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# Refugees' Self-Perceived Discrimination in Europe. A Statistical Analysis

**Smaranda CIMPOERU**<sup>1</sup> (smaranda.cimpoeru@csie.ase.ro)  
Bucharest University of Economic Studies

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**Amira KOBEISSI**  
Bucharest University of Economic Studies

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**Hiba MOHAMMAD**  
Bucharest University of Economic Studies

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**Monica ROMAN**  
Bucharest University of Economic Studies

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## ABSTRACT

*The paper aims at identifying the individual factors associated with self-perceived discrimination in the case of refugees residing in Europe. The study uses a number of non-parametric tests, as well as ordinal logistic regression, applied on a sample of 500 refugees, from the main origin countries (Syria, Iraq, Palestine). The results indicate that economic factors, such as being unemployed or having a low income are positively associated with discrimination. Demographic factors, such as gender or marital status are not significant predictors for discrimination. However, having more than three children increases the perceived discrimination, while age and arriving with the family decreases it. Other demographic factors such as gender or nationality did not prove to significantly affect discrimination.*

**Keywords:** non-parametric tests, survey, discrimination, refugees, ordinal logistic regression

**JEL Classification:** J15, J61, C12

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## 1. INTRODUCTION

Migration is one of the most controversial demographic phenomenon highlighted and debated in recent decades; it is an issue that becomes profoundly relevant, as it entails a series of decisions that place economic

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1. Corresponding author: Smaranda Cimpoeru, Faculty of Cybernetics, Statistics and Economic Informatics, Bucharest University of Economic Studies, 15-17 Calea Dorobantilor, District 1, Bucharest, Romania, tel 0040721675585

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migrants, refugees, asylum seekers in a variety of situations. Migrants' personal behaviors are based on individuals' experiences associated to migration, whether forced or voluntary.

In 2015, almost 60 million people were forced to leave their homes around the world. (United Nations High Commissioner for Refugees [UNHCR], 2015). Refugees have all been forced to evacuate their homes due to horrific exposure to war, tragedy, or political abuse, and have accrued a number of stressors during their travel by bus, or boat (Porter and Haslam, 2005). Most refugees make the decision to leave after facing significant political, economic, or social obstacles (Içduygu and Sert, 2019).

Europe had witnessed in the last decade a huge wave of refugees and asylum seekers, especially after the Syrian war started in 2011. Refugees were firstly spread in the neighborhood countries (Lebanon, Jordan, and Turkey) and others have had the opportunity to travel to Europe (legally or illegally, by boats or buses). Also, many of the European countries were not capable in welcoming large numbers of refugees and asylum seekers. This may be related to economic, social, political or financial situations.

After the settlement of the refugees in the host countries many dilemmas and challenges usually appear in their path to safety. In the beginning of that period refugees may have been exposed to difficult experiences as a result of their origins in war-torn areas. As the flow of refugees increased and it is still increasing in Europe, a number of factors that led to discrimination started to arise, such as inequalities caused by a shortage of wealth, income status, racial heritage, and being a newcomer to the region. The isolation and segregation of many disparate and diverse populations becomes more evident (Tümtas, 2018). Syrian refugees were forced to experience a challenging journey that began with their decision to leave their home country and continued after they arrived in their new destination, where they faced new challenges related to settlement, integration, adaptation, and rehabilitation from trauma, as well as how the host country supported them in integrating or settling in the new society.

Not surprisingly, refugees' discrimination is considered one of the main debatable topics as it appears in host societies in a wide range, in the context of the refugees' interaction with the local citizens or authorities. Moreover, discrimination appears in different shapes: as gender discrimination, labor market discrimination, or related to education, access to health, and obstacles of integration in the host countries.

The objective of the paper is to analyze the factors associated with refugees' discrimination, as it is self-perceived and reported by a sample of 500 refugees residing in Europe. The analysis relies on an online survey conducted

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in 2020; the questionnaire covered issues related to integration, discrimination, housing and health (Cimpoeru et al., 2020). Most of the existing research is focused on country specific data, as they are collected at destination mainly. The current analysis has the novelty that brings respondents from the main origin countries (Syria, Palestine, Iraq) living in various European areas: Western Europe (Germany, Sweden) and Eastern Europe (Romania). Therefore, the paper fills this gap as it provides a multi-facets perspective, emphasizing the role of both destination and origin countries in perceiving discrimination.

The paper is structured as follows: Section 2 comprises a review of the literature on migrants' discrimination; Section 3 provides a brief overview of the statistic and econometric methods used in our analysis; it also describes the characteristics of the database, the variables and the assumptions used in the research; Section 4 contains a presentation of the empirical outcomes regarding the factors that influence discrimination, as well as the econometric results, followed by discussions and conclusions.

## **2. DISCRIMINATION AND REFUGEES: THEORETICAL FRAME**

As the emerging literature on migration and refugees is quite substantial, in this section we focus on the existing studies based on surveys microdata, which provide realistic evidence on the profile of the refugees and reveal their challenges. Starting with the portfolio of refugees and taking Turkey as an example, studies had shown that in many socioeconomic ways, the Syrian refugee community is considered to be very particular. One of these features is the age range, which is much lower than the population of most countries around the world and comparable to many countries in Sub-Saharan Africa. The Syrian refugees in Turkey have an average age of 23.0 years. (Pinedo-Caro, 2020). In areas with a high refugee population, a large number of young Syrians are likely to crowd labor markets. In this regard, initiatives aimed at future work capacity growth, as well as progressive measures for job creation in the affected regions, should be taken.

Jordan, another neighboring country, according to the November 2015 Jordanian Census, had 1,265,514 Syrians, almost all of whom had arrived in the previous five years, including 953,289 Syrian refugees (Department of Statistics Jordan, 2015). The majority of Syrian refugees aged 15 to 59 years old (93 percent) fled their home country due to violence, persecution, or security concerns. A 5 percent of refugees were traveling with a member of the family. Those accompanying family members were registered as refugees at comparable rates as those escaping persecution, despite the limited sample size (Krafft, Sieverding, Salemi and Keo, 2018).

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Gender discrimination is a severe issue, mostly when it is related to refugees. A study made in Turkey based on interviews with Syrian refugees (especially women) observed the challenges and obstacles they faced in Turkey when they moved there. Women fight to provide food, safety and protection to their families, and they were in need of employment also. When mentioning gender discrimination, many negative phrases can come to our minds such as women's violence which can come in different shapes (sexual, psychological, physical and economic violence). An ISTAT (2015) report finds that foreign women living in Italy face the same risk of physical or sexual violence as Italian women (31.3 percent vs. 31.5 percent).

Furthermore, when considering the education discrimination of refugees, studies showed that in the Indian state of Assam, education was the most important factor for women's empowerment, growth, progress, and welfare; discrimination against women was prevalent, contributing to continued deprivation and vulnerability of women in all sectors – economic, education, social, political, healthcare, rights and legal (Sonowal, 2013). Other surveys discovered unique obstacles for refugee women in terms of education and integration. Watkins, Razei, and Richters (2012) investigated the factors that influence refugee's women English language education, engagement and achievement in Australia. Between 2009 and 2011, data was gathered through ethnographic analyses and interviews with 67 participants were conducted. Women's education is an essential perspective because it plays a role in women's economic and social empowerment as a contributor to nation-building and progress. Despite training and education, it has been reported that there is widespread systematic discrimination against refugee women in the labor market, making them more vulnerable to physical attacks and/or sexual exploitation in exchange for basic needs and protection (UNHCR, 2016).

Looking at work and labor market discrimination, this is considered a very sensitive subject as refugees usually are facing obstacles in the workplace, such as language barrier and understanding the requirements; most of refugees tend to speak only their own native language and this creates a barrier in integrating in the labor market in the host country. Refugees face a number of challenges in terms of finding jobs and the kind of work they can do (Cimpoeru et al., 2020). As a result, the rates of unemployment and underemployment among refugees are significantly higher than those of the host population. Diplomas are either invalid or irrelevant, and training is based on a variety of technologies. For refugees, it is a concern that they are unable to cope with tension caused by discrepancies between their formal qualifications and the jobs that are available to them. Some of them would rather sit at home and be unemployed than accept a career that they believe is beneath their ability level.

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While talking about education and training, refugees may raise the number of opportunities in the host economy if they were well qualified in their home country. The talents and abilities that refugees carry with them can be valuable assets to employers (Shah, 2008). Assisting refugees to integrate into the labor market and make use of their skills and abilities is a challenging mission, but a quicker labor market integration process in the host country will help both the refugees and the host country significantly. As a result of the delay in integrating refugees into the labor market, host countries could lose out on the possible economic benefits that the refugees may provide. This could intensify poverty and separation among refugees, as well as increase societal costs (Ott, 2013). De Vroome and van Tubergen (2010) discovered that the host country's specific training, work experience, language skills, and interactions with the local community are all strongly correlated to job opportunities. Syrians' incorporation into the formal labor market is without a doubt the most challenging task.

As the ORSAM report (2016) points out, in Turkey it was not legal for refugees to work until recently, their only option was to work illegally for low pay with no social benefits or rights. In addition to being a challenge in and of itself, the rise in the illegal workforce has the potential to exacerbate tensions between the two populations. As an example of Syrian refugees and their integration in the labor market, there is the case of Turkey, where Syrian refugees who wish to work on their own face difficulties in obtaining permission to work and registering. Syrian refugees must have lived in Turkey for at least 5 years before being allowed to operate openly. However, this does not seem to be a condition that could be applied in practice because the temporary security identity document's right to remain does not replace the right to live in the country (Kaya 2016). One of the most significant barriers to social integration in Turkey is the inability of Syrian refugees to obtain work permits. The policies that have been introduced so far do not provide adequate assistance to refugees in their efforts to integrate into Turkey's labor market.

While we talk about the obstacles, a common and critical one is related to wages and salaries offered to refugees in their new society, according to a fieldwork conducted by Kaya (Kaya, 2016): in Istanbul, where the majority of Syrian refugees live, the majority of Syrians work for a small proportion of what Turkish people receive in similar occupations. Due to bureaucratic difficulties such as obtaining work permits, high prices, salaries, and insurance premiums, both Syrian refugees and employers tend to prefer unauthorized employment. As a result, they are operating in environments that are vulnerable to various forms of inequality (Akar and Mustafa, 2019).

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Another obstacle that refugees face in the workplace is racism. Discrimination based on race restricts employment prospects and places social workers in the difficult yet essential role of advocate (Morávková and Mojtová, 2018).

The results emphasize various dimensions of discrimination, associated to gender, race, education, employment. They have different shapes and intensity in different destination countries. These may also be associated with the individual factors that make people vulnerable. As it was shown, women or less educated people are more exposed to discrimination. In light of the existing evidence, the remaining of this paper addresses the individual determinants of self-perceived discrimination in the case of recent European refugees.

### **3. DATA DESCRIPTION AND METHODOLOGY**

The research has a descriptive nature and aims to explore the factors affecting perceived discrimination. The data was collected through an online survey between May and November 2019. The questionnaire was advertised and distributed via various social media platforms (Facebook or Twitter) as this method is the most effective to reach a widely spread population located in different European countries. Moreover, this allows to collect quick and relevant responses, with reduced costs. The questionnaire covers a large variety of issues related to integration and discrimination, as well as to the economic and demographic profile of the refugees. The questionnaire was distributed in two languages (English and Arabic), in order to make it more accessible to a larger group of people. After cleaning the data, the sample consists in 500 respondents located in different European countries.

As a starting point, descriptive statistics were computed and the sample was presented in detail. In the second stage the effects of specific variables on discrimination were analyzed using hypothesis testing. As most of the variables have a qualitative nature, non-parametric tests were employed. Finally, ordinal logistic regressions were estimated. For an easier interpretation of the results, marginal effects are reported.

As non-parametric methods, firstly Kruskal – Wallis test was used to establish statistical associations between the perceived discrimination level and categorical variables with more than two classes. The Kruskal – Wallis test (Kruskal and Wallis, 1952) is a nonparametric test that is often labelled as the substitute for the parametric one-way ANOVA (Pagano, 2012). It is used to test if samples originate from the same distribution, being an extension of the two sample Wilcoxon-Mann-Whitney test for more than two independent samples. Kruskal – Wallis does not assume normality nor homogeneity of

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variance (as it is the case for the ANOVA) – Pagano, 2012. However, it does assume that the observations in each group are from populations with the same shape of distribution, that the samples are random and independent (Ostertagova, 2014). Since the dependent variable can be also on an ordinal scale (Vargha, Delaney, 1998), it is suitable for performing our statistical analysis. The test statistic is based on the sums of ranks in each subgroup. The test statistic follows a chi distribution.

Secondly, we used Dunn’s test as the pairwise multiple comparison procedure if the Kruskal – Wallis test was rejected. Dunn (1964) proposes z-test statistics to approximate exact rank-sum test statistics by applying the mean rankings of the outcome in each group as results from the Kruskal – Wallis test. Following original Dunn’s approach, we used the Bonferroni adjustment that multiplies the p-values with the number of multiple comparisons being made between groups. Dunn’s test has grown in popularity, being mostly used with multiple-comparison adjustments (Dinno, 2015), an approach we have also decided to follow.

Thirdly, based on the results of the post-estimation tests, we created dummy variables from the initial categorical variables. The objective of this procedure is two-fold. First of all, we will run also Mann – Whitney (Wilcoxon Rank Sum) tests to compare the discrimination level of the two groups created by the dummy variables. This would reinforce the results obtained from the Kruskal – Wallis tests. Secondly, the dummy variables will be used in the next section of the analysis, as factors in ordinal logistic regression models.

Finally, using the variables that have proven to be significantly associated with discrimination, a series of *ordinal logistic regression* models was developed, in an attempt to explain discrimination through individual characteristics of refugees. To ease the interpretation of the results, besides the odds ratios we have also computed the average marginal effects. We decide reporting *the average marginal effects* instead of the marginal effect at the mean since the former are “more appropriate for providing a realistic interpretation of estimation results” (Bartus, 2005, pg. 310). The average marginal effects are obtained by computing the average of partial changes over all observations, while the marginal effects at mean are calculated at fixed values of the independent variables (usually, at mean). Since most of the independent variables introduced in the model are dummy variables, the sample means calculated using the marginal effect at mean would make no sense (Long, 1997). Thus, we calculate and report the average marginal effects following the methodology proposed by Williams (2020). All the computations were performed in Stata 16.

## 4. RESULTS

### 4.1 Descriptive statistics

First of all, the demographic characteristics of the sample are presented. The majority of participants come from Arabic countries with three quarters of respondents being Syrian. Other nationalities include Palestinian, Iraqi and Lebanese. The remaining of 21 respondents were merged under a sole category (“Other”)<sup>1</sup>. The gender distribution is relatively even, slightly balanced towards men (53 percent), following the international statistics on migration.<sup>2</sup> Average age of respondents is approximately 35 years, ranging between 11 and 71 years. With a standard deviation of 10.4 years, the age distribution of the respondents is quite homogenous, although skewed to the right with most of them being aged between 20 and 40 years (Table 1).

**Frequency distributions for the demographic and socio-economic variables**

*Table 1*

Variable	Weight	Variable	Weight
<b>Nationality</b>		<b>Children</b>	
Syrian	75.6%	No children	53.6%
Palestinian	8.6%	One child	12.8%
Iraqi	6.8%	Two children	15.4%
Lebanese	4.8%	Three children	10.8%
Other	4.2%	Four or more children	7.4%
<b>Gender</b>		<b>Marital Status</b>	
Male	53%	Married	53.8%
Female	47%	Single	40.6%
		Divorced / Separated / Widow	5.6%
<b>Age</b>		<b>Education level</b>	
< 20 years	2.4%	Primary or less than primary	3.2%
20 – 40 years	71%	Secondary education	9.8%
40 – 60 years	23.4%	High-school	32.2%
> 60 years	3.2%	Post-secondary education	7.6%
		Tertiary education	47.2%
<b>Economic Status</b>		<b>Income Status</b>	
Employed	35.8%	Living comfortably on present income	25.2%
Self – Employed	9.8%	Coping on present income	44.2%
Students	29.8%	Finding it difficult on present income	23.4%
Unemployed	24.6%	Finding it very difficult on present income	7.2%
<b>Housing</b>		<b>Health insurance / free access to health services</b>	
Rented from a person or company	61.4%	Yes	85.2%
Owner or owned by an acquaintance/ relative	23.4%	No	12.2%
House paid by the State	8.6%	Private health insurance	2.6%
Rented from State institutions	3.2%		
Room in a student dormitory	3.4%		

1. Libya (9); Afghanistan (3 ); Yemen (3); Egypt (2); Iran (1); Kuwait (1); Sudan (1); Tunisia (1).

2. <https://migrationdataportal.org/themes/gender-and-migration>



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In what regards the family situation, a little more than a half of participants are married and 40 percent declared to be single. In accordance with the marital status, slightly over half of the individuals in the sample declared to have no children, and more than a quarter (28 percent) have one or two children. Generally, migrants included in the sample have a good education level, with a little less than half having tertiary education and only 13 percent declaring a secondary or less education level (Table 1).

Moving on to the socio-economic variables, we notice a heterogeneous distribution of the sample regarding the economic status. A third of individuals are employed and a quarter are unemployed. The income status was assessed based on the following question: “What is your current income status?” with four possible answers – living comfortably on present income, coping on present income, finding it difficult on present income and finding it very difficult on present income. The economic situation of respondents is rather modest. Almost half of migrants cope on present income and 30 percent declared they find it difficult and very difficult on present income. Only a quarter of respondents live comfortably on present income. Regarding the housing situation, 60 percent of migrants live in houses rented from a person or from a company. A little less than a quarter declared to own the house or living in a house owned by a relative / acquaintance. Most respondents have health insurance or free access to health services (85 percent) and only 12 percent declared not to be health insured (Table 1).

Lastly, we will describe the variables related to migrants’ integration in the host country and to the migration journey. More than three quarters of migrants included in the study are currently residing in one of the following three European countries: Sweden (29.2 percent), Germany (28.8 percent) and Romania (21 percent) and 10 percent are in Turkey. For statistical analysis purposes the host countries with less than 15 observations have been merged into a single category (“Other”)<sup>1</sup>. 64 percent of migrants have been in the destination country for less than 6 years, and only 18 percent have less than 2 years in Europe. Most migrants came with their families or with their friends and about a third came alone (Table 2).

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1. Belgium (14), United Kingdom (12), United States (5), France (5), Netherlands (4), Italy (3), Spain (3), Austria (2), Canada (2), Russia (2), Czech Republic (1), Greece (1).

**Frequency distributions for the migration integration variables**

*Table 2*

Variable	Weight	Variable	Weight
Host country		Number of years in the destination country	
Sweden	29.2%	Less than 1 year	5.8%
Germany	28.8%	1 – 2 years	12%
Romania	21%	3 – 5 years	46%
Turkey	10.2%	6 – 8 years	27.4%
Other	10.8%	9 – 10 years	3.4%
		More than 10 years	5.4%
Accompanying person (?)		Language course attendance	
Family	63%	Yes	52%
Friends	5.8%	Started, but not finished	8%
Alone	31.2%	No	40%

When asked about the difficulties faced when applying for asylum, around a third of respondents declared they faced no difficulties. Of those facing difficulties, the most common ones were related to the long and costly processes or procedures and the problems with required documents (Figure 1).

**Difficulties faced when applying for asylum**

*Figure 1*



With respect to the barriers faced when coming to Europe, most respondents considered the language and communication issues the main barrier. Economical or financial reasons, related to housing, labour or financial matters were mentioned as barriers by 20 percent of migrants. Family separation or trauma suffered along the migration journey were invoked as barriers by less than 10 percent of respondents. The evidence that the main barrier faced was related to language is reinforced by the fact that 40 percent of migrants included in the study declared not to have attended language courses.

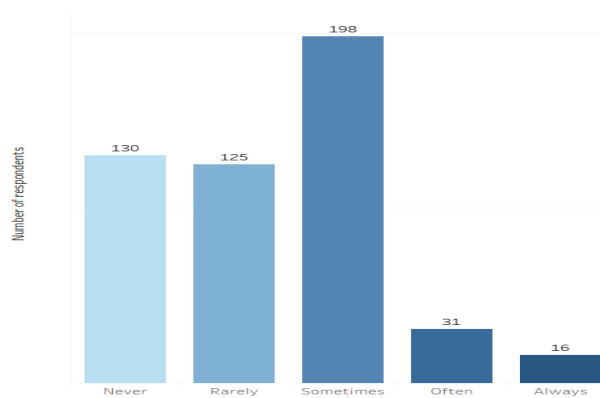
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## 1.2 Individual characteristics and discrimination: Results from non-parametric tests

The variable of interest in the analysis performed is the discrimination level perceived by respondents. The original question was “*How often do you feel discriminated in current country because of nationality?*”. The possible answers (Never, Rarely, Sometimes, Often, Always) were coded on a 5-point Likert scale from 1 (Never) to 5 (Always). As it can be observed from Figure 2, half of respondents said that they never or rarely feel discriminated, while about one in ten participants declared to always or often feel discriminated. The average of the constructed ordinal variable was calculated at 2.35, corresponding to a medium to low level of perceived discrimination.

**Distribution of respondents per Discrimination level**

*Figure 2*



In order to find the characteristics of refugees that feel discriminated, first of all we have conducted non-parametric tests to observe significant associations between the perceived discrimination level and the variables used to describe the sample of respondents. Tables 3 and 4 summarize the results obtained from the non-parametric tests.

### Results of the Kruskal – Wallis non-parametric tests

Table 3

Variable	Degrees of freedom	Chi-Square test statistic	P-value
Nationality	4	12.392	0.0147
Marital Status	2	0.235	0.8892
Children	4	7.907	0.0950
Education level	4	4.161	0.3847
Economic Status	3	8.064	0.0447
Income Status	3	21.941	0.0001
Housing	4	17.475	0.0016
Health Insurance	2	10.619	0.0049
Host Country	4	32.968	0.0001
Accompanying person	2	6.783	0.0337
Language course attendance	2	8.001	0.0183
No of years in the destination country	5	14.816	0.0112
Difficulties	5	33.919	0.0001
Barriers	6	8.404	0.2100

The Kruskal – Wallis test shows there is a statistically significant difference in the perceived discrimination level between the nationalities. The post estimation Dunn test establishes that Iraqi respondents feel more discriminated than Lebanese ones (p-value 0.0694). However, there is no significant difference in the perceived level of discrimination between Syrian and other nationalities. Since Iraqi, Lebanese and *Other* nationalities account for less than 50 cases each (Table 1), we decide not to further pursue with Mann – Whitney test for these variables.

### Results of the Mann – Whitney non-parametric tests

Table 4

Variable	Average discrimination level	Variable	Average discrimination level
Gender (z = -1.046)		Host Country – Romania (z = 4.867***)	
Female	2.4	Romania	1.9142
Male	2.3169	Any Other country	2.4734
No of children (z = -1.733*)		Host Country – Turkey (z = -4.267***)	
3 or more children	2.5184	Turkey	2.9411
Less than three children	2.3202	Any Other country	2.2895
Economic Status (z = -2.976***)		Accompanying person (z = 1.988**)	
Unemployed	2.6178	Family	2.2793
Employed / Student	2.2705	Alone or friends	2.4864
Income Status (z = -4.057***)		Language course attendance (z = -2.395**)	
Low Income	2.6732	Yes or started but not finished	2.43
Not low income	2.2161	No	2.245
Health insurance (z = -3.370***)		No. of years in destination country (z = 2.745***)	
No or private health insurance	2.7297	More than 6 years	2.1933
Yes	2.2910	Less than 6 years	2.4482
Difficulties (z = -5.371***)			
Yes	2.5297		
No	2.0497		

\*\*\* p-value < 0.01; \*\* p-value < 0.05; \* p-value < 0.1

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Gender related, no significant association could be established between gender and perceived discrimination level. Thus, we cannot conclude that women feel more discriminated than men. Likewise, there is no significant difference in the perceived level of discrimination between different categories of respondents based on their marital status, as shown by the results of the Kruskal – Wallis test. What is more, no statistically significant association can be established between education and discrimination level (Tables 3, 4).

Since the Kruskal – Wallis test showed a (weak) statistical significance for the association between the number of children and the discrimination level ( $p$ -value  $< 0.10$ ), post estimation test confirmed that respondents with three or more children feel more discriminated than those with one child ( $p$ -value 0.0154). The result is reinforced by the Mann Whitney test, with a weak statistical significance ( $p$ -value  $< 0.10$ ). Dunn test could not establish any significant differences between migrants with and without children (irrespective of the number of children) in terms of discrimination degree.

The socio-economic variables prove to be strongly associated with the perceived discrimination level of the respondents in the sample. There is a significant difference between perceived discrimination level of migrants in different economic situations, as shown by the results of the Kruskal – Wallis test. Unemployed migrants feel significantly more discriminated than employed or student migrants, a difference proven to be strongly statistically significant also by the Mann Whitney test (Table 4).

A strong significant association is also established between the income status and the perceived degree of discrimination (Table 3). Considering the low number of observations in one of the categories, the categories “Finding it difficult on present income” and “Finding it very difficult on present income” were merged into a single category renamed “Low income”. The Mann-Whitney test for this new variable confirms the strong significant difference of perceived discrimination level between respondents with low income and others (Table 4).

Results also showed that migrants in distinct housing situations have different perceived discrimination levels, with migrants living in houses paid by the State feeling less discriminated than those living in students’ dormitories or in rented house ( $p$ -value  $< 0.05$ ). However, results should be treated with caution considering the small number of observations in certain categories. This is the reason why we decide not to go further with the Mann-Whitney tests for the housing variable.

The existence or lack of a health insurance is also an aspect that appears to have a significant association with migrants’ discrimination level. Respondents without health insurance feel more discriminated than those that hold health insurance (Table 4).

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One of the most strongly associated variables with the discrimination level is the host country. Results of the post estimation tests show that the perceived discrimination level of migrants residing in Romania is significantly lower than in any other destination country in the sample. What is more, those established in Turkey have a significantly higher degree of perceived discrimination level than those in other countries. Still the results found for Turkey have to be considered with caution since there are only 51 respondents who reside in Turkey. Mann – Whitney tests for dummy variables created for Romania and Turkey confirm the results (Table 4).

Other variables associated with the migration journey prove to have a significant association with the discrimination level. For instance, migrants who came with their families feel significantly less discriminated than those traveling with friends (Table 4). In what concerns language course attendance, post estimation tests and also Mann Whitney test show that migrants who have attended or have started language courses feel significantly more discriminated than those who have not attended the language courses (Table 4).

There is also a significant difference in the perceived discrimination level of migrants with different migration duration, with respondents who are for a longer period of time in the host country feeling less discriminated than those that have a shorter history of migration in the destination country. Considering the low number of observations in certain categories, a dummy variable was created with migrants who reside in the destination country for more than 6 years. Mann – Whitney tests confirm that migrants with a migration history longer than 6 years feel significantly less discriminated than those who have been in the host country for less than 6 years (Table 4).

Ultimately, significant differences have also been confirmed between the difficulties faced by migrants and their perceived discrimination degree (Table 3). A more in depth analysis reveals that migrants facing any type of difficulty felt more discriminated than those who declared they face no difficulty in their migration journey. Indeed, migrants who faced difficulties feel significantly more discriminated than those who did not encounter difficulties (Table 4). As opposed to the difficulties encountered, there is no statistically significant association between the barriers faced by respondents and their perceived discrimination level (Table 3). What is more, there are no respondents to state they have not face any barrier when coming to Europe.

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### 1.3 Explaining discrimination: Results from ordinal regression models

In order to assess the effects magnitude of the variables we have identified as potential explanatory variables of the discrimination level, we employed a series of ordinal logistic regression models. The dependent variable in all models is the perceived discrimination level, an ordinal variable measured on a 5-point Likert scale, as specified in the previous section.

Inspired by the existing evidence (Noh et al., 1999) the independent variables in the model are selected from the dummy variables created following the results of the previous section. Thus, the following dummy variables were included as potential explanatory variables of the discrimination level:

- More than 3 children (1 = if the respondent has 3 or more children; 0 – otherwise)
- Unemployed (1 = if the respondent is unemployed, 0 – if the economic status is Employed / self-employed / student)
- Low income (1 = if the respondent declared to find it difficult or very difficult on present income; 0 – otherwise)
- Health insured (1 = if the respondent has access to health insurance; 0 – if he/she doesn't have access to health insurance or has a private health insurance)
- Host country Romania (1 = if the respondent is residing in Romania; 0 – otherwise)
- Accompanied by family (1 = if the respondent is accompanied by family; 0 – if he/she is alone or accompanied by friends)
- Attended Language courses (1 = if the respondent declared to have attended language courses or has started and not finished; 0 – if he/she declared not to have attended language courses)
- More than 6 years in the destination country (1 = if the respondent declared to have been in the destination country for more than 6 years; 0 – otherwise)
- Difficulties faced in the migration journey (1 = if the respondent declared to have faced difficulties in the migration journey; 0 – otherwise).

Additionally, we have introduced *Age* as an explanatory variable, but also a dummy variable for the Tertiary education level. Odds ratio, significance of the parameters and overall goodness of fit of the estimated models are reported in Table 5. As outlined in Section 3, we have also determined the average marginal effects that are reported in table 6 (associated with model IV).

## Results of the ordered logistic models

Table 5

Dependent variable: Discrimination level				
Factor variables	( I )	( II )	( III )	( IV )
Age	0.9666*** (0.0102)	0.9669*** (0.0101)	0.9671*** (0.0101)	0.9663*** (0.0101)
More than three children	2.1286*** (0.5881)	2.1302*** (0.5884)	2.1434*** (0.5922)	2.2139*** (0.6084)
Tertiary education	1.7015*** (0.3189)	1.6964*** (0.3170)	1.7161*** (0.3201)	1.6891*** (0.3147)
Unemployed	1.4916* (0.3390)	1.4808* (0.3325)	1.4533* (0.3250)	1.4785* (0.3301)
Low Income	1.8046*** (0.3734)	1.8006*** (0.3721)	1.8143*** (0.3746)	1.9225*** (0.3902)
Health insured	0.6636 (0.1704)	0.6668 (0.1705)	0.6911 (0.1750)	
Host country Romania	0.4211*** (0.0984)	0.4246*** (0.0977)	0.3906*** (0.0838)	0.3874*** (0.0832)
Accompanied by family	0.7211* (0.1303)	0.7217* (0.1303)	0.7238* (0.1306)	0.7058* (0.1269)
Attended language courses	1.2086 (0.2282)	1.2049 (0.2269)		
More than 6 years in destination country	1.0392 (0.1930)			
Difficulties faced in the migration journey	2.3488*** (0.4304)	2.3408*** (0.4273)	2.3574*** (0.4300)	2.4178*** (0.4393)
Likelihood ratio $\chi^2$	94.39	94.35	93.37	91.24
Prob > $\chi^2$	0.0000	0.0000	0.0000	0.0000
Pseudo $R^2$	0.0701	0.0701	0.0694	0.0678

Odds ratios reported; standard errors in parenthesis; \*\*\* p-value < 0.01; \*\* p-value <0.05; \* p-value <0.1

The migration duration turns to be an insignificant factor for the discrimination level (model I). However, *Age* is statistically significant in all estimated regression models. Other variables with insignificant coefficients are: being health insured (or not) and having attended language courses (or not). All others variables are statistically significant (model IV).

All other things kept constant, a one-year increase in the respondents' age would reduce their probability of feeling more discriminated by around



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3%. We find that the odds of feeling more discriminated are with 121% higher for migrants that have three or more children. Migrants with three or more children are 13 percentage points less likely than migrants with less than three children to never feel discriminated and 2.4 percentage points more likely to always feel discriminated.

The odds of feeling more discriminated are with 69% higher for respondents with higher (tertiary or more) education. Moreover, migrants with a better education level are 2.7 percentage points more likely to often feel discriminated than those with a less than tertiary education level.

The coefficient associated with the unemployment status has a weak statistical significance (Table 5, p-value < 0.1). Unemployed migrants are 5.2 percentage points more likely to sometimes feel discriminated than those employed or students. Respondents who find it difficult or very difficult on present income are 11 percentage points less likely than those living comfortably or coping on present income to never feel discriminated and 3 percentage points more likely to often feel discriminated (Table 6).

Indeed, the odds of perceiving a higher discrimination level are with around 61 percent lower for migrants residing in Romania than those residing in other countries (Sweden, Germany, Turkey, etc.). More precisely, migrants in Romania are 16 percentage points more likely to never feel discriminated compared to those in other countries (Table 6).

The dummy variable stating if the migrants is accompanied by family in the migration journey has a weak statistical significance. Migrants accompanied by family are 5.9 percentage point more likely to never feel discriminated than those traveling alone or with friends (Table 6).

Respondents who declared to have faced difficulties in their migration journey are 12 percentage points more likely to sometimes feel discriminated and 4.5 percentage points more likely to often feel discriminated than those who didn't have difficulties. The odds of a higher discrimination are considerably higher (with 142%) for migrants who faced difficulties in their integration process (Table 5).

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**Average Marginal Effects for the ordered logit model IV**

*Table 6*

Variable	Discrimination Level				
	Never	Rarely	Sometimes	Often	Always
More than 3 children	-0.134	-0.037	0.107	0.040	0.024
Tertiary or higher education	-0.089	-0.024	0.070	0.027	0.016
Unemployed	-0.066	-0.018	0.052	0.020	0.012
Low income	-0.110	-0.030	0.088	0.033	0.020
Host country Romania	0.160	0.044	-0.127	-0.048	-0.029
Accompanied by family	0.059	0.016	-0.047	-0.018	-0.011
Difficulties faced	-0.149	-0.041	0.118	0.045	0.027

## 5. DISCUSSION AND CONCLUSIONS

The present paper identified the individual factors associated with discrimination, applying non-parametric tests on a sample of 500 refugees in Europe. The results show that several demographic, socio-economic and migration related variables turn to be strongly associated with the perceived discrimination level of the respondents in the sample. Surprisingly, gender or nationality are not strong discriminators of the perceived discrimination level. This could be explained by the rather homogenous sample including mostly migrants from Arabic countries. Although there are no significant differences of the discrimination level between respondents in different familial situations (single, married, etc.), we find that migrants with three or more children feel more discriminated than those that have one, two or no children at all.

Socio-economic factors are among the strongest predictors for explaining the discrimination level. As expected, unemployed and migrants with financial difficulties feel more discriminated than those employed or those with a better financial situation. This is in line with the existing evidence, that shows that refugees working in more precarious conditions (illegally) or being unemployed are more exposed to abuse (Akar and Mustafa, 2019). The labour market discrimination of immigrants is well documented and researched, a series of studies developed by ILO showing that immigrants face major difficulties in obtaining jobs. As such, migrants in Western European countries are confronted with high level of discrimination in access to employment (Abella, 2000). Apart from the objective disadvantages faced by migrant workers – such as education, training, lack of access to the labour market network, difficulties with recognition of their qualifications obtained abroad, insufficient expertise of the local language, there is also some subjective discrimination grounded on their actual or perceived nationality, religion, race or ethnic origin (Allasino et al., 2004).

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Several variables associated with the migration journey have strong association with the outcome variable, as shown by the results of the non-parametric tests and confirmed by the ordered logistic regression models. A highly statistically significant result is that migrants residing in Romania feel less discriminated than those residing in other countries (Sweden, Germany, Turkey, etc.). On the contrary, migrants living in Turkey feel more discriminated than those residing in the other countries included in the sample. Other studies have also shown that “the anti-immigration sentiment differs strongly across European countries.” (Meuleman, 2009, pg. 273). The attitudes towards immigrants depend on the group size (number of migrants in the country) and on the economic conditions. As such, it is argued that a more positive attitude towards migrants is found in countries that have weak immigration flows (Meuleman, 2009). This could be a valid explanation for the lower discrimination level perceived by migrants in Romania, that has fewer immigrants than Sweden, Germany or other countries included in the sample as host countries; at the same time, migration policies in Romania followed a Europeanization process in what regards a more open migrants’ access to the labor market (Matei et. al, 2020).

Also related to the migration journey, results showed that migrants who travel with family feel less discriminated than those travelling alone or with friends. They may have a stronger support system in the country of destination and a better family network.

Another strong factor for explaining the discrimination degree is represented by the difficulties faced in the migration journey. Migrants declaring to have faced difficulties feel also significantly more discriminated than those who said that they did not encounter difficulties. Most common difficulties faced are related to the long and costly processes or procedures and to the problems with required documents.

As expected, migrants that reside in the destination country for a longer period perceive themselves as less discriminated compared to those with a shorter history of migration, as shown by the non-parametric tests. Although the migration duration is not a significant factor in the regression models, variable age turns to be significant, thus the perceived discrimination level decreases with age. This is an expected result, since immigrants who live longer in the destination country tend to be more familiar with the language and the local culture, thus becoming more integrated or acceptable to the local population and therefore feeling less discriminated against (Flores, 2015).

Non-parametric tests show that no significant association can be established between the education level and the discrimination level. However, the regression models show that respondents with tertiary and higher education

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feel more discriminated than those with less than tertiary education. This is in line with the results obtained by Andre et al. (2008), who find that “the higher the educational level, the higher is the perceived discrimination” (Andre et al., 2008, pg. 15). Their study is based on European Social Survey data on immigrants in fourteen European Union countries.

To conclude, the paper shows that economic factors, such as being unemployed or having a low income are positively associated with refugees’ discrimination. Demographic factors, such as gender or marital status are not significant predictors for discrimination. However, having more than three children increases the perceived discrimination, while age and arriving with the family decreases it. Other demographic factors such as gender or being of Syrian nationality did not prove to significantly affect discrimination. Finally, those having difficulties in their migration journey are more prone to feel discrimination more often.

Forced migration in refugees necessitates numerous adaptations in a short period of time and people become more vulnerable to abuse and neglect and discrimination. The international organizations, such as The United Nations Refugee Agency (UNHCR), the United Nations Population Fund (UNFPA), and the Commission for Refugee Women (WRC) are deeply concerned about the serious risks that refugee and migrants in transit face in Europe. Our results point that the efforts for dealing discrimination should be reinforced at country level and better policies targeting the economic integration and against labor discrimination needs to be implemented.

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