FORDHAM UNIVERSITY DEPARTMENT OF ECONOMICS DISCUSSION PAPER SERIES

Game of Prejudice

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August 2023

Abstract: Children and adolescents are often revered as powerful symbols of hope, representing the future and embodying the potential for positive change. However, early stages of life can also give rise to the development of immoral tendencies and anti-social behaviors. This paper examines the prevalence and possible underlying causes of discrimination among adolescents. Specifically, we examine how discriminatory preferences may vary depending on two common type of decisions – selecting group members versus sharing a pie. We find that even in low-stakes settings, there is sizable ingroup bias when individuals have the opportunity to include someone from the minority ethnicity as part of their ingroup. However, when asked to share a pie, the prevalence of discrimination decreases. Notably, discrimination largely stems from taste-based animosity with no evidence of statistical discrimination or inaccurate beliefs. Furthermore, adolescents curb discriminatory choices when the price of prejudice becomes prohibitively high. Our results have important implications for the design and timing of anti-discriminatory policies and programs.

Keywords: Discrimination, Adolescents, Low-stakes, Lab-in-the-field experiment, Slovakia

JEL: C9, D3, J7

1. Introduction

Children and adolescents are often revered as powerful symbols of hope, representing the future and embodying the potential for positive change. However, these early life stages can also lead to the development of immoral tendencies and transgressions. While there is a growing literature on measuring economic preferences among children and adolescents (see List, Petrie, and Samek, 2023 and Sutter, Zoller, and Glätzle-Rützler, 2019 for a recent review), there is relatively little evidence on children and adolescents' anti-social preferences that impose substantial economic and moral costs on society, such as preferences for discrimination, dishonesty, spite, and negative reciprocity (Barron, Harmgart, Huck, Schneider, and Sutter, 2023; List et al., 2023; Chowdhury, Sutter, and Zimmermann, 2022; Bauer, Cahlíková, Chytilová, and Želinský, 2018; Angerer, Dutcher, Glätzle-Rützler, Lergetporer, and Sutter, 2017; Houser, List, Piovesan, Samek, and Winter, 2016; Maggian and Villeval, 2016; Fehr, Glätzle-Rützler, and Sutter, 2013). Moreover, since most adult behaviors and preferences can be easily traced back to when adults were younger as children and adolescents (Sutter et al., 2019), identifying the prevalence and causes of anti-social preferences among children and adolescents is crucial for the design of programs and policies that focus on building tolerance, honesty, and kindness.

In this paper we comprehensively study the discriminatory preferences of adolescents. In particular, we examine three things: 1) the prevalence of discriminatory preferences, 2) its underlying causes (i.e., whether behavior is a result of statistical or taste-based discrimination), and 3) the impact of increasing the cost of discrimination. We study this in the context of two decision environments – selecting group members versus sharing a pie. This allows us to comprehensively examine the discriminatory preferences of adolescents.

We focus on selecting group members versus sharing a pie as these scenarios represent some of the most common environments where children interact. Peer group selection plays a critical role in adolescents' social and emotional development, impacting their identity formation and overall behavior (e.g., Killen, Rutland, Abrams, Mulvey, and Hitti, 2013; Eccles, Barber, Stone, and Hunt, 2003; Dishion, McCord, and Poulin, 1999; Gardner and Steinberg, 2005) while being essential in their socialization process (Tomé, Matos, Simões, Diniz, and Camacho, 2012). School environments offer the opportunity to bring together diverse peer communities, promoting valuable interactions among adolescents. The selection of peer groups during this phase can shape intergroup contact, exposure to diverse perspectives, and foster integration (e.g., Aboud et al., 2012). Given its importance, we investigate peer group selection among adolescents, specifically whether they tend to select ingroup or outgroup members. Moreover, we explore whether peer group selection is influenced by taste or statistical discrimination and whether incentives play a role in shaping their decisions.

While the selection of peers is crucial, equally significant is how individuals behave within their peer groups, particularly in terms of tendencies to share or behave anti socially with others. Learning to cooperate with others is essential for success both inside and outside of school (Barron, 2003; Blatchford, Baines, Rubie-Davies, Bassett, & Chowne, 2006). This may be especially relevant when group membership is not self-selected, such as when groups are assigned by teachers or sporting clubs, and thus individuals find themselves interacting with an outgroup. In such cases, exposure to the outgroup can sometimes lead to discrimination (Rutland, Cameron, Bennett, and Ferrell, 2005; McGlothlin and Killen, 2006), making it essential to understand how individuals interact with outsiders in various contexts.

We argue that studying both these settings is important for a number of reasons. First, by investigating both group selection and how individuals behave with their peers in exogenously selected groups, we can comprehensively study some of the most common settings where discriminatory behavior among adolescents may occur. Second, it's not clear that the rate of discriminatory behavior or even the sources of discrimination will be identical across settings. Third, discrimination observed in these two decision-making environments calls for distinct policy responses. Affirmative action policies, such as that establishment of quotas for minorities in educational institutions and workplaces, are warranted for curbing discrimination during group formation. Conversely, when discrimination occurs during resource sharing, stronger punitive measures may become necessary. Despite notable differences between these two related decision-making contexts, the current literature lacks evidence on the prevalence of discrimination, its underlying causes, and the potential policy interventions that could effectively address it within these settings. Our paper aims to fill this gap in the literature.

Our study involved 629 adolescents participating in a series of incentivized games in Slovakia. Slovak adolescents belonging to the majority ethnicity were randomly assigned to either select a group member or share a pie with one's group member. In addition, we also experimentally varied the ethnicity of the group member (Slovak, Hungarian, or Roma) and elicited beliefs (high type vs. low type) about them to determine the sources of discrimination, whether it is taste-based discrimination, statistical discrimination, or due to inaccurate beliefs (Bohren, Imas, and Rosenberg, 2019a, 2019b).[1] Finally, by varying information about the type (high vs. low) of the

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[1] This is in contrast to many of the existing laboratory experiments on discrimination which do not have such scopes by design. In a meta-analysis, Lane (2016, p 12) pointed out that *"66.5% of the papers in*

minority, we were able to measure the impact of increasing the cost of prejudice on limiting discriminatory preferences. This serves as a valuable test of a potential economic policy aimed at mitigating discriminatory behavior. Our design pays close attention to experimenter demand effects by – (a) implementing these games in a natural setting where the ethnic identities are not artificially created in a laboratory and (b) by providing information on more than one minority ethnicity, namely Roma and Hungarians.

The experiment generates several important findings. First, we find that even in a low stake setting like ours, there is sizable ingroup bias when there is a possibility of including someone from the minority ethnicity as part of one's ingroup. However, the prevalence is significantly lower relative to when asked to share a pie. Second, the prevalence of discrimination largely stems from taste-based animosity with no evidence of statistical discrimination or inaccurate beliefs. Lastly, participants curb discriminatory preferences only when the price of prejudice is prohibitively high.

Our study makes several important contributions to the current literature. First, our paper adds to the small but growing literature on measuring anti-social preferences among adolescents and children (Bauer et al., 2018; Houser et al., 2016; Fehr et al., 2013). While some evidence exists on the prevalence of discriminatory preferences among children, the findings are largely mixed (Barron et al., 2023; List et al., 2023; Bindra, Glätzle-Rützler, and Lergetporer, 2020; List et al., 2017; Angerer et al., 2016). Importantly, none of these studies investigate whether discriminatory preferences differ based on common decision-making environments: at the extensive margin, such as deciding who to work with, or more generally, incorporating someone into the ingroup, versus at the intensive margin, such as deciding how to allocate

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the sample cannot disentangle the two types of behavior by design due to a lack of belief elicitation data or any control game".

earnings or simply sharing resources with an outgroup member. In our study, we address this gap by experimentally manipulating the setting in which decisions are made. We find that there is sizable discriminatory preference when there is a possibility of including someone from the minority ethnicity into one's ingroup. However, the prevalence is significantly lower when asked to share a pie. This distinction is very important for understanding discriminatory preferences observed in the real world. In real-life settings individuals may be more likely to share money with the outgroup or donate money towards causes that help outgroup members but not share neighborhoods, schools, parks, and workplace environments with them. Our findings highlight the importance of understanding these decision-making environments in explaining variations in discriminatory behavior, providing valuable insights for future research and policy design.

Second, given that preferences measured at young ages are a strong predictor of behavior in later life (Golsteyn, Grönqvist, and Lindahl, 2014; Cadena and Keys 2015), it is crucial not only to measure the prevalence of discriminatory preferences but also to identify economic policies that can mitigate these anti-social preferences early on. In this paper, we experimentally vary the costs of prejudice, which allows us to identify the causal impact of costly prejudice on discriminatory preferences among adolescents.[2] These findings can guide the design of anti-discriminatory programs that target children and adolescents.

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[2]Few experimental papers explicitly measure the price of prejudice (Becker, 1957); an important exception is Hedegaard and Tyran (2018). However, our experimental design differs from Hedegard and Tyran in key details, and we provide a complementary set of insights on the issue of price of prejudice. Importantly, in our study subjects make decisions on whether to work with someone or whether to share a pie, facilitating a comparison of the incidences, sources, and costs of discriminatory behavior allowing these impacts to vary by the type of interaction. Further, we explicitly elicit beliefs in different information conditions allowing us to differentiate between taste and other forms of discrimination since subjects make choices knowing the exact payoff consequences for themselves. Here, unlike Hedegard and Tryan (2018), our subjects participating as employees and employers never meet face-to-face preventing the possibility of unknown sources of prejudice that could arise unbeknownst to the experimenter.

Third, our findings speak to the broader literature on understanding the underlying causes of discriminatory preferences among children and adolescents. Barron et al. (2023) show that parental narratives are crucial in shaping children's discriminatory attitudes towards Syrian refugee children. Discrimination also permeates through language barriers among children in Italy (Angerer et al. 2016). By experimentally varying information on partner type and eliciting beliefs using incentives, we identify the source of discrimination to be taste-based and rule out concerns relating to statistical discrimination and inaccurate beliefs. This allows us to provide a clear understanding of the origins of discrimination in our sample.

Lastly, these results add important knowledge on how preferences evolve with age (Fehr, Bernhard, and Rockenbach, 2008; Fehr et al., 2013; Martinsson, Nordblom, Rützler, and Sutter, 2011; Almås, Cappelen, Sørensen, and Tungodden, 2010). By examining the prevalence of discrimination among adolescents, we provide important information on the age at which these anti-social preferences might develop and provide crucial insights on how to curtail them early on.

2. Overview of Experiment Design

To investigate discriminatory preferences among adolescents in Slovakia, we devised a Game of Prejudice that assigned participants to either the role of an employer or an employee, based on their ethnicity. The employers, all of Slovak ethnicity, made decisions regarding group formation and sharing a pie with minority employees. On the other hand, employees could belong to the Slovak, Roma, or Hungarian ethnic groups and had the choice of exerting effort in a real-effort task. This intentional assignment allowed us to specifically examine the discriminatory preferences of the ethnic majority, namely Slovak. During each experiment session, all participants were required to complete a Background Questionnaire, which collected information on

their ethnicity. This data enabled us to categorize subjects accordingly (refer to Appendix Table A1).

We first ran the employee sessions. Here we collected data on employee performances in a real-effort task where subjects were categorized as high or low-effort employees based on their performances in the real-effort task. The employees performed the task only once, and their categorization into high or low-effort employees was recorded and remained fixed for what followed, i.e., the employer choices.

Next, we ran the sessions comprising employers. Subjects participating in the role of employers made two decisions sequentially: *1) group-membership stage* – subjects indicated their preferred pool of employees based on the information provided, and *2) sharing stage* – they chose a wage for the employee they were matched with. This stage measures how the ethnic majority shares a pie with the minority relative to majority. Multiple different information conditions were implemented where information on the employee's ethnicity (Slovak, Roma, or Hungarian) and/or productivity (high or low effort) were exogenously varied and made salient allowing us to draw causal inferences on the prevalence, sources (taste and statistical) and impacts of costly discrimination at each of the margins (described in Section 3). All employer-subjects participated in only one of the information conditions; hence our design is between-subjects. The final payoff from the game depended on the recorded employee performance in the real-effort task and the employer's wage to the employee.

The separation of employee sessions from employer sessions allowed us to provide actual performance information (high effort or low effort) about prospective employees to the employer in our hand-run experiment. Additionally, it prevented face-to-face interactions between the two groups which would have opened the

possibility of an employer discriminating against a matched employee on dimensions other than the information on ethnicity and performance in the real-effort task. This stylized employer-employee interaction environment constitutes our *Game of Prejudice*. A summary of the stages can be found in Figure 1.
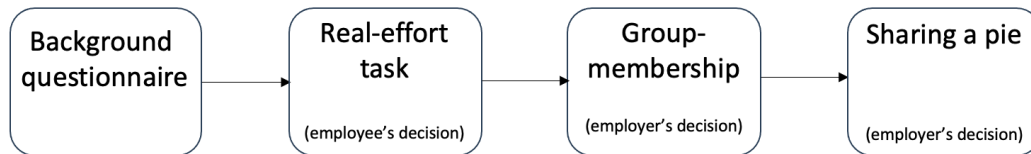
Figure 1: Game of Prejudice

We used the Game of Prejudice in our unified experiment framework, comprising the *extensive margin design* and the *intensive margin design*. Although the employers always made the group membership and sharing decisions in the information condition they participated in, in the *extensive margin design* we were interested in the first decision, i.e, an employer's group-membership decision: whether they prefer including ingroup Slovak members more than outgroup Roma members, ceteris paribus. In the *intensive margin design,* we were interested in the second decision, i.e, the employer's sharing decision: whether they offered a high or a low wage to the ingroup Slovak employee in comparison to the Roma, ceteris paribus.

2.1 Employee's decision: Real-effort Task

The real-effort task was designed to create a perception that completing the task was challenging and required a significant amount of effort. Subjects who participated as employees were instructed to copy 35 sentences in Swedish, a language that was unfamiliar to all participants. The sentences were provided to them in a specific

format, with capital letters and on lined paper, as shown in Appendix B. They were given a time limit of 20 minutes to complete the task. Based on their performance in completing the task within the given time, employees were categorized as either exerting *high effort* or *low effort* in the experiment. If an employee successfully completed the task within the allotted time, they were classified as having exerted high effort. On the other hand, employees who did not complete the task within the given time were categorized as having exerted low effort. It is important to note that this categorization of effort for each employee remained unchanged throughout the duration of the experiment and had real consequences in terms of the payoff for both the employer and the employee.

2.2 Employer's decision: Group-membership

First, employers were presented with information about the ethnicities of prospective employees using two lists, labeled as List A and List B. Each list contained employees from three ethnic groups: Roma, Slovak, and Hungarian. In addition, we introduced different information conditions where employers were provided with information regarding the recorded efforts of employees in the real-effort task. This information indicated whether each employee had been categorized as a high-effort or a low-effort employee (as shown in Table 1). Based on the available information, employers were required to choose one of the two lists and indicate their preferred pool of employees. The two pieces of information given to the employers, namely employee ethnicity and effort types, were exogenously varied using different combinations of lists. This variation allowed us to examine the frequency, sources, and costs associated with discriminatory behavior. A detailed explanation of these different information conditions is provided in Section 3.

Once the employer chose a list, they were matched with a prospective employee from that list with an equal chance. Information about the matched employee was then revealed, which includes their ethnic identity and in certain information conditions, the effort type of the employee. The employer then moves to the sharing stage.

Table 1: Example of Information for Group-membership

List A	List B
Roma – high effort	Slovak – high effort
Hungarian – high effort	Hungarian – high effort
Roma – high effort	Roma – high effort
Slovak – high effort	Slovak – high effort

2.3 Employer's decision: Sharing a pie

Here, the employer had to decide between offering a high or a low wage to the matched employee based on their performance in a real-effort task. The final payoffs in the experiment were determined by the employer's wage offer and the matched employee's recorded performance in the real-effort task (see Table 2).

Table 2: Wage offers for performance in the real-effort task

		(Employee Performance in the Real-Effort Task)	
		High Effort	Low Effort
(Employer)	High wage	6, 6	0, 4
	Low wage	4, 0	4, 4

Notice, once the employer was provided information on the matched employee's effort in the real-effort task, choosing a high or a low wage was a matter of preference and not about incorrect beliefs or uncertainties regarding the matched worker's effort in

the real-effort task. The employer had complete information on their payoff function and has two payoff-maximizing outcomes (High wage, High effort) and (Low wage, Low effort). If the employer offered a low wage to a high-effort worker, it indicates discriminatory actions against the matched employee. Such an action, while delivering a zero payoff to the employee, imposes a cost of two euros for the employer, which is a deviation from the payoff maximizing choice. We introduce this aspect in the experiment design to identify and measure the price of prejudice (Becker, 1970). Higher rates of such punitive choices towards one ethnic group over another would be a strong indicator of costly discriminatory behavior. We discuss the information conditions next.

3. Information Conditions

Employers are randomly assigned to either the Extensive Margin experiment or the Intensive Margin. We explain each below.

3.1 Extensive Margin Design

There are two ways that an employer might discriminate at the extensive margin, that is, the group-membership stage. In the Game of Prejudice, the employer can try to influence the choice of prospective employees to increase the chance of matching with an ingroup employee or decrease the chance of matching with an outgroup/ethnic minority employee. The list pairs along with the information conditions were designed to elicit such preferences.

In the *Costless Taste Extensive* information condition, list A contained two Roma, one Hungarian and one Slovak, and list B contained two Slovaks, one Hungarian and one Roma (see Table 3, Panel A). Further, both lists consisted of employees of only high-effort types, which means the employer was guaranteed to be

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matched with an employee who had successfully completed the real-effort task and had been categorized as a high effort employee. The only difference between the two lists was the proportion of Roma and Slovaks found in each group. An employer who preferred to be matched with a Slovak employee would choose list B since the probability of a Slovak employee is 50% in list B and only 25% in list A. Since all employees were announced to be of a high effort type, an employer's choice of list B in the presence of list A reveals their taste-based discriminatory behavior. Further, discriminatory behavior is costless for the employer in this information condition since they are guaranteed to be matched with a high effort employee no matter which list is chosen. As a result, as long as the employer chose the high-wage offer, they will always earn 6 euros (high wage-high effort outcome). If employers chose list B more often it would be suggestive of discrimination at the extensive margin against Roma when it is costless to them (H_1 in Table 5 provides the testable hypothesis).

In the *Costly Taste Extensive* information condition, list A contained two high effort Roma and two high effort Hungarians, while list B had two high effort Hungarians and two low effort Slovaks (see Table 3, Panel B). Choosing list A here guarantees a high effort employee and consequently the maximum payoff of 6 euros if the employer chooses the payoff maximizing wage. If instead, the employer chose list B in the presence of list A, then the probability of being matched with a Slovak employee increases, indicating that the employer prefers Slovak employee, even when they exhibit low effort. Consequently, this information condition elicits costly taste-based discriminatory behavior for the employer at the extensive margin.

Note that we can impute the expected costs of taste-based discrimination. If the employer selects list A, they will receive 6 euros provided they continue to reward the high-effort employee with high wages, the payoff maximizing equilibrium of the game. Instead, when the employer chooses list B, they can only receive an expected payoff of

5 euros as long as they reward a high-effort employee with high wages and a low-effort employee with low wages.[3] Consequently, this expected loss of 16% of the maximum possible payoff for the employer is the "price of prejudice" an employer is willing to pay for their prejudice when they choose list B. Costly taste-based discrimination would suggest that the proportion of employers choosing list B is greater than or equal to the proportion of employers choosing list A in this game (H_2 in Table 5 provides the testable hypothesis).

Our final information condition, *Discrimination Extensive*, is constructed to help us elicit discrimination that is not only due to taste but can be due to statistical reasons as well, i.e., emanating from false beliefs about the matched employee's effort level in the real-effort task. To allow for such reasons, *Discrimination Extensive* did not provide information on the effort levels of the matched employee for any of the two lists; instead, the employer is informed of the ethnic identity after the matching takes place. List A included two Roma and two Hungarians, while list B included two Slovaks and two Hungarians (see Table 3, panel C). An employer who prefers to be matched with a Slovak employee should choose list B since the probability of hiring a Slovak partner is 50% in list B and zero in list A. Consequently, a higher proportion of

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[3] Notice that in *Costly Extensive*, if the employer chose list B, there is a 50% chance of being matched to a low-effort Slovak and a 50% chance of being matched to a high-effort Hungarian. The employer's maximum expected payoff from this choice would be 5 euros (0.5*6+0.5*4). Where with 50% probability the employer receives 6 euros for rewarding a high-effort employee with high wages, and with 50% probability, the employer receives 4 euros for rewarding a low-effort employee with low wages.

subjects choosing list B over list A indicates discriminatory behavior against Roma (H_3 in Table 5 provides the testable hypothesis). [4,5]

The three conditions together allow us to measure the extent and incidence of statistical discrimination as well. To measure the size of statistical discrimination, we assume that taste and statistical discrimination are linearly additive, and hence any evidence of residual discrimination in *Discrimination Extensive* after accounting for taste-based discrimination elicited through *Costless Taste Extensive* or *Costly Taste Extensive* would be attributed to statistical discrimination (H_4 in Table 5 provides the testable hypothesis).

Bohren et al. (2019a, 2019b), Bordalo, Coffman, Gennaioli, and Shleifer, (2019), and Bordalo, Coffman, Gennaioli, and Shleifer, (2016) point out that statistical discrimination can either be based on accurate beliefs about a group, based on true average differences representative of underlying distributions of a relevant attribute (Phelps, 1972), or inaccurate beliefs based on incorrect stereotyping, where the average differences, in fact, are not different. Hence, employers' beliefs become important in *Discrimination Extensive* where information on the employee's effort type is not revealed before the employer makes a wage offer. Hence, they have to choose a wage based on their beliefs about the effort type of the matched employee.

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[4] It is useful to point out a part of our design choice here. Even though our primary interest is to identify the extent and sources due to which the majority might prefer to have or avoid the prospects of a Roma employee, we included a third ethnic identity in each list – that of Hungarians. Since the presence of this third identity remains identical across lists A and B in each game (see Panels A-C in Table 3), the choice of either of the two lists A and B cannot be attributed to the presence of Hungarians. In particular, including a third group, who are also a prominent minority in Slovakia can help obfuscate the experimenter's interest in measuring behavior towards Roma and possibly helps in reducing the extent to which subjects might provide socially desirable responses of no discrimination. Additionally, to increase the external validity of our decision environment we would like to point out that it is not unusual for the majority to interact with Hungarians since, according to the official 2011 Census data, they are the largest (officially reported) ethnicity in Slovakia (8.5%). In the region of the experiment: 6% of the population belongs to the Hungarian ethnicity.

[5] While not discussed in this paper, we also conducted another variant where list A contained two Slovaks, one Hungarian, and one Roma, all high type. List B contained the same identities, but all were low type. We exclude this variant as it is not needed to test our hypothesis. However, the results are discussed in Dasgupta et al. (2020).

We implemented an incentivized belief elicitation exercise for employers participating in the *Discrimination Extensive* information condition to measure beliefs. After choosing a wage offer, the employer was asked to guess the effort level that had been exerted by the matched employee, with only the ethnicity information at hand. The employer received an additional Euro if their guess about the employee's effort matched the actual effort exerted by the employee.

Note, in the information conditions above, decisions at the intensive margins, i.e., wage offers to a matched employee are not useful for our interest in eliciting discrimination. Such wage offers are endogenous, i.e., conditional on the choices employers previously made in the worker selection stage (extensive margin). In other words, the employee one is matched with is not random but based on an employer's choice, making decisions regarding the wage offered in these conditions is prone to bias. For this reason, we do not focus on the intensive margin decisions for those assigned to the extensive margin design.

Table 3: Extensive Margin Information Conditions

Panel A: *Costless Taste* at the *Extensive* Margin	
List A	**List B**
Roma – high effort	Slovak – high effort
Hungarian – high effort	Hungarian – high effort
Roma – high effort	Roma – high effort
Slovak – high effort	Slovak – high effort

Panel B: *Costly Taste Extensive* Margin Discrimination	
List A	**List B**
Roma – high effort	Slovak – low effort
Hungarian – high effort	Hungarian – high effort
Hungarian – high effort	Hungarian – high effort
Roma – high effort	Slovak – low effort

Panel C: *Discrimination* at the *Extensive* Margin	
List A	**List B**
Roma	Slovak
Hungarian	Hungarian
Hungarian	Hungarian
Roma	Slovak

Notes: We will use the *italicized* part to refer to the particular information condition throughout the paper.

3.2 Intensive Margin Design

To elicit intensive margin discrimination by employers and to avoid the endogeneity concerns mentioned above we introduce the intensive margin design. Although employers still make two sequential decisions as in the extensive margin design, our focus here is on measuring behavior at the intensive margin, i.e., employers' wage offers for matched employees which measures how Slovaks share a small pie with a stranger. To prevent endogeneity issues at the selection of employee stage, the ethnic compositions of employees in the paired lists were kept identical (see Table 4) (i.e., lists A and B were the same). Consequently, selecting either of the two lists did not change the probability of being matched with employees of any ethnicity: the employer had one-third chance of being matched with any of the three ethnicities ex-ante in each of the information conditions in this design.

In the intensive margin design, we compare wage offers made by employers to matched Slovak and Roma employees in three information conditions described below. Note, that in contrast to some of the information conditions introduced at the extensive margin, discrimination at the intensive margin is always costly in the Game of Prejudice. There are two ways employers can discriminate: offer a low wage to a deserving high effort employee from the minority group, or offer a high wage to a non-deserving low effort ingroup Slovak. In both cases, these discriminatory actions reduce

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the employer's earnings since neither choice aligns with the payoff-maximizing strategy.[6]

In *Low-Cost Taste Intensive* and *High-Cost Taste Intensive,* we provided information on the employees' efforts as well as their ethnic identities.

In particular, in the *Low-Cost Taste Intensive,* all employees in the list-pair exerted high effort. Hence, offering a low wage to the outgroup Roma employee becomes costly for the employer as they would lose 33% of the maximum possible earnings (which could have been 6 euros if the payoff-maximizing choice of high wage for high effort was chosen). Taste-based discriminatory behavior here would imply that the percentage of high wage offers made to high effort Slovak employees are higher than the percentage of high wage offers made to high effort Roma employees (H_5 in Table 6 provides the testable hypothesis).

Another form of taste-based discrimination at the intensive margin can occur when the undeserving ingroup members are rewarded while deserving outgroup members are shunned. This type of taste-based discrimination is prohibitively costly in the Game of Prejudice, since offering a high wage to a low effort Slovak worker earns the employer zero in our setup (where payoff maximizing behavior would instead suggest offering a low wage to the low effort employee to receive a guaranteed payoff of 4). In this case, the employer forgoes 100% of his earning to "reward" a non-performing Slovak. This loss of payoff is again akin to Becker's idea of the price of prejudice where he argued that taste-based discrimination cannot be sustained in the long run in a competitive market; here, hiring/promoting inefficient workers consistently would ensure the eventual shut down of the firm due to it being a breeding ground for inefficient workers. In our experiment, such an extreme form of taste-based

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[6] This reflects the conditions in the naturally occurring markets as it is relatively more costly to discriminate against workers on the job than during the hiring stage.

discrimination would imply that the percentage of high wage offers made to the low effort Slovak employees in the *High-Cost Taste Intensive* condition are at least greater than or equal to the percentage of high wage offers made to high effort Roma employees in the *Low-Cost Taste Intensive* condition (H_6 in Table 6 provides the testable hypothesis).

In line with the extensive margin design, our final information condition at the intensive margin is *Discrimination Intensive*. In this condition, the employer is provided with the ethnic identities of the matched employee but is not given any information about their effort level. By comparing the wage offers made to Roma and Slovak employees, we can measure the prevalence of discrimination without knowing whether it is taste-based or statistical. Discrimination would suggest that the percentage of high wage offers made to the Slovak employees is higher than the percentage of high wage offers made to Roma employees (H_7 in Table 6 provides the testable hypothesis).[7]

To measure statistical discrimination at the intensive margin, we again assume the two sources of discrimination are linearly additive as before and propose that any remaining evidence of discrimination in the *Discrimination Intensive* condition after subtracting the effects of taste-based discrimination elicited through the *Low-Cost Intensive* and the *High-Cost Intensive* conditions should be attributed to statistical discrimination (H_8 in Table 6 provides the testable hypothesis).

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[7] We also compare the wage offers made by Slovaks towards Non-Slovaks (combining Roma and Hungarians). The results are similar and robust to our reported results in Table 6. (See Appendix Table A7).

Table 4: Intensive Margin Information Conditions

Panel A: *Low-Cost Taste Intensive* Margin Discrimination

List A	List B
Roma – high effort	Roma – high effort
Hungarian – high effort	Hungarian – high effort
Slovak – high effort	Slovak – high effort

Panel B: *High-Cost Taste Intensive* Margin Discrimination

List A	List B
Roma – low effort	Roma – low effort
Hungarian – low effort	Hungarian – low effort
Slovak – low effort	Slovak – low effort

Panel C: *Discrimination* at *Intensive* Margin

List A	List B
Roma	Roma
Hungarian	Hungarian
Slovak	Slovak

Notes: We will use the *italicized* part to refer to the particular information condition throughout the paper.

Additionally, we also implemented our incentivized belief elicitation exercise for the employers participating in the *Discrimination Intensive* condition. After the wage offer stage, employers were asked to guess the effort level that had been exerted by their matched employee, with only the ethnicity information at hand.

4. Experiment Procedures

Our experiment was conducted in Eastern Slovakia, during June and September 2017. We selected 7 high schools from a region with a relatively high proportion of people of Roma ethnicity. A total of 687 school-going adolescents participated in the experiment. Selecting this subject pool allows us to use natural ethnic identities and elicit homegrown preferences.

Each session was randomized into one of the six information conditions and lasted for 45 minutes (i.e., during the time of a typical class).[8] Each employer subject participated only once in any of the information conditions. To minimize contamination across sessions we completed all sessions in the selected school on a single day.

Three Slovak experimenters (undergraduate students) were randomly assigned to each of the sessions. To ensure common knowledge, they read aloud subject instructions and the relevant payoff tables and lists were used to illustrate payoffs. To ensure comprehension, participants answered control questions on payoff consequences of their decisions after reading the instructions. Students were assigned randomized I.D. numbers.[9] These I.D.s were used for payoff computations, decision sheets, and to determine the order of appearances of the lists on the decision sheets. To control for order effects, in the extensive margin information conditions, half the students in a session saw list A first, and the other half saw list B first. In the intensive margin information condition although the ethnicity in each list was the same, the order in which the ethnicities appeared in each list was randomized.

629 subjects participated as employers and 58 as employees. The number of subjects participating as employees was purposely limited since our primary interest was to study the behavior of employers. However, we also needed a sample of employee participants from all three ethnicities to implement credible choice

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[8] We also collected data on an additional 64 employer subjects who made decisions in an extensive margin information condition where subjects had to choose between high effort (Slovak, Hungarian, Roma, and Slovak employees) and low effort (Slovak, Hungarian, Roma, and Slovak employees). We implemented this condition to see if subjects consistently preferred high effort employees to low effort employees and indeed they do. Since this information condition is not of primary importance to the paper, we do not use this data in any of the main tables or appendix.

[9] Perfect anonymity was maintained with respect to the experimenters, classmates, and teachers. Subjects were assured that only researchers involved in the project would have access to the data; we never asked for subjects' names; subjects had to fold answer sheets in halves and were collected in a bag by experimenters; rewards were paid in a sealed envelope.

consequences for the employers. Our employee sample consisted of 21 Slovaks, 18 Hungarians, and 19 Roma. We followed the one-to-many matching protocol and the payment procedure in Bauer, Cahlíková, Chytilová, and Želinský (2018) where each employee was matched with more than one employer. After the conclusion of the experiment, we revisited the schools to make final payments to the students.

Each subject received a fixed show-up fee of 2 euros in addition to payments from the experiment. Average payouts were approximately 6 euros. As most of the subjects were not adults, subjects received their rewards in the form of a generic gift card (https://up-dejeuner.sk/zamestnanci/nasa-ponuka/poukazka-upcadhoc), that could be spent on a variety of goods and services (including food and beverages, sport, culture, and health services) in hundreds of stores in the region.[10]

5. Results

We report session-level subject participation information in Appendix Table A2 and average employer characteristics in Appendix Table A3. The median subject is 17 years old and 52% of them are females. The average subject has one sibling and a household size of four. Approximately 55% of the mothers and 61% of the fathers had completed secondary schooling. Interestingly, only 43% of the subjects reported a high level of subjective well-being. Notably, as indicated in Appendix Table A3, we observe no substantial variations in family background characteristics across the different experimentally generated information conditions.

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[10] The gift cards are very common in Slovakia and are often used by employers to provide non-monetary employee compensation as a part of employee benefits, or for marketing purposes.

5.1 Employee choices

We find that 84.5% of all subjects who participated as employees in our experiment completed the task and were categorized as "high effort." Although completion rates vary a little across ethnicities, 88.8% Hungarians, 85.7% Slovaks, and 78.9% Roma, we are not able to reject the null of no difference in completion rates between – Roma and Slovaks (p-value = 0.57), Roma and Hungarians (p-value = 0.41), and Hungarians and Slovaks (p-value = 0.76).[11] This is suggestive that there were no significant differences in employee performance across ethnicities.

5.2 Employer choices

Extensive Margin Information Conditions

Figure 2 below reports the average behavior observed in each of the extensive margin information conditions. The corresponding statistical tests are presented in Table 5, specifically in Columns 3, 4, and 5.

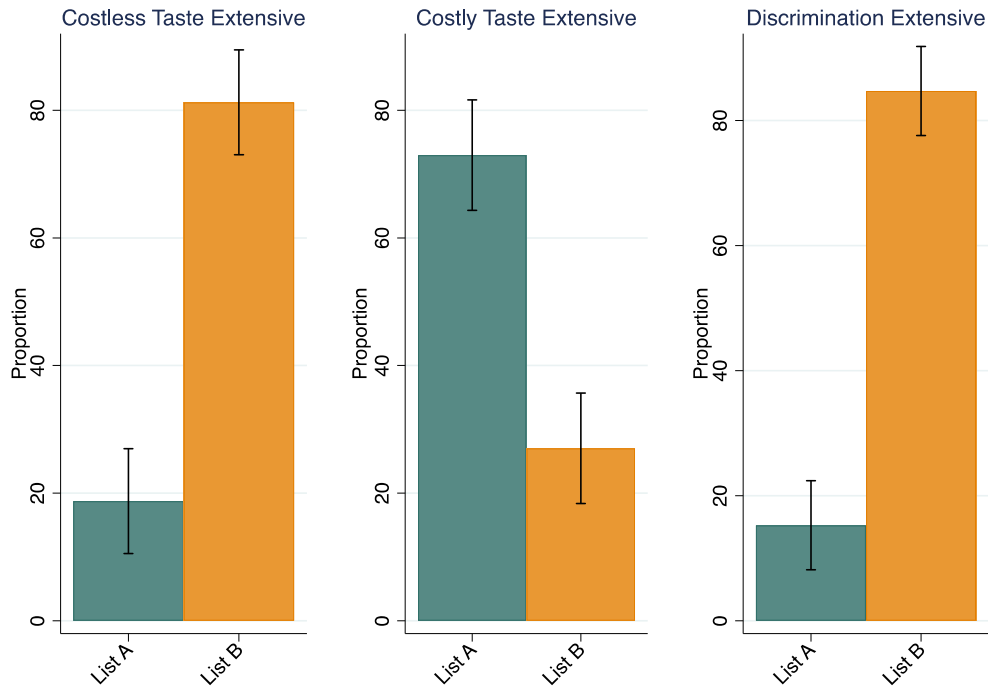[11] All p-values are based on two-sided proportions test.

Figure 2: Results from the Extensive Margin Design

In *Costless Taste Extensive*, 81.25 percent of employers chose the list with a higher proportion of high effort Slovak employees and only 18.75 percent of employers chose the list with a higher proportion of high effort Roma employees. The observed 62.5 percentage point gap between lists A and B is statistically significant ($p<0.01$) indicating that employers frequently indulge in taste-based discrimination when such prejudice is costless to pursue.

In *Costly Taste Extensive*, only 27.03 percent of employers chose the list with a higher proportion of low effort Slovak employees and 72.97 percent of employers chose the list with a higher proportion of high effort Roma employees; the observed 45.94 percentage point gap between lists A and B is statistically significant ($p<0.01$). That is, as the cost of discrimination increases by 16 percentage points compared to the costless information condition, discriminatory behavior reduces substantially. Nevertheless, it is worth noting that taste-based discrimination does not completely

vanish even with a moderate increase in costs. Our findings reveal that a significant proportion (27%) of employers are still willing to bear the costs in order to perpetuate taste-based discrimination. This highlights the persistence of discriminatory attitudes even in the face of some level of financial disincentives.

Next, we examine employer decisions in *Discrimination Extensive* condition where no information about employee productivity was provided to the employers hence discrimination could be both statistical and taste-based. In this situation, 84.72 percent of employers chose the list with a higher proportion of Slovaks and only 15.28 percent of employers chose the list with a higher proportion of Roma; the observed 69.44 percentage point gap between the two choices is statistically significant (p<0.01). While this documents the incidence of extensive margin discrimination against Roma, we cannot assign a source (taste-based or statistical) to the discriminatory behavior yet. To comment on the presence of statistical discrimination, we use two complementary approaches. First, assuming taste and statistical discrimination are linearly additive, we subtract discriminatory behavior due to *Costless Taste Extensive* and due to *Costly Taste Extensive* from discriminatory behavior in *Discrimination Extensive*. We fail to reject the corresponding null hypothesis of no statistical discrimination (p-value = 0.22). Second, we look at the belief data. For statistical discrimination to exist, employers must believe that Roma put in low efforts more often relative to Slovaks.

Evidently, employers with positive beliefs about a Slovak employee's productivity should choose list B (the Slovak heavy group) while those who had a positive belief about a Roma employee should choose list A (the Roma heavy group). We found employers who chose list A in *Discrimination Extensive* indicated more often (83.3% of time) that the matched Roma employee must have put a low effort in the real-effort task. Similarly, employers who chose list B, indicated more often (66.6%

of the time) that the matched Slovak must have put in high effort.[12] As we explained earlier, the elicited beliefs at the extensive margin information conditions suffer from selection bias since the employer is asked about the matched employee's effort exerted in the real-effort task, *after* they have indicated their preferences by selecting one of the two lists. So, it is not surprising that employers who chose list B predict Slovaks are more likely to be of high effort while those who chose list A predict Roma to be more likely to be of high effort.

Overall, our results at the extensive margin indicate a prevalence of taste-based discrimination, especially when it is costless for the employer. Such discrimination interestingly goes down significantly once the cost of taste-based discrimination is made sufficiently high. Our findings at the extensive margin suggest that anti-discriminatory policies must focus on making the cost of discrimination sufficiently high in schools and the workplace.

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[12] Although we are not interested in the wage choices in our extensive margin conditions since they suffer from selection issues, we do report them in Appendix Table A4. They are similar to our results from intensive margin information conditions which do not suffer from such selection issues.

Table 5: Discrimination at the Extensive Margin

Hypothesis (1)	Relevant Information Condition (2)	Difference (List B − List A) (3)	Decision (4)	Implication (5)
H₁: Percentage of employers choosing list B = Percentage of employers choosing list A H₁ₐ: Percentage of employers choosing list B > Percentage of employers choosing list A	*Costless Taste Extensive*	62.50*** (0.01)	Reject H1	Employers discriminate against high effort Roma by choosing to create a group with high effort Slovaks more often when it is costless to them
H₂: Percentage of employers choosing list B >= Percentage of employers choosing list A H₂ₐ: Percentage of employers choosing list B < Percentage of employers choosing list A	*Costly Taste Extensive*	−45.94*** (<0.01)	Reject H2	Employers *do not* discriminate against high effort Roma (by choosing to select the low effort Slovaks more often than the high effort Roma even when it is costly for them to do so)
H₃: Percentage of employers choosing List B = Percentage of employers choosing list A H₃ₐ: Percentage of employers choosing list B > Percentage of employers choosing list A	*Discrimination Extensive*	69.44*** (0.01)	Reject H3	Employers discriminate against Roma by choosing to select Slovaks more often
H₄: Difference in percentage of employers choosing list B and list A in Discrimination Extensive = Difference in percentage of employers choosing list B and list A from Costless Extensive and Costly Extensive H₄ₐ: Difference in percentage of employers choosing list B and list A in Discrimination Extensive > Difference in percentage of employers choosing list B and list A from Costless Extensive and Costly Extensive	All three information conditions	0.07 (0.22)	Do not reject H4	Employers *do not* practice statistical discrimination against Roma by choosing to select them less often when productivity information is not available

Notes: ***p<0.01, **p<0.05, * p<0.10. Total sample size = 210. In parenthesis, we report p-values from proportion test for H1-H3 and t-test for H4. The test in Column (3) is equivalent to testing whether choices differ from 50%.

Figure 3 below describes the average behavior of employers at the intensive margin. The corresponding statistical results from the intensive margin information conditions are presented in Columns 3, 4, and 5 of Table 6.
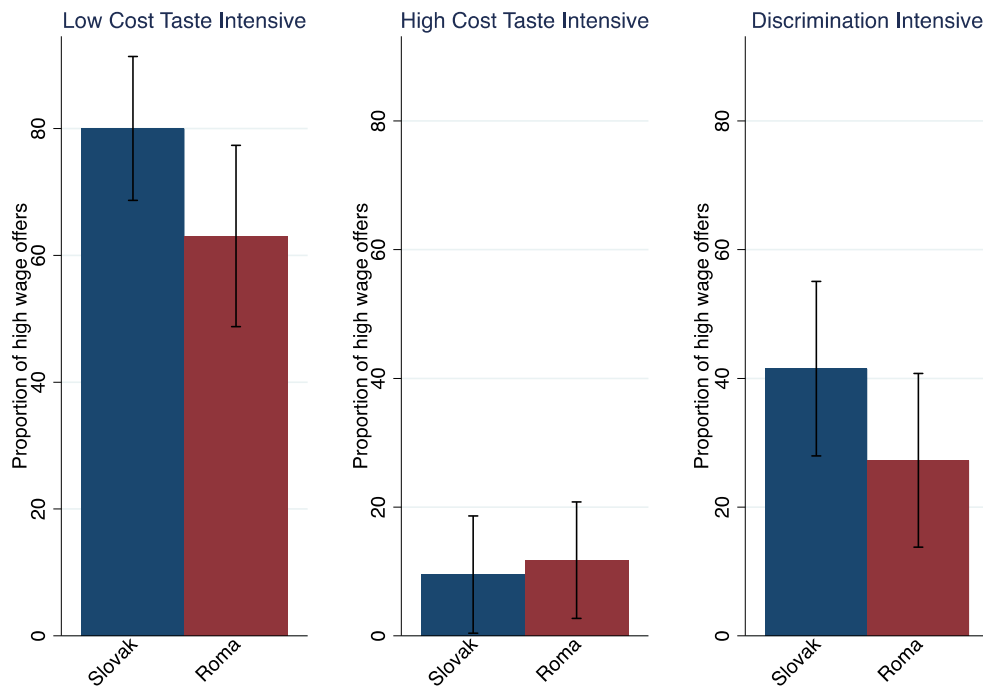

Figure 3: Results from the Intensive Margin

In *Low-Cost Taste Intensive*, 80 percent of employers made high-wage offers to high effort Slovak employees but offered a high wage to high effort Roma employee only 63.04 percent of the time. This 16.95 percentage point gap is statistically significant at the 5% level (p-value = 0.03) indicating that Slovak employers do discriminate against deserving high effort Roma at the intensive margins by giving them lower wages. It is important to note that this discriminatory behavior is costly for the employer since it deviates from the payoff-maximizing choice of offering a low (high) wage to a low (high) effort employee.

In the *High-Cost Taste Intensive*, 63.04 percent of employers made high-wage offers to high effort Roma employees, while in the *Low-Cost Taste Intensive* 9.52 percent of the employers made high wage offers to low effort Slovak employees. This difference is significant at the 1% level (p-value<0.01), indicating that when the cost of discrimination at the intensive margin is high, employers are more likely to reduce discriminatory behavior.

Finally, in *Discrimination Intensive,* where employers make choices about wage offers without any information on the matched employees' efforts, Slovak employees received high wages 41.5 percent of the time while Roma employees received high wages 27.27 percent of the time. This 14.23 percentage point gap is significant at the 10% level (p-value = 0.07) indicating discrimination against Roma. Notably, the overall prevalence of discrimination at the intensive margin is much lower than at the extensive margin.

To capture statistical discrimination at the intensive margin, as in the extensive margin conditions, we subtract the effects of *Low-cost Taste Intensive* and *Costly Taste Intensive* from *Discrimination Intensive*. We fail to reject the null of no statistical discrimination (p-value = 0.78). Additionally, we elicited incentivized beliefs among employers in the *Discrimination Intensive* condition and found that 62.2% of employers when randomly matched with a Slovak employee believed the Slovak employee had exerted high effort, whereas 59.09% of employers, when randomly matched with a Roma employee believed the Roma employee had exerted high effort.[13] These elicited beliefs are not statistically significantly different (Roma=Slovak, p-value = 0.75; Hungarian=Slovak, p-value=0.72).[14] The choice data,

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[13] 65.8% of employees similarly believed that the randomly matched Hungarian employee had exerted high effort.
[14] Interestingly, although employers underestimated the true worker performances in the real-effort task for all ethnic identities, the relative rankings of their guesses are consistent with actual observed differences in performances in the real-effort task.

actual employee effort, and beliefs combined indicate that the discriminatory behavior observed in the Discrimination Intensive condition cannot be attributed to differing beliefs about the effort levels of Roma and Slovak workers or inaccurate beliefs about their actual performances. Consequently, we conclude that the discriminatory behavior found in the Discrimination Intensive condition stems from pure distaste towards the Roma.

Overall, our results at the intensive margin indicate that employers systematically discriminate against Roma individuals based on taste, even in the presence of modest costs. Such discriminatory behavior disappears only when the costs of discrimination become very large.

Table 6: Discrimination at the Intensive Margin

Hypothesis (1)	Relevant Information Condition (2)	Difference Wage Offers (3)	Decision (4)	Implication (5)
H_5: Percentage of high wage offers to *high effort* Slovaks = Percentage of high wage offers to *high effort* Roma H_{5A}: Percentage of high wage offers to *high effort* Slovaks > Percentage of high wage offers to *high effort* Roma	*Low-Cost Taste Intensive*	16.95** (0.03)	Reject H5	Employers discriminate against high effort Roma by offering high effort Slovaks high wages more often even though it is costly to them
H_6: Percentage of high wage offers to *high effort* Roma = Percentage of high wage offers to *low effort* Slovaks H_{6A}: Percentage of high wage offers to *high effort* Roma > Percentage of high wage offers to *low effort* Slovaks	*Low-Cost Taste Intensive* and *High-Cost Taste Intensive*	-53.52*** (<0.01)	Reject H6	Employers *do not* discriminate against high effort Roma by offering high wages to low effort Slovaks more often than offering high wages to high effort Roma
H_7: Percentage of high wage offers to Slovaks = Percentage of high wage offers to Roma H_{7A}: Percentage of high wage offers to Slovaks > Percentage of high wage offers to Roma	*Discrimination Intensive*	14.23* (0.07)	Reject H7	Employers discriminate against Roma by offering Slovaks high wages more often
H_8: Difference in percentage of high wage offers to Slovaks and Roma in Discrimination Intensive = Difference in percentage of high wage offers to Slovaks and Roma in Low-Cost Taste Intensive and High-Cost Taste Intensive H_{8A}: Difference in percentage of high wage offers to Slovaks and Roma in Discrimination Intensive > Difference in percentage of high wage offers to Slovaks and Roma in Low-Cost Taste Intensive and High-Cost Taste Intensive	All three information conditions	2.72 (0.83)	Fail to Reject H8	Employers *do not* practice statistical discrimination against Roma

Notes: ***p<0.01, **p<0.05, * p<0.1. In parenthesis () we report p-values from proportion test for H5-H7 and t-test for H8.

6. Conclusion

This paper studies the prevalence, underlying causes, and impact of the price of discrimination on discriminatory preferences among Slovak adolescents towards Roma adolescents. We specifically investigate how these preferences, causes, and the influence of price vary in different decision-making environments – group-membership vs. sharing a pie.

Our primary finding reveals a significant level of discrimination at the group membership stage when participants have the opportunity to include outgroup members in one's ingroup. However, the prevalence of discrimination diminishes notably when participants are tasked with sharing a pie with a minority individual. This inclination to discriminate during the membership stage may be a common behavior, as it is conceivably easier to deny minority applicants the opportunity to be included in jobs, school teams, playgrounds, neighborhoods (discrimination at the extensive margin) compared to withholding rewards, promotions, awards, and recognition (discrimination at the intensive margin) once individuals are already part of the group, and their deservingness has been documented. Notably, our experiment indicates that taste-based animosity is the primary driver of discriminatory behavior, with no substantial evidence of statistical discrimination or inaccurate beliefs playing a significant role. Furthermore, our results highlight a troubling pattern where modest economic costs fail to deter subjects from engaging in discriminatory behavior. Only when the costs are very high do we observe a significant reduction in taste-based discrimination.

Methodologically, the main contribution of this paper lies in the design of an experiment that allows for estimating the incidence, causes, and impact of price on discriminatory preferences, providing causal interpretations for both extensive and intensive margin decisions. Furthermore, our study contributes to the growing

literature on the examination of anti-social behavior among young individuals. Understanding the behavior of this group is particularly significant, as they represent the future managers and leaders of society.

The findings have two clear implications for policymaking. First and foremost, our study underscores the need to address taste-based discrimination, which can be a significant cause for concern. These deeply ingrained prejudices are challenging to eliminate and call for robust anti-discriminatory policies that incorporate substantial fines to combat such forms of discrimination, particularly at the extensive margin. Secondly, the substantial disparity in the prevalence of discrimination observed between the extensive (e.g., group-membership) and intensive (e.g., sharing a pie stage) margin decisions emphasize the importance of policies that focus on fostering diversity in schools and workplaces. Affirmative action policies that focus on setting quotas wherein explicit percentage of positions or opportunities are to be allocated to underrepresented groups in school admissions and jobs could be warranted to reduce taste-based extensive margin discrimination.

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Appendix A: Tables

<div align="center">

Table A1: Background Questionnaire

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	Question	Response
1	What is your height?	☐ 0-100 cm ☐ 101-200 cm
2	Is summer one of your favorite seasons?	☐ Yes ☐ No
3	What is your ethnicity?	☐ Slovak ☐ Hungarian ☐ Roma ☐ Other
4	What language do your parents speak at home?	☐ Slovak ☐ Hungarian ☐ Roma ☐ Other
5	Have you ever been to Iceland?	☐ Yes ☐ No

Table A2: Sample size by Games

	Sample size
Panel A: Extensive Margin	
Costless Taste Extensive	64
Costly Taste Extensive	74
Discrimination Extensive	72
Panel B: Intensive Margin	
Low-Cost Intensive	146
High-Cost Intensive	135
Discrimination Intensive	138

Notes: Sample size = 629. This is the sample of Slovak adolescents making decisions in our experiments.

Table A3: Balance in Socioeconomic Characteristics

	Mean (sd) (1)	Joint F [p-value][+] (2)
Proportion male	0.49	0.95 [0.45]
Household size	4.04 (1.10)	0.64 [0.67]
No. of siblings	1.27 (0.95)	1.12 [0.34]
Age	16.83 (1.00)	4.10 [<0.01]
Proportion of mother's with secondary schooling	0.55	0.46 [0.80]
Proportion of father's with secondary schooling	0.61	0.72 [0.61]
Proportion reporting high subjective well-being	0.43	1.49 [0.19]

Notes: Joint F statistic and p-values in Column 2 are obtained from regressing each of these variables separately on the full set of information dummies capturing the different information conditions presented to the subjects. ***p<0.01, **p<0.05, * p<0.10. In Column 1, standard deviations are not reported for dichotomous variables.

Table A4: Wage Offers in the Extensive Margin

Information conditions	High wage offers to Slovak (in %) (1)	High wage offers to Roma (in %) (2)	Difference [p-value] (3)
Costless Taste Extensive	75 (n=24)	55 (n=20)	20* [0.08]
Costly Taste Extensive	0 (n=3)	75 (n=20)	-75 [0.99]
Discrimination Extensive	60.0 (n=30)	66.66 (n=6)	-6.66 [0.62]

Notes: ***p<0.01, **p<0.05, * p<0.10. In Column 3 we report p-values from a one-tailed proportions test.

Table A5: Order Effects in the Extensive Margin

Information conditions	P-values (1)
Costless Taste Extensive	0.056*
Costly Taste Extensive	>0.99
Discrimination Extensive	0.24

Notes: Column (1) reports p-values on the order dummy obtained from regressing the variable, decision (=1 if List A chosen, 0 if List B is chosen) on order (=1 if subject sees List A first, 0 if subject sees List B first). ***p<0.01,**p<0.05,* p<0.10.

Table A6: Understanding of the Game

Comprehension questions	% Correct
Q1) If you decide to select High Wage, and at the same time the employee decides to put in High Effort, how much will you earn? How much will the employee earn? You will earn:................EUR The employee will earn:...................EUR	98.41
Q2) If you decide to select High Wage, and the employee decides to put in Low Effort, how much will you earn? How much will the employee earn? You will earn:................EUR The employee will earn:...................EUR	95.67
Q3) If you decide to select Low Wage, and the employee decides to put in High Effort, how much will you earn? How much will the employee earn? You will earn:................EUR The employee will earn:...................EUR	95.24
Q4) If you decide to select Low Wage, and at the same time the employee decides to put in Low Effort, how much will you earn? How much will the employee earn? You will earn:................EUR The employee will earn:...................EUR	97.26
Excellent Comprehension (=1 if Q1-Q4 are all correct, 0 otherwise)	93.51

Table A7: Intensive Margin Results – Slovak vs. Roma and Hungarian

Games (1)	High wage offers by employers to		Difference (4)	Decision (5)	Implication (6)
	Slovak (2)	Hungarian and Roma (3)			
Low-Cost Intensive	80.39	66.33	14.05** (0.03)	Reject H_5	Employers discriminate against high effort Roma and Hungarians by offering high wages to high effort Slovaks more often even when it is costly to them
Low Cost Intensive and *High cost Intensive*	11.11	66.33	-55.22*** (<0.01)	Reject H_6	Employers do not discriminate against high effort Roma and Hungarians by offering high wages to low effort Slovaks more often than offering high wages to high effort Roma and Hungarians
Discrimination Intensive	60.63	54.70	5.23 (0.65)	Reject H_7	Employers discriminate against both Roma and Slovak by offering Slovaks high wages more often

Notes: p-values parentheses. ***$p<0.01$,**$p<0.05$,* $p<0.10$.

Appendix B: Real-effort Task

Subjects were told to copy the sentences in the space under each sentence.

1 MIDVINTERNATTENS KOLD AR HARD,

$\longrightarrow$

2 STJARNORNA GNISTRA OCH GLIMMA.

$\longrightarrow$

3 ALLA SOVA I ENSLIG GARD DJUPT

$\longrightarrow$

4 UNDER MIDNATTSTIMMA.

$\longrightarrow$

5 MANEN VANDRAR SIN TYSTA BAN,

$\longrightarrow$

6 SNON LYSER VIT PA FUR OCH GRAN,

$\longrightarrow$

7 SNON LYSER VIT PA TAKEN.

$\longrightarrow$

8 ENDAST TOMTEN AR VAKEN STAR

$\longrightarrow$

9 DAR SA GRA VID LADGARDSDORR,

$\longrightarrow$

10 GRA MOT DEN VITA DRIVA,

$\longrightarrow$

11 TITTAR, SOM MANGA VINTRAR FORR,

$\longrightarrow$

12 UPP EMOT MANENS SKIVA,

$\longrightarrow$

13 TITTAR MOT SKOGEN,

$\longrightarrow$

14 DAR GRAN OCH FUR DRAR

$\longrightarrow$

15 KRING GARDEN SIN DUNKLA MUR,

$\longrightarrow$

16 GRUBBLAR, FAST EJ DET LAR BATA,

$\longrightarrow$

17 OVER EN UNDERLIG GATA.

⟶

18 FOR SIN HAND GENOM SKAGG OCH HAR,

⟶

19 SKAKAR HUVUD OCH HATTA

⟶

20 NEJ, DEN GATAN AR ALLTFOR SVAR,

⟶

21 NEJ, JAG GISSAR EJ DETTA

⟶

22 SLAR, SOM HAN PLAGAR, INOM KORT

⟶

23 SLIKA SPORJANDE TANKAR BORT,

⟶

24 GAR ATT ORDNA OCH PYSSLA,

⟶

25 GAR ATT SKOTA SIN SYSSLA.

⟶

26 GAR TILL VISTHUS OCH REDSKAPSHUS,

⟶

27 KANNER PA ALLA LASEN

⟶

28 KORNA DROMMA VID MANENS LJUS

⟶

29 SOMMARDROMMAR I BASEN;

⟶

30 GLOMSK AV SELE OCH PISK OCH TOM

⟶

31 PALLE I STALLET HAR OCK EN DROM:

⟶

32 KRUBBAN HAN LUTAR OVER

⟶

33 FYLLS AV DOFTANDE KLOVER;

⟶

34 GAR TILL STANGSLET FOR LAMM OCH FAR,

⟶

35 SER, HUR DE SOVA DAR INNE;

⟶

36 GAR TILL HONSEN, DAR TUPPEN

⟶

37 STAR STOLT PA SIN HOGSTA PINNE;

⟶

38 KARO I HUNDBOTS HALM MAR GOTT,

⟶

39 VAKNAR OCH VIFTAR SVANSEN SMATT,

⟶

40 KARO SIN TOMTE KANNER.

⟶