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Economic and Social Integration of Syrian Refugees and Their Intention to Stay in Germany

Cyrine Hanna and Mohamed Ali Marouani



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Cyrine Hannafi*, Mohamed Ali Marouani†

Abstract

The aim of this paper is to investigate the impact of both social and economic integration on the intention of Syrian refugees to stay permanently in Germany. We also study the determinants of these two components of integration and the causal relationships between them using the 2016 IAB-BAMF-SOEP Refugee Survey. Our econometric strategy is to estimate a simultaneous equation model for the former three variables using the Conditional Mixed Process method. The main results show the importance of the social integration component, not only for its impact on the permanent stay of the Syrian refugees in Germany but also for its bidirectional relationship with the economic integration component. Moreover, we find that the arrival year, the level of education, the family context of having a child in Germany, social networks and the residence in a refugee accommodation are relevant additional explanations of the three outcomes of interest.

Keywords: Refugees, integration, intention to stay, Syria, Germany.

JEL Codes: O15, J15, C36, D10.

Declarations

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*UMR Développement et sociétés, Paris 1 Pantheon-Sorbonne and IRD, hannafi_cyrine@hotmail.com. Current affiliation: ERUDITE - University Paris-Est Créteil

†**Corresponding author**, UMR Développement et sociétés, IRD, Paris 1 Pantheon-Sorbonne and ERF, 45 bis Avenue de la Belle Gabrielle, 94736 Nogent sur Marne, France, marouani@univ-paris1.fr, telephone: +33622418424. ORCID code: 0000-0002-9052-1517

1 Introduction

The Syrian conflict is considered among the most deadly of the current century, leading to large waves of Syrian refugees all over the world. Germany hosted almost 600,000 of them between 2014 and 2016. One of the main issues for both origin and host countries is whether they will return home at the end of the conflict. We focus here on the latter's perspective.

The return of refugees would mean a loss of labor and human capital resources for host countries, such as Germany, that invested heavily in their integration. However, the increasing unpopularity of immigration after the admittance of big waves of refugees (Sola, 2018) led the German Government to finance the voluntary return of Syrian refugees. According to the Germany's Federal Office for Migration and Refugees, BAMF, a little more than 400 were candidates in 2018. This represents a very tiny proportion of returnees, although the conflict has ended in many Syrian regions. This figure raises the question of the permanent stay in Germany and reveals the effectiveness of the integration process.

In the context of the Covid-19 crisis, the need of labour resources by farmers and human capital by health institutions has increased significantly. Germany has involved its refugees to help dealing with the pandemic crisis especially for agricultural workers and medical staff and even those that are not yet permitted to work. This crisis may modify again the population's attitude towards refugees.

Driven from their homes by push factors, refugees' decision to stay permanently in Germany will depend on both pull and push factors. In this paper we investigate the impact of both social and economic components of integration of Syrian refugees in Germany on the decision to stay there permanently. Moreover, we deepen the debate by investigating the causal relationships between the two components. The rationale behind this is that social integration may help people find a job and facilitate integration into the economic sphere. At the same time, economic integration creates social networks, and hence, social integration in the host society. Second, we study other possible determinants.

Given the scarcity of the literature on refugees' return, we extend the review to papers encompassing other forms of migration. Return migration is perceived in the neoclassical migration theory as a decision related to the degree of which the expectations of migrants are met in terms of earnings in the host country (Sjaastad, 1962; Todaro, 1976; Duleep, 1994). Return migration is considered by Cerase (1974) as a "return of failure" because those who integrate well in the host country do not return. At the opposite end of the spectrum, the new economics of labor migration (NELM) perceives return migration as a "success" when people have specific income goals such as to accumulate savings and generate remittances in order to diversify the sources of income in their home-country household and go home once they achieve these goals (Piore, 1979; Stark, 1991). The empirical evidence seems to support the NE theory, finding a negative impact of integration on the decision to return (Waldorf, 1995; Jensen and Pedersen, 2007; Dustmann, 2008; De Haas and Fokkema, 2011; Constant and Massey, 2002).

Both theories consider migration to be based on economic incentives. However, there are other

reasons behind migration decisions, hence, various typologies of return that should each be addressed differently (Kuschminder, 2017). There is no singular theory that explains this phenomena (Massey et al., 1993). The case of forced migration in the context of war is more problematic since return conditions and the ability of the refugees to reintegrate and to contribute to development in the country of origin are among the main issues to be addressed (Black and Gent, 2006; Van Houte and Davids, 2008).

De Haas and Fokkema (2011) analyzed the link between return migration and integration of four refugee groups in Italy and Spain. Their main objective was to test the relevance of alternative theories in explaining return migration. They found that sociocultural factors matter, while work and occupational status do not. More strikingly, they found that education had a positive impact on the decision to return in contrast to the results showing a negative selectivity according to human capital (Borjas, 1989; Massey, 1987; Lindstrom and Massey, 1994; Dustmann, 1996). However, Ramos (1992) and Jasso and Rosenzweig (1988) also find a positive impact of the level of education and skills with higher incentives to return.

Employment represents the most commonly researched area of integration (Constant and Massey, 2002; Tomlinson and Egan, 2002). The conditions of the local labor market in the host country has been shown to predict employment among refugees (Bevelander and Lundh, 2007). However, integration is not only defined by the economic aspect with labor market participation in the host country, but it represents one of the main “markers and means” to support integration with adding education, housing and health (Tomlinson and Egan, 2002).

The second key domain of integration is social connection. Theorists define three forms of social connection, which are: social bonds between members of the same family, ethnicity, religion, or nationality, bridges connecting local communities and, finally, social links within the state’s structures (Putnam, 1993; Woolcock, 1998). Tomlinson and Egan (2002) define two additional core domains of integration as “facilitators,” given by cultural knowledge, and “foundation,” granted by rights and citizenship. Language learning also plays an important role in the social and economic integration of refugees (Chiswick and Miller, 1996; Zorlu and Hartog, 2018).

However, the literature has been less prolific on social integration since there is no consensus indicator to measure. Recent studies consider some proxies among which language, perceived discrimination as a barrier to social inclusion (Hainmueller et al., 2017), hobbies and membership in local clubs, reading local newspapers of the host country and having non-immigrant friends. Even the planned stay duration in the host country is used as a proxy of social inclusion (Avitabile et al., 2013; Hainmueller et al., 2017) rather than an outcome for the social integration component to explain.

Recent studies on economic integration have focused on the role of ethnic enclaves in the economic integration of refugees, which they usually measure as integration into the labor market with respect to employment (Damm, 2014, 2009) for the Danish context. There is also literature that points out the negative aspects of ethnic enclaves, namely, their limited opportunities to integrate in the host society, especially in terms of language acquisition (Chiswick and Miller, 1996).

De Vroome and Van Tubergen (2010) have shown, in addition to language and ethnic enclaves, the role that education and experience play in the economic integration of refugees in the Netherlands. Furthermore, they express the role of integration courses and the negative impact of the time spent in refugee accommodation. They also investigate the impact of another component of integration, the social capital of having Dutch friends and of being a member of a mainstream organization.

Similarly, Danzer and Ulku (2011) studied the impact of some integration components on income for a sample of the Turkish community in Berlin. They show that only political integration (i.e. holding German citizenship) determines economic success, rather than social integration, as measured by the number of close German friends an immigrant has.

For social integration, Dustmann (1996) uses the feeling of belonging to the host country as a proxy for social integration in order to investigate its determinants and shows that the stay duration, the education level, the language proficiency and the family context are the main causes of migrants' social assimilation. Moreover, he argues that successful economic integration could in itself be a strong determinant of social integration because of increased exposure to the host society. He finds no empirical evidence to support this assertion and concludes that the two aspects of integration are dependent on similar determinants rather than being interdependent.

Our contribution to this literature is twofold. First, we investigate the impact of both social and economic integration on the intention to stay permanently in Germany. Second, we study the determinants of these components of integration with a focus on the causal relationships between each one on the other. Our econometric strategy is to estimate a simultaneous equation model for the three variables of interest using the Conditional Mixed Process method. Our data is based on the IAB-BAMF-SOEP Refugee Survey 2016.

To our knowledge, this is the first study to empirically investigate the intention to stay permanently in the case of Syrian refugees in Germany. It is also the first that deals with the planned stay duration in the host country and integration concurrently while distinguishing between the economic and social components of the latter.

The main results show a bidirectional relationship between social and economic integration components. However, we find only a significant impact of social integration on the intention to stay permanently in Germany but no evidence of a significant impact of the economic integration component. Moreover, we find that the arrival year, the level of education, the family context of having a child in Germany, social networks and the residence in a refugee accommodation are relevant additional explanations of the three outcomes of interest.

2 Data

The source of our survey data is the IAB-BAMF-SOEP Refugee Survey 2016 conducted by the Institute for Employment Research (IAB), the German Institute for Economic Research (DIW Berlin) for the Socio-Economic Panel (SOEP), and the Research Centre on Migration, Integration, and Asylum of the Federal Office of Migration and Refugees (BAMF-FZ).

This survey data aims to provide relevant information about refugees, mainly about their living conditions, their educational status, their vocational training, their current occupational situations, their language skills, their family situations, their biographies before the conflict, their social participation, their link to their country of origin and their participation in integration programs. The first wave of the survey was conducted in 2016 after the number of refugees rose, particularly in 2015. The total number of adults surveyed among refugees from many countries is 4,817 in 3,538 households. The sample includes 2,212 Syrian adult refugees between 18 and 83 years old. The sample is representative with the application of an appropriate weighting procedure. The data was collected from the Central Register of Foreigners (AZR) and represents asylum seekers having entered Germany between 2013 and 2016 and filed an asylum application before June, 2016. Higher sample probabilities were assigned to refugees who had already received an answer to their asylum application with an accordance of the asylum protection rather than those for whom the asylum procedure is still ongoing or that have received a rejection and an allowance to remain in Germany temporarily. The aim of this sampling strategy is to target people that have more incentives to remain in Germany. We restrict the sample to only those between 18 and 64 years old (the working age population).

2.1 Dependent variables

As we are interested in the impact of both social and economic integration on the intention to stay permanently in Germany and also the determinants behind these main components of integration and the causal relationships between the two, we define our three main variables of interest as follows:

- **Intention to stay permanently in Germany:** The choice on this variable is limited by the survey since no direct question on the intention to return to Syria is asked but only on the intention to stay permanently in Germany or not and the intended stay duration if the refugee does not intend to stay permanently. As we mentioned before, both the intention to return and the permanent stay in Germany issues are important but not necessarily associated: the intention to stay permanently in Germany could also mean the intention to move somewhere else instead of returning. Some other questions are asked for the return about the worry for the return to Syria or in what case the refugee could return but we retain the question about the intention to stay permanently in Germany or not since it points out also the success of the integration process whose the aim is to maintain the refugees in the long run. The question asked in the survey is: "Would you like to stay in Germany permanently?". Hence, we construct a binary variable that takes a value of 1 if the respondent would like to stay permanently in Germany, 0 otherwise. We consider no responses as a non-intention to stay permanently in Germany.
- **Economic integration:** We construct this variable according to employment status. It is a binary variable that takes a value of 1 if the respondent is currently working (including full-time employment, part-time employment, minimal or irregular employment,

apprenticeship or undergoing occupational retraining and internship), 0 otherwise. The authorization to work is granted without any restriction for those who have an approval on their asylum application and a residence permit. However, for those whose application is ongoing, they get permission to reside and have restricted access to the job market but can ask for permission to work from the Foreigners Office and the Federal Labor Office.

- **Social integration:** For social integration, we consider an indicator that combines three main metrics from the literature. First, we cite the perceived discrimination as a barrier to social inclusion (Hainmueller et al., 2017). The available information on this metric in the survey data is about whether an immigrant feels like an outsider. The question asked is “How often do you feel like an outsider?”. This question is very precise and deals directly with perceived social inclusion. The variable is ordinal with 5 categories running successively from 1 to 5: Very often, Often, Sometimes, Occasionally, Never.

Furthermore, another compelling question in the survey assesses discrimination that does not deal directly with social inclusion and could also include economic discrimination with access to employment; this question is “How often have you personally experienced being disadvantaged in Germany because of your origin?”

As a second metric, we consider language. This variable is given by the level of German-speaking. It is an ordinal variable with 5 categories from 1 to 5: Not at all, Not very well, Averagely, Well, Very well.

Third, another interesting metric the literature considers is the number of German friends an immigrant has. Precisely, we consider the variable that corresponds to the question “How many German people have you met since your arrival in Germany with whom you have regular contact?”.

Finally, participation in integration programs also represents a substantive predictor of social inclusion. In the context of German asylum seeker programs, a course organised by the BAMF is open for refugees or asylum applicants and comprises a language course covering aspects of everyday life (i.e. work, family, children, leisure, media, consumption and social interaction) and an orientation course about the German legal system (including culture, history, social values, rights and obligation). However, this indicator is not really representative since the participation in the integration course is mandatory for those who have already submitted their application for asylum in Germany and have access to the Benefit Act that covers basic needs. Moreover, participation in the integration course is a necessary condition in order to have a settlement permit after 3 years of residence for those that have strong prospects to remain. In other words, the participation to the BAMF integration course could be not a choice considered as an aspect of social integration but rather an obligation.

As we have ordinal variables (German speaking proficiency and level of feeling like an outsider), continuous variables (number of German friends) and a binary variable (participation to the BAMF course), we construct an index of social integration with these three variables of interest. We follow Hainmueller et al. (2017) in using a polychoric principal component analysis (PCA) and extracting the first principal component that accounts for 44.2 percent of the total variance. This method allows us to deal with binary, categorical and continuous distributions.

2.2 Independent variables included in each equation

- **Individual characteristics:** The individual characteristics we consider as independent variables are the Governorate of origin, the age, the sex (1 for female, 0 for male), the marital

status (1 for single, 0 for married), the level of education (Primary education, Lower-secondary education, Upper-secondary education, Bachelor, Master and Doctoral studies), and the arrival year from 2013 to 2016 ¹.

- Religion: We have the following categories for this variable: no religion, Islamic-Shiite, Islamic-Sunni, Islamic-Alawite, Christian or other religion. The religious orientation can be reflected in the behavior of the person belonging to a given religious group, hence impacting his social and economic integration. Taking into account the fact that the majority is Sunni Muslims, we simplify by considering a dummy for whether a Syrian immigrant is a Sunni Muslim or not.
- Family networks: We consider whether the refugee has one or more of his relatives in Germany (including spouse, children, father, mother or siblings).
- Social networks: We add the number of Syrian friends and also the number of friends from other countries as a measure of social networks.
- Refugee accommodation: We add a variable that indicates whether the refugee lives in a refugee accommodation or in an independent accommodation (1 for refugee accommodation, 0 otherwise). The question about the type of accommodation corresponds to the place of residence in which the refugee spent the longest period since his or her arrival in Germany. The allocation of refugees to the refugee centers is made under a quota system that is defined on an annual basis. Refugees are then received in the nearest reception center of the Federal Land where they register upon arrival in Germany and are given proof of arrival.

We should also point out the role of the German policies in order to integrate the refugees but also all the facilities provided in order to offer them a decent life. In particular, there were specific programs to help refugees integrate in the economic sphere especially in 2015 such as "Perspectives for refugees" and "ESF-BAMF" programs that are dedicated to unemployed refugees and help them to find a job with providing information about the labor market and the recognition of certificates and degrees. These programs give them also the opportunity to practice their skills in a company and identify their skills. Moreover, The German Academic Exchange Service (DAAD) conducted programs funded by the Federal Ministry of Education and Research (BMBF) in order to provide grants and scholarship dedicated to young refugees in Germany to encourage them to strengthen their potential and to have access to higher education. Some of these programs are asked about in the survey, however, we can not include them in our model since most of them were conducted in 2015 and the survey was just carried out in 2016 (only few proportions of refugees were participating in 2016). Another technical reason is that the participation to these integration programs is endogenous and we need to take into account the selection bias that could derive from this inclusion especially that we have several other endogeneity issues to handle and that will be presented later.

Table 1 gives descriptive statistics on the variables used. By eliminating the missing responses for all variables, we obtain a sample of 1,890 observations. Almost one quarter of Syrian refugees came from Aleppo and Damascus. Thus, Aleppo is considered the reference modality in the estimations. The sample contains almost 37% females and 27% singles. The sample includes refugees from 19 to 64 years old with a mean age of 35 years. The majority of Syrian refugees arrived in 2015 (65%), while 23% arrived in 2014 and 5% in 2013 and 2016. Hence, the arrival year 2015 serves as a reference modality in our estimations. Most refugees have an upper-secondary educational level (46%), and 27% have attained education outside Syria. The majority of those included in the sample are Sunni Muslims (about 75%). Among the married refugees, 85% are accompanied by their partner, 19% have at least one of their parents with them and 55% have at least one of their siblings. Among the refugees that have children, 92% have at least one of their children accompanying them in Germany. The mean number of Syrian friends is about eight and that of friends from other countries is about three. Roughly 62% of refugees live in a refugee accommodation. Finally, 68% of refugees had work experience before their arrival in Germany, and 36% are proficient English speakers.

¹Note that we remove the refugees that entered in Germany in 2012 and that represent a minor proportion, which made up only about 0.2 percent of the sample.

For the variables of interest, 83% of refugees intend to stay permanently in Germany, or at least provided this answer on the survey. As for economic inclusion, we have only 9% of refugees who are currently working. Considering social integration components, 40% of refugees have participated in the BAMF integration course. The table reports a median of 4 for the degree of feeling outsider, which means that 50% of refugees have occasionally the feeling of being outsiders. Moreover, 50% of refugees speak average-level German, and the mean number of German friends is five.

3 Econometric and identification strategy

As the aim of this study is to investigate the impact of both social and economic integration on the intention to stay permanently in Germany among Syrian refugees, we estimate an equation of the intention to stay including both social and economic integration as endogenous explanatory variables. Moreover, we simultaneously estimate two other equations of both social and economic integration, which are considered endogenous, while including the set of independent variables listed before and extra instruments. Handling endogeneity issues in this estimation allows us to investigate further relationships between social and economic integration since we argue that they are inter-dependent but also to identify some other determinants of integration from the literature. Our strategy is then to simultaneously estimate the three equations of interest with both social and economic integration being endogenous explanatory factors in the intention to stay equation and dependent variables for the two other equations, in which each integration component appears as an explanatory variable in the other integration component equation.

Our econometric strategy is to estimate a simultaneous equation model for the three dependent variables of interest using the Conditional Mixed Process method following Amemiya (1973); Heckman (1978, 1976); Schmidt (1978); Wilde (2000). This model allows for an instrumental variable estimation using a system of simultaneous equations and different kinds of dependent variables (continuous, binary, ordinal, multinomial) with estimations based on the normal distribution of the errors. Moreover, as we have almost the same explanatory variables in each equation, it is interesting to use such models².

Alternative estimations, such as probit and OLS for separate equations can also be used to answer similar questions to ours. However, assuming linearity with binary data could lead to biased and inconsistent estimators (Horrace and Oaxaca, 2006). Nevertheless, a robustness check section is added to test for the robustness of the results to other alternative estimations. As we have mentioned before, we need to add extra instruments in both social and economic integration equations in order to handle endogeneity issues. To summarize, we finally decide upon three equations to estimate simultaneously, using the Conditional Mixed Process that takes into account simultaneity and endogeneity issues at the same time. The system of equations to estimate is as follows:

$$\begin{cases} \text{Intention to stay}_i^* = \beta_{01} + \beta_{11} \cdot \text{Social integration}_i + \beta_{21} \cdot \text{Employment}_i^* + \gamma_1 \cdot \text{Controls}_i + \epsilon_{1i} \\ \text{Employment}_i^* = \beta_{02} + \beta_{12} \cdot \text{Social integration}_i + \gamma_2 \cdot \text{Controls}_i + \delta_1 \cdot \text{Instrument}_{1i} + \epsilon_{2i} \\ \text{Social integration}_i = \beta_{03} + \beta_{13} \cdot \text{Employment}_i^* + \gamma_3 \cdot \text{Controls}_i + \delta_2 \cdot \text{Instrument}_{2i} + \epsilon_{3i} \end{cases}$$

Where $\beta_{01}, \beta_{02}, \beta_{03}$ are constants to estimate, $\beta_{11}, \beta_{21}, \beta_{12}$ and β_{13} are the coefficient associated to the causal relationships to estimate between the three endogenous variables of the system, γ_1, γ_2 and γ_3 are vectors to estimate including the coefficients associated to the control variables listed before. δ_1 and δ_2 are the coefficients of the instruments used in the employment and the social integration equations in order to satisfy the identification assumption. $\text{Intention to stay}_i^*$ and Employment_i^* are respectively the latent variables for the intention to

²The command to install the Conditional Mixed Process capabilities in Stata is `cmp` (Roodman, 2011).

stay permanently in Germany among Syrian refugees and the employment status dummy variables, $Socialintegration_i$ is the continuous variable that corresponds to the social integration indicator constructed, $i = 1, \dots, 1890$. Finally, ϵ_{1i} , ϵ_{2i} and ϵ_{3i} are centered error terms with normal distributions. The estimation is based on reproducing the reduced form from the system of equations, computing the likelihood for a given observation i from the joint density for the three variables of interest, then maximizing the log-likelihood function for all the observations in order to obtain the coefficients estimated. The instruments used are the following:

- Instrument in the Social integration equation: We use the reciprocity social norm that gives the response of someone to a positive or negative action by someone else (Fehr and Schmidt, 2006; Perugini et al., 2003). The survey contains several questions about reciprocity. We construct an index from several negative reciprocity actions which responds to the degree of agreement about the statements: “If someone insults me, I will insult him.”, “If someone does me a serious wrong, I will get my own back at any price at the next opportunity”, “If somebody puts me in a difficult position, I will do the same to them”. Specifically, each variable is ordinal with 7 categories running successively from 1 (“I totally disagree”) to 7 (“I totally agree”).

We use also the polychoric principal component analysis (PCA) from these statements and extract the first principal component in order to construct the negative reciprocity index. The identification strategy is that this variable would have a direct negative effect on social integration since reciprocity strongly impacts social connections and their sustainability (Phillimore et al., 2018). Moreover, it deals directly with their social behavior, which can not directly impact their economic integration nor their intention to stay permanently; it can only do this through its impact on social integration.

One could argue that negative reciprocity could impact non-cognitive skills that would impact economic integration. However, we are dealing only with employment status, and most studies that deal with the impact of reciprocity focus, rather, on the impact on wages and not simply on the probability to find a job (Charness, 2004; Akerlof and Yellen, 1990).

We should mention that the complexity of the social integration measure and the understanding of this integration component made the choice of the instrument challenging. We had to develop many ideas in order to find an adequate instrument that fits the intuition of the identification strategy and reports a significant impact on the endogenous social integration variable at the same time. For instance, any type of social discrimination in the county of residence would necessarily reflect a common discriminatory behaviour in the recruitment process, which would impact the economic integration. We made other test at county level that included the level of depression of the local population, which would impact the social integration of the refugees. However, we did not successfully obtain statistical significance for these types of indicators. The negative reciprocity index was the instrument we retained in this study, as it is the measure that most fully satisfies the identification strategy and provides statistical significance.

- Instrument in the economic integration equation given by the employment status: Following Bevelander and Lundh (2007), the conditions of the local labor market in the host country are strong predictors for employment among refugees. Hence, we propose the unemployment rate among foreigners in Germany (including refugees) in the county of residence in which each refugee resides, including all nationalities. We consider the rate in 2011 in order to not take into account the unemployment rate among Syrian refugees and to make the instrument exogenous. It could be argued that the unemployment rate among foreigners is directly related to the unemployment rate in the county and which could increase the amount of discrimination towards refugees and their social integration. That is why considering the unemployment rate among foreigners in 2011 can handle this potential identification strategy violation. Hence, this variable would increase the probability to work in the county of residence without directly impacting the social integration or the intention to stay permanently since it reflects the labor market situation, hence the economic activity, of the county of residence starting before the arrival of Syrian refugees and does not deal directly with social inclusion. This variable was downloaded from the

official regional unemployment statistics published by the German Labor Office.

We are conscious about the selectivity biases potentially existing when working on the employment variable without selecting only the sample of the active people and correcting for this selectivity bias. However, the complexity of the model used and the existing endogeneity issues do not allow us to have numerous instruments that could satisfy the exclusion restrictions.

Finally, we should mention that we cluster the standard errors at the household-level, since most decisions of different individuals in the same household are not independent of each other, particularly for the intended duration to stay.

4 Results

Table 2 reports the results of the simultaneous equation models in which the three equations of interest are estimated (including the intention to stay permanently in Germany, economic integration and social integration).

Beginning with the equation of the intention to stay permanently, we first find that the social integration has a significant positive impact, indicating that people who are more socially integrated are more likely to stay permanently in Germany. However, there is no evidence about a significant impact of economic integration on the intention to permanently reside in Germany.

Therefore, it is social integration that matters for the decision to stay permanently in Germany, rather than the employment status of immigrants. In a way, this finding supports that of the neoclassical theory about how integration success increases the incentives to stay in the host country, but it does so in a way that corresponds only to the social integration component. Hence, in this special context of Syrian refugees, economic integration in terms of access to employment is a way to better integrate in the German economic sphere and to provide for basic needs rather than a motivating factor to remain in Germany in the long-run.

For the other controls, Table 2 shows that the governorate of origin almost does not affect the intention to stay permanently in Germany. Moreover, being single decreases the intention to stay permanently in Germany. This result is in line with the findings of Massey and Espinosa (1997) who found that being married reduces the odds of return migration among Mexican migrants in the US.

The level of education is also a determinant with negative and significant coefficients for all educational levels except for the doctoral level in comparison to those that have a primary educational level. This means that the more educated the refugees are, the less they would like to stay permanently in Germany. This result is in line with the first trend of literature that points out this effect (Ramos, 1992; Jasso and Rosenzweig, 1988). However, the results show that the Syrian refugees who have received an education outside Syria are less likely to stay. This result is explained by the fact that studying abroad could be highly valued in the country of origin, allowing them to get good jobs (Borjas, 1989).

Moreover, we also find that people who have at least one child in Germany are particularly less likely to intend to stay permanently. This result is consistent with Dustmann (2003) who shows a positive impact of children on the return decision for families with a higher share of daughters among Turkish immigrants in Germany. This result is explained by the preferences of parents for preserving traditions of female offsprings. In the case of Syrian refugees, about 55 per cent of refugees have a higher share of daughters. Finally, we find that the number of friends from other countries decreases the incentives to stay permanently.

Considering the equation of economic integration as measured by employment status, the unemployment rate among all the foreigners in Germany of the same county in 2011, used as instrument in this equation has a significant coefficient at 10%, with the expected negative sign. Precisely, this rate reflects the labor market situation in the same county in which each refugee resides before the arrival of the big waves of refugees in Germany (especially in 2015 and 2016). The estimation provides an evidence of a positive and significant impact of social integration on

finding a job. This result is consistent with the fact that social integration may help people to find a job and facilitates the integration in the economic sphere. Indeed, using an innovative social integration indicator, this result is in contradiction with what was found by Danzer and Ulku (2011) and who showed that only political integration matters for economic integration for a sample of the Turkish community in Berlin.

As we are also interested in the other factors that would impact economic integration, we find that people that come from Homs, Latakia and Rif-Dimashq are more likely to find a job than those that come from Aleppo. Moreover, we find that females have less chances to work in comparison to males and that the probability to find a job decreases with the arrival year. Specifically, those who arrived in 2013 and 2014 are more likely to find a job than those who arrive in 2015, and the result is reversed for those who arrive in 2016.

Moreover, we find that people from Syria who have at least one child in Germany are less likely to work. This is maybe due to the fact that these people have less time to search for a job but also their expectations in terms of job and income are higher because they would like to provide enough resources for their children.

However, the results show that the number of Syrian friends decreases the probability to work. This finding is consistent with the literature that shows that the ethnic enclaves can limit opportunities to integrate into the host society, corresponding with less contact with natives and fewer efforts made to learn the native language (Chiswick and Miller, 1996). Controversially, the number of friends from other countries has a positive impact on the probability to find a job.

Another determinant of economic integration is the English speaking proficiency that is beneficial for finding a job. As only a small proportion of refugees speak German, usually they use English, which is the second language most foreigners use and is comprehensible to the natives. Hence, being fluent in English facilitates economic integration and even the learning of German.

Moreover, the results show that work experience matters for the probability to find a job. This variable has a positive coefficient which is significant at the one percent level.

Finally, we find that living in a refugee accommodation decreases the probability to find a job. This result is consistent with that found by De Vroome and Van Tubergen (2010) and is explained by the fact that being in a refugee reception center limits contact with native people and the opportunities to find a job.

For the social integration equation, the instrument used has a negative coefficient significant at the 1 per cent level, indicating that negative reciprocity negatively impacts the social integration of refugees because it deals directly with their social behaviour. This result is consistent with that argued by Phillimore et al. (2018) about the importance of reciprocity in order to develop and to sustain social connections.

Unlike Dustmann (1996), who finds no empirical evidence supporting the impact of economic integration on social integration, our results show a positive and highly significant impact, with more exposure to the host society and more opportunities to meet native people. Therefore, this result indicates that economic integration impacts indirectly the decision to stay permanently in Germany through its impact on social integration.

For the control variables, we find first that Syrian refugees that come from Homs are less socially integrated than those who come from Aleppo and that age has a negative impact on social integration. Moreover, the arrival year almost does not impact social integration.

The level of education control variables show that those who have a lower and upper secondary education levels are more integrated socially than those who have a primary educational level. However, the impact is not significant for the other educational levels.

Furthermore, we find that having a partner or a child in Germany increases the social integration of refugees. Dustmann (1996) found the same result with having a child in the same host country, especially if they attend school in Germany, which can increase the feeling of belonging to Germany (the measure of social assimilation).

Moreover, the number of friends from other countries increases social integration, which can be explained by the fact that social networks facilitate social integration in the host society.

Another explanation is the fact that Syrian refugees can learn from the experiences of other immigrants in order to successfully integrate into the German society.

However, we find that work experience prior to the arrival in Germany has a negative impact on social integration. This means that those who have no working experience are more likely to integrate socially. This confirms the results found with the age variable.

Finally, we find that residing in a refugee accommodation increases social integration. The duration of stay in a refugee accommodation allows for having more exchanges and contacts with other refugees from other countries that is in itself a form of social connection (Putnam, 1993; Woolcock, 1998) and that strongly impacts integration into German society.

5 Robustness check

The first part of our robustness check consists of estimating two by two equations (Tables 3 to 5) using the same estimation method as the original analysis, which is the conditional mixed process method with the same instruments.

Next, we estimate alternative results to compare against those we consider the most relevant results of the study and interpret in the previous section. We accomplish this using the conditional mixed process estimation, this time taking into account non-linearity and endogeneity issues with using simultaneous equations and further instruments (Table 6). We estimate separate equations for both intention to stay and employment equations using a standard probit model for binary variables (intention to stay and employment equations) and also OLS model for the three equations assuming linearity. We should mention that we tried to add fixed effects estimations, taking into account household fixed effects, but we failed to make this estimation since we have more than 1500 households.

The two by two equations estimated in Tables 3 to 5 show almost the same results as those given in the simultaneous estimation of the three equations and for the main relationships of interest except the significant impact of social integration on employment that becomes non significant in the two by two equations (social integration and employment equations). Moreover, there are some minor changes in the coefficients of the control variables.

Considering the separate estimations, we find in Table 6 that the the impact of both social and economic integration on the intention to stay permanently in Germany are robust to the changes in the estimation method (columns (1) and (2)). Moreover, there are some minor changes in the control variables estimation.

For the employment equation estimation given in columns (3) and (4), the positive impact of social integration is robust to the estimation method with using standard probit and OLS models. Moreover, there are some minor changes for the other control variables.

Finally, the results of the social integration equation in column (5) report that the positive impact of employment on social integration is also robust to the OLS standard estimation with some minor changes for the control variables.

From our robustness check, we conclude first that our results are almost robust to the two by two estimations for the main relationships of interest between the intention to stay, the economic and social integration variables. Moreover, the results are also robust to the alternative basic estimations (standard probit and OLS) with some minor changes for the control variables.

6 Conclusion

This paper aimed to investigate the impact of both social and economic integration on the intention to stay permanently in Germany and the impact of other relevant determinants from the literature. We also studied the determinants of these main components of integration and the causal relationships between them using the IAB-BAMF-SOEP Refugee Survey 2016.

The main results of this show only a significant impact of social integration on the intention to stay permanently in Germany but no evidence of a significant impact of the economic integration component. However, there is a bidirectional relationship between both social and economic integration.

Moreover, in this study we were able to investigate some interesting determinants of the intention to stay permanently and both social and economic integration components which are primarily the arrival year, the level of education, the family context with having a child in Germany, social networks, and the residence in a refugee accommodation.

While integration policies mostly focus on economic integration, the results of this study make us conclude that social integration is another important dimension of the integration process that the German government and the other social actors involved in the integration process should take into account, at least for the well-being of the refugees during their stay in Germany and also for their economic integration that is strongly determined by their social integration.

Finally, this paper does not provide an evidence that the economic integration is the key of a successful integration in order to maintain refugees in the long run to address Germany's labor shortages. Our findings show that programs should be focused on how to better integrate refugees in the German society and have a new life and a new "home" at which they could stay permanently.

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Table 1: Descriptive statistics

VARIABLES	N	mean/median	sd
Aleppo	1,890	0.235	0.424
Al-Hasakah	1,890	0.189	0.391
Ar-Raqqah	1,890	0.015	0.123
As-Suwayda	1,890	0.0049	0.0703
Damascus	1,890	0.235	0.424
Daraa	1,890	0.047	0.213
Deir ez-Zor	1,890	0.042	0.2
Hama	1,890	0.033	0.179
Homs	1,890	0.059	0.237
Idlib	1,890	0.052	0.222
Latakia	1,890	0.021	0.145
Quneitra	1,890	0.009	0.094
Rif Dimashq	1,890	0.017	0.13
Tartus	1,890	0.006	0.082
Gender	1,890	0.369	0.483
Age	1,890	35.30	10.39
Single	1,890	0.264	0.441
Arrival year 2013	1,890	0.0509	0.220
Arrival year 2014	1,890	0.237	0.425
Arrival year 2015	1,890	0.651	0.477
Arrival year 2016	1,890	0.0532	0.224
Primary education	1,890	0.116	0.320
Lower secondary	1,890	0.229	0.420
Upper secondary	1,890	0.469	0.499
Bachelor	1,890	0.0505	0.219
Master	1,890	0.00947	0.0969
Doctoral studies	1,890	0.0135	0.116
Education abroad	1,890	0.275	0.447
Sunni	1,890	0.756	0.430
Child with	1,336	0.928	0.258
Partner with	1,550	0.857	0.349
Parent with	1,890	0.197	0.398
Sibling with	1,890	0.550	0.498
N friends same country	1,890	7.550	13.30
N friends German	1,890	5.614	13.86
N friends other countries	1,890	2.731	11.65
Refugee Accommodation	1,890	0.617	0.486
Worked before	1,890	0.689	0.463
English speaking proficiency	1,890	0.365	0.482
German speaking proficiency	1,890	3	0.937
Intention to Stay	1,890	0.830	0.375
Employment	1,890	0.0902	0.286
Feeling outsider	1,890	4	1.273
Social Integration	1,890	-0.037	1.077

Table 2: Estimation results

VARIABLES	(1) Intention to stay	(2) Employment	(3) Social integration
Employment	-0.179 (0.773)		0.669*** (0.16)
Social integration	0.768*** (0.24)	0.301* (0.167)	
Al-Hasakah	0.00870 (0.177)	-0.169 (0.146)	0.105 (0.121)
Ar-Raqqah	-0.396 (0.239)	0.0503 (0.358)	0.0438 (0.244)
As-Suwayda	-0.0881 (0.364)		0.0138 (0.179)
Damascus	-0.117 (0.145)	0.0953 (0.137)	-0.0690 (0.104)
Daraa	-0.298* (0.199)	-0.199 (0.264)	0.164 (0.228)
Deir ez-Zor	-0.113 (0.244)	-0.214 (0.242)	0.204 (0.215)
Hama	-0.145 (0.187)	0.0382 (0.228)	-0.0700 (0.147)
Homs	-0.142 (0.446)	0.444** (0.208)	-0.395** (0.166)
Idlib	-0.213 (0.260)	0.186 (0.205)	-0.200 (0.155)
Latakia	0.184 (0.463)	0.527* (0.288)	-0.385 (0.236)
Quneitra	0.138 (0.338)	0.0494 (0.589)	-0.129 (0.426)
Rif Dimashq	-0.180 (0.524)	0.560* (0.323)	-0.139 (0.289)
Tartus	-0.597 (0.455)	0.145 (0.554)	-0.176 (0.373)
Gender	0.0157 (0.299)	-0.375*** (0.143)	0.0661 (0.136)
Age	0.00939 (0.00635)	0.00491 (0.00851)	-0.0150*** (0.00503)
Single	-0.513* (0.291)	0.182 (0.163)	-0.0418 (0.117)
Arrival year 2013	0.00395 (0.984)	1.249*** (0.186)	-0.516** (0.264)
Arrival year 2014	-0.218 (0.401)	0.473*** (0.116)	-0.0912 (0.122)
Arrival year 2016	0.422 (0.517)	-0.550 (0.355)	-0.00528 (0.282)
Lower secondary	-0.362*** (0.117)	-0.0375 (0.150)	0.220* (0.118)
Upper secondary	-0.559*** (0.126)	-0.0320 (0.142)	0.276** (0.108)
Bachelor	-0.402** (0.215)	-0.250 (0.259)	0.280 (0.203)
Master	-0.708* (0.404)	0.160 (0.423)	-0.0498 (0.270)
Doctoral studies	-0.157 (0.326)	-0.186 (0.409)	-0.0476 (0.326)
Education abroad	-0.181**	-0.00698	0.106

	(0.0815)	(0.115)	(0.0908)
Sunni	0.0130	-0.110	-0.0347
	(0.118)	(0.121)	(0.104)
Partner in Germany	-0.171	-0.0805	0.472*
	(0.253)	(0.258)	(0.268)
Child in Germany	-0.410*	-0.334**	0.356***
	(0.224)	(0.131)	(0.119)
Parent in Germany	0.0869	-0.0456	0.0529
	(0.113)	(0.131)	(0.103)
Sibling in Germany	-0.0727	-0.00248	0.0696
	(0.0695)	(0.0960)	(0.0752)
N friends same country	-0.00323	-0.00945**	0.00594
	(0.00866)	(0.00459)	(0.00651)
N friends other countries	-0.0196*	0.00860	0.0217***
	(0.0112)	(0.00773)	(0.00637)
English speaking proficiency	-0.274	0.195*	0.138
	(0.204)	(0.118)	(0.0950)
Worked before	0.0897	0.661***	-0.453***
	(0.529)	(0.152)	(0.126)
Refugee accommodation	-0.0566	-0.229**	0.171*
	(0.179)	(0.102)	(0.0938)
unemployment rate among foreigners		-0.00727*	
		(0.00411)	
Negative reciprocity			-0.0874***
			(0.0187)
Constant	1.257	-1.833***	1.275
	(1.885)	(0.383)	(0)
Observations	1,890	1,890	1,890

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 3: Intention to stay and Social integration equations

VARIABLES	(1) Intention to stay	(2) Social integration
Social Integration	0.709*** (0.184)	
Al-Hasakah	0.0860 (0.101)	-0.00477 (0.0596)
Ar-Raqqah	-0.374 (0.237)	0.0470 (0.159)
As-Suwayda	-0.0222 (0.416)	0.0274 (0.270)
Damascus	-0.102 (0.0904)	-0.0273 (0.0553)
Daraa	-0.254* (0.148)	0.0435 (0.0961)
Deir ez-Zor	0.0128 (0.166)	0.0508 (0.103)
Hama	-0.0954 (0.172)	-0.0406 (0.113)
Homs	-0.142 (0.153)	-0.170* (0.0900)
Idlib	-0.212 (0.152)	-0.0879 (0.0926)
Latakia	0.0182 (0.212)	-0.0890 (0.135)
Quneitra	0.0802 (0.336)	-0.199 (0.212)
Rif Dimashq	-0.164 (0.259)	0.261* (0.154)
Tartus	-0.580* (0.350)	-0.0291 (0.249)
Gender	0.0937 (0.0906)	-0.229*** (0.0503)
Age	0.00848* (0.00475)	-0.0144*** (0.00250)
Single	-0.554*** (0.128)	0.0950 (0.0686)
Arrival year 2013	-0.229 (0.171)	0.367*** (0.0918)
Arrival year 2014	-0.294*** (0.0858)	0.300*** (0.0479)
Arrival year 2016	0.491*** (0.158)	-0.420*** (0.0871)
Lower secondary	-0.308*** (0.104)	0.207*** (0.0586)
Upper secondary	-0.588*** (0.0982)	0.303*** (0.0580)
Bachelor	-0.325** (0.158)	0.131 (0.0980)
Master	-0.705** (0.300)	0.0118 (0.199)
Doctoral studies	-0.306 (0.277)	-0.176 (0.174)
Education abroad	-0.181** (0.0760)	0.116** (0.0501)
Sunni	0.0723	-0.126***

	(0.0787)	(0.0477)
Partner in Germany	-0.0717	0.496***
	(0.243)	(0.129)
Child in Germany	-0.379***	0.153***
	(0.0941)	(0.0537)
Parent in Germany	0.0914	0.0389
	(0.0923)	(0.0559)
Sibling in Germany	-0.0575	0.0890**
	(0.0685)	(0.0423)
N friends same country	-0.00135	-0.000227
	(0.00256)	(0.00160)
N friends other countries	-0.0212***	0.0343***
	(0.00757)	(0.00181)
English speaking proficiency	-0.280***	0.346***
	(0.0939)	(0.0477)
Worked before	-0.0172	-0.0132
	(0.0809)	(0.0522)
Refugee accommodation	-0.0211	0.0307
	(0.0653)	(0.0409)
Negative reciprocity		-0.107***
		(0.0201)
Constant	1.585***	-0.0498
	(0.296)	(0.134)
Observations	1,890	1,890

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 4: Intention to stay and Employment equations

VARIABLES	(1) Intention to stay	(2) Employment
Employment	0.383 (0.659)	
Al-Hasakah	0.142 (0.146)	-0.156 (0.143)
Ar-Raqqah	-0.365 (0.301)	0.0488 (0.406)
As-Suwayda	-0.118 (0.430)	
Damascus	-0.167 (0.106)	0.0700 (0.130)
Daraa	-0.275 (0.252)	-0.121 (0.226)
Deir ez-Zor	-0.00262 (0.228)	-0.149 (0.274)
Hama	-0.360* (0.194)	0.189 (0.229)
Homs	-0.493*** (0.189)	0.329* (0.190)
Idlib	-0.428** (0.170)	0.121 (0.213)
Latakia	-0.150 (0.408)	0.470 (0.295)
Quneitra	-0.0423 (0.550)	0.470 (0.433)
Rif Dimashq	-0.438 (0.404)	0.553* (0.295)
Tartus	-0.935*** (0.362)	0.322 (0.417)
Gender	0.125 (0.315)	-0.440*** (0.123)
Age	-0.000955 (0.00509)	-0.00148 (0.00622)
Single	-0.622*** (0.156)	0.155 (0.155)
Arrival year 2013	-0.369 (0.880)	1.248*** (0.166)
Arrival year 2014	-0.339 (0.335)	0.553*** (0.101)
Arrival year 2016	0.485 (0.443)	-0.701* (0.404)
Lower secondary	-0.220 (0.136)	0.0114 (0.140)
Upper secondary	-0.436** (0.173)	0.0243 (0.138)
Bachelor	-0.185 (0.344)	-0.285 (0.263)
Master	-0.883** (0.388)	0.134 (0.402)
Doctoral studies	-0.215 (0.456)	-0.296 (0.441)
Education abroad	-0.102 (0.0931)	0.00790 (0.110)
Sunni	0.00441	-0.176*

	(0.160)	(0.103)
Partner in Germany	0.200	0.0906
	(0.277)	(0.258)
Child in Germany	-0.166	-0.236*
	(0.263)	(0.129)
Parent in Germany	0.116	0.0117
	(0.113)	(0.122)
Sibling in Germany	-0.0212	-0.0144
	(0.0824)	(0.0992)
N friends same country	0.000459	-0.00814**
	(0.00690)	(0.00405)
N friends other countries	-0.00288	0.0181***
	(0.0141)	(0.00576)
English speaking proficiency	-0.166	0.280***
	(0.189)	(0.108)
Worked before	-0.281	0.655***
	(0.435)	(0.142)
Refugee accommodation	0.0955	-0.229**
	(0.162)	(0.0949)
unemployment rate among foreigners		-0.00706
		(0.00687)
Constant	2.481***	-1.662***
	(0.646)	(0.347)
Observations	1,890	1,890

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 5: Employment and social integration

VARIABLES	(1) Social integration	(2) Employment
Employment	0.71** (0.314)	
Social integration		0.324 (0.304)
Al-Hasakah	0.112 (0.132)	-0.168 (0.151)
Ar-Raqqah	0.0389 (0.332)	0.0496 (0.421)
As-Suwayda	0.0123 (0.211)	
Damascus	-0.0751 (0.112)	0.0982 (0.134)
Daraa	0.167 (0.203)	-0.194 (0.242)
Deir ez-Zor	0.207 (0.230)	-0.210 (0.286)
Hama	-0.0696 (0.212)	0.0372 (0.261)
Homs	-0.411* (0.215)	0.445** (0.202)
Idlib	-0.207 (0.186)	0.188 (0.221)
Latakia	-0.406 (0.294)	0.528* (0.298)
Quneitra	-0.124 (0.437)	0.0455 (0.552)
Rif Dimashq	-0.170 (0.336)	0.559* (0.320)
Tartus	-0.183 (0.406)	0.148 (0.472)
Gender	0.0847 (0.175)	-0.371** (0.149)
Age	-0.0150*** (0.00520)	0.00522 (0.00782)
Single	-0.0544 (0.147)	0.185 (0.165)
Arrival year 2013	-0.570 (0.479)	1.238*** (0.237)
Arrival year 2014	-0.113 (0.207)	0.466*** (0.148)
Arrival year 2016	0.0290 (0.374)	-0.549 (0.437)
Lower secondary	0.221* (0.120)	-0.0455 (0.170)
Upper secondary	0.275** (0.120)	-0.0409 (0.177)
Bachelor	0.289 (0.222)	-0.253 (0.274)
Master	-0.0688 (0.349)	0.173 (0.407)
Doctoral studies	-0.0323 (0.371)	-0.189 (0.459)
Education abroad	0.104	-0.00843

	(0.0927)	(0.120)
Sunni	-0.0301	-0.105
	(0.0998)	(0.116)
Partner in Germany	0.464**	-0.0853
	(0.221)	(0.306)
Child in Germany	0.362**	-0.332**
	(0.143)	(0.143)
Parent in Germany	0.0559	-0.0482
	(0.107)	(0.131)
Sibling in Germany	0.0669	-0.00181
	(0.0833)	(0.106)
N friends same country	0.00633	-0.00944**
	(0.00476)	(0.00456)
N friends other countries	0.0209***	0.00782
	(0.00773)	(0.0125)
English speaking proficiency	0.125	0.188
	(0.135)	(0.157)
Worked before	-0.477*	0.657***
	(0.249)	(0.150)
Refugee accommodation	0.180*	-0.231**
	(0.106)	(0.0991)
Negative reciprocity	-0.0829***	
	(0.0205)	
unemployment rate among foreigners		-0.00709**
		(0.00316)
Constant	1.355*	-1.836***
	(0.721)	(0.368)
Observations	1,890	1,890

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 6: Alternative results

VARIABLES	(1)	(2)	(3)	(4)	(5)
	Intent. to stay	Intent. to stay	Employment	Employment	Social integration
	Probit	OLS	Probit	OLS	OLS
Socia integration	0.0770** (0.0389)	0.0180** (0.00891)	0.238*** (0.0433)	0.0389*** (0.00643)	
Employment	-0.0548 (0.121)	-0.0164 (0.0299)			0.437*** (0.0722)
Al-Hasakah	0.144 (0.112)	0.0296 (0.0246)	-0.176 (0.143)	-0.0208 (0.0179)	-0.00794 (0.0600)
Ar-Raqqah	-0.379 (0.256)	-0.0958 (0.0655)	0.00485 (0.408)	0.00345 (0.0477)	-0.00359 (0.160)
As-Suwayda	-0.0440 (0.469)	-0.0142 (0.113)		-0.103 (0.0822)	-0.00164 (0.276)
Damascus	-0.136 (0.0964)	-0.0291 (0.0229)	0.0651 (0.127)	0.00943 (0.0167)	-0.0429 (0.0559)
Daraa	-0.294* (0.159)	-0.0749* (0.0398)	-0.162 (0.229)	-0.0181 (0.0289)	0.0192 (0.0970)
Deir ez-Zor	0.00756 (0.180)	0.00673 (0.0425)	-0.221 (0.282)	-0.00366 (0.0309)	0.0188 (0.104)
Hama	-0.239 (0.178)	-0.0602 (0.0462)	0.192 (0.230)	0.0431 (0.0336)	-0.0316 (0.113)
Hama	-0.353** (0.144)	-0.0856** (0.0368)	0.305 (0.188)	0.0386 (0.0267)	-0.199** (0.0895)
Idlib	-0.341** (0.152)	-0.0834** (0.0383)	0.141 (0.214)	0.0223 (0.0279)	-0.115 (0.0934)
Latakia	-0.0759 (0.232)	-0.00946 (0.0564)	0.464 (0.291)	0.0600 (0.0410)	-0.167 (0.137)
Quneitra	0.0160 (0.371)	0.00268 (0.0866)	0.467 (0.428)	0.0689 (0.0630)	-0.241 (0.211)
Rif Dimashq	-0.173 (0.258)	-0.0419 (0.0620)	0.518* (0.290)	0.0666 (0.0451)	0.180 (0.151)
Tartus	-0.649* (0.353)	-0.214** (0.101)	0.498 (0.398)	0.137* (0.0732)	-0.126 (0.246)
Gender	-0.0205 (0.0865)	-0.00385 (0.0208)	-0.363*** (0.121)	-0.0292* (0.0151)	-0.179*** (0.0506)
Age	-0.000976 (0.00442)	-0.000154 (0.00104)	0.00635 (0.00622)	0.000638 (0.000753)	-0.0136*** (0.00251)
Single	-0.607*** (0.123)	-0.141*** (0.0282)	0.175 (0.150)	0.0221 (0.0205)	0.0353 (0.0688)
Arrival year 2013	-0.0117 (0.172)	-0.00687 (0.0387)	1.264*** (0.160)	0.242*** (0.0277)	0.269*** (0.0942)
Arrival year 2014	-0.122 (0.0824)	-0.0320 (0.0201)	0.533*** (0.101)	0.0849*** (0.0145)	0.252*** (0.0486)
Arrival year 2016	0.290* (0.169)	0.0566 (0.0362)	-0.612 (0.397)	-0.00689 (0.0263)	-0.408*** (0.0877)
Lower secondary	-0.211* (0.113)	-0.0362 (0.0240)	-0.0671 (0.142)	-0.0137 (0.0175)	0.230*** (0.0584)
Lower secondary	-0.498*** (0.107)	-0.105*** (0.0238)	-0.0633 (0.138)	-0.00981 (0.0173)	0.310*** (0.0577)
Bachelor	-0.285 (0.174)	-0.0441 (0.0406)	-0.0611 (0.231)	-0.0101 (0.0295)	0.169* (0.0989)
Master	-0.857*** (0.308)	-0.219*** (0.0835)	-0.00991 (0.394)	0.000931 (0.0607)	0.0108 (0.204)

Doctoral studies	-0.500*	-0.104	-0.483	-0.0480	0.126
	(0.287)	(0.0716)	(0.444)	(0.0521)	(0.175)
Education abroad	-0.136*	-0.0376*	0.00639	0.000861	0.112**
	(0.0821)	(0.0207)	(0.108)	(0.0151)	(0.0505)
Sunni	6.00e-05	-0.000606	-0.149	-0.0242*	-0.0921*
	(0.0826)	(0.0196)	(0.102)	(0.0142)	(0.0477)
Partner in Germany	0.303	0.0733	-0.0801	0.0131	0.475***
	(0.232)	(0.0537)	(0.253)	(0.0391)	(0.130)
Child in Germany	-0.323***	-0.0653***	-0.383***	-0.0446***	0.155***
	(0.104)	(0.0222)	(0.125)	(0.0161)	(0.0541)
Parent in Germany	0.115	0.0299	-0.0385	-0.0110	0.0495
	(0.0963)	(0.0229)	(0.122)	(0.0167)	(0.0559)
Sibling in Germany	-0.0153	-0.00506	-0.0166	-0.00485	0.0756*
	(0.0732)	(0.0175)	(0.0986)	(0.0127)	(0.0427)
N friends same country	-0.00209	-0.000486	-0.00870**	-0.000781	0.000258
	(0.00281)	(0.000668)	(0.00441)	(0.000485)	(0.00163)
N friends other countries	0.00130	0.000209	0.0100*	0.00113*	0.0330***
	(0.00422)	(0.000816)	(0.00569)	(0.000593)	(0.00186)
English speaking proficiency	-0.0655	-0.0182	0.207*	0.0267*	0.333***
	(0.0813)	(0.0199)	(0.107)	(0.0145)	(0.0481)
Worked before	-0.00247	0.00116	0.601***	0.0608***	-0.0137
	(0.0887)	(0.0215)	(0.137)	(0.0156)	(0.0525)
Refugee accommodation	0.0129	0.000919	-0.230**	-0.0322***	0.0396
	(0.0711)	(0.0169)	(0.0929)	(0.0123)	(0.0412)
Constant	1.874***	1.017***	-1.905***	0.0620	-0.109
	(0.241)	(0.0547)	(0.327)	(0.0398)	(0.133)
Observations	1,890	1,890	1,890	1,890	1,890
R-squared		0.061		0.132	0.319

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1