101) 1918	(17)	(21)	(22)	(16)	Kruskal-Wallis
Education	4.82	4.24	4.68	4.19	p=0.0575
(1) No formal education – (6) more than 12 years schooling	(17)	(21)	(22)	(16)	Kruskal-Wallis
Socioeconomic status	4.53	3.57	4.68	4.38	p=0.2819
(0) worst off – (10) best off	(17)	(21)	(22)	(16)	Kruskal-Wallis
Risk	2.47	2.29	2.64	2.81	p=0.8662
(1) Extremely comfortable taking risks – (7) extremely uncomfortable taking risks	(17)	(21)	(22)	(16)	Kruskal-Wallis

Table A5: Distribution of repair prices for each treatment

	Min	Max	Mean	Stand. dev.	10th Percentile	25th Percentile	50th Percentile	75th Percentile	90th Percentile
MAJ-ORD	60	180	95	26	65	80	90	120	130
MAJ-CRE	50	280	128	57	70	80	120	150	200
MIN-ORD	50	248	103	44	60	75	100	110	175
MIN-CRE	50	500	158	94	80	90	150	200	250

Appendix B

Faces of Discrimination (#12363)

Created: 07/02/2018 02:43 AM (PT)
Shared: 03/24/2019 02:40 AM (PT)

This pre-registration is not yet public. This anonymized copy (without author names) was created by the author(s) to use during peer-review. A non-anonymized version (containing author names) will become publicly available only if an author makes it public. Until that happens the contents of this pre-registration are confidential.

1) Have any data been collected for this study already?
No, no data have been collected for this study yet.

2) What's the main question being asked or hypothesis being tested in this study?
We plan to conduct a natural field experiment in the Turkish market for cell phone repairs to address the following research questions: (i) To what extend are non-locals discriminated against in an ordinary service market? (ii) To what extend are non-locals discriminated against in a credence goods market? (iii) How large is the 'credence markup' (that is, the price difference between a service without credence goods character and the same service with credence goods character) in general? (iv) Is there a difference in the credence markup for non-locals and local customers?

3) Describe the key dependent variable(s) specifying how they will be measured.
The main dependent variable is the average repair price in each treatment group.

4) How many and which conditions will participants be assigned to?
We will use a mystery shopper approach, where research assistants enter cell phone repair shops with a non-functioning phone and ask for a repair. The mystery shoppers are either locals (Turkish) or non-local (Syrian), and either know (ordinary) or do not know (credence) the problem with the phone. The participants (i.e. the cell phone repair shops) are thus assigned to four treatments:

• ordinary_local: ordinary service market and local customer
• credence_local: credence goods market and local customer
• ordinary_non-local: ordinary service market and non-local (Syrian) customer
• credence non-local: credence goods market and non-local (Syrian) customer

5) Specify exactly which analyses you will conduct to examine the main question/hypothesis.
• By comparing the average repair price in the treatment ordinary_local to the average repair price in the treatment ordinary_non-local we address research question (i).
• By comparing the average repair price in the treatment credence_local to the average repair price in the treatment credence_non-local we address research question (ii).
• By comparing the average repair price in the treatment ordinary_local to the average repair price in the treatment credence_local we address research question (iii).
• By comparing the difference of average repair prices between ordinary_local and credence_local to the difference of average repair prices between ordinary_non-local and credence_non-local we address research question (iv).

In addition to the binary treatment comparisons with non-parametric tests sketched above, the collected data would also allow us to perform a classical difference-in-difference estimation using standard econometric techniques.

6) Describe exactly how outliers will be defined and handled, and your precise rule(s) for excluding observations.
We will exclude observations if the participants (shop owners) realize that it is an experiment. If a shop declines to repair the phone, we will not be able to include it in the price comparisons. This is not a real exclusion though, and if this happens more often, we will control whether there is an effect of the treatments on refusal to repair the phone.

7) How many observations will be collected or what will determine sample size? No need to justify decision, but be precise about exactly how the number will be determined.
In total, we plan to collect 200 observations (50 observations per treatment). We will strive to select the sample in such a way that the person behind the counter is Turkish (native). However, we will make sure to document this and control for it if it happens that several shop owners are non-native.

8) Anything else you would like to pre-register? (e.g., secondary analyses, variables collected for exploratory purposes, unusual analyses planned?)
In addition to the data on repair prices we also plan to collect data on characteristics and attitudes of repair shops via a questionnaire to be filled out by our mystery shoppers and a survey to be completed by the shop owners.

Appendix C

The questions of the ex-post survey are listed in Table C1. The survey elicits various demographics characteristics (questions 1-7), risk attitudes (question 8), honesty attitudes (question 9), religiosity (questions 10-12), national identification (questions 13) and attitudes towards immigration (questions 14-35). Most of the questions concerning the attitudes towards immigration are from the migration module of the European Social Survey (https://www.europeansocialsurvey.org, accessed on the 3rd of June 2022).

Table C1 reports the average answer to all survey questions separately for Turks and Kurds and (in the last column) the p-values of the pairwise comparisons between Kurds and Turks for the corresponding question (the category labels were not shown to the survey participants).

Table C1: Ex-post survey grouped by ethnicity

questions from survey	Turkish	Kurdish	p-value
Demographics			
1. *What is your gender?*	84.44% Male 15.56% Female	87.10% Male 12.90% Female	0.7470 (Chi2-test)
2. *What year were you born? (1) 2018 – (101) 1918.*	32.6	36	0.1182 (T-test)
3. *Were you born in Turkey? (1) Yes – (0) no.*	1	1	---
4. *What is your ethnicity? (1) Turkish, (2) Kurdish and (3) other.*	1	2	---
5. *What is your religion?*	64.44% Sunni 31.11% Shia 4.44% Other	32.26% Sunni 67.74% Shia	0.005 (Chi2-test)
6. *What is the highest level of education that you have completed? (1) I have no formal education – (6) I have completed more than 12 years of schooling.*	4.64	4.26	0.0192 (MW-test)
7. *Imagine Turkish society as arranged on a scale where the worst off socially and economically are on the left (0) and the best off are on the right (10). Please select the place where you feel you stand today.*	4.67	4	0.1752 (MW-test)
Risk			

8. *In general, people often face risks when making financial, career, or other life decisions. Overall, do you feel comfortable, uncomfortable, or neither comfortable nor uncomfortable taking risks? (1) Extremely comfortable taking risks – (7) extremely uncomfortable taking risks.*

2.58	2.48	0.8951 (MW-test)

Honesty

9. *How much do you agree or disagree with the following statement: If you want to make money, you can't always act honestly. (5) Strongly agree – (1) strongly disagree.*

3.84	3.39	0.2697 (MW-test)

Religion

10. *How religious would you say you are? (0) not at all religious – (10) very religious.*

4.2	4.52	0.8224 (MW-test)

11. *Apart from special occasions such as weddings and funerals, about how often do you attend religious services nowadays? (7) Every day – (1) never.*

3.84	4.23	0.3997 (MW-test)

12. *Apart from when you are at religious services, how often, if at all, do you pray? (7) Every day – (1) never.*

5.51	5.61	0.6234 (MW-test)

National Identification

13. *How emotionally attached do you feel to Turkey? (0) not at all emotionally attached – (10) very emotionally attached.*

6.91	4.13	0.0026 (MW-test)

Perceived cultural diversity in Turkey

14. *Out of every 100 people living in Turkey, how many do you think were born outside Turkey?*

27.29	23.29	0.4317 (T-test)

15. *Thinking about people who come to live in Turkey from other countries, which is the main country you think they came from?*

91.11% Syria 8.89% Other	96.77% Syria 3.23% Other	0.5320 (Chi2-test)

Contact with immigrants

16. *How often do you have any contact with people who are of a different race or ethnic group from most Turkish people when you are not at home? This could be on public transport, in the streets, in shops or in the neighborhood (any contact should be included whether verbal or non-verbal)? (1) never – (7) every day.*

4.71	5.26	0.1370 (MW-test)

17. *Thinking about this contact, in general how bad (10) or good (0) is it?*

3.8	3.91	1.0000 (MW-test)

18. *Do you have any close friends who are of a different race or ethnic group from most Turkish people. (1) Yes, several, (2) yes, a few and (3) no, none at all.*	1.87	1.42	0.0066 (MW-test)

Social distance

19. *Think of people who have come to live in Turkey from another country who are of a different race or ethnic group from most Turkish people. Please tell me how much you would mind or not if someone like this was appointed as your boss? (0) Not mind at all – (10) mind a lot.*	5.62	4.42	0.1263 (MW-test)
20. *Think of people who have come to live in Turkey from another country who are of a different race or ethnic group from most Turkish people. Please tell me how much you would mind (10) or not (0) if someone like this marries a close relative of yours.*	6.4	4.23	0.0053 (MW-test)

Realistic threat

21. *Would you say that people who come to live here generally take jobs away (10) from workers in Turkey or generally help to create new jobs (0)?*	7.22	5.19	0.0070 (MW-test)
22. *Most people who come to live here work and pay taxes. They also use health and welfare services. On balance, do you think people who come here take out more from society than they put in (10) or put in more to society than they take out (0)?*	6.62	5.39	0.0609 (MW-test)
23. *Would you say it is generally bad or good for the Turkish economy that people come to live here from other countries? (0) Good for economy – (10) bad for economy.*	6.53	6.48	0.8217 (MW-test)
24. *Are Turkey's crime problems made worse or better by people coming to live here from other countries? (0) Crime problems made better – (10) crime problems made worse.*	7.09	6.26	0.2564 (MW-test)
25. *Compared to people like yourself, would you say that those who have come to live here from other countries are better or worse off financially? (5) much better off – (1) much worse off.*	3.49	3.32	0.3550 (MW-test)

Symbolic threat

26. *Would you say that Turkey's cultural life is generally undermined (10) or enriched (0) by people coming to live here from other countries?*	5.71	5.13	0.3687 (MW-test)

Question			
27. *Do you think the religious beliefs and practices in Turkey are generally undermined or enriched by people coming to live here from other countries? (0) Religious beliefs and practices enriched – (10) religious beliefs and practices undermined.*	5.33	5.58	0.7613 (MW-test)
28. *How would you describe the area where you currently live? (1) An area where almost nobody is of a different race or ethnic group from most Turkish people, (2) some people are of a different race or ethnic group from most Turkish people and (3) many people are of a different race or ethnic group.*	1.82	1.71	0.3165 (MW-test)
Biological racism			
29. *Do you think some races or ethnic groups are born less intelligent than others? (1) yes – (0) no.*	0.42	0.74	0.0062 (MW-test)
30. *Do you think some races or ethnic groups are born harder working than others? (1) yes – (0) no.*	0.6	0.84	0.0260 (MW-test)
Opposition towards immigration			
31. *Some people come to this country and apply for refugee status on the grounds that they fear persecution in their own country. Please say how much you agree (5) or disagree (1) that most applicants for refugee status aren't in real fear of persecution in their own countries.*	3.53	4.29	0.0066 (MW-test)
32. *Is Turkey made a worse (10) or a better place (0) to live by people coming to live here from other countries?*	4.87	5.29	0.6261 (MW-test)
33. *To what extent do you think Turkey should allow people of the same race or ethnic group as most Turkish people to come and live here. (1) allow many – (4) allow none.*	2.33	1.90	0.1022 (MW-test)
34. *To what extent do you think Turkey should allow people of different race or ethnic group than most Turkish people to come and live here. (1) allow many – (4) allow none.*	2.49	2.07	0.1189 (MW-test)
35. *To what extend do you think Turkey should allow people from the poorer countries in the region to come and live here? (1) Allow many to come and live here – (4) allow none.*	2.47	2.10	0.1421 (MW-test)
# Observations	45	31	

We switched between two-sided T-tests, Chi2 tests and Mann-Whitney tests according to the measurement scale of the variable of interest.

The most important differences between the two ethnicities are found in the answers to questions 6, 13, 18, 20, 21, 22, 29, 30 and 31. Question 6 shows that Turks attended school significantly longer than Kurds. Question 13 reveals, not surprisingly, that Turks feel significantly more attached to Turkey than Kurds. Questions 18 and 20 are hard to interpret as it is not clear how the reference group labeled "most Turkish people" is interpreted by the survey participants (i.e., are Kurds considered as different ethnicity than most Turkish people or not). Questions 21 and 22 show that Turks express significantly more support for the view that immigrants take away jobs from the local society and that they generally take out more than they put in.[37] Questions 29 and 30 reveal that Kurds exhibit more racist attitudes in general as they think significantly more often that some ethnic groups are born more intelligent and harder working than others. Finally, an interesting finding is that Kurds think significantly more often that most people who apply for refugee status in Turkey are not in real fear of persecution in their home countries (see question 31).

We found no significant difference when it comes to the answers to the other survey questions: For example, there is no evidence of differences in socio-economic status across the two groups according to the answer to question 7. Regarding attitudes towards immigration in general, question 32 reveals that Kurds and Turks think to the same degree that Turkey is neither a better nor a worse place because of immigration. Further, question 26 reveals that Kurds and Turks believe to the same degree that their culture is neither enriched nor undermined by immigration. When it comes to estimate the financial wealth of immigrants (question 25), Kurds and Turks believe to the same extent that migrants are financially slightly better off than themselves. Finally, question 10 reveals that both groups are only moderately religious.

Taken together the results of the ex-post survey suggest that Turks believe more often that migration has negative consequences from an economic perspective (questions 21 and 22),

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[37] These concerns are also confirmed by economic studies: Balkan and Tumen (2016) and Balkan (2016) point out that Syrian refugees drive out informal native workers in sectors with high informal labor intensities because Syrian refugees are more willing to accept lower pay.

Kurds exhibit more racist attitudes in general (questions 29 and 30) and they doubt more often that most people who apply for refugee status in Turkey are in real fear of persecution in their home countries (see question 31). It seems important to note that the survey did not specifically ask for attitudes towards Syrian immigrants but rather about attitudes towards immigration in general (the emphasis on attitudes towards immigration in general was also communicated to the survey participants verbally when approaching them and in written form at the beginning of the survey). However, it is quite plausible that most survey participants had Syrian immigrants in mind when answering the questions. Evidence supporting this conjecture comes from question 15 where we asked the survey participants about the main countries they believe people immigrate from: out of our 76 survey participants, 71 think that people who come to live in Turkey are mainly from Syria.

Table C2 presents the average price per treatment contingent on the ethnicity of the service provider and reveals that the average repair price is almost identical across the two ethnicities in the **ORD**-treatments but different in the **CRE**-treatments. In the latter Kurds charge significantly higher prices than Turks, on average (one-sided T-test adjusted for unequal variances, bootstrapped with 999 replications, p-value=0.040). In light of our main results, more important is the fact that Kurds add a noticeable discriminatory markup in the **CRE**-treatments (143 vs. 192 TRY), while Turks do not (121 vs. 125 TRY). This suggests that our Result 3 is mainly driven by the behavior of ethnic minority Turkish Kurds.[38]

Table C2: Average repair price (in TRY) and number of observations (in parentheses)

for the survey subsample contingent on ethnicity of shop staff

	ORDINARY		CREDENCE	
	TURKISH	**KURDISH**	**TURKISH**	**KURDISH**

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[38] The differences in animus towards other ethnicities are also manifested within the subset of experts in the MIN-CRE treatment: In the MIN-CRE treatment, 100 % of the Kurdish experts answer question 13 with "yes" (versus 64 % of the Turkish experts) and 80 % answer question 12 with "yes" (versus 34 % of the Turkish experts).

MAJORITY	92	90	121	143
	(13)	(4)	(14)	(7)
MINORITY	93	93	125	192
	(7)	(15)	(11)	(5)

With the help of two OLS-regressions in Table C3, we investigate to what extent Turkish and Kurdish expert providers charge differing repair prices in the various treatments. The first regression shows the results for the subsample of Turkish expert providers and the second regression shows the results for the subsample of Kurdish expert providers. Both models have the repair price as the dependent variable and dummies for **CRE** and **MIN,** as well as an interaction term **MIN x CRE** as explanatory variables – keeping **MAJ-ORD** as the (omitted) benchmark. Furthermore, we include once again the dummies **MAJ-MEM 2, MAJ-MEM 3** and **MIN-MEM 2** – keeping **MAJ-MEM 1** and **MIN-MEM 1** as the (omitted) benchmarks – in order to control for potential fixed effects of the individual mystery shoppers.[39]

Row 1 of Table C3 reveals that within the subsample of Turkish expert providers there is only a relative moderate credence goods markup (of 25 TRY) for members of the majority and this effect is statistically only marginally significant (one-sided p-value=0.061). Within the subset of Turkish expert providers, the credence goods markup for members of the minority (i.e., the joint effect of **CRE** and **MIN x CRE**) is (with 29 TRY) also only moderate and statistically only marginally significant (one-sided p-value=0.070). In contrast, row 8 of Table C3 reveals that within the subsample of Kurdish expert providers there is (with 85 TRY) an economically large and statistically highly significant (one-sided p-value<0.001) credence goods markup for members of the majority. Within the group of Kurdish experts, the credence goods markup for members of the minority is (with 101 TRY) also economically large and

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[39] Unfortunately, we do not have enough observations and different mystery shoppers in each subsample to include interaction effects between the individual mystery shoppers and the CRE treatment and therefore, we decided to include only dummies for the individual mystery shoppers.

statistically highly significant (one-sided p-value=0.004). Comparing the joint effect of **CRE** and **MIN x CRE** across the two regressions suggests that Kurdish expert providers charge a higher credence goods markup for members of the minority than Turkish expert providers (one-sided p-value=0.046). In both regressions, none of the other explanatory variables have a significant effect on the repair price.

Table C3: Separate regression analyses of repair prices contingent on treatment and grouped by ethnicity of repair stores

Dependent variable (OLS regressions)	*Repair price*
Independent variables	*(in TRY)*
CRE & TURKISH providers (1=yes)	25.25*
	(16.30)
MIN & TURKISH providers (1=yes)	8.74
	(22.30)
MIN x CRE &TURKISH providers (1=yes)	3.47
	(25.35)
MAJ-MEM 2 (1=yes)	-17.65
	(14.34)
MAJ-MEM 3 (1=yes)	-21.23
	(18.97)
MIN-MEM 2 (1=yes)	-20.28
	(20.90)
Constant	98.60***
	(7.53)
CRE & KURDISH providers (1=yes)	85.00***
	(22.51)
MIN & KURDISH providers (1=yes)	-6.54
	(17.27)
MIN x CRE & KURDISH providers (1=yes)	15.65
	(44.10)
MAJ-MEM 2 (1=yes)	-40.00
	(25.17)
MAJ-MEM 3 (1=yes)	-48.33
	(31.62)
MIN-MEM 2 (1=yes)	19.73
	(17.48)
Constant	90.00***
	(13.78)
# Observations	76

OLS-regressions (robust standard errors) with repair price (in TRY) as dependent variable, including, as explanatory variables, a dummy for **CRE**, a dummy for **MIN**, a dummy for **MIN x CRE** and mystery shopper dummies grouped by the ethnicity of the expert provider (the treatment **MAJ x ORD**, mystery shopper **MAJ-MEM 1** and mystery shopper **MIN-MEM 1** serve as the benchmark). ***, **, * denote significance at the 1%, 5%, 10% level, standard errors in parentheses.

Appendix D

<u>Protocol for the data collection</u>

It is very important that the data collected by the various mystery shoppers is comparable. Therefore, it is necessary that the procedure of this experiment (manipulation of the phone, hand-in of the phone, pick-up of the phone and payment) is exactly specified and all mystery shoppers stick to the following protocol.

General information regarding the mobile phone

The mystery shoppers should **<u>NOT</u>** communicate the following information unless the repair shop is stating explicit questions in this direction. The idea of this information is that the mystery shoppers are prepared for certain questions of the repair shop.

- You got the mobile from a friend.
- It did not work from the very beginning – the screen stayed black after trying to switch it on.
- The mobile phone is not protected by a PIN code.

Manipulation of the mobile phone

The goal of this task is to impair the charging port of the mobile phone so that it is no longer possible to charge the phone. To do so use the provided tool and damage the pins within the charging port (see the picture below). Please do not use excessive force. The idea is to simulate damage that could result in the course of everyday use of the mobile. After checking that is no longer possible to charge the phone several times, empty the battery of the mobile phone by playing a video.

It is very important that the battery of the mobile phone is completely empty (i.e., the screen is black and it is not possible to switch the phone on) when handing-in the mobile phone for a repair.

Handing-in the mobile

- Visit the repair shop without making an appointment.
- Use the following sentence – depending on the treatment – when handing-in the mobile:

    BASELINE TREATMENT

    "Hi! I can't switch on my mobile phone anymore and I know that a defective charging port causes the problem. Could you please repair it?"

    CREDENCE GOODS TREATMENT

    "Hi! I can't switch on my mobile phone anymore and I don't know what the problem is. Could you please repair it?"

- Leave your contact details and leave the shop - do **NOT** wait in the shop until the mobile is repaired.
- If it is necessary to pay a deposit do so.
- In case the shop asks question regarding a data backup make clear that it is not necessary to do a data backup.
- Accept all repair quotes up to 200 EUR (otherwise contact us before accepting the repair).

Picking-up the mobile and payment

- Most of the times the shop calls you with a diagnosis or when the mobile is repaired within a few days. In case you hear nothing from a shop for a week, contact the shop and ask what the status of the repair is.
- When picking-up the phone pay the repair bill and take the bill with you.

After picking up the phone

- Check if the mobile works properly and that is possible to charge the mobile.
- Fill out the prepared Excel sheet and provide all the information asked for.
- Store the repair bill and make a photo of it.
- Manipulate the mobile phone again and bring it to the next store in the Excel sheet.
- In the unlikely case that a shop is suspicious that you are not a "normal" customer, simply pretend that you do not know what the shop is talking about and note this in the Excel sheet.