Deconstructing Attitudes towards Immigrant Workers among Hungarian Employees and Higher Education Students

Krisztina Dajnoki [1], Domician Máté [2], Veronika Fenyves [2,*] and András István Kun [1]

[1] Institute of Management and Organization Sciences, Faculty of Economics and Business, University of Debrecen, 4028 Debrecen, Hungary; dajnoki.krisztina@econ.unideb.hu (K.D.); kun.andras.istvan@econ.unideb.hu (A.I.K.)

[2] Institute of Accounting and Finance, Faculty of Economics and Business, University of Debrecen, 4028 Debrecen, Hungary; mate.domician@econ.unideb.hu

* Correspondence: fenyves.veronika@econ.unideb.hu; Tel.: +36-30-269-5798

Abstract: To preserve economic and social sustainability, countries impacted by international migration must prepare for the challenges that influx will bring to their societies, whether it be to their labor markets or their local, regional and national cultures. In essence, all areas of public life may be affected. Therefore, the exploration and recognition of the factors influencing integration, as well as the correlations behind attitudes of acceptance or rejection of the integration of immigrants, are essential. The present study contributes to the results in this field by revealing the beliefs behind the differences between groups accepting and rejecting immigrants, using a questionnaire database. Our survey sample consists of 444 Hungarian university students and 170 employees. The primary method of data analysis is binary logistic regression, completed by bivariate analyses. Our findings confirm that a positive, accepting attitude towards immigrants is more probable if an image is formed of them as being hardworking and that the work they do contributes to the economic development of the host country. Moreover, the integration of such individuals should not be seen as resulting in any unfavorable change in criminal statistics, working conditions, unemployment or discrimination. Additionally, the acceptance of immigrants as colleagues might be facilitated—in addition to their higher qualifications—by domestic (i.e., Hungarian) employees being better informed about immigration, and if immigrants occupy positions in which domestic employees are not willing to work.

Keywords: labor market; migration; integration; prejudice; questionnaire survey; correlation; regression

1. Introduction

Groups traditionally threatened by their labor market situation have always been more exposed to the risk of unemployment than other groups of employees. Therefore, their labor market integration and the strengthening of their status are always challenging tasks for experts. Young people, labor market entrants, employees close to retirement age, the elderly, women, ethnic minorities, people with reduced capacity to work, the permanently unemployed, and refugees and immigrants belong to this group. As a result of the wave of illegal immigration which intensified in the summer of 2015, management of the immigrant phenomenon and solutions for their integration, both socially and in the labor market, have become the center of interest in some European countries receiving them. These are tasks yet to be resolved and which create deep divisions in public and political opinion across Europe.

Between 1990 and 2015, the number of international migrants rapidly increased within the total population of Europe, North America and Oceania, while remaining on a relatively moderate level

in Africa, Asia, Latin America and the Caribbean [1]. The previous peak value of the migration wave in 2007 was exceeded in both 2014 and 2015. According to OECD (Organisation for Economic Co-operation and Development) data , 4.8 million people immigrated into OECD countries seeking permanent residence in 2015, which is 10% more compared to the previous year, and every third new immigrant arrived from another OECD country [2]. The European country where our empirical data were collected faces similar problems. Although Hungary is primarily a transit country instead of being a target destination for this wave of migrants, for the sake of social sustainability, social, labor market, educational, legal, cultural, religious and other challenges must be prepared for, vis-à-vis the potentially large numbers of migrants expected to arrive. In order to be better prepared to face all these challenges, an exploration of those factors affecting migration and the causes behind the rejection or acceptance of migrants is essential.

The immigrant phenomenon can be examined from multiple angles: legal-political, cultural, socio-economic and mainstream societal attitudes. In conformity with the latter aspect, the present study introduces the partial results of the research carried out in the scope of the research program "*Human resource management challenges of the reception and labor market integration of immigrants*" which aimed to explore labor market attitudes towards immigrants. The starting point of the research was the fact that external regulation, strategy or legislation are insufficient for the successful integration of disadvantaged groups. Rather, successful integration is, to a great extent, influenced by the positive or negative images created by public opinion, potential concerns or prejudices and fears, in which the flow of information plays a major role.

We would like to contribute to the understanding of how certain actors of the labor market—in our case, university students as prospective market entrants, and employees—generally relate to the labor market integration of immigrants.

Within this complex problem, the present study focuses on the following research question:

Which beliefs about the labor market and about immigrants are connected (positively or negatively) to attitudes rejecting and accepting immigrants in the cases of university students and employees in Hungary?

The attitudes to be analyzed are related to the following issues:

- integration of immigrants into the labor market;
- concerns that immigrants take job opportunities from the respondent;
- working together with immigrant employees;
- general opinions related to immigrants.

The beliefs involved in the present study:

- qualifications of the typical immigrant;
- work attitudes of the average immigrant;
- respondents' own knowledge in terms of issues related to immigrants;
- factors playing a role in the employment of immigrants (characteristics of immigrants and the domestic labor market);
- positive and negative effects of immigrants on domestic society/the economy.

In the next section of our article, a brief literature review introduces the definitions necessary for the current study and discusses the preliminary findings in the literature that inspired our research. At the end of the review, hypotheses for our empirical research are introduced. The material and methods section is used to present the sample, the variables and the analytical techniques we employed, as well as to describe how each of our hypotheses are tested. The results and discussion section lists the technical findings and provides a short interpretation of them. The conclusion section summarizes the results and determines the supportability of the hypotheses.

2. Literature Review

In this section, a brief review is presented of the basic definitions of attitude, belief, and immigration, as well as of the most important empirical findings in the literature on the labor market issues related to immigration in Europe. The discussion will focus on the research question, thus we are not attempting to cover the large and wide-ranging literature on immigration in general. Based on these earlier findings, we form our hypothesis for the empirical part of our research.

The 'single factor view' makes a difference between the notions of attitude and belief, as well as between behavioral intention and open behaviour [3]. The term 'belief' is reserved for the opinions concerning the object of attitude, i.e., the information, knowledge and thoughts possessed by someone concerning the object of an attitude. Attitudes denote those emotions (emotional evaluations) which are connected to the object of the particular attitude. These emotions can be positive or negative. Behavioral intentions describe a certain type of prediction connected to the relevant activity from the point of view of the object of the attitude. This means the tendency towards a defined potential behaviour (that will not necessarily happen) of a given attitude object [4,5].

Changes in beliefs can lead to changes in attitudes [6,7]. In the 'three-component view', attitude is a predisposition to some class of stimuli with cognitive, affective and behavioral responses [8]. The principal alternative to this three-component view treats attitude as a 'single affective construct' [9].

Concerning measurement, all attitude scaling techniques share the characteristic that they put individuals on a dimension of affect. This affect for or against an object is frequently inferred from an assessment of people's beliefs about the object [10].

The level of social integration, namely the choice facing immigrants between adopting the language and culture of the host country and keeping their ethnic difference, is influenced by numerous factors. Among others, it depends on prevailing preconceptions within the society, the extent of cultural distance and also the policies regarding the reception of immigrants by the host country [11]. Judgement of social integration is influenced by the success of labor market integration, which depends greatly on the group and individual characteristics of immigrants and on the labor market situation, the immigration policy, and the religious views and attitudes towards ethnic groups of the host country.

Threat perceptions related to immigration are the source of the majority of members' negative attitudes towards integration [12]. According to the 'contact hypothesis', negative attitudes held by one group towards another are rooted in the lack of knowledge about that group [13]. Research has found that intercultural contact significantly improved attitudes (positively) toward immigrants [14,15].

According to Dustman and Preston [16], attitude towards immigrants is more determined by "welfare concerns" than labor market concerns, although cultural and racial prejudice also affects accepting or hostile behavior. According to the research results of [17], North European countries are the most tolerant, while the Mediterranean population has the most negative attitude towards immigrants. According to the surveys, countries with higher unemployment rates and poor economic indices are likely to be more prejudiced. Attitudes towards immigrants and ethnic minorities are influenced by qualification, status within the labor market, type of residence, political views and religiousness. People with lower educational and income levels are more prejudiced towards immigrants. This is confirmed by Bridges—Mateut [18] and their analysis of the European Social Survey and the 2001–2006 period of Eurostat, according to which people with higher incomes are less negative towards immigrants, while people with lower incomes are more inclined to believe that immigrants have an adverse effect on the economy.

According to the results of the "Transatlantic Trends: Immigration survey", there was a clear preference for highly educated immigrants over immigrants with low educational levels, but when faced with a trade-off, majorities or pluralities in all countries preferred the lower educated worker with a job offer [19].

In the scope of the International Social Survey Programme (ISSP), attitudes towards immigrants have been surveyed in 22 countries. On the basis of the results, it has been found that highly

qualified employees are more inclusive towards immigrants, in contrast to employees with lower level qualifications [20,21].

In her study, Gödri [22] sought the possible connections between attitudes towards immigrants, judgements of interventions related to immigration and individual value orientations. The basis of the analysis is the Population Policy Acceptance (PPAA) survey carried out between 2000 and 2003 in eight countries (Austria, the Czech Republic, Estonia, Finland, Germany, Hungary, Poland, and Slovakia). On the basis of the analyzed values, three value dimensions were determined: financial welfare, sufficient leisure time and privacy. According to the findings, the first two factors are linked to judgments of immigration. People who consider financial welfare important tend to be more rejecting towards the integration of immigrants. They do not share the opinion that immigrants are a necessary solution to their country's population decline and they also reject the idea that immigrants should receive voting rights after five years. In other words, their attitudes are less positive. This also affects their judgment of the employment of immigrants: according to these people, immigrants take jobs and their presence promotes the spread of criminal activities. These people expressly reject immigrants. The attitude of the group preferring sufficient leisure time is more positive; this attitude stems from their view which prioritizes the freedom of individuals. This group of respondents considers immigration advantageous both culturally and economically; they support integration and they reject the notion that immigration intensifies crime and that there is no place for immigrants in the country. Peri [23] has found that natives are paid more than immigrants with similar characteristics and skills. This is, in part, due to the fact that many immigrants, because of less attractive outside options, have lower bargaining power with the firm and this leads to discrimination and prejudice.

An integration strategy can be pursued only in societies that are explicitly multicultural, and where certain psychological preconditions are established [24]. These preconditions are the following [25,26]: widespread acceptance of the value of cultural diversity, low levels of discrimination and prejudice, positive mutual attitudes among ethnocultural groups, and a sense of attachment to or identification with the larger society by all individuals and groups.

According to Waters and Jiménez [27], a number of review studies of immigrant integration give a rather optimistic picture of their assimilation to the American society. They reviewed papers on four primary aspects of assimilation (socioeconomic status, spatial concentration, language assimilation, and intermarriage) and stated that immigrants are largely assimilating into American Society along each of these dimensions.

According to the analyses carried out on the data of the European Social Survey (ESS) Immigration Module by Card et al. [28], part of the fear linked to immigration is of economic origin. Negative attitudes are caused by the fact that the residents of the host country are concerned for their jobs and the feeling that the presence of immigrants results in income-based competition within the labor market. These attitudes also lead to cultural estrangement, since the native population is afraid that immigrants do not respect the language, culture, religious beliefs and lifestyle of the host country. Societal and social concerns related to immigration might arise from ignorance and/or exaggerated fears, which differ from actual facts and experiences. According to the analyses, two determinants of the attitude towards immigrants are age and qualification. Highly qualified people are more inclusive towards immigrants, and older people tend to have anti-immigrant opinions. The results are confirmed by Herreros—Criado [29] and Rosenbluth et al. [30]. However, according to the results of a recent Hungarian case study, rejecting attitudes do not correlate significantly with the highest educational levels or the social class of the respondent [31]. Views related to immigration are also influenced by labor market status. Unemployed people or those looking for a job are more adverse towards people who are already employed.

However, the reason behind negative attitudes is not necessarily the competition for employment, since people who are not looking for a job (the retired, disadvantaged, parents at home on child benefit) are even more resistant [28].

Concerning empirical research on the effects of immigration, one should particularly consider the findings of Dustmann et al. [32]: in the presence of labor response heterogeneity, estimated relative wage effects of immigration from the national skill-cell approach yield misleading and hard-to-interpret estimates of the overall labor market impact of immigration.

The immigration attitudes of 26 European countries have been analyzed on the basis of the European Social Survey (ESS-4) data by Paas and Halapuu [33]; they found the following groups more accepting towards immigrants: ethnic minorities, urban populations, highly qualified and better paid people and employees who already have work experience abroad. People with positive prospects for the future and who have a more positive attitude towards socio-economic risks are also more tolerant of immigrants. However, no significant correlation has been found in this case with labor market status; respondents do not link their own labor market status (employed, unemployed) with their judgement of immigrants. Barta et al. [34] compared three international surveys (Eurobarometer, 2015; European Social Survey 7; Pew Research Center, 2016). They found that the population of the European countries analyzed had different opinions in terms of immigrants and the European migration processes. During all this time, migration has been considered a much larger problem for the European Union by Hungarian society. In spring 2015, Hungary was ranked seventh among the analyzed countries, and it moved to fourth by the end of the same year. Although Hungary has always belonged to those countries rejecting immigrants more than the average (whether they come from outside the EU or from within it), it has represented a more moderate opinion within this group. However, in spring 2016, Hungary was third amongst countries which considered the issue of refugees a problem from their own point of view [35]. In the course of their analysis of the role of NGOs (Non-Governmental Organizations) in integration, Pierog and Szabados [36] confirmed that although Hungary is not a primary target destination, migration is deemed a significant problem and a threat by people as a result of politics, media and rumors.

According to the OECD [37], the foreign-born population includes every person who migrated from their place of birth. Rules for acquiring citizenship differ by country; a distinction has to be made between the foreign-born population and the foreign population. In 2013, 4.5% of the population in Hungary was foreign-born, this proportion had decreased to 1.5% by 2014 [2]. In Hungarian, the term 'immigrant' in everyday terminology and also in governmental communication covers every immigrant, refugee, and asylum seeker referred to as an immigrant, irrespective of their country of origin.

On the basis of the research results introduced in the literature review section, the following hypotheses have been proposed:

Hypothesis 1. *Negative attitude towards immigrants (general opinions, labor market integration, concerns of job loss, joint work with immigrants) is related to the fact that the phenomenon of immigration is primarily associated with negative effects; its positive effects on society and economy are less visible (e.g., [12,13,34,35]).*

Accordingly, it is expected that the questionnaire items which involve negative beliefs will have more statistically significant relationships with attitude variables than items representing positive beliefs.

Hypothesis 2. *The chance of negative attitudes is increased if (H2a) immigrants are considered employees with low qualifications, or (H2b) they are deemed employees who are willing to take on jobs that require low qualifications and are to be carried out under poor working conditions (e.g., [19–21,23]).*

Hypothesis 3. *Lack of information increases the chance of negative attitudes appearing (see H1) (see among others: [13–15,28,33]).*

The following statement explicitly expresses one of the joint consequences of hypotheses H1, H2 and H3 (it assumes awareness, the ability to appreciate advantages and the ability to integrate immigrants into the labor market structure):

Hypothesis 4. *The chance that negative attitudes (see H1) may be reduced and accepting attitudes may be increased if the respondent thinks that immigrants are required in the domestic labor market as a supplementary workforce.*

3. Materials and Methods

In the scope of this section, we introduce the sampling methods, the data elaborated variables utilized and the analytical methods employed.

3.1. The Sample

The bases of the survey are two separate samples collected using questionnaires; one questionnaire was completed by students and another by employees. Surveying took place at the beginning of 2017. Printed questionnaires were passed to students and were completed in the context of university classes, where the students had the opportunity to ask clarifying questions orally. The student sample primarily reflects the views of students studying economic science at the University of Debrecen. Their curriculum includes labor market and human resource related knowledge, thus they already possess information regarding the phenomenon analyzed. In the case of the students, the objective was to involve all of them in the survey; however, since the completion of the questionnaire was voluntary, some of the potential respondents refused to share their opinions or submitted an incomplete questionnaire due to the nature of the topic. In total, 800 questionnaires were distributed (representing 25% of the total number of students studying in the field of economic sciences at different levels at the Faculty of Economics and Business, University of Debrecen). In the case of employees, sampling was based on availability. Collection of questionnaires ran into difficulties because of the low willingness to respond to questions about the topic. The fact that the sampling period partly coincided with the "national consultation (A governmental political questionnaire series (https://nemzetikonzultacio.kormany.hu/). It was strongly criticized by social science researchers due to methodological and ethical issues (e.g., https://www.peticiok.com/tarsadalomkutatok_a_nemzeti_konzultaciorol). The relevant questionnaire is available in English here: http://www.kormany.hu/en/prime-minister-s-office/news/national-consultation-on-immigration-to-begin)" and occurred only three months after the national referendum (The referendum related to the European Union's migrant relocation plans was held on 2 October 2016. Voters could decide on the following question: "Do you want to allow the European Union to mandate the resettlement of non-Hungarian citizens to Hungary without the approval of the National Assembly?" (for details visit http://valasztas.hu/en/ref2016/477/477_0.html)) (2 October 2016) on the same topic also did not help data collection (a long political debate can lead to aversion in the potential respondents and/or can bias their answers).

None of the samples are representative, but answering our research questions does not necessarily require this, since our intention is not to draw conclusions concerning the statistical population, but the relationships between certain variables [38]. Obviously, it is assumable that the analysis of different societal groups results in somewhat different relationships. Therefore, the generalizability of the present survey is limited; this fact will be taken into consideration when drawing conclusions (especially in relation to the employees).

Additionally, cases where answers to a question are missing or cannot be evaluated are excluded from the samples, as are those which belong to such sub-populations which do not render actual analysis possible due to their sample size. In the case of certain analyses, sample sizes are different due to the above considerations.

Of the student respondents, 262 (129 women) were born between 1980 and 1994, and 200 respondents (169 women) between 1995 and 2010; these data are missing in the case of four individuals. In total, 290 respondents (189 women) declared themselves to be living in the same household as their parents, 146 respondents (94 women) declared themselves to be partly independent and 25 people (13 women) live in independent households; six people did not answer this question. In total, 53 students were studying in vocational higher education ("There is no consensus on the definition of higher Vocational

Education and Training (VET) so far. Most countries have some forms of higher VET" [39]. In Hungary, "from the 2013/2014 school year onwards only higher education institutions (colleges or universities) can launch these programmes." . . . . "A higher education institution can only deliver HE VET programmes which are linked to Ba/Bsc programmes already run by the HEI." . . . "These programmes predominantly train for high quality professional work and at the same time help transition from VET to tertiary level education. Graduates can transfer up to 75% of all the credits gained (between 30–90 credits) to a bachelor (BA/BSc) programme in the same field" [39]), 357 students in BSc courses, and 41 students in MSc courses.

Within the employee-based sample, 21 men and 14 women were born between 1946 and 1964, 29 men and 54 women between 1965 and 1979, 25 men and 22 women between 1980 and 1994 and 4 women and 5 men between 1995 and 2010. In total, 21 respondents have worked in multinational organizations, 40 in large companies, while in medium, small and micro enterprises, the numbers were 36, 38 and 36 respectively. According to the questionnaires, the workplaces of 143 respondents are Hungarian owned, while 26 are foreign and 5 are have mixed ownership. In total, 59 people worked in the service sector, 39 in the public sector, 24 in industry, 23 in commerce, 18 in agriculture and 12 in other fields. Obviously, there were missing answers in some cases.

3.2. Variables and Analytical Techniques

Our data came from a combined database of two questionnaire surveys. The student and the employee subsamples were described in Section 3.1. Both questionnaires were self-administered. There were six attitude questions and 25 belief questions. The survey took around 20–25 min to complete, but could run a little shorter or longer depending on the respondents.

There are three groups of questions in the questionnaire. Demographic questions were used to describe our sample and three of them (being a student or an employee, age category, sex) will be involved in the multivariate analysis. We have to omit other demographic questions from the analysis because they are present in only one of the subsamples (originally, the two questionnaires were not intended to be analyzed as parts of the same research). Attitude questions were developed to measure different aspects of the respondents' attitudes towards immigration and immigrants. The labels of these questions start with the letter 'A'. Belief questions (with 'B' labels) were designed to estimate the respondents' opinions about their own awareness of labor market and immigration topics, about labor market situations, and about immigrants and their economic and social impact. Attitude and belief questions were identical in both surveys. In sum, our database contains all the attitude and belief questions, plus the three common demographic questions.

The reader can find the questions translated into English in Table A1 (in the Appendix A), along with their labels (A1, A2 etc.) and measurement scale. Hereafter, we will refer to the questions only with their labels. Some of the items in the questionnaire (B4, B5, and B6) were originally created by Juhász et al. [40]. These questions were adapted and completed with other items by Dajnoki and Kőmíves [41].

The questionnaire contains questions on different measurement scales. Dichotomous variables are A1, A2, and A3. The first two have only yes and no options, while at A3 there was also an 'I don't know' option, although the latter answers were omitted from the database. Two (belief) questions (B1, B2) offered ordinal response options to the subjects (the options can be found in Table A1 in the Appendix A). All the other questions employed a 6 degree measurement scale.

The transformations of some items are necessary to develop variables for the statistical analysis (see Table 1 for the definitions of the variables). The dichotomous items are used as dummy (0 and 1) variables, but some non-dichotomous variables are also transformed into dummies (e.g., age category, B1, B2, etc.). If an item is involved in two or more different analyses, it could become necessary to transform more than one of its variables (e.g., A4 and A4_binary).

Table 1. Definitions of variables.

Variable Name	Definition
EMPLOYEE	0, if the respondent is a student, 1 if an employee.
SEX	0, if the respondent is male, 1 if female.
AGE1	1, if the respondent was born between 1948 and 1964, 0 otherwise.
AGE2	1, if the respondent was born between 1965 and 1979, 0 otherwise.
AGE3	1, if the respondent was born between 1980 and 1994, 0 otherwise.
AGE4	1, if the respondent was born between 1995 and 2010, 0 otherwise.
A1	0, if the answer is 'no' and 1 if 'yes'.
A2	0, if the answer is 'no' and 1 if 'yes'.
A3	0, if the answer is 'no' and 1 if 'yes'.
A4	The value selected by the respondent: 0, 1, 2, 3, 4, or 5.
A4_binary	0 if the value of A4 is 0, 1, or 2, while 1 if the value of A4 is 3, 4 or 5.
A51	An aggregate index variable elaborated from the A1, the A2, the A3, and the A4_binary variables by summing up their values.
A51_binary	0 if the value of A51 is 0 or 1, while 1 if the value of A51 is 2, 3, or 4.
A52	An aggregate index variable elaborated from the A1, the A2, and the A4_binary variables by summing up their values.
A52_binary	0 if the value of A52 is 0 or 1, while 1 if the value of A52 is 2 or 3.
B1	If the respondent believes that the typical school qualification of immigrants is: 'They have no school qualification whatsoever', then the value of B1 is 0, 'Primary school', then the value of B1 is 1, 'Secondary school', then the value of B1 is 2, 'Higher education degree', then the value of B1 is 3, 'Academic degree', then the value of B1 is 4.
EDU1	1, if the respondent answered the B1 item to reflect that a representative migrant has no measurable education level, 0 otherwise.
EDU2	1, if the respondent answered the B1 item to reflect that a representative migrant graduated at the secondary or higher education level, 0 otherwise.
EDU3	1, if the respondent answered the B1 item to reflect that a representative migrant graduated at the secondary or higher education level, 0 otherwise.
B2	If the respondent thinks that the immigrants' attitude towards work is: 'They explicitly intend to avoid work', then the value of B2 is 0, 'They work, although not willingly', then the value of B2 is 1, 'They work willingly', then the value of B2 is 2.
WORK1	1, if the respondent answered the B2 item as to reflect that immigrants explicitly tend to avoid work, 0 otherwise.
WORK2	1, if the respondent answered the B2 item to reflect that immigrants tend to work, but not willingly, 0 otherwise.
WORK3	1, if the respondent answered the B2 item to reflect that immigrants tend to work willingly, 0 otherwise.
B31, ... , B35	The value selected by the respondent: 0, 1, 2, 3, 4, or 5.
B3_MEAN	(B31 + B32 + B33 + B34 + B35)/5
B41, ... , B49	The value selected by the respondent: 0, 1, 2, 3, 4, or 5.
B4_MEAN	(B41 + B42 + B43 + B44 + B45 + B46 + B47 + B48 + B49)/9
B51, ... , B54	The value selected by the respondent: 0, 1, 2, 3, 4, or 5.
B5_MEAN	(B51 + B52 + B53 + B54)/4
B61, ... , B65	The value selected by the respondent: 0, 1, 2, 3, 4, or 5.
B6_MEAN	(B51 + B52 + B53 + B54 + B55)/5
AWARENESS	The factor of B31, B32, B33, B34, and B35.
FRUGALITY	The factor of B42, B44, and B46.
ADVANTAGES	The factor of B41, B47, B49, B51, B52, B53, and B54.
DISADVANTAGES	The factor of B61, B62, B63, B64, and B65.

In cases where a group of items is designed to describe one latent variable, we have employed two different techniques to reveal that 'hidden' variable. First, we calculated the mean of the items in the same question-group (i.e., on the same scale). These new variables are termed B3_MEAN, B4_MEAN, B5_MEAN, and B6_MEAN. The reliability of the B3, B4, B5, and B6 scales was tested with Cronbach's

alpha presented in Tables A8 and A9 in the Appendix A (alpha is always greater than 0.7, thus scale reliability is acceptable).

Second, we conducted a factor analysis on all Likert-scale belief items and four latent variables were revealed. These factors are introduced with the help of Table 2, including factor loadings. In the course of the elaboration of factors, three items have been excluded. Items B43 and B45 do not fit properly into the factor-structure, while the fit of B48 is contradictory, as it was linked to the ADVANTAGES factor representing positive opinions, although it is clearly negative in content. These three excluded items have been used as stand-alone variables in regression models. Factor analysis clearly indicates that the B4 scale is actually not uniform: items B2, B4, B6 and items B41, B47, and B49 represent different underlying variables. The former fit on the latent belief concerning the secondary employee nature of immigrants, while the latter have been correlated with the B5 scale including advantages.

Table 2. Rotated factor coefficient matrix.

Items	Factors			
	Awareness	**Frugality**	**Advantages**	**Disadvantages**
B31	0.826			
B32	0.763			
B33	0.844			
B34	0.800			
B35	0.640			
B42		0.701		
B44		0.721		
B46		0.684		
B41			0.679	
B47			0.651	
B49			0.715	
B51			0.839	
B52			0.710	
B53			0.792	
B54			0.826	
B61				0.721
B62				0.679
B63				0.736
B64				0.799
B65				0.696

Notes: the Kaiser–Meyer–Olkintest is 0.845, and the Bartlett's test of sphericity is 4385.859 (*df* = 190, *p* < 0.001). The explained variance is 59.378%. Coefficients lower than 0.400 are supressed.

The item measuring general opinions related to immigrants (A4) and measured on the 6 degree Likert-scale has been converted into a binary variable (A4_binary) by the lower three values (363 indications for students and 125 for employees) representing negative attitudes, with the upper three values (81 indications for students and 41 for employees) representing positive attitudes.

An aggregate variable has been elaborated from the A1–A4 binary variables with the label A51 and another one from the A1, A2, and A4 variables labeled as A52 by summing their values. Thus, A51 has values between 0 and 4 with the following distribution: in the case of the student sample, 0: 53, 1: 96, 2: 40, 3: 24, 4: 32; in the case of the employee sample, 0: 21, 1: 57, 2: 11, 3: 8, 4: 6.

The possible values of A52 are between 0 and 3. In the case of students, these are 0: 92, 1: 193, 2: 92 and 3: 53, and in the case of employees 0: 29, 1: 74, 2: 39, 3: 17. Elaboration of A52 was necessary because in the A3 question too many respondents did not give a yes or no answer.

The items will be examined both as stand-alone items and as scales (if possible). Descriptive statistics are demonstrated by Tables A2–A9 (Appendix A) with respect to the entire sample (answers of respondents providing insufficient demographic data have also been included). As our sample is

not representative, descriptive data are not generalizable to any wider population, its introduction is necessary only as a point of reference for later analyses.

The applied bivariate analytical methods are Mann–Whitney *U* test, independent samples *t*-test, and rank correlation analysis (Spearman's rho), while the multivariate-related analytical method is binary logistic regression. In the case of the latter, demographic variables available for both samples are taken into consideration (gender, age group, student or employee).

Deriving from a one-time survey, our data are not sufficient to examine causality: we can test only connections or relationships between beliefs and attitudes. That is why, in bivariate analyses, we will not distinguish dependent and independent variables. We will only test which beliefs are more likely to be present when the respondent has negative or positive attitudes (Mann–Whitney *U*-test, independent samples *t*-test), or which beliefs tend to move together with attitudes (rank correlation).

On the other hand, interpretation is sometimes more comprehensible if we assume that beliefs affect attitudes toward immigration. In the binary logistic regression analysis, we will test which beliefs seem to contribute (as independent variables) to the possibility that someone will have a positive attitude towards immigrants. We have to state, however, that this dependency is only an assumption, and the opposite direction of causality (Attitudes can filter the information, and through this, the formation of new beliefs, as well) or no casual connection (both could be affected by a third phenomenon), are also possible, even if they are not testable.

Given the variables and methods introduced above, here we summarize how each of the hypotheses is tested.

Hypothesis 1 (H1) is supported if Mann–Whitney *U* tests, independent samples *t*-tests, rank correlation analyses, or binary logistic regression analyses find more connections between the attitude variables and the negative belief variables than between the attitude variables and the positive belief variables, and these connections are positive.

Hypothesis 2a (H2a) is supported if

- the Mann–Whitney *U* test finds the mean rank of B1 significantly lower when the value of A1, A2, or A3 is zero (i.e., the attitude is negative towards immigrants);
- there is a significant negative rank correlation between B1 and A4, A51, or A52;
- EDU1 has a significant negative coefficient in the binary logistic regression models (the dependent variable is A1, A2, A3, A4_binary, A51_binary, or A52_binary).

Hypothesis 2b (H2b) is supported if

- the Mann–Whitney *U* test finds the mean rank of B42, B45, and B46 significantly lower when the value of A1, A2, or A3 is zero (i.e., the attitude is negative towards immigrants);
- the independent samples *t*-test finds the mean value of B42, B45, and B46 significantly lower when the value of A1, A2, or A3 is zero (i.e., the attitude is negative towards immigrants);
- there is a significant negative rank correlation between B42, B45, and B46 and A4, A51, or A52;
- B45 and/or FRUGALITY has a significant negative coefficient in the binary logistic regression models (the dependent variable is A1, A2, A3, A4_binary, A51_binary, or A52_binary).

Hypothesis 3 (H3) is supported if Mann–Whitney *U* tests, independent samples *t*-tests, rank correlation analyses, or binary logistic regression analyses find a significant positive relationship between the attitude variables and B31, B32, B33, B34, B35, B3_MEAN, and AWARENESS.

Hypothesis 4 (H4) is supported if Mann–Whitney *U* tests, independent samples *t*-tests, rank correlation analyses, or binary logistic regression analyses find a significant positive relationship between the attitude variables and B41, B42, B43, B45, B47, and B52.

4. Results and Discussion

With the help of the variables introduced above, this section analyses which belief variables (marked with B) associate and/or correlate with the variables measuring attitudes (A); the strength of these relationships is also estimated.

Due to the clarity of demonstration, the section is structured according to the type of analysis, and not by the tested hypotheses (we will reflect on the hypotheses in the conclusion section). In Section 3.1, the results of bivariate analyses are introduced and Section 3.2 contains the results of the multivariate analyses.

4.1. Results of the Bivariate Analyses

In the case of the dichotomous attitude variables (A1, A2, and A3), Mann–Whitney *U* and *t*-tests have been carried out (the latter was used for six Likert-scale belief variables only), while in the case of variables measurable on at least an ordinal scale, the Spearman correlation analysis has been used. Aggregate results of the group difference tests are shown in Table 3, and the results of the rank correlation analyses are included in Table 4. First, the results of the statistical analysis shown in Table 3 are briefly summarized below.

According to the examinations on the level of each item, compared to the group of respondents who disagree *the respondents agreeing with the integration of immigrants into the world of labor* (A1) (Question IDs are indicated between brackets (e.g., B1) as well as the sample in which the result is significant (S = students, E = employees). An association was considered significant when the nonparametric test indicated a significant result at least at 5%, or the nonparametric test indicated a significant result at least at 10% and the *t*-test at 5%)

- consider the typical school qualification of immigrants higher (B1) (S),
- consider their willingness to work stronger (B2) (S, E),
- consider immigrants more mobile and flexible employees (B41) (S).

Additionally, they think that

- migrants carry out work that domestic workers are not willing to do (B45) (S),
- migrants are required in the labor market due to the lack of a well-qualified domestic workforce (B47) (S, E),
- migrants find it difficult to find employment due to the lack of a network of contacts (B48) (S),
- migrants work decently and reliably (B49) (S, E),
- migrants as flexible employees are advantageous for the Hungarian economy (B51) (S),
- migrants might help occupy the less attractive work positions (B52) (S, E),
- with the appearance of immigrants, domestic employees might get jobs (B53) (S, E),
- the presence of immigrant employees contributes to the development of certain economic sectors (B54) (S).

However, they agree *less* with the notions that the presence of immigrant employees

- strengthens prejudice (B62) (S),
- increases domestic unemployment (B63) (S), intensifies criminal activities (B65) (S, E).

Table 3. Belief-differences between groups with positive vs. negative attitudes towards immigrants.

Belief Variables	Sample	Differences by Attitude Groups (Positive–Negative)											
		Difference by A1				Difference by A2				Difference by A3			
		Mean Rank	U	Mean	t	Mean Rank	U	Mean	t	Mean Rank	U	Mean	t
B1	Student	48.800	14,841.0 ***	–		17.709	16,395.5	–		56.735	2692.5 ***	–	
	Employee	15.219	1807.0 **	–		8.190	1971.0	–		15.989	426.5	–	
B2	Student	50.332	14,694.5 ***	–		4.295	17,563.5	–		57.870	2640.5 ***	–	
	Employee	19.726	1661.0 ***	–		20.882	1582.0 ***	–		18.189	398.5 **	–	
B3_MEAN	Student	4.554	19,072.0	0.016	0.152	30.583	15,274.5 **	0.227	2.053 **	25.066	4143.5 **	0.387	2.262 **
	Employee	−0.664	2278.5	0.025	0.123	−1.909	2163.5	−0.056	−0.272	−6.718	544.5	−0.269	−0.822
B31	Student	15.869	17,990.0	0.183	1.308	27.218	15,567.5 **	0.310	2.118 **	22.688	4252.5 **	0.518	2.369 **
	Employee	3.411	2189.5	0.152	0.611	−10.066	1913.5	−0.359	−1.423	−2.946	592.5	−0.167	−0.413
B32	Student	1.124	19,400.0	−0.010	−0.074	11.967	16,895.5	0.129	0.879	21.334	4314.5 **	0.472	2.147 **
	Employee	3.689	2180.5	0.109	0.482	−1.615	2172.5	−0.044	−0.190	−4.243	576.0	−0.183	−0.507
B33	Student	−0.230	19,485.5	0.003	0.020	10.985	16,981.0	0.110	0.804	6.646	4987.5	0.119	0.583
	Employee	−5.912	2108.5	−0.145	−0.651	1.044	2190.0	0.063	0.276	−6.089	552.5	−0.350	−0.945
B34	Student	−4.837	19,045.0	−0.101	−0.684	33.546	15,016.5 ***	0.370	2.350 **	15.038	4603.0	0.329	1.431
	Employee	−5.942	2107.5	−0.201	−0.769	4.144	2095.0	0.152	0.568	−12.021	477.0	−0.633	−1.550
B35	Student	−4.439	19,083.0	0.007	0.050	16.067	16,538.5	0.217	1.532	20.058	4373.0 **	0.496	2.775 ***
	Employee	5.063	2136.0	0.209	0.763	−1.860	2165	−0.089	−0.317	−0.157	628.0	−0.010	−0.021
B4_MEAN	Student	38.724	15,804.5 ***	0.287	3.588 ***	−0.672	17,879.0	0.001	0.015	38.216	3541.0 ***	0.499	4.141 ***
	Employee	14.061	1844.5 *	0.302	1.851 *	15.613	1743.5 **	0.268	1.595	11.196	487.5	0.203	0.771
B41	Student	40.559	15,629.0 ***	0.460	3.474 ***	4.927	17,508.5	0.078	0.557	37.496	3574.0 ***	0.827	4.195 ***
	Employee	11.221	1936.5	0.439	1.813 *	7.912	1979.5	0.207	0.880	6.875	542.5	0.250	0.718
B42	Student	8.973	18,649.5	0.162	1.104	5.983	17,416.5	0.094	0.601	19.163	4414.0 **	0.504	2.442 **
	Employee	1.775	2242.5	0.086	0.295	5.318	2059.0	0.234	0.729	5.657	558.0	0.321	0.679
B43	Student	18.290	17,758.5	0.178	1.400	−9.802	17,084.0	−0.140	−1.050	7.824	4933.5	0.163	0.850
	Employee	9.986	1976.5	0.192	0.896	2.724	2138.5	−0.001	−0.005	−2.396	599.5	−0.276	−0.761
B44	Student	0.936	19,418.0	0.129	0.894	−4.324	17,561.0	−0.008	−0.050	−5.456	5042.0	0.065	0.312
	Employee	8.258	2032.5	0.483	1.666*	−8.418	1964.0	−0.284	−0.901	0.354	625.5	0.067	0.128
B45	Student	31.582	16,487.5 ***	0.444	2.709 ***	−5.088	17,494.5	−0.080	−0.462	27.249	4043.5 ***	0.698	2.875 ***
	Employee	6.868	2077.5	0.276	0.957	17.636	1681.5 **	0.684	2.351 **	8.761	518.5	0.426	0.913
B46	Student	−16.193	17,959.0	−0.199	−1.245	−18.289	16,345.0	−0.238	−1.429	−16.555	4533.5 *	−0.369	−1.538
	Employee	1.050	2266.0	−0.012	−0.043	−2.088	2158.0	−0.126	−0.399	−2.082	603.5	−0.202	−0.436
B47	Student	25.522	17,067.0 **	0.323	2.326 **	−9.021	17,152.0	−0.083	−0.580	14.972	4606.0	0.315	1.518
	Employee	13.258	1870.5 *	0.520	2.110 **	16.575	1714.0 **	0.467	1.920*	11.511	483.5	0.450	1.185
B48	Student	35.733	16,090.5 ***	0.450	3.196 ***	14.378	16,685.5	0.178	1.228	42.363	3351.0 ***	0.942	4.543 ***
	Employee	7.671	2051.5	0.273	1.058	20.947	1580.0 ***	0.694	2.664 ***	4.950	567.0	0.179	0.437
B49	Student	54.212	14,323.5 ***	0.633	4.976 ***	16.503	16,500.5	0.210	1.629	62.006	2451.0 ***	1.347	7.298 ***
	Employee	16.330	1771.0 **	0.457	2.104 **	16.363	1720.5 **	0.540	2.647 ***	13.789	454.5 *	0.617	1.684 *

Table 3. *Cont.*

Belief Variables	Sample	Differences by Attitude Groups (Positive–Negative)											
		Difference by A1				Difference by A2				Difference by A3			
		Mean Rank	U	Mean	t	Mean Rank	U	Mean	t	Mean Rank	U	Mean	t
B5_MEAN	Student	65.495	13,244.5 ***	0.615	5.541 ***	28.975	15,414.5 **	0.285	2.503 **	75.767	1820.5 ***	1.333	9.084 ***
	Employee	16.562	1763.5 **	0.423	2.094 **	15.613	1743.5 **	0.451	2.145 **	14.496	445.5 *	0.585	1.854 *
B51	Student	64.790	13,312.0 ***	0.786	5.881 ***	24.588	15,796.5 **	0.317	2.486 **	71.827	2001.0 ***	1.641	8.445 ***
	Employee	12.657	1890.0 *	0.373	1.695 *	8.141	1972.5	0.249	1.075	8.761	518.5	0.498	1.444
B52	Student	44.878	15,216.0 ***	0.542	3.828 ***	26.288	15,648.5 **	0.318	2.122 **	47.045	3136.5 ***	1.014	4.941 ***
	Employee	21.115	1616.0 ***	0.784	3.230 ***	23.443	1503.5 ***	0.856	3.885 ***	18.582	393.5 **	1.038	2.806 ***
B53	Student	34.724	16,187.0 ***	0.427	3.281 ***	15.992	16,545.0	0.192	1.459	54.793	2781.5 ***	1.177	6.542 ***
	Employee	14.308	1836.5 **	0.415	1.826 *	10.914	1887.5	0.304	1.285	5.579	559.0	0.250	0.713
B54	Student	59.362	13,831.0 ***	0.705	5.374 ***	24.508	15,803.5 **	0.314	2.529 **	68.139	2170.0 ***	1.500	7.718 ***
	Employee	5.649	2117.0	0.119	0.533	11.762	1861.5	0.395	1.713 *	12.296	473.5	0.552	1.537
B6_MEAN	Student	−41.176	15,570.0 ***	−0.339	−3.254 ***	−57.669	12,916.0 ***	−0.482	−4.479 ***	−39.624	3476.5 ***	−0.673	−4.433 ***
	Employee	−9.955	1977.5	−0.346	−1.685 *	−6.966	2008.5	−0.128	−0.590	−15.832	428.5 **	−0.696	−1.903 *
B61	Student	−6.390	18,896.5	−0.089	−0.656	−7.844	17,254.5	−0.115	−0.788	−20.778	4340.0 **	−0.482	−2.534 **
	Employee	−10.897	1947.0	−0.433	−1.805 *	−1.175	2186.0	−0.042	−0.158	−13.907	453.0 *	−0.810	−1.774 *
B62	Student	−37.469	15,924.5 ***	−0.410	−2.948 ***	−33.925	14,983.5 ***	−0.379	−2.633 ***	−22.644	4254.5 **	−0.482	−2.234 **
	Employee	−3.149	2198.0	−0.101	−0.394	5.792	2044.5	0.227	0.863	−10.293	499.0	−0.543	−1.253
B63	Student	−46.698	15,042.0 ***	−0.620	−3.987 ***	−80.511	10,927.0 ***	−1.057	−7.100 ***	−41.414	3394.5 ***	−1.000	−4.570 ***
	Employee	−10.897	1947.0	−0.431	−1.634	−6.526	2022.0	−0.303	−1.023	−1.729	608.0	−0.160	−0.346
B64	Student	−2.159	19,301.0	−0.010	−0.078	−35.309	14,863.0 ***	−0.374	−2.699 ***	−6.820	4979.5	−0.149	−0.743
	Employee	0.741	2276.0	0.016	0.059	−9.250	1938.5	−0.317	−1.166	−9.743	506.0	−0.595	−1.320
B65	Student	−42.593	15,434.5 ***	−0.566	−3.745 ***	−36.084	14,795.5 ***	−0.485	−3.256 ***	−49.696	3015.0 ***	−1.250	−5.370 ***
	Employee	−18.846	1689.5 ***	−0.780	−2.828 ***	−7.407	1995.0	−0.202	−0.691	−19.446	382.5 **	−1.371	−3.030 ***
N		students: +: 153, −: 255; employees: +: 50, −: 92				students: +: 287, −: 125; employees: +: 101, −: 44				students: +: 63, −: 168; employees: +: 15, −: 84			

Notes: *** significant at the 1% level, ** significant at the 5% level, * significant at the 10% level. *U* is the test statistic of the Mann–Whitney *U*-test, *t* is the test statistic of the Student *t*-test.

On the level of scales calculated as the mean of the related items, students agreeing with the labor market integration of immigrants are characterized by a higher level of employment factors (B4) and positive effects on society (B5), and a lower level of negative effects on the economy (B6). The positive attitude of employees resulted in the relatively higher level of the positive societal effects (B5).

Respondents, *who were not concerned that immigrants take work possibilities (A2)*, considered themselves more familiar with

-   the labor market situation of immigrants (B31) (S),
-   the school qualification of immigrants (B34) (S),

    than respondents who had these concerns. Also, the former group was *more* convinced that

-   migrants are willing to work (B2) (E),
-   migrants carry out work that domestic workers are not willing to do (B45) (E),
-   the employment of immigrants is necessary due to the lack of a well qualified domestic workforce (B47) (E),
-   immigrants find it difficult to find employment due to the lack of a network of contacts (B48) (E),
-   migrants work decently and reliably (B49) (E),
-   as flexible workers, immigrants are advantageous for the Hungarian economy (B51) (S),
-   with the help of immigrants, the less attractive work positions will be filled (B52) (S, E),
-   the labor market presence of immigrants contributes to the development of certain economic sectors (B54) (S).

    Besides, they were *less* convinced that the presence of immigrant employees

-   strengthens prejudice (B62) (S),
-   increases domestic unemployment (B63) (S),
-   intensifies labor market discrimination (B64) (S),
-   intensifies criminal activities (B65) (S, E).

On the level of mean scales, students with positive attitudes considered themselves more familiar with immigrant-related issues (B3) and agreed less with the negative effect of immigration on the economy (B6) than the group of respondents who fear that immigrants take job opportunities. In the case of employees, there was a similar difference between the two groups in the mean of the assessment of employment factors (B4). Respondents—both students and employees—who were less concerned about their own jobs valued the societal advantages of migration more (B5).

Respondents who *would be willing to work together with immigrants (A3)*,

-   considered the typical school qualification of immigrants higher (B1) (S),
-   considered their willingness to work stronger (B2) (S, E);

    also considered themselves familiar with

-   the labor market situation of immigrants (B31) (S),
-   the legal background of immigration (B32) (S),
-   the reasons for immigration (B35) (S)

The same is true for respondents whose opinions on the following issues are more positive than the opinions of respondents who do not want to work together with immigrants:

-   migrants are mobile and they constitute a flexible labor offer (B41) (S),
-   migrants work more cheaply than the domestic workforce (B42) (S),
-   migrants carry out work that domestic employees are not willing to do (B45) (E),

- immigrants find it more difficult to find employment due to the lack of a network of contacts (B48) (E),
- migrants work decently and reliably (B49) (E),
- as flexible workers, immigrants are advantageous for the Hungarian economy (B51) (S),
- with the help of immigrants, the less attractive work positions can be filled (B52) (S, E),
- with the appearance of immigrant entrepreneurs, domestic employees might get jobs (B53) (S),
- the labor market presence of immigrants contributes to the development of certain economic sectors (B54) (S).

The willingness to work together with immigrants seemed also to be linked to the fact that a respondent is *less* likely to think that the presence of immigrants

- maintains poor working conditions (B61) (S),
- strengthens prejudice (B62) (S),
- increases domestic unemployment (B63) (S),
- intensifies criminal activities (B65) (S, E).

According to the picture obtained from the scales elaborated from the items, the willingness to work together is positively linked to the judgment of the respondent's own awareness (B3) (S), the value of the scale of labor market factors (B4) (S), and a belief in the positive societal effects (B5) (S), and negatively linked to the strength of a belief in the negative economic effects (B6) (S, E).

The examinations featured in Table 4 introduce rank correlation analyses; we are not comparing the groups of respondents with positive and negative attitudes along the belief variables in this case, but rather looking for an answer to the question of whether the belief variables' values become more positive or more negative when there is a positive tendency in attitudes. Item labels are completed by the letter indicating the sample. When correlations are above a value of 0.4, the letter for the relevant sample is highlighted (underlined).

Table 4. Rank correlations between beliefs and attitudes.

Belief-Variables		Attitude Variables			Belief-Variables		Attitude Variables		
		A4	A51	A52			A4	A51	A52
B1	S	0.330 ***	0.344 ***	0.231 ***	B47	S	0.239 ***	0,121 *	0,072
	E	0.235 ***	0.112	0.245 ***		E	0.534 ***	0.289 ***	0.327 ***
B2	S	0.431 ***	0.373 ***	0.245 ***	B48	S	0.221 ***	0.254 ***	0.176 ***
	E	0.427 ***	0.396 ***	0.432 ***		E	0.336 ***	0.134	0.275***
B3_MEAN	S	−0.097 **	0.100	0.071	B49	S	0.412 ***	0.419 ***	0.275 ***
	E	0.058	−0.051	0.018		E	0.467 ***	0.263 **	0.337 ***
B31	S	−0.063	0.142 **	0.105 **	B5_MEAN	S	0.407 ***	0.457 ***	0.311 ***
	E	0.075	0.014	0.018		E	0.551 ***	0.271 ***	0.344 ***
B32	S	−0.098 **	0.042	0.022	B51	S	0.404 ***	0.447 ***	0.290 ***
	E	0.134	−0.016	0.076		E	0.514 ***	0.137	0.265 ***
B33	S	−0.105 **	−0.011	0.009	B52	S	0.287 ***	0.302 ***	0.228 ***
	E	0.058	−0.077	−0.022		E	0.489 ***	0.313 ***	0.404 ***
B34	S	−0.032	0.051	0.074	B53	S	0.314 ***	0.330 ***	0.195 ***
	E	−0.004	−0.036	−0.032		E	0.486 ***	0.216 **	0.283 ***
B35	S	−0.129 ***	0.085	0.001	B54	S	0.376 ***	0.411 ***	0.286 ***
	E	0.025	−0.094	0.046		E	0.475 ***	0.160	0.237 ***
B4_MEAN	S	0.242 ***	0.260 ***	0.138 ***	B6_MEAN	S	−0.335 ***	−0.298 ***	−0.292 ***
	E	0.467 ***	0.201 *	0.324 ***		E	−0.298 ***	−0.223 **	−0.163 *
B41	S	0.255 ***	0.300 ***	0.162 ***	B61	S	−0.224 ***	−0.106	−0.072
	E	0.431 ***	0.105	0.218 ***		E	−0.238 ***	−0.232 **	−0.146 *
B42	S	0.064	0.105	0.044	B62	S	−0.198 ***	−0.145 **	−0.175 ***
	E	0.216***	0.013	0.108		E	−0.195 **	−0.123	−0.026
B43	S	0.054	0.088	0.046	B63	S	−0.250 ***	−0.354 ***	−0.357 ***
	E	0.386***	−0.044	0.196**		E	−0.212 **	−0.145	−0.139

Table 4. *Cont.*

Belief-Variables		Attitude Variables			Belief-Variables		Attitude Variables		
		A4	A51	A52			A4	A51	A52
B44	S	−0.116**	−0.078	−0.050	B64	S	−0.160 ***	−0.102	−0.133 ***
	E	−0.017	−0.044	0.005		E	−0.178 **	−0.137	−0.041
B45	S	0.252 ***	0.199 ***	0.113 **	B65	S	−0.224 ***	−0.106	−0.072
	E	0.394 ***	0.268 ***	0.237 ***		E	−0.238 ***	−0.232 **	−0.146 *
B46	S	−0.124**	−0.098	−0.110					
	E	0.127	0.014	0.073					
N student		415	227	405			415	227	405
N employee		146	94	141			146	94	141

Notes: *** significant at the 1% level, ** significant at the 5% level, * significant at the 10% level. S refers to the students', E refers to the employees' sample.

Respondents' general opinions of immigrants (A4) are better if their opinions are more similar to the following:

- they considered the typical school qualification of immigrants higher (B1) (S, E),
- they considered their willingness to work higher (B2) (S̲, E̲),

  respondents considered themselves more familiar with

- immigration-related legislation (B32) (S),
- work positions occupied by immigrants (B35) (S),
- the reasons for immigration (B35) (S),

  respondents agreed more with the following:

- migrants are mobile and constitute a flexible labor offer (B41) (S, E̲),
- migrants work more cheaply than domestic employees (B42) (E),
- the internal mobility of the workforce is low (B43) (E),
- migrants carry out work which domestic employees are not willing to do (B45) (S, E),
- the employment of immigrants is necessary due to the lack of a well-qualified domestic workforce (B47) (S, E̲),
- immigrants find it more difficult to find employment due to their lack of a network of contacts (B48) (S, E),
- migrants work decently and reliably (B49) (S̲, E̲),
- as flexible workers, they are advantageous for the Hungarian economy (51) (S̲, E̲),
- with the help of immigrants, the less attractive work positions can be filled (52) (S, E̲),
- with their appearance, domestic employees might get jobs as well (53) (S, E̲),
- their presence on the labor market contributes to the development of certain economic sectors (54) (S, E̲),

  and they agreed *less* with the following:

- migrants have inadequacies in terms of their knowledge of the Hungarian language (B44, S),
- they are less demanding in terms of working conditions (B46, S),
- the presence of immigrants maintains poor working conditions (B61) (S),
- their presence strengthens prejudice (B62) (S),
- their presence increases domestic unemployment (B63) (S),
- their presence intensifies discrimination in the labor market (B64) (S),
- their presence intensifies criminal activities (B65) (S, E).

The scale of awareness (B3) (S) and the scale of negative economic effects (B6) (S, E) had a negative connection to the general opinion of immigrants, while the scale of employment factors (B4) (S, E̲) and the scale of positive societal effects (B5) (S̲, E̲) had a positive connection.

It is also important that rank correlation indices of the awareness scale and its items relating to general opinions are significant, but below 0.200; therefore, their rank-orders should be considered uncorrelated. It is also worth mentioning that in the case of negative effects, indices usually indicate a weaker correlation than in the case of positive effects, willingness to work, work ethics (decency, reliability), and two labor market factors: mobility/flexibility and shortages in professions in a certain field.

Amongst bivariate analyses, aggregate variables are discussed last (A51, A52). Since these differ only in the inclusion of a single variable (willingness to work together), they are discussed jointly by doubling the brackets indicating the significance of sub-samples.

Variables of the following beliefs showed positive rank correlations with the aggregate attitude represented by the aggregate variables:

- typical school qualification of immigrants (B1) (A51: S) (A52: S, E),
- typical willingness to work (B2) (A51: S, E) (A52: S, E̲),
- awareness of the labor market situation of immigrants (B31) (A51: S) (A52: S),
- migrants are mobile and constitute a flexible labor offer (B41) (A51: S) (A52: S, E),
- migrants carry out work that domestic employees are not willing to do (B45) (A51: S, E) (A52: S, E),
- their employment is necessary due to the lack of a well qualified domestic workforce (B47) (A51: E) (A52: E),
- immigrants find it more difficult to find employment due to their lack of a network of contacts (B48) (A51: S) (A52: S, E),
- they work decently and reliably (B49) (A51: S̲, E) (A52: S, E),
- as flexible workers, immigrants are advantageous for the Hungarian economy (B51) (A51: S̲) (A52: S, E),
- with the help of immigrants, the less attractive work positions can be occupied (B52) (A51: S, E) (A52: S, E̲),
- with their appearance, domestic employees might also get jobs (B53) (A51: S, E) (A52: S, E),
- their presence in the labor market contributes to the development of certain economic sectors (54) (A51: S̲) (A52: S, E).

Negative rank correlation was found only in the case of items on the scale of negative economic effects and aggregate attitude variables but only occasionally (not for both the attitude variable version and/or sub-sample) and also to a weaker degree:

- the presence of immigrants would maintain poor working conditions (B61) (A51: E) (A52: neither),
- the presence of immigrants would strengthen prejudice (B62) (A51: S) (A52: S),
- the presence of immigrants would increase domestic unemployment (B63) (A51: S) (A52: S),
- the presence of immigrants would intensify discrimination within the labor market (B64) (A51: neither) (A52: S),
- the presence of immigrants would intensify criminal activities (B65) (A51: E) (A52: neither).

From among the scales elaborated with item means, the awareness scale (B3) did not correlate with any of the aggregate variables. The scale of employment effects (B4) showed positive correlations with both of them, but on the employee sub-sample of A51, it is only significant at 10%. The scale of societal advantages (B5) is significant along both variables and sub-samples, showing positive correlations; the scale related to negative economic effects shows a negative correlation in every combination mentioned (in the case of the A52 employee sub-sample, it is only significant at 10%).

4.2. Results of the Multivariate Analysis

The following section includes a comparison of groups with negative and positive attitudes towards immigrants by means of binary logistic regression analysis. In the course of this analysis, the items of the questionnaires or scales are not used, but rather the factors behind them (Table 2).

Regression analyses are not conducted separately for students and employees, but the fact of belonging to the employees' group is integrated amongst the independent variables as a dummy variable (EMPLOYEE). Consequently, it becomes possible to control whether there are any differences amongst the student or employee respondents not caused by any other independent variable.

The last four independent variables are the factors presented in Table 2, Section 3.2. Dependent variables of regression models are binary attitude variables in every case (A1, A2, A3, A4_binary, A51_binary, and A52_binary) with values of 0 or 1, where 1 always represents the more accepting attitude.

Analysis by means of binary logistic regression provides the answer to the question of whether independent variables forecast the chance of the respondent belonging to the group of people rejecting (if the coefficient of the independent variable is negative) or accepting (if the coefficient is positive) immigrants along each attitude variable; and if yes, to which direction and to what extent. Proceeding on the logic described above, in this case—unlike the bivariate analysis—analytical results that are shown in Table 5 are discussed in the text along with the independent variables of the models, starting from the role of factors.

The factor of economic disadvantages attributed to immigrants (DISADVANTAGES) is the only independent variable which has a negative contribution to the attitudes in all six models. Namely, the respondents who strongly believe that their situation is altered for the worse by immigrants are expected to have a more negative attitude towards immigrants in every analyzed attitude measure (acceptance, concerns of job loss, collegial relationship, general opinion or any dual combination of these). The factor of socio-economic advantages (ADVANTAGES) moves in the opposite direction and has almost the same general effect. The only model where it does not show a significant contribution regards concerns of job loss. It is worth observing—although it is not controllable—that the wording of the questions in the questionnaire were aimed directly at fears and concerns (a negative aspect) in the case of this dependent variable. The effect of both the AWARENESS factor, which represents a proper level of knowledge of the respondent about immigration and the labor market, and the FRUGALITY factor, which represents the opinion considering immigrants as a secondary workforce, can be confirmed only in a single model (the one aiming at a collegial relationship). In this model, respondents regarding themselves as more aware and considering immigrants as replacement workers who are willing to carry out inferior work proved to have more willingness to work with them.

From among non-factor independent variables, the dummy of the belief which considers immigrants 'willing to work' is significant in every model. Every attitude index shows a higher acceptance if a respondent regards immigrants as motivated employees or job seekers. Additionally, the dummy of the opinion 'they work, although not willingly' is also positive, although with a lower coefficient in the models of joint work and general opinion.

If a respondent deems the domestic workforce less mobile, this has significant and negative effects in two models (concerns of job loss and joint work): respondents considering the Hungarian workforce less mobile are more concerned for their jobs and would be less willing to work with immigrants.

The supposedly typical school qualification of immigrants is linked—although through two different dummies (EDU1 and EDU3), but with a similar content—to the integration into the labor market and joint work. Respondents are more willing to work together with more qualified immigrants, while in their opinion unqualified immigrants are not welcome, even on the labor market.

From amongst the demographic variables concerning respondents, only two showed a significant contribution in the case of a single model. Women and/or respondents born before 1965 are more concerned that immigrants 'oust' them from their positions. It is reasonable to assume (although the present survey is insufficient to examine this) that these two groups automatically feel their labor market position threatened; therefore, they react more strongly in this case, as well.

Table 5. Binary logistic regression models for attitudes with factor independent variables.

Independent	Dependent											
	A1		A2		A3		A4_Binary		A51_Binary		A52_Binary	
	B	Wald	*B*	Wald	*B*	Wald	*B*	Wald	*B*	Wald	*B*	Wald
Constant	−0.637	2.511	1.667	15.200 ***	−1.942	8.224 ***	−3.479	37.854 ***	−0.827	2.308	−1.095	6.450 **
EMPLOYEE	−0.052	0.021	0.408	1.116	−0.779	1.363	0.353	0.634	−0.537	1.144	0.230	0.373
SEX	0.130	0.407	−0.519	5.875 **	0.702	3.754 *	0.321	1.612	0.356	1.468	0.252	1.344
AGE1	0.180	0.100	−1.327	6.020 **	1.311	1.470	0.784	1.329	0.479	0.323	0.265	0.189
AGE2	0.105	0.058	−0.313	0.462	0.105	0.017	0.429	0.684	0.107	0.030	0.262	0.336
AGE4	−0.084	0.148	0.045	0.041	0.051	0.017	−0.104	0.137	0.299	0.885	0.158	0.471
EDU1	−0.555	4.436 **	−0.248	1.004	−0.598	1.282	−0.120	0.113	−0.372	0.989	−0.514	3.349 *
EDU3	0.228	1.034	0.007	0.001	1.381	12.719 ***	0.434	2.466	0.543	2.659	0.249	1.097
Work2	0.044	0.038	−0.342	2.212	1.122	7.302 ***	0.910	8.692 ***	0.498	2.399	0.017	0.005
Work3	1.204	10.795 ***	1.056	4.565 **	1.456	5.730 **	1.553	15.174 ***	1.875	9.462 ***	1.365	12.611 ***
B43	−0.029	0.107	−0.201	4.973 **	−0.495	8.182 ***	0.011	0.009	−0.113	0.746	0.055	0.323
B45	−0.012	0.027	−0.031	0.175	−0.028	0.043	0.165	2.767*	−0.083	0.565	−0.151	3.353 *
B48	−0.010	0.014	0.099	1.301	0.135	0.873	0.108	0.910	−0.008	0.004	0.061	0.430
AWARENESS	0.042	0.159	0.163	2.606	0.483	6.515 **	0.127	0.839	0.037	0.069	−0.029	0.064
FRUGALITY	0.149	1.707	0.146	1.670	0.411	4.149 **	−0.093	0.390	0.278	3.059 *	0.172	1.940
ADVANTAGES	0.406	8.276 ***	0.229	2.471	0.995	15.775 ***	0.470	7.013 ***	0.742	13.789 ***	0.668	18.872 ***
DISADVANTAGES	−0.265	6.467 **	−0.314	9.239 ***	−0.753	13.763 ***	−0.659	21.688 ***	−0.456	8.686 ***	−0.461	16.125 ***
N	543		550		326		554		317		539	
Cox and Snell *R*2	0.123		0.095		0.328		0.198		0.250		0.191	
Nagelkerke *R*2	0.168		0.134		0.494		0.310		0.345		0.263	

Notes: *** significant at the 1% level, ** significant at the 5% level, * significant at the 10% level. B is the unstandardized coefficient, Wald is the test statistic of the Wald-test.

The above information needs to be supplemented with the remark that the explanatory power of models is greatest in the case of the aggregate variable including joint work and general opinions, while it is weakest in the case of concerns of job loss and labor market acceptance.

5. Conclusions

Based on our results, we were able to filter out the main experience that the respondents' general beliefs about immigrants are a good predictor of attitudes. It should be emphasized that those respondents who are more likely to presume immigrants' willingness to work are also more receptive to them in general. Our detailed results are described below.

Bivariate analyses provide informative results by themselves; even more so as they have been carried out with certain items and not factors. The opinion of the typical school qualification of immigrants (at least in the student sample) is positively related to attitudes, although with the exception of concerns of job loss. The lack of correlation in the latter case is interesting since it would be logical if respondents considering immigrants to have low qualifications would be less afraid of losing their jobs because of them.

The belief concerning the willingness to work of immigrants is also paradoxical, as respondents in the employee group fear for their jobs less in the case of immigrants that have greater willingness to work (there is no significant contrast in the case of students). Otherwise, a positive relationship with the assumed greater willingness to work is confirmed for at least one of the samples (in both samples for general and aggregate attitudes) in the case of every attitude measure.

The level of awareness of respondents in terms of immigration is rarely connected significantly to attitudes: the scale mean shows a significant relation only for job concerns, collegial acceptance and general opinion and only for the student sample. Moreover, while this correlation is positive in the case of job concerns and collegial acceptance, it is close to zero (negative) for general opinions. The most general awareness item has a relation with the aggregate attitude variables as well: awareness of the labor market situation of immigrants. Thus, the correlation is not unambiguous.

The scale of employment factors and the items pertaining to them either do not show any significant connection to attitudes or only positive ones, with two exceptions. Both cases involve the attitude of general opinions and the items of frugality towards working conditions and the lack of language skills. On the scale level, there are positive relationships with every attitude index, but in the case of job concerns this appears only in the employee sample.

The scale and items related to beliefs in the positive effects of immigration are always connected positively to attitudes, with a few exceptions. One of the noteworthy exceptions is the item 'With the appearance of immigrant entrepreneurs, domestic employees might also get jobs', which did not show a significant relationship in any of the samples.

In terms of significant relationships, the last belief-scale concerning negative effects is also homogenous: it is always negative. However, there are hardly any significant scale-level relationships within the employee sample (collegial acceptance, general opinion, the second aggregate attitude).

According to the binary logistic regression analyses, respondents who believe in the negative socio-economic effects of immigrants (the factor represents the following beliefs: the presence of immigrants maintains poor working conditions, it contributes to the strengthening of prejudice, increases domestic unemployment and contributes to the intensification of crime) are more inclined to respond negatively in terms of every attitude question. Respondents believing in the positive effects of the presence of immigrants (migrants constitute a more flexible workforce offer, they compensate for the lack of a domestic workforce, work decently and reliably, help occupy the least attractive positions, and the appearance of immigrant entrepreneurs might help domestic employees get jobs and they contribute to the development of certain economic sectors) are more inclined to respond positively, with one exception. This exception is the loss of jobs due to immigrants, which did not show a significant correlation with the positive opinions factor in the presence of other variables. The above findings were to be expected, but this latter is not trivial at all. It indicates that respondents do not

identify job preservation with economic growth, even if one of the responses belonging to the factor explicitly indicated so.

Apart from these two factors, the assumption of a positive willingness to work showed a significant correlation with positive opinions in every regression model, echoing the same paradox revealed by the previous examinations in our paper. Obviously, an increasingly motivated workforce has a job preserving effect through economic growth, but whether respondents are aware of this remains a question.

In models involving aggregate indices, no other independent variable showed a significant contribution, apart from the ones mentioned above. However, in two models, the assumption of higher qualifications was correlated with more positive attitudes: these dependent variables are the general opinion of immigrants (in this case, the lack of qualifications has a negative effect) and the acceptance of immigrant colleagues (in this case, a higher qualification had a positive coefficient). It is probably correct to assume that the opinion of respondents was, ceteris paribus, better regarding more highly qualified immigrants and worse regarding less qualified ones.

It is informative that immigrant colleagues are more accepted by respondents who consider themselves more aware in terms of immigration issues (AWARENESS factor) and/or think that immigrants tend to occupy positions which are less preferred (FRUGALITY). However, the effects of these two factors have not appeared in other models (even in the case of aggregate attitudes).

According to our additional results, respondents considering the mobility of the domestic workforce to be low are more afraid of losing their jobs and are less willing to work together with immigrants; while women and older respondents are more inclined to fear for their jobs (it is worth mentioning that this was the only dependent variable in which age and gender showed any effect).

To summarize the above, of the four hypotheses that we proposed at the end of the literature review section, the following can be supported:

- H1 '*Negative attitude towards immigrants (general opinions, labor market integration, concerns of job loss, joint work with immigrants) is related to the fact that the phenomenon of immigration is primarily associated with negative effects; its positive effects on society and the economy are less visible*' (the belief in the advantages of migration contributed significantly to one fewer regression model than the belief in the disadvantages);
- H2a '*The chance of negative attitudes is increased if immigrants are considered employees with low qualifications*' for the A1, A3 and A52 attitudes;
- H2b '*The chance of negative attitudes is increased if immigrants are deemed employees who are willing to take on jobs that require low qualifications and are to be carried out under poor working conditions*' in the case of A3, and—based on the binary variable analyses—in the case of A4 and A51-52 as well;
- H3 '*Lack of information increases the chance of negative attitudes appearing*' in the case of A3; although it had a reverse correlation with A4 in the binary variable analysis, it does not appear in the multivariate analysis;
- H4 '*The chance that negative attitudes may be reduced and accepting attitudes may be increased if the respondent thinks that immigrants are required in the domestic labor market as a supplementary workforce*', except for the case of A2 in the multivariate analyses.

Discriminative behavior, prejudice and stereotypes are formed in the course of socialization. However, according to the research results, generally negative, rejecting attitudes can be reduced. The flow of information and its content may have a role in this. According to the technical literature, Hungary has an essentially rejecting behavior, although respondents deeming themselves more aware were less adverse (the behavioral component of the attitude), which means that knowledge acquired during formal study and information acquired informally (the cognitive component) and events and news covered by the media (which often affect the emotional component) have significant roles in shaping the image of immigrant employees. Judgments regarding the work ethic of immigrants and labor market knowledge concerning a relevant group are of particular significance in the societal

and organizational culture of the host country. It must be pointed out that the employment rate of immigrants is higher than that of the Hungarian population [42]. Confirming the results of the scientific literature, prejudicial behavior is more likely to be present among people with lower school qualifications; therefore, proper information and the promotion of the positive effects of immigrant employees have a higher significance in this case. Obviously, rejection might be caused by the fact that low qualified workers are in a disadvantaged situation within the labor market and identify immigrants as competition. Additionally, Hungarians are less mobile, therefore, they identify immigrants as competitors due to their flexibility. The ability of informative material or education to change this is limited. In order to promote integration, prejudicial behavior and the lack of information can be reduced and best practices applied by international companies can be introduced with the help of social sensitization training [43], which is a standard method in the case of the integration of disabled or impaired people. According to our results, the number of people that are not willing to work together with immigrants might be reduced with the help of proper information, not to mention the fact that as a consequence, diversity management and an equal opportunity-based attitude might be integrated into the organizational strategy on the level of individual employers.

Author Contributions: The authors contributed equally to this article.

Conflicts of Interest: The authors declare no conflict of interest.

Appendix A

Table A1. Wording and measurement of the questionnaire items involved in the analysis.

Label	Wording	Measurement
	Attitude Items	
A1	Do you agree with the statement that immigrants should be integrated into the world of labor?	Yes or no
A2	Are you concerned that immigrants take work opportunities?	Yes or no
A3	Would you work together with immigrants?	Yes or no
A4	What is your opinion of immigrants?	0–5 scale (0 = do not accept them, 5 = accept them)
	Belief Items	
B1	In your opinion, what is the typical school qualification of immigrants? - They have no school qualification whatsoever - Primary school - Secondary school - Higher education degree - Academic degree	Single choice
B2	What do you think about the attitude of immigrants towards work? - They explicitly intend to avoid work - They work, although not willingly - They work willingly	Select one of the followings:
B3	How familiar do you consider yourself with the following immigrant-related aspects?	
B31	Labor market situation of immigrants	0–5 scale (0 = not at all, 5 = absolutely)
B32	Legal provisions and laws concerning immigration	0–5 scale (0 = not at all, 5 = absolutely)

Table A1. *Cont.*

Label	Wording	Measurement
	Belief Items	
B33	Work positions filled by immigrants	0–5 scale (0 = not at all, 5 = absolutely)
B34	School qualification	0–5 scale (0 = not at all, 5 = absolutely)
B35	Reason for immigration	0–5 scale (0 = not at all, 5 = absolutely)
B4	In your opinion, what factors play a role in the employment of immigrants?	
B41	Immigrants are more mobile; therefore, they are a more flexible offer on the labor market.	0–5 scale (0 = strongly disagree, 5 = strongly agree)
B42	Immigrants work more cheaply.	0–5 scale (0 = strongly disagree, 5 = strongly agree)
B43	Internal workforce mobility is low.	0–5 scale (0 = strongly disagree, 5 = strongly agree)
B44	Immigrants have inadequacies in terms of their knowledge of the Hungarian language	0–5 scale (0 = strongly disagree, 5 = strongly agree)
B45	Migrants carry out work that domestic employees are not willing to do	0–5 scale (0 = strongly disagree, 5 = strongly agree)
B46	Immigrants are less demanding in terms of working conditions.	0–5 scale (0 = strongly disagree, 5 = strongly agree)
B47	The employment of immigrants is necessary due to the lack of a well-qualified domestic workforce.	0–5 scale (0 = strongly disagree, 5 = strongly agree)
B48	The lack of a network of contacts makes it harder to employ immigrants.	0–5 scale (0 = strongly disagree, 5 = strongly agree)
B49	Immigrants work decently and reliably.	0–5 scale (0 = strongly disagree, 5 = strongly agree)
B5	What positive effect might the employment of immigrants have on society in your opinion?	
B51	Immigrants are flexible workers which is advantageous for the economy.	0–5 scale (0 = strongly disagree, 5 = strongly agree)
B52	With the help of immigrant employees, less attractive jobs will be filled as well.	0–5 scale (0 = strongly disagree, 5 = strongly agree)
B53	With the appearance of immigrant entrepreneurs, domestic employees might get jobs.	0–5 scale (0= strongly disagree, 5= strongly agree)
B54	The presence of immigrant employees contributes to the development of certain economic sectors.	0–5 scale (0 = strongly disagree, 5 = strongly agree)
B6	*What positive effect might the employment of immigrants have on the economy in your opinion?*	
B61	The presence of immigrant employees maintains poor working conditions.	0–5 scale (0 = strongly disagree, 5 = strongly agree)
B62	The presence of immigrant employees contributes to the strengthening of prejudice.	0–5 scale (0 = strongly disagree, 5 = strongly agree)
B63	The presence of immigrant employees increases domestic unemployment.	0–5 scale (0 = strongly disagree, 5 = strongly agree)
B64	The presence of immigrant employees intensifies discrimination within the labor market.	0–5 scale (0 = strongly disagree, 5 = strongly agree)
B65	The presence of immigrant employees contributes to the intensification of criminal activities.	0–5 scale (0 = strongly disagree, 5 = strongly agree)

Table A2. Descriptive statistics of stand-alone dichotomous (yes/no) attitude items in the case of students.

Yes or No Questions	Valid *N*	Yes	No	Don't Know
A1. Do you agree with the statement that immigrants should be integrated into the world of labor?	436	166	270	NE
A2. Are you concerned that immigrants take work opportunities?	438	134	304	NE
A3. Would you work together with immigrants?	444	68	182	194

Note: NE = the option did not exist in the questionnaire.

Table A3. Descriptive statistics of stand-alone ordinal measurement items for beliefs in the case of students.

Ordinal Items	Frequency	Rank	Median	Mode
B1. In your opinion, what is the typical school qualification of immigrants?				
They have no school qualification whatsoever	99	2		
Primary school	177	1	√	√
Secondary school	144	3		
Higher education degree	18	4		
Academic degree	2	5		
B2. What do you think about the attitude of immigrants towards work?				
They explicitly intend to avoid work	210	1		√
They work, although not willingly	179	2	√	
They work willingly	47	3		

Table A4. Descriptive statistics of a stand-alone Likert-scale attitude item in the case of students.

Likert Scale (0–5) Item	Valid *N*	Mean	SD	Median	Mode
A4. What is your opinion of immigrants?	444	1.4595	1.3049	1	1

Table A5. Descriptive statistics of stand-alone dichotomous (yes/no) attitude items in the case of employees.

Yes or No Questions	Valid *N*	Yes	No	Don't Know
A1. Do you agree with the statement that immigrants should be integrated into the world of labor?	161	58	103	NE
A2. Are you concerned that immigrants take work opportunities?	168	52	116	NE
A3. Would you work together with immigrants?	170	16	94	60

Table A6. Descriptive statistics of stand-alone ordinal measurement items for beliefs in the case of employees.

Ordinal Items	Frequency	Rank	Median	Mode
B1. In your opinion, what is the typical school qualification of immigrants?				
They have no school qualification whatsoever	52	2		
Primary school	73	1	√	√
Secondary school	34	3		
Higher education degree	4	4		
Academic degree	0	5		
B2. What do you think about the attitude of immigrants towards work?				
They explicitly intend to avoid work	77	1		√
They work, although not willingly	69	2	√	
They work willingly	18	3		

Table A7. Descriptive statistics of a stand-alone Likert-scale attitude item in the case of employees.

Likert Scale (0–5) Item	Valid *N*	Mean	SD	Median	Mode
A4. What is your opinion of immigrants	166	1.494	1.365	1	0

Note: NE = the option did not exist in the questionnaire.

Table A8. Descriptive statistics of scales and their items on the students' sample (all items measured on 0–5 Likert-scales).

Scales and Items	Valid *N*	Mean	SD	Median	*α*
B3. How familiar do you consider yourself with the following immigrant-related aspects?	442	11.799	5.277	–	0.827
B31. Labor market situation of immigrants	442	2.127	1.368	2	–
B32. Legal provisions and laws concerning immigration	442	2.351	1.397	2	–
B33. Work positions filled by immigrants	442	1.805	1.298	2	–
B34. School qualification	442	2.005	1.510	4	–
B35. Reason for immigration	442	3.511	1.278	4	
B4. In your opinion what factors play a role in the employment of immigrants?	427	21.534	7.064	–	0.722
B41. Immigrants are more mobile, therefore they are a more flexible offer on the labor market.	427	1.632	1.303	1	
B42. Immigrants work more cheaply.	427	3.136	1.481	3	
B43. Internal workforce mobility is low.	427	2.384	1.249	2	
B44. Immigrants have inadequacies in terms of their knowledge of the Hungarian language	427	3.867	1.463	4	
B45. Migrants carry out work that domestic employees are not willing to do	427	2.485	1.606	3	
B46. Immigrants are less demanding in terms of working conditions.	427	2.902	1.547	3	
B47. The employment of immigrants is necessary due to the lack of a well-qualified domestic workforce.	427	1.492	1.361	1	
B48. The lack of a network of contacts makes it harder to employ immigrants.	427	2.122	1.349	2	
B49. Immigrants work decently and reliably.	427	1.515	1.290	2	
B5. What positive effect might the employment of immigrants have on society in your opinion?	435	6.297	4.300		0.848
B51. Immigrants are flexible workers which is advantageous for the economy	435	1.490	1.282	1	
B52. With the help of immigrant employees, less attractive jobs will be filled as well.	435	1.961	1.408	2	
B53. With the appearance of immigrant entrepreneurs, domestic employees might get jobs	435	1.356	1.235	1	
B54. The presence of immigrant employees contributes to the development of certain economic sectors.	435	1.490	1.256	1	
B6. What positive effect might the employment of immigrants have on the economy in your opinion?	434	15.254	5.116		0.775
B61. The presence of immigrant employees maintains poor working conditions.	434	2.507	1.351	2	
B62. The presence of immigrant employees contributes to the strengthening of prejudice.	434	3.401	1.363	4	
B63. The presence of immigrant employees increases domestic unemployment.	434	2.797	1.538	3	
B64. The presence of immigrant employees intensifies discrimination within the labor market.	434	3.201	1.296	3	
B65. The presence of immigrant employees contributes to the intensification of criminal activities.	434	3.348	1.489	4	

Notes: NE = the option did not exist in the questionnaire, *α* = Cronbach's alpha.

Table A9. Descriptive statistics of scales and their items on the employees' sample (all items measured on 0–5 Likert-scales).

Scales and Items	Valid *N*	Mean	SD	Median	*α*
B3. How familiar do you consider yourself with the following immigrant-related aspects?	165	9.869	5.783	–	0.876
B31. Labor market situation of immigrants	165	1.685	1.387	2	
B32. Legal provisions and laws concerning immigration	165	1.915	1.309	2	
B33. Work positions filled by immigrants	165	1.570	1.250	2	
B34. School qualification	165	1.618	1.454	1	
B35. Reason for immigration	165	2.842	1.612	3	
B4. In your opinion what factors play a role in the employment of immigrants?	157	18.019	8.486	–	0.811
B41. Immigrants are more mobile, therefore they are a more flexible offer on the labor market.	157	1.318	1.345	1	
B42. Immigrants work more cheaply.	157	2.516	1.643	2	
B43. Internal workforce mobility is low.	157	1.885	1.325	2	
B44. Immigrants have inadequacies in terms of their knowledge of the Hungarian language	157	3.510	1.789	4	
B45. Immigrants carry out work that Hungarian employees are not willing to do.	157	1.873	1.612	2	
B46. Immigrants are less demanding in terms of working conditions.	157	2.567	1.614	2	
B47. The employment of immigrants is necessary due to the lack of a well-qualified domestic workforce.	157	1.223	1.328	1	
B48. The lack of a network of contacts makes it harder to employ immigrants.	157	1.675	1.451	1	
B49. Immigrants work decently and reliably.	157	1.452	1.253	1	
B5. What positive effect might the employment of immigrants have on society in your opinion?	169	4.976	4.628	–	0.909
B51. Immigrants are flexible workers which is advantageous for the economy	169	1.183	1.261	1	
B52. With the help of immigrant employees, less attractive jobs will be occupied as well.	169	1.438	1.413	1	
B53. With the appearance of immigrant entrepreneurs, domestic employees might get jobs	169	1.195	1.292	1	
B54. The presence of immigrant employees contributes to the development of certain economic sectors.	169	1.160	1.250	1	
B6. What positive effect might the employment of immigrants have on the economy in your opinion?	167	14.012	6.106	–	0.855
B61. The presence of immigrant employees maintains poor working conditions.	167	2.461	1.492	2	
B62. The presence of immigrant employees contributes to the strengthening of prejudice.	167	2.964	1.497	3	
B63. The presence of immigrant employees increases domestic unemployment.	167	2.766	1.560	3	
B64. The presence of immigrant employees intensifies discrimination within the labor market.	167	2.707	1.498	3	
B65. The presence of immigrant employees contributes to the intensification of criminal activities.	167	3.114	1.626	3	

Notes: NE = the option did not exist in the questionnaire, *α* = Cronbach's alpha.

References

1. United Nations. *International Migration Report 2015*; United Nations: New York, NY, USA, 2016.
2. The Organisation for Economic Co-operation and Development (OECD). *International Migration Outlook 2017*; International Migration Outlook; OECD Publishing: Paris, France, 2017; ISBN 9789264275553.
3. Petty, R.E.; Cacioppo, J.T. Source factos and the elaboration likelihood model of persuaison. In *Advances in Consumer Research*; Association for Consumer Research: Duluth, MN, USA, 1984; Volume 11, pp. 668–672.
4. Cialdini, R.B.; Petty, R.E.; Cacippo, J.T. Attutude and attutude change. *Annu. Rev. Pcichol.* **1981**, *32*, 357–404. [CrossRef]
5. Petty, R.E.; Cacioppo, J.T. The elaboration likelihood model of persuasion. In *Advances in Experimental Social Psichology*; Academic Press: New York, NY, USA, 1986; Volume 19.
6. Lutz, R.J. Changing Brand Attitudes through Modification of Cognitive Structure. *J. Consum. Res.* **1975**, *1*, 49–59. [CrossRef]
7. Bettman, J.R.; Capon, N.; Lutz, R.J. Multiattribute Measurement Models and Multiattribute Attitude Theory: A Test of Construct Validity. *J. Consum. Res.* **1975**, *1*, 11–15. [CrossRef]

8. Rosenberg, M.J.; Hovland, C.I. *Attitude Organization and Change: An Analysis of Consistency among Attitude Components*; Yale University Press: New Haven, CT, USA, 1960.

9. Bagozzi, R.P.; Burnkrant, R.E. Attitude Measurement and Behavior Change. A Reconsideration of Attitude Organization and Its Relationship to Behavior. *Adv. Consum. Res.* **1979**, *6*, 295–302.

10. Fishbein, M. A Consideration of Beliefs and Their Role in Attitude Measurement. In *Readings in Attitude Theory and Measurement*; Fishbein, M., Ed.; Wiley: New York, NY, USA, 1967.

11. Heckmann, F. Integration Research from a European Perspective. *Z. Bevolkerungswiss* **2001**, *26*, 341–356.

12. Piontkowski, U.; Rohmann, A.; Florack, A. Concordance of Acculturation Attitudes and Perceived Threat. *Group Process. Intergr. Relat.* **2002**, *5*, 221–232. [CrossRef]

13. Van Oudenhoven, J.P.; Colleen Ward, C.; Masgoret, A-M. Patterns of relations between immigrants and host societies. *Int. J. Intercult. Relat.* **2006**, *30*, 637–651. [CrossRef]

14. Van Oudenhoven, J.P.; Groenewoud, J.T.; Hewstone, M. Co-operation, ethnic salience and generalization of inter-ethnic attitudes. *Eur. J. Soc. Psychol.* **1996**, *26*, 649–661. [CrossRef]

15. Voci, A.; Hewstone, M. Intergroup contact and prejudice toward immigrants in Italy: The mediational role of anxiety and the moderational role of salience. *Group Process. Intergr. Relat.* **2003**, *6*, 37–54. [CrossRef]

16. Dustmann, C.; Preston, I.P. Racial and Economic Factors in Attitudes to Immigration. *BE J. Econ. Anal. Policy* **2000**, *7*, 62. [CrossRef]

17. European Monitoring Centre on Racism and Xenophobi. *Majorities' Attitudes towards Immigrants and Minorities: Key Findings from the Eurobarometer and the European Social Survey*; European Union Agency for Fundamental Rights: Wien, Austria, 2005.

18. Bridges, S.; Mateut, S. Attitudes towards immigration in Europe. *Sheff. Econ. Res. Pap. Ser.* **2009**, *8*, 1–29.

19. Diehl, C. *Transatlantic Trends: Immigration Survey*; German Marshall Fund of the United States: Washington, DC, USA; Compagnia di San Paolo: Turin, Italy; Barrow Cadbury Trust: London, UK, 2011.

20. O'Rourke, K.H.; Sinnott, R. The determinants of individual attitudes towards immigration. *Eur. J. Political Econ.* **2006**, *22*, 838–861. [CrossRef]

21. Hainmueller, J.; Hopkins, D.J. Public Attitudes Toward Immigration. *Annu. Rev. Political Sci.* **2014**, *17*, 225–249. [CrossRef]

22. Gödri, I. A bevándórlókkal szemneni attitűd és az egyéni értékbeállítódás összefüggései. *Demografia* **2007**, *50*, 1–38.

23. Peri, G. Immigration, Labor Markets and Productivity. *Cato J.* **2012**, *32*, 35–53.

24. Berry, J.W.; Kalin, R. Multicultural and ethnic attitudes in Canada: Overview of the 1991 survey. *Can. J. Behav. Sci.* **1995**, *27*, 301–320. [CrossRef]

25. Kalin, R.; Berry, J.W. Ethnic and civic selt-identity in Canada: Analysis of 1974 and 1991 national surveys. *Can. Ethn. Stud.* **1995**, *27*, 1–15.

26. Berry, J.W. A psychology of immigration. *J. Soc. Issues* **2001**, *57*, 615–631. [CrossRef]

27. Waters, M.C.; Jiménez, T.R. Assessing immigrant assimilation: New empirical and theoretical challenges. *Annu. Rev. Sociol.* **2005**, *31*, 105–125. [CrossRef]

28. Card, D.; Dustmann, C.; Preston, I. *Understanding Attitudes to Immigration: The Migration and Minority Module of the first European Social Survey*; CReAM Discussion Paper, CDP 03/05; Centre for Research and Analysis of Migration, Department of Economics, University College London: London, UK, 2005; pp. 1–45.

29. Herreros, F.; Criado, H. Social Trust, Social Capital and Perceptions of Immigration. *Political Stud.* **2009**, *57*, 337–355. [CrossRef]

30. Rosenbluth, F.; Kage, R.; Tanaka, S. *Four Types of Attitudes towards Foreign Workers: Evidence from a Survey in Japan*; Center on Japanese Economy and Business Working Papers; Center on Japanese Economy and Business, Columbia University: New York, NY, USA, 2016. [CrossRef]

31. Oláh, J.; Halasi, G.; Szakály, Z.; Popp, J.; Balogh, P. The impact of international migration on the labour market—A case study from Hungary. *Amfiteatru Econ.* **2017**, *19*, 790–805.

32. Dustmann, C.; Schönberg, U.; Stuhler, J. The Impact of Immigration: Why Do Studies Reach Such Different Results? *J. Econ. Perspect.* **2016**, *30*, 31–56. [CrossRef]

33. Paas, T.; Halapuu, V. *Attitudes towards Immigrants and the Integration of Ethnically Diverse Societies*; Discussion Paper; NORFACE Research Programme on Migration, University College London: London, UK, 2012; Volume 23, pp. 1–19.

34. Barta, J.; Bernát, A.; Boda, J.; Kertész, A.; Sik, E.; Simonovits, B.; Szeitl, B.; Tóth, F.M. *Attitudes towards Refugees, Asylum Seekers and Immigrants*; Simonovits, B., Ed.; Tárki Social Research Institute: Budapest, Hungary, 2016.

35. Bernát, A.; Sik, E.; Simonovits, B.; Szeitl, B. *Attitudes towards Refugees, Asylum Seekers and Immigrants—First Results (October 2015)*; Simonovits, B., Ed.; Tárki Social Research Institute: Budapest, Hungary, 2015.

36. Pierog, A.; Szabados, G.N. *Migránsok, Civilek, Szervezeti Lehetőségek Civil Szervezetek a Migránsokért, a Migránsok Által.*; Papp, K., Kerepeszki, R., Eds.; Debreceni Egyetem Történelmi Intézete: Debrecen, Hungary, 2016.

37. OECD Foreign-Born Population (Indicator). Available online: http://www.oecd-ilibrary.org/social-issues-migration-health/international-migration-outlook-2017_migr_outlook-2017-en (accessed on 29 June 2017).

38. Babbie, E.R. *The Practice of Social Research*; Cengage Learning: Boston, MA, USA, 2013; ISBN 1133049796.

39. Ulicna, D.; Messerer, K.L.; Auzinger, M. *Study on Higher Vocational Education and Training in the EU*; Final Report; European Comission: Brussels, Belgium, 2016; pp. 18–78.

40. Juhász, J.; Makara, P.; Makara, E. *A Munkaerő-Piaci Integráció Kihívásai Magyarországon—A Harmadik Országbeli Munkavállalók Beilleszkedésének Esélyei és Korlátai*; Kutatási Zárótanulmány, Pantha Rhei Társadalomkutató Bt.: Budapest, Hungary, 2011; pp. 37–39.

41. Dajnoki, K.; Kőmíves, P.M. Exploration of labour-market attitudes towards migrants among university students. *Int. J. Eng. Manag. Sci.* **2016**, *1*. [CrossRef]

42. Hárs, Á. Harmadik országbeli migránsok munkaerő-piaci helyzete. In *Bevándorlás és Integráció. Magyarországi Adatok, Európai Indikátorok*; Kovács, A., Ed.; MTA Társadalomtudományi Kutatóközpont, Kisebbségkutató Intézet: Budapest, Hungary, 2013; pp. 42–69.

43. Public Policy and Management Institute (PPMI). *Preparing Teachers for Diversity—EU Law and Publications*; European Comission: Brussels, Belgium, 2017.