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Working Paper

Refugees' integration into the Austrian labour market: Dynamics of occupational mobility and job-skills mismatch

wiiw Working Paper, No. 188

Provided in Cooperation with:

The Vienna Institute for International Economic Studies (wiiw) - Wiener Institut für Internationale
Wirtschaftsvergleiche (wiiw)

Suggested Citation: Leitner, Sandra M.; Landesmann, Michael (2020) : Refugees' integration into the Austrian labour market: Dynamics of occupational mobility and job-skills mismatch, wiiw Working Paper, No. 188, The Vienna Institute for International Economic Studies (wiiw), Vienna

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OCTOBER 2020

Working Paper 188

Refugees' Integration into the Austrian Labour Market:

Dynamics of Occupational Mobility and Job-Skills Mismatch

Sandra M. Leitner and Michael Landesmann



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Dynamics of Occupational Mobility and Job-Skills Mismatch

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Abstract

This paper analyses the employment experiences of the recent wave of Middle Eastern refugees (from Syria, Iraq, Afghanistan and Iran) in the Austrian job market. The emphasis in this research was to investigate whether refugees experienced an initial (sharp) downgrade in their occupational status when they accepted their first employment, compared with the occupation they had in their home country, and then whether (and to what extent) such a downgrade had been followed by an upgrade in the jobs they currently held. This U-shaped pattern of occupational trajectories is familiar in the migration literature, and it is here tested using data from two survey waves of recent refugees in the Austrian labour market. The paper also analyses, in its second part, subjective assessments of refugees as to whether they feel that they are 'over-' or 'under-' qualified (regarding their previous educational attainment levels and work experiences) for the jobs in which they are currently employed. In both exercises, we report results regarding the heterogeneity across groups of refugees by age, gender, their specific occupations in their home country, their educational attainment levels, their country of origin, and whether they obtained refugee status as first-time asylum applicants or through family reunion. We also refer, in the second part, to the issues of refugees' mental state and their degree of social integration with the host population.

Keywords: Refugees, occupational trajectories, job-skills mismatch, Austria, refugees from Middle East, migrants' job-market integration

JEL classification: J15, J24, J61, J62

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1. Introduction

Migrants have great difficulty in finding and sustaining employment that is commensurate with their skills and experience. Very often, at least initially, they end up in occupations for which they are overqualified, which leaves their human capital underutilised and detrimentally affects their productivity, wages and welfare. Several existing studies document that the overeducation of migrants as compared to natives is a prevalent and widespread phenomenon in many countries (see, for example, Biagi et al. (2020), OECD/European Union (2014) or Sparreboom and Tarvid (2017) for recent cross-country comparative analyses). However, with time spent in the destination country and the acquisition of additional human capital and labour market experience, their prospects of ascending the occupational ladder seem to improve.

Very little is still known about the occupational mobility and **occupational trajectories of refugees**, who face unique circumstances. In contrast to labour migrants, who move for economic motives, refugees are forced to leave their home countries – often without much preparation. This gives them little opportunity to choose the country of destination according to the transferability and optimal match of their human capital; refugees are typically ill-prepared in terms of language skills, and often lack the necessary papers and certificates (or face difficulties in having these recognised); many refugees have experienced violent and traumatic events in their countries of origin, on the routes of escape or after arrival in the asylum destination country, which makes them more prone to trauma-related mental and physical health problems; usually, they no longer have the option of returning home (to their families); and, typically, they have smaller social networks to fall back on than labour migrants. All these factors put them at a disadvantage in the adjustment and integration process in the host country, and adversely affect their occupational mobility.

Refugees generally have also a bigger cultural and linguistic distance from the host country because their migration is determined by (exogenous) humanitarian factors such as war and disaster, which often implies that they come from countries/regions that do not have traditional links with the country in which they apply for asylum. The criteria that may apply in regular migration policy regimes (prior language skills, and proof that the prospective migrants can support themselves and their families) do not apply in the case of refugees, who have the right to be considered under the conditions of the Geneva Convention. Unlike labour migrants, who move for economic motives and make preparations regarding economic and social integration possibilities in the prospective host country, the situation can be quite different for refugees, who might find that their occupational skills are not easily transferable to the host countries. However, the special circumstances of their departure from their home country and the relative irreversibility of their move might mean that there could be a very high incentive to make a special effort to readjust their lives and use available resources for integration into the country that grants asylum.

Therefore, the following hypothesis lends itself to empirical investigation: refugees experience a sharp initial decline in occupational status and a (delayed) and then potentially steep subsequent recovery.

One important reason for the scarcity of empirical studies in this line of research is the shortage of the type of longitudinal information needed for this analysis. Frequently, empirical studies cannot take the home-to-host country transition into account as records of immigrant occupations often only include information about the time in the destination country and lack relevant information about the time in the home country. Additional interviews and special surveys often help to fill this gap.

Against this backdrop, the aim of the current analysis is twofold. First, it focuses on a recent wave of refugees in Austria and examines their occupational mobility from their countries of origin to Austria and then in the Austrian labour market. It takes account of the heterogeneity among refugee groups along different important dimensions – such as level of education, age, gender, country of origin, time of arrival etc. – and attempts to identify whether and to what extent observable trajectories differ. Second, it sheds light on possible relationships between job-skills mismatches and issues such as mental health, (perceived) discrimination, social integration (social networks), satisfaction with life in Austria, further migration plans and refugees' financial situations.

The analysis uses novel and unique surveys conducted among recent refugees in Austria – particularly those from Syria, Afghanistan, Iraq and Iran – and contains, *inter alia*, detailed information about their pre- and post-migration occupational profiles. During the escalation of the war in Syria, the influx of refugees was particularly high in the years 2014 to 2016, and Austria received one of the highest refugee inflows per capita in Europe, along with Germany and Sweden. In Germany, about 1.2 million asylum seekers were registered in 2015 and 2016, compared with 199,000 in Sweden and 131,000 in Austria. On a per capita basis, Sweden registered 17 asylum applications per 1,000 inhabitants in 2015 (in 2016 this came down to three per 1,000), Austria ten (reduced in 2016 to five) and Germany six (increased in 2016 to nine).¹ Although previous post-WWII refugee flows into Austria were predominantly from other European countries, the most recent refugee influx is the first significant refugee inflow from outside Europe. Integrating these refugees into the Austrian economic and sociocultural fabric is a significant challenge as they are diverse in terms of age, cultural and religious background, languages spoken and levels of education, and have a greater cultural distance in relation to Austria than was the case for past refugee flows. Experiences with this group of refugees are of particular importance, therefore, as one can expect 'South-North' migration and refugee flows into Europe to become more dominant in the future.

The rest of the paper is structured as follows: section 2 discusses theoretical considerations and provides empirical evidence on occupational mobility of refugees in some countries. Section 3 discusses the underlying data as well as the methodological approach taken in the analysis. The results on occupational trajectories differentiated by various important factors are presented and discussed in section 4. Section 5 takes a closer look at the phenomenon of job-skills mismatch among refugees and attempts to identify a variety of factors that relate to refugees' feeling that they are 'overqualified' (or, in much fewer instances, 'underqualified') for the jobs in which they are currently employed. Finally, section 6 summarises the most important results and provides some conclusions.

¹ Eurostat, Asylum Statistics: https://ec.europa.eu/eurostat/statistics-explained/index.php/Asylum_statistics

2. Occupational mobility: theoretical considerations and empirical evidence

Conceptually, the process of occupational mobility is commonly explained by the assimilation hypothesis that advocates that immigrants' occupational mobility follows a U-shaped pattern, characterised by a decrease in occupational status from the last job in the country of origin to the first job in the destination country and a subsequent increase in occupational status there. The initial drop in occupational status is the result of the limited transferability of immigrants' skills, education and experience acquired prior to migration. The lower the degree of transferability, the more pronounced the drop will be. After migration, however, as immigrants spend more time in the destination country, they invest in and acquire additional human capital and experience that helps them to improve their occupational status and climb up the occupational ladder (Duleep and Regets, 1999; Chiswick and Miller, 2009, 2012; Chiswick et al., 2005).

Empirical evidence generally corroborates the assimilation hypothesis and suggests that the steeper the initial loss in occupational status, the steeper the subsequent recovery; and also that the depth of the U differs by immigrants' human capital and demographic characteristics. In particular, the U tends to be more pronounced for migrants with high-status occupations in their home country, women, refugees (compared with family migrants or economic migrants), and migrants from countries that are culturally and linguistically very different from the destination country: furthermore, conditions in the country of destination as regards degree recognition, access to supporting complementary skill acquisition and labour market integration policies matter (see, for example, Akresh, 2008; Bauer and Zimmermann, 1999; Chiswick et al., 2005; Fernandez and Ortega, 2008; Kogan, 2006 and 2011; Fellini and Guetto, 2018; Fernandez and Ortega, 2008; Fernández-Macías et al., 2015; Mahuteau and Junankar, 2008; Simón et al., 2014; Rooth and Ekberg, 2006; Sánchez-Soto and Singelmann, 2017).

Persons who acquire refugee status through family reunion are in a somewhat different situation from the members of their family who reached the country of destination first: job search and job opportunities become more a family decision on employment, on incomes, on the allocation of other tasks that have to be performed and therefore on household characteristics (such as age composition, persons to look after, etc.). The positions of different family members in terms of occupational status thus depend on relative opportunities, incentives and cultural traditions of family structures. More generally, gender differences are important and the literature often finds a stronger decline in occupational status of women than of men and not necessarily a recovery, as women often face additional pressures to initially provide for their family such as to support their husbands as they attempt to acquire more qualifications and search for better jobs and, once family income is somewhat secured, might spend more time on non-market activities (Duleep and Sanders, 1993, Baker and Benjamin, 1997, Duleep and Dowhan, 2002, Crespo et al., 2014).

Another important aspect with regard to initial occupational placement and subsequent occupational mobility patterns is the role of co-ethnic networks. These do provide initial support to find a job and provide for their families (Mullan, 1989); however, there is also evidence that such network links might limit job placements to particular "labour market niches" (specific "immigrant jobs") and this might be an

added factor of reducing the scope for occupational mobility afterwards (Goel and Lang, 2010, Patel and Vella, 2013, Mahuteau and Junankar, 2008, Vono and Vidal, 2012). The situation would be different with developing closer relationships with the host population (also a function of how this society operates in different localities at the civil society or policy level) that might ease access to jobs beyond such niches and also provide better opportunities to upgrade occupational status over time.

Another issue that is well discussed in the literature are the characteristics of the labour market in the host country. In particular, a number of papers emphasise the role of 'labour market segmentation' (Gordon et al., 1982; Gordon, 1995) which is an important factor in inhibiting migrants to move from low-wage, low occupational status positions in 'secondary' labour markets (with less secure, more cyclical jobs, often also without formal employment contracts) to positions in 'primary' sections of the labour market. The evidence suggests that crossing boundaries between such 'dual' structures of the labour market in a 'vertical' direction (i.e. across such segments) is difficult and – if occupational mobility occurs – it would be within the secondary sections of the labour market. These tendencies might get accentuated when there is additionally labour market segmentation along ethnic lines leading to 'ethno-stratification' (see Gordon, 1995; Bauer and Zimmermann, 1999; Fassmann, 1997; Kogan, 2004, Martinez-Pastor, 2014). A number of comparative studies, and particularly studies on Spain emphasise the impact of the segmented structure of labour markets on initial occupational entry-points for migrants and subsequent patterns of occupational mobility (Aysa-Lastra and Cachon, 2013; Simon et al., 2014; Fernandez-Macias et al., 2015; Fellini and Guetto, 2018).

Of course, the nature of support that the host country provides in terms of labour market policies, human capital acquisition after arrival, ease of skill and certificate recognition, program designs tailored to the needs of specific sub-groups of migrants and refugees (differentiated by age, gender, prior education and language proficiencies, family circumstances, cultural traditions etc.) can strongly influence labour market integration more generally and occupational mobility specifically. There is a lot of scope for comparative research on the effectiveness of such programs, especially in the case of the recent wave of refugee inflows into the European labour markets (for a recent attempt to do this for Austria see Ortlieb et al., 2020). Finally, of course, the cyclicity of labour market conditions more generally (reflected in unemployment rates, activity rates etc.) affect labour demand for different occupations at different points in time and thus affect labour market entry and the possibility for occupational mobility (Kogan, 2006; Reyner and Fullin, 2011; Ballarino and Panichella, 2015).

3. Data and methodological approach

The analysis uses data from the large-scale FIMAS survey of recognised refugees and persons with subsidiary protection status, mostly from Syria, Afghanistan, Iraq and Iran, between 15 and 64 years of age, and resident in Austria. It is a unique survey dataset designed as a longitudinal dataset with a one-year re-interview interval. Currently, three survey waves are available; a fourth will become available by the end of 2020. Owing to the very small number of persons with any employment record in wave 1, we use waves 2 and 3 for this analysis. For a detailed description of the two waves of the FIMAS survey used in this paper, see ICMPD (2017) and Hosner et al. (2019).

The FIMAS surveys generally draw on two sources: the majority of the interviewees were reached by a random sampling of asylum seekers and beneficiaries of subsidiary protection who are or were previously registered with the Austrian Public Employment Service (henceforth, AMS), which was based on AMS client data. The random sampling was stratified by province and citizenship. Depending on available contact information, participants were invited via text message, email or regular mail, all of which contained a personalised link to the online questionnaire. The dataset captures the bulk of refugees who have obtained asylum status as, by law, recognised refugees are obliged to register with the AMS in order to access support services (such as initial accommodation support, financial support, and support via labour market policies). However, as not all register, despite these incentives, additional attempts to contact refugees have been made.

Further refugees participated in the survey through face-to-face interviews (which allowed us to capture persons who would not respond online), self-administered questionnaires or online questionnaires. Face-to-face interviews were conducted by trained interviewers (native speakers) in German, Arabic and Farsi on tablets at various refugee organisations and NGOs in some of the provinces' (Bundesländer) capital cities. Furthermore, respondents from the previous survey waves who had agreed to be contacted again were invited to participate online. The online questionnaires were also available in German, Arabic and Farsi. Furthermore, a helpline was set up and staffed with native speakers to assist interviewees in completing the online questionnaires. Interviewees received a shopping voucher of EUR 5-10.

The questionnaire is in parts based on that from the German IAB-SOEP refugee survey 2016 (TNS Infratest Sozialforschung 2016) and covers topics such as employment, social and cultural integration, health, education, and family and living conditions.

The second survey wave (FIMAS+) was conducted between December 2017 and April 2018 in the five Austrian provinces of Vienna, Upper Austria, Styria, Salzburg and Tyrol, and the third survey wave (FIMAS+2) was conducted between March and May 2019 in all nine Austrian provinces. The two surveys comprise samples of 1,640 and 2,403 recognised refugees and beneficiaries of subsidiary protection, respectively. Panellists (those who replied in at least two surveys) numbered only around 100 in the second wave but over 300 in the third wave.

To analyse occupational trajectories, the International Socio-Economic Index (ISEI) is used and assigned to the three-digit ISCO-08 codes in the two surveys.² ISEI is an internationally standardised measure of occupational status, developed by Ganzeboom et al. (1992) and Ganzeboom and Treiman (1996), using weighted information on income, education and occupation of around 74,000 men from 16 developing and developed countries. This index is a continuous measure of occupational status and has several advantages: first, it facilitates quantitative comparison of the occupational status of persons from different countries of origin; second, it avoids subjective and arbitrary choices of what constitute occupational gains or losses; third, it allows the capture of occupational mobility over short time periods; fourth, as a one-dimensional continuous measure, it is more amenable to multivariate analyses than are categorical variables (such as the ISCO classification), can be handled more easily methodologically and produces more readily interpretable parameters.

For the analysis, the information of refugee i 's occupational status at three different points in time is used, namely the occupational status of (i) the last job in the country of origin ($ISEI_i^{home}$), (ii) the first job in Austria ($ISEI_i^{first}$) and (iii) the current job in Austria ($ISEI_i^{current}$). The information on occupational status regarding these (potentially) three employments is collected within the same survey – the person is asked in each of the survey waves, i.e. at the same point in time – for retrospective information regarding past jobs and then about their current job. Based on this information, two distinct *occupational transitions* can be identified:

- › **First transition:** from the last job in the country of origin to the first job in Austria ($ISEI_i^{home} \rightarrow ISEI_i^{first}$)
- › **Second transition:** from the first job in Austria to the current job in Austria ($ISEI_i^{first} \rightarrow ISEI_i^{current}$)

In order not to select for the analyses only recognised refugees and beneficiaries of subsidiary protection who changed occupation in Austria, the characteristics of the first job after migration were reconstructed for some persons in the sample who were employed at the time of the interview. In particular, for those who stated that their current job was also their first (paid) job in Austria, the current job was considered to correspond to their first job and coded accordingly. For those whose current job was different from their first job, both surveys provide the characteristics of both the first and current job and no further recoding was necessary.

In general, the analysis focuses on persons with occupational information for all three points in time. To guarantee correct inferences about the total population of recognised refugees and beneficiaries of subsidiary protection resident in Austria, weights were used in the analysis.³

² ISEI was initially developed on the basis of the ISCO-68 classification and later adapted to also fit the ISCO-88 and ISCO-08 classifications.

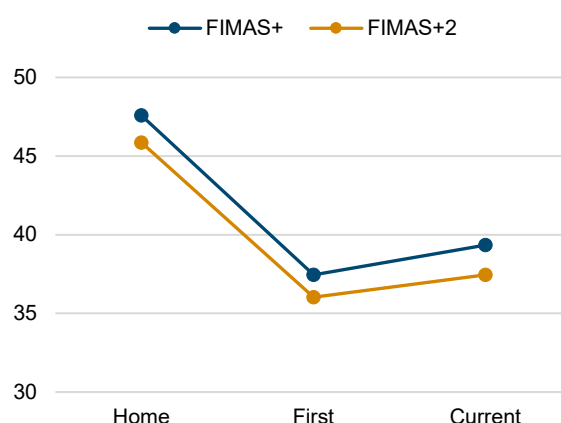
³ Weights were calculated based on a combination of three data sources. Although the number of refugees and beneficiaries of subsidiary protection resident in Austria is unknown, an estimate was calculated based on asylum decision statistics (Eurostat, 2019a, b, c, d), population statistics (Statistics Austria, 2019a) and migration statistics (Statistics Austria, 2019b). Post-stratification weights for the total sample were calculated and calibrated based on the proportions of gender by citizenship groups in this estimate and the distribution of AMS clients across federal states (AMS, 2019).

4. Occupational trajectories

Here we report the results regarding the occupational trajectories for different sub-groups of the persons in the survey. We start, however, with the sample as a whole. Figure 1 shows average population-weighted ISEI scores⁴ for both survey waves at three points in time: *home* for the last job in the home country, *first* for the first job in Austria and *current* for the current job in Austria.

Occupational trajectories follow the expected U-shaped pattern with a pronounced initial loss and a subsequent mild recovery. Both survey waves show a U-shaped pattern, with a pronounced initial drop (of around 10 ISEI score points) and a very mild recovery (of around 2 ISEI score points) thereafter. The two survey waves are very similar, both in terms of ISEI score levels as well as in patterns of occupational trajectories.

Figure 1 / Occupational trajectories by survey wave



Note: Weighted values are reported.

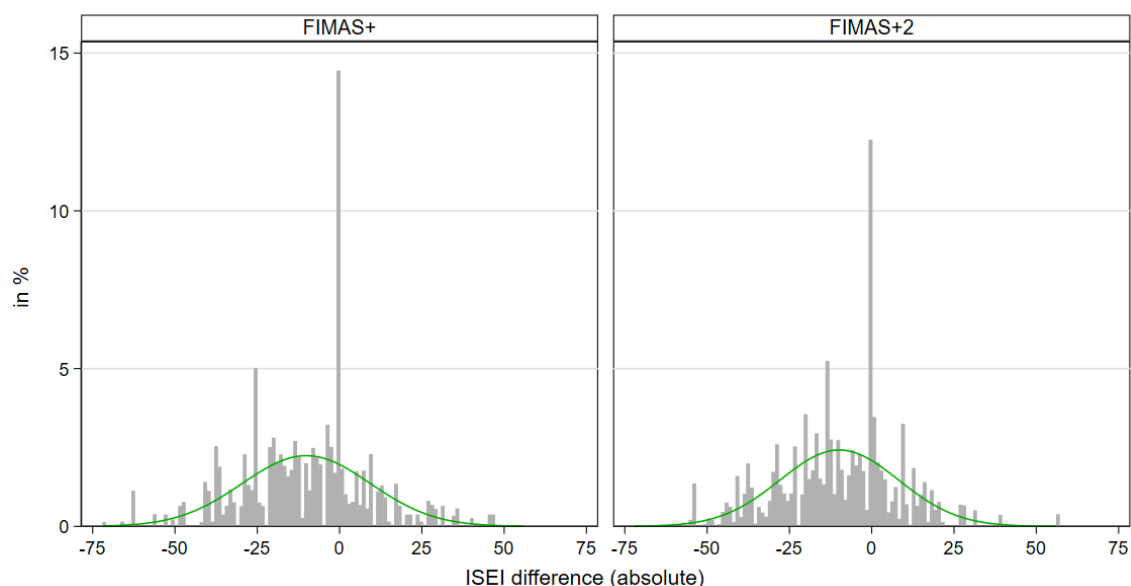
Sources: FIMAS+ and FIMAS+2; own calculations.

Although the majority of refugees underwent an occupational downgrade between their last job in their home countries and their first job in Austria, some refugees experienced an improvement of their occupational status. The histograms in Figure 2 (below) depict for both survey waves the distribution of changes in ISEI score points between the last job in the home country and the first job in Austria. They both point to a broad range in changes of between around -75 to +50 score points. This indicates that refugees had highly diverse experiences. In some cases the occupational loss was dramatic. By contrast, a non-negligible number of refugees were able to improve their occupational position. On average, however, refugees experienced a deterioration of their occupational situation (as shown in Figure 1, above). This is indicated by the peak of the normal distribution (which is superimposed on both histograms in green) which lies to the left of the zero point. Furthermore, between

⁴ These refer to gross scores, not controlling for compositional differences in basic sociodemographic characteristics (such as gender, age on arrival and level of education etc.).

10% and 15% of refugees in both waves were able to maintain their occupational status between their last job in their home countries and their first job in Austria.

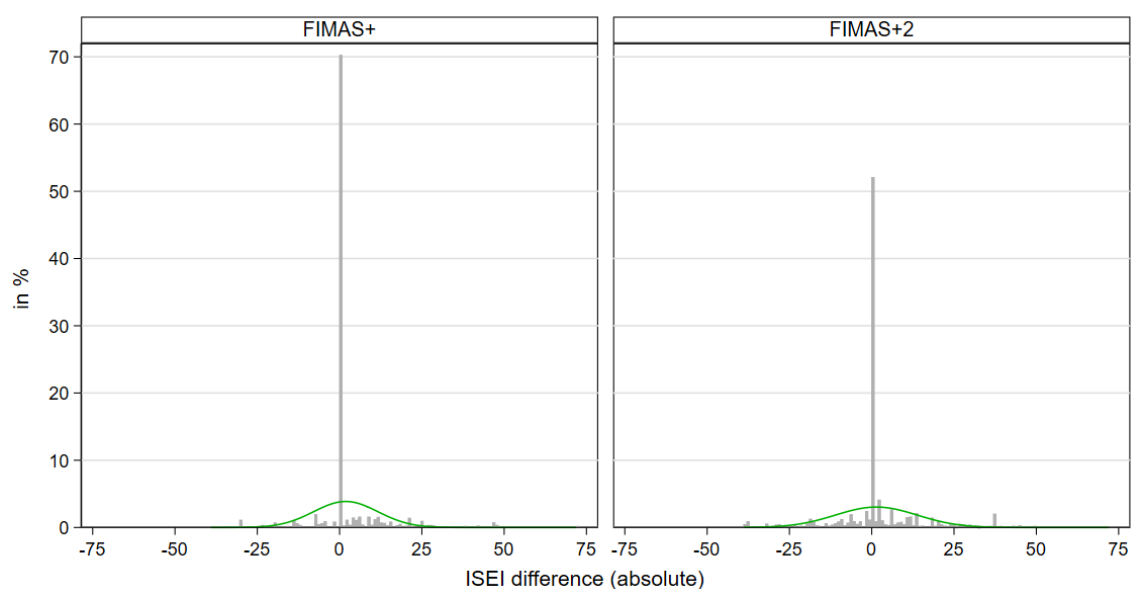
Figure 2 / Occupational change – from last job in the home country to first job in Austria



Note: Weighted values are reported.

Sources: FIMAS+ and FIMAS+2; own calculations.

Figure 3 / Occupational change – from first to current job in Austria



Sources: FIMAS+ and FIMAS+2; own calculations.

A very high share of refugees had not experienced any change in their occupational position between their first and current jobs in Austria. Generally, refugees' occupational mobility in Austria is limited: between 50% (third wave) and 70% (second wave) of all surveyed refugees maintained their

occupational position between their first and current jobs in Austria (Figure 3). The remaining refugees again had diverse experiences but, in contrast to the transition from the last job in the home country to the first job in Austria, the subsequent transition from the first to the current job in Austria resulted in much more muted occupational changes, in the range of only around -40 to +40 score points. Hence, while some refugees showed upward mobility and were able to (further) improve their occupational status, many experienced an occupational deterioration.

To shed light on occupational mobility patterns across particular occupations, Table 1 shows, for the two survey waves separately, occupational transition matrices for the transition across occupations from the last job in the home country to the first job in Austria (in the top half of the table), and from the first to the current job in Austria (in the bottom half).

For this purpose, refugees' occupations were grouped into the ten ISCO-08 major groups. These groups were subsequently ranked in descending order according to the corresponding **ISEI index**, as follows:

- › Professionals (ISEI: 65)
- › Legislators, senior officials and managers (ISEI: 62)
- › Armed forces (ISEI: 53)
- › Technicians and associate professionals (ISEI: 51)
- › Clerks (ISEI: 41)
- › Craft and related trade workers (ISEI: 35)
- › Plant and machine operators and assemblers (ISEI: 32)
- › Service workers and shop and market sales workers (ISEI: 31)
- › Elementary occupations (ISEI: 20)
- › Skilled agricultural and fishery workers (ISEI: 18)

The occupational downgrade between the last job in the home country and the first job in Austria was most pronounced for refugees who had worked in high-level occupations. The occupational loss was strongest for refugees who worked as professionals and legislators, senior officials and managers before leaving their home countries (see top half of Table 1). In their first job in Austria, they mainly worked as service and sales workers or in elementary occupations, with a few employed as skilled agricultural and fishery workers. Many refugees in higher-level occupations in their home countries worked as service and sales workers or in elementary occupations in their first job in Austria. Meanwhile, many refugees who worked as service and sales workers, professionals (true for both waves), or craft and related trade workers (second wave only) before leaving their home countries maintained their occupations in their first job in Austria (as indicated by the diagonal entries in Table 1). Some refugees experienced an improvement of their occupational status, particularly those who worked as legislators, senior officials and managers, clerks or service and sales workers in their home countries who then worked as professionals in their first job in Austria.

Table 1 / Transition matrices

First job in Austria: FIMAS+											
Last job in home country	Professionals	Legislators, senior officials and managers	Armed forces	Technicians and associate professionals	Clerks	Craft and related trade workers	Plant and machine operators, assemblers	Service and sales workers	Elementary occupations	Skilled agricultural and fishery workers	N
Professionals	29.5	1.2	0.0	17.7	0.0	3.6	5.6	22.6	16.9	3.0	79
Legislators, senior officials and managers	29.2	4.6	0.0	13.0	9.6	16.7	0.0	9.1	17.9	0.0	20
Armed forces	0.0	0.0	0.0	0.0	0.0	25.0	61.0	14.1	0.0	0.0	4
Technicians and associate professionals	9.8	0.0	0.0	12.4	3.5	16.7	8.7	26.2	22.6	0.0	54
Clerks	20.2	0.0	0.0	20.2	0.0	19.9	0.0	28.2	11.4	0.0	6
Craft and related trade workers	2.9	0.0	0.0	11.6	0.0	32.4	6.2	20.2	25.0	1.7	54
Plant and machine operators, assemblers	6.4	0.0	0.0	0.0	0.0	13.8	28.7	5.4	27.9	17.8	10
Service and sales workers	10.7	0.0	0.0	9.6	1.2	9.4	10.5	38.7	19.9	0.0	49
Elementary occupations	28.1	0.0	0.0	0.0	0.0	28.1	0.0	28.1	15.8	0.0	4
Skilled agricultural and fishery workers	12.9	0.0	0.0	26.1	0.0	0.0	0.0	61.0	0.0	0.0	5
First job in Austria: FIMAS+2											
Last job in home country	Professionals	Legislators, senior officials and managers	Armed forces	Technicians and associate professionals	Clerks	Craft and related trade workers	Plant and machine operators, assemblers	Service and sales workers	Elementary occupations	Skilled agricultural and fishery workers	N
Professionals	35.1	0.0	0.0	18.4	4.9	1.6	1.5	22.5	16.0	0.0	135
Legislators, senior officials and managers	6.1	4.2	0.0	28.6	9.5	0.0	1.5	9.7	34.5	6.0	25
Armed forces	0.0	0.0	0.0	91.3	0.0	0.0	0.0	8.7	0.0	0.0	2
Technicians and associate professionals	6.3	0.0	0.0	16.1	4.2	9.9	10.1	26.8	24.9	1.8	68
Clerks	17.9	0.0	0.0	0.0	7.3	3.9	3.9	28.1	38.9	0.0	25
Craft and related trade workers	0.2	0.0	0.0	23.1	3.5	16.8	6.3	23.2	22.6	4.3	71
Plant and machine operators, assemblers	0.0	0.0	0.0	0.0	0.0	36.3	2.9	18.8	42.1	0.0	14
Service and sales workers	3.4	0.0	0.0	8.8	0.8	18.5	1.2	38.1	29.1	0.0	72
Elementary occupations	0.0	0.0	0.0	0.0	0.0	11.8	9.1	4.9	74.3	0.0	11
Skilled agricultural and fishery workers	58.6	0.0	0.0	20.3	0.0	0.0	0.0	21.1	0.0	0.0	3
Current job in Austria: FIMAS+											
First job in Austria	Professionals	Legislators, senior officials and managers	Armed forces	Technicians and associate professionals	Clerks	Craft and related trade workers	Plant and machine operators, assemblers	Service and sales workers	Elementary occupations	Skilled agricultural and fishery workers	N
Professionals	82.1	0.0	0.0	15.6	0.0	0.0	0.0	2.3	0.0	0.0	47
Legislators, senior officials and managers	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2
Armed forces	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Technicians and associate professionals	16.8	0.0	0.0	73.6	0.0	0.0	0.0	3.9	5.8	0.0	35
Clerks	0.0	11.1	0.0	0.0	57.2	0.0	0.0	15.9	15.9	0.0	7
Craft and related trade workers	3.9	1.8	0.0	3.6	0.0	78.5	3.4	2.5	6.3	0.0	45
Plant and machine operators, assemblers	0.0	0.0	0.0	0.0	5.1	17.5	64.8	0.0	12.6	0.0	19
Service and sales workers	1.6	0.6	0.0	3.6	4.8	0.0	3.9	80.8	4.7	0.0	63
Elementary occupations	3.4	0.0	0.0	4.1	0.0	10.9	4.2	5.5	72.0	0.0	62
Skilled agricultural and fishery workers	43.7	0.0	0.0	20.7	0.0	16.6	0.0	19.0	0.0	0.0	5
Current job in Austria: FIMAS+2											
First job in Austria	Professionals	Legislators, senior officials and managers	Armed forces	Technicians and associate professionals	Clerks	Craft and related trade workers	Plant and machine operators, assemblers	Service and sales workers	Elementary occupations	Skilled agricultural and fishery workers	N
Professionals	67.7	0.0	0.0	6.9	6.7	0.0	5.9	7.8	5.0	0.0	62
Legislators, senior officials and managers	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1
Armed forces	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Technicians and associate professionals	9.4	0.0	0.0	59.2	1.3	12.7	0.0	14.3	3.1	0.0	60
Clerks	12.8	0.0	0.0	20.2	63.0	0.0	0.0	0.0	4.0	0.0	17
Craft and related trade workers	0.0	0.0	0.0	0.0	0.0	73.0	0.0	20.3	6.8	0.0	36
Plant and machine operators, assemblers	0.0	0.0	0.0	0.0	0.0	1.1	70.0	2.0	26.8	0.0	20
Service and sales workers	6.4	0.0	0.0	6.8	2.1	2.1	3.8	71.8	7.2	0.0	120
Elementary occupations	2.6	0.0	0.0	11.5	0.8	4.8	10.2	18.5	51.6	0.0	106
Skilled agricultural and fishery workers	0.0	0.0	0.0	16.6	0.0	61.8	0.0	0.0	0.0	21.6	3

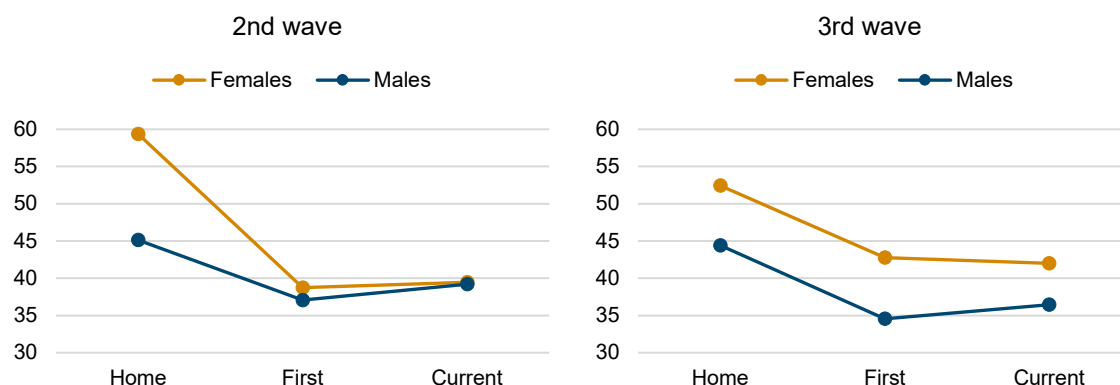
Refugees' occupational upward mobility in Austria is limited and restricted to some medium- and low-level occupations. In the course of the transition from their first to their current job, many refugees who worked in elementary occupations, as clerks or as technicians and associate professionals experienced some upward mobility (see bottom half of Table 1). Refugees covered in the third wave who worked in elementary occupations in their first job in Austria underwent the most widespread upward mobility, with almost 20% moving to a service and sales job and 10-12% becoming technicians and associated professionals or plant and machine operators and assemblers. A similar upward mobility is observable for refugees covered in the second wave, with around 11% moving from an elementary occupation job to a craft and related trade job. Taken together with the strong mobility into elementary occupations in the course of the preceding home-to-host country transition, this suggests that the preceding downgrade into one of the lowest occupations is only of a temporary nature. By contrast, the pronounced downward mobility into service and sales jobs observable during the first transition seems to be more permanent, as 70-80% of service and sales workers have a service and sales job as their first and current job in Austria.

In the course of the second transition from first to current job in Austria, some refugees experienced another occupational downgrade. Between 13% and 27% of refugees who held medium-level jobs and worked as plant and machine operators and assemblers (both survey waves), as technicians and associate professionals and craft and related trade workers (in the third wave only) or as clerks (second wave only) in their first jobs in Austria currently hold lower-level jobs and have mainly become service and sales workers or workers in elementary occupations (see bottom half of Table 1).

We return now to more aggregate representation of occupational transitions, using the ISEI scores as in Figure 1 above, but now for different sub-groups of the sample.

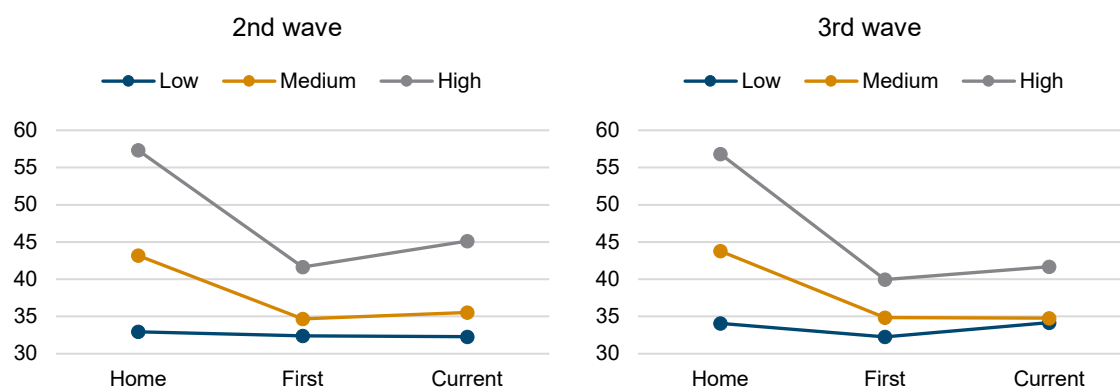
Occupational trajectories of female refugees do not follow a U-shaped pattern. Occupational trajectories for male and female refugees are shown in Figure 4 (separately for the two survey waves). A comparison of gender-specific occupational trajectories across survey waves shows some interesting commonalities, but also differences. For instance, irrespective of the survey wave considered, occupational trajectories of women tend to lie above those of men, which indicates that, on average, female refugees tend to hold higher-level occupations than male refugees. This is particularly true for the last job in the home country of female refugees of the second survey wave, which lies almost 15 points above that of male refugees.

Regarding the shapes and patterns of occupational trajectories, those of male refugees follow a relatively flat U-shaped pattern, with an average initial loss of around 8 to 10 points between the last job in the home country and the first job in Austria, and a mild recovery of around 2 points between the first and current job in Austria. These patterns are similar across survey waves. By contrast, occupational trajectories of female refugees differ from those of their male counterparts in two important respects: first, female refugees of the second survey wave experience a significant occupational downgrade of around 21 ISEI points between the last job in the home country and the first job in Austria, compared with a loss of only around 8 ISEI points for male refugees; second, for female refugees there is little evidence of an occupational recovery after the initial drop. Female refugees of the third survey wave even seem to undergo a further occupational downgrade.

Figure 4 / Occupational trajectories by gender

Sources: FIMAS+ and FIMAS+2; own calculations.

The higher a refugee's level of education, the more pronounced is the U-shaped occupational trajectory. A comparison of occupational trajectories across educational attainment levels on arrival is provided in Figure 5, below. Educational attainment levels are measured based on the ISCED-11 classification and divided into the following three groups: low (ISCED-11 0-2), medium (ISCED-11 3-4) and high (ISCED-11 5-8).

Figure 5 / Occupational trajectories by highest educational attainment level on arrival in Austria

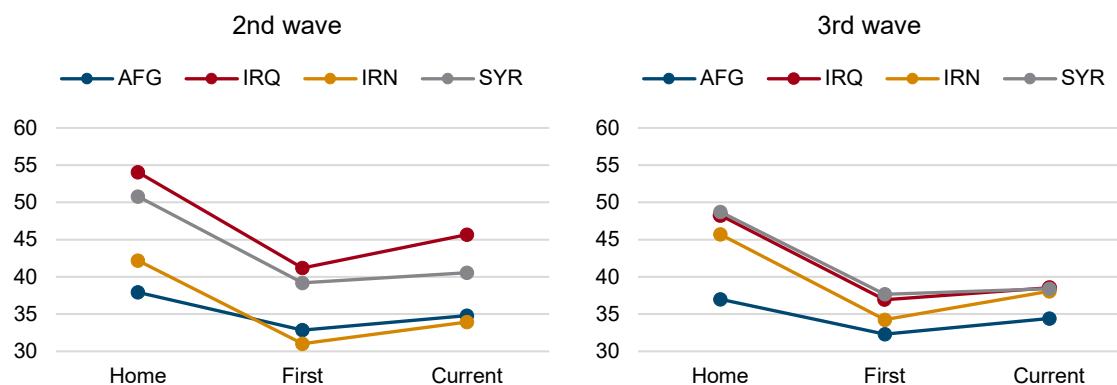
Sources: FIMAS+ and FIMAS+2; own calculations.

This shows that, as expected, more highly educated refugees also occupy higher-status jobs, as represented by higher ISEI scores. Furthermore, as is commonly found in the literature, it also shows that the higher the educational attainment level on arrival, the stronger the initial occupational downgrade: from around 57 points to around 40-41 points for highly educated refugees, from around 43 points to around 35 points for medium-educated refugees and from around 33 to 32 points for low-educated refugees. The subsequent occupational recovery from the first to the current job in Austria is limited but generally more pronounced among the highly educated refugees, leading to a more pronounced U-shaped pattern. By contrast, and depending on the survey wave, the subsequent occupational recovery is much weaker – and in part even non-existent – among the medium- and low-educated refugees.

Occupational trajectories differ by refugees' country of birth (Figure 6). In general, refugees from Iraq and Syria record much higher ISEI scores. This indicates that at each of the three points in time, they hold higher-status jobs, on average, than refugees from Iran or Afghanistan.

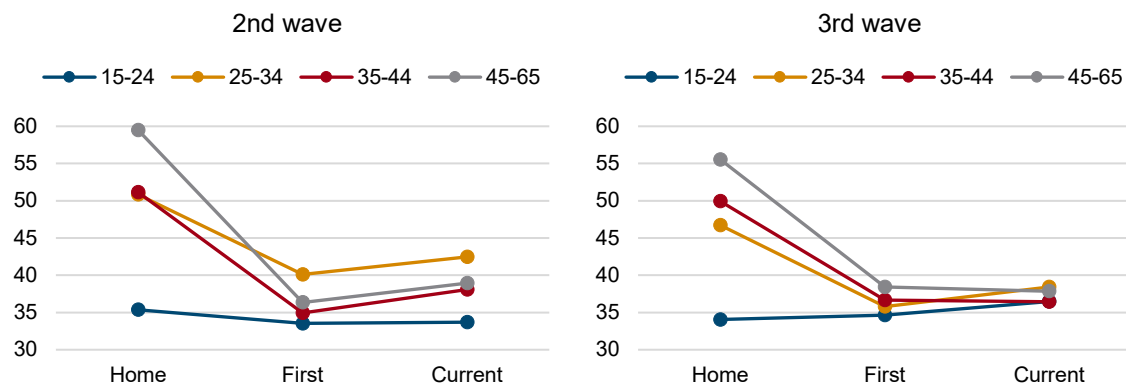
Furthermore, in terms of shapes and patterns, occupational trajectories differ by country of birth and are generally flattest for refugees from Afghanistan, with an initial occupational downgrade of around 5 score points between the last job in Afghanistan and the first job in Austria and a subsequent occupational improvement of around 1 score point between the first and current job in Austria. By contrast, occupational trajectories are most pronounced for refugees from Iran (for both waves) and Iraq (for the second wave only). In particular, refugees from Iran experience a loss in their occupational status of around 11 score points between their last job in Iran and their first job in Austria and a subsequent recovery of their occupational status of 3 to 4 score points between the first and current job in Austria. Refugees from Iraq undergo a similar initial occupational downgrade of around 11 score points between their last job at home and their first job in Austria, which holds for both survey waves. However, their subsequent occupational recovery lies between 2 and 5 score points, depending on the survey wave. Occupational trajectories of refugees from Syria, who represent the most recent group of refugees in Austria, differ from those of all other refugee groups: although the initial occupational downgrade is similarly pronounced (with a loss of around 11 score points), the subsequent occupational recovery between first and current job in Austria is very mild, at only around 1 score point.

Figure 6 / Occupational trajectories by country of birth

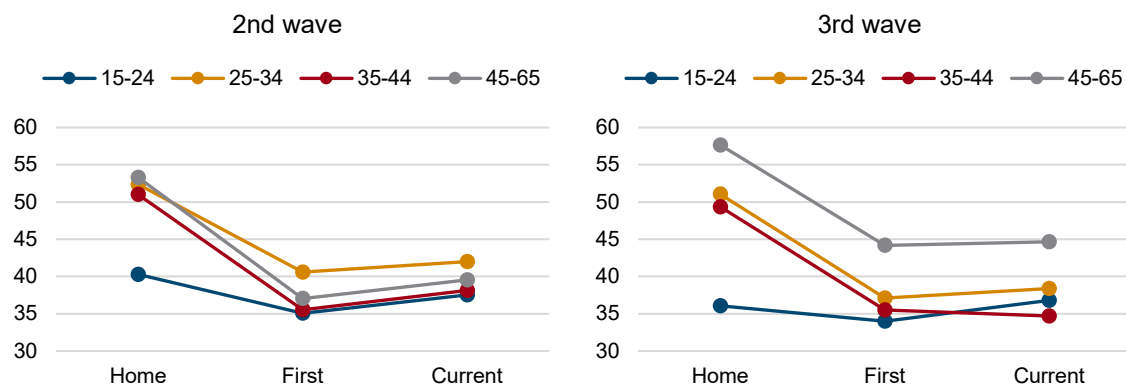


Sources: FIMAS+ and FIMAS+2; own calculations.

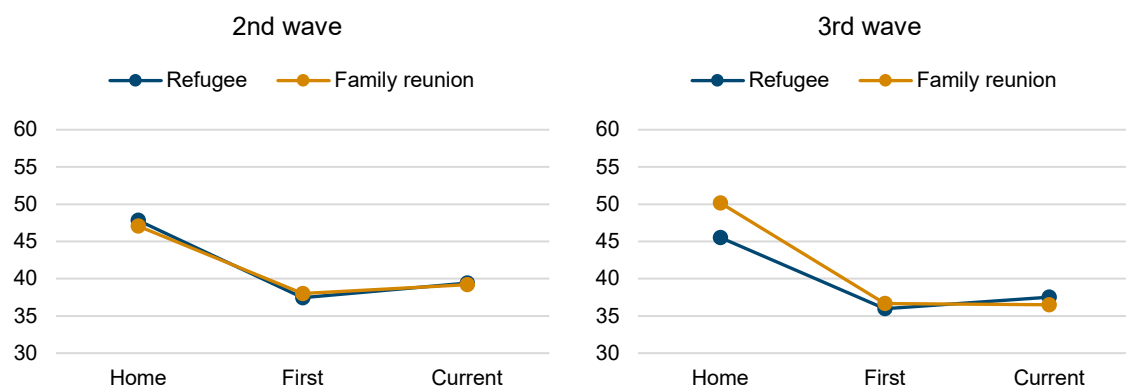
Older age groups experienced a stronger downgrade in occupational status initially and did not improve significantly in subsequent recovery. This is shown in both Figure 7 and Figure 8; the first refers to the assessment by age at time of the interview, the second by age at time of arrival. We can see that the older age groups (35-44 and 45-65) experienced sharper drops in occupational status in the first job in Austria compared to the one they had back home, than did the younger age cohort (25-34). We can ignore here the youngest age group, many of whom would still be in education and training in Austria. There are some worrying indications that, in particular, the 35-44 age group in the third wave seems to have undergone a further downgrade in occupational status when moving from first to current jobs, while the recoveries of occupational status of the other age groups were very mild or non-existent, except for some – promising – second transitions of the youngest age group (15-24).

Figure 7 / Occupational trajectories by age (at time of interview)

Sources: FIMAS+ and FIMAS+2; own calculations.

Figure 8 / Occupational trajectories by age (at arrival in Austria)

Sources: FIMAS+ and FIMAS+2; own calculations.

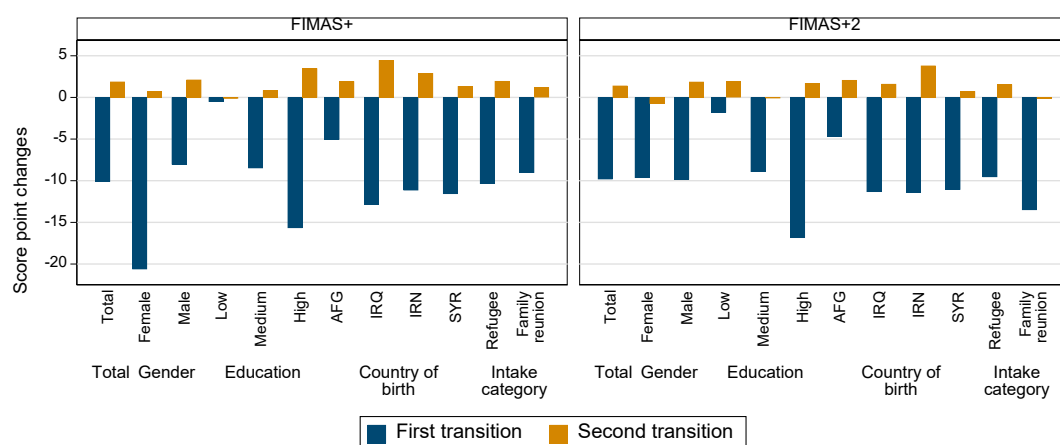
Figure 9 / Occupational trajectories by intake category

Sources: FIMAS+ and FIMAS+2; own calculations.

Occupational trajectories also differ, to some extent, by intake category. For the second wave, both refugees as well as persons who came to Austria through family reunion show similar occupational trajectories, with a non-negligible loss in occupational status, of around 10 score points, between the last job in their home country and the first job in Austria and a mild occupational recovery, of around 2 score points, thereafter (Figure 9). By contrast, for persons included in the third (most recent) survey wave, the mode of obtaining refugee status makes a difference for their occupational trajectories. Compared with refugees, those who came to Austria through family reunion experience a much more pronounced occupational downgrade, of around 14 score points, between their last job in their home country and the first job in Austria. Furthermore, in contrast to refugees, who undergo a mild occupational recovery, of around 2 score points, there is little evidence that those who came to Austria through family reunion can subsequently improve their occupational status.

Finally, we present an overview of occupational trajectories in Figure 10, where we show the relative severity of initial downgrades in transition 1 and subsequent recoveries in transition 2 across all the categories of refugees and for both survey waves. Just to pick out the most striking results: there is a much higher downgrade for the more highly educated than for the medium- and low-educated in the first transition, but also somewhat of a higher upgrade in the second transition. The low-educated show no significant upward move in occupational status over time (second transition) at all. The results differ between the two surveys regarding gender and whether someone obtains refugee status as a first-time asylum applicant or through family reunion: In the second wave (FIMAS+) there is clear evidence of a much stronger fall in occupational status for females than for males in the first job they obtained in Austria; in the third wave (FIMAS+2), such differentiation is no longer visible. There is also a different picture with respect to the mode of entry: persons who obtained refugee status through family reunion show a much stronger decline in occupational status, in the third wave only, than the group of first-time applicants. Both of these features may be to do with the timing of the two waves of the survey: the second took place about one year after the first. By then, women might have had more opportunity to participate in the labour market and find a more appropriate job (and may also have had more of a chance to take advantage of specific support programmes for women). In addition, as regards family reunion, there is a much higher number of persons from the Middle East who came to Austria via family reunion in the third wave than in the second. This revealed a more persistent pattern of differentiation between the two groups of refugees.

Figure 10 / Overview of score changes across all categories



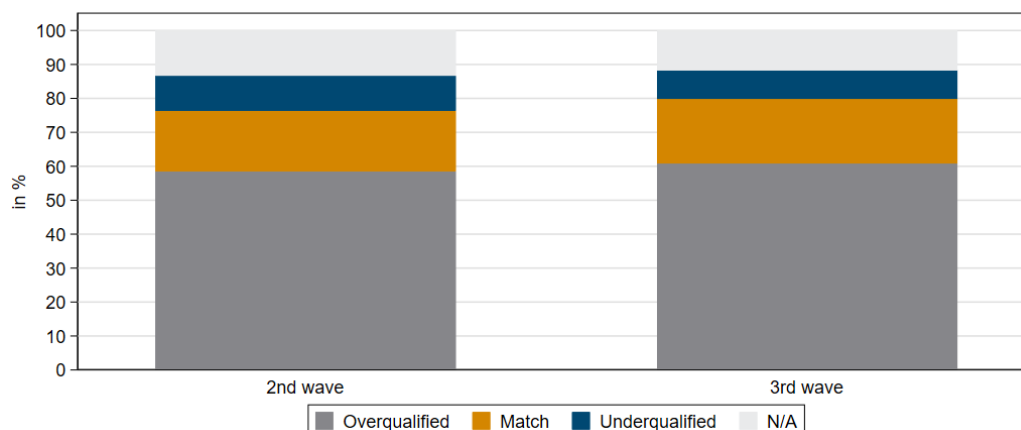
Sources: FIMAS+ and FIMAS+2; own calculations.

5. Job-skills mismatch and its relationship with other variables of interest

In this section, we report the results of the second exercise, which investigates job-skills mismatches that refugees encounter on the Austrian labour market. This part of the analysis used a self-assessment question in the survey, where respondents were asked whether the job for which they are employed corresponds to the level of their education/training and their work experience. They could reply to this question: (1) 'Yes' – which we shall refer to in the following as '**match**'; (2) '*No, I do not have the appropriate education/training or work experience for this job*' – which we refer to as '**underqualified**'; (3) '*No, I have a higher level of education/training or more work experience than is required for this job*' – which we refer to as '**overqualified**'.

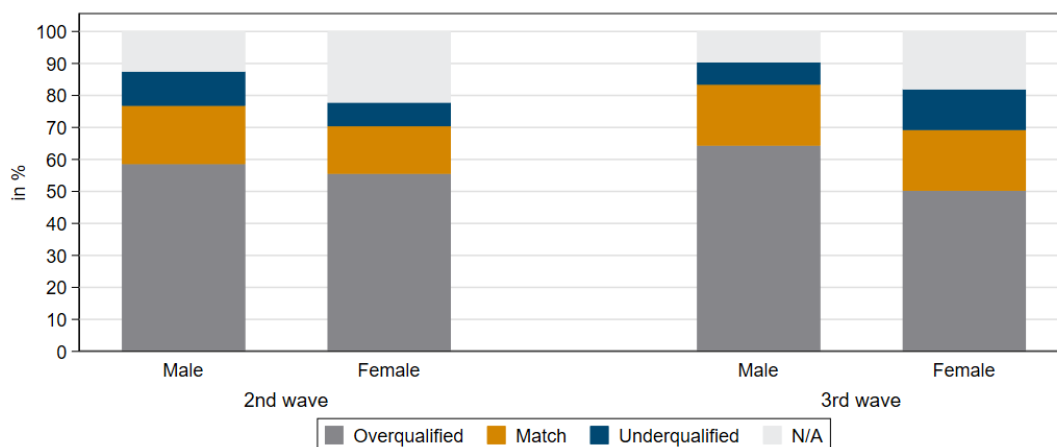
A very large share of refugees self-assess that they are 'overqualified' in the job in which they are currently employed in Austria. Looking at the results for the sample as a whole, we can see in both waves of the survey that around 60% of the persons regard themselves as 'overqualified' with regard to their current employment, with 18-19% reporting that their qualifications and/or work experience match the job they are currently employed in and 8-10% feeling that they are 'underqualified' (Figure 11).

Figure 11 / Job-skills mismatch by survey wave



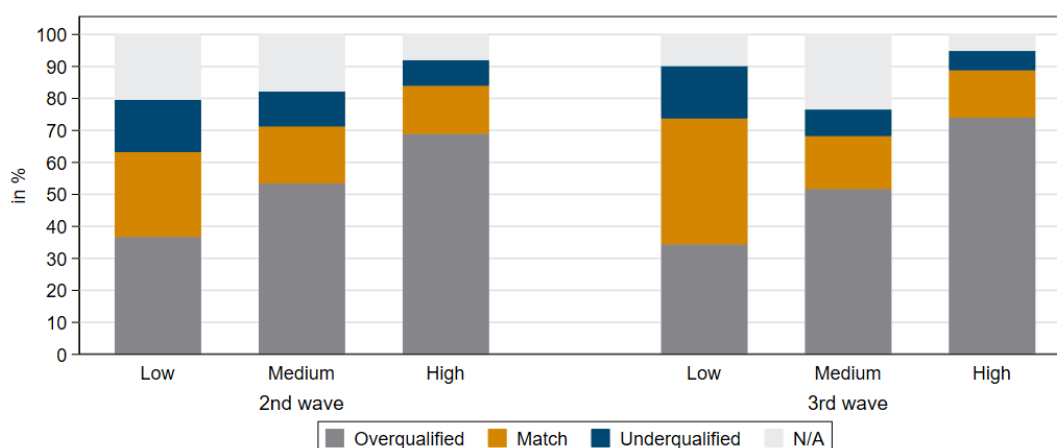
Sources: FIMAS+ and FIMAS+2; own calculations.

A higher proportion of males think they are overqualified than females (Figure 12). There can be many reasons for such gender differences: there could be a difference in subjective self-assessment between males and females, even if they do not differ by objective criteria. One interesting feature is the lower share of females who assess themselves as overqualified in the third wave (and also more women think that their qualifications match their current job); this could be due to the success of specific integration programmes for women, the results of which take some time to show. The third wave also included a higher proportion of women (and also more women who arrived through family reunion), and this could also allow a better assessment of gender differences.

Figure 12 / Job-skills mismatch by gender

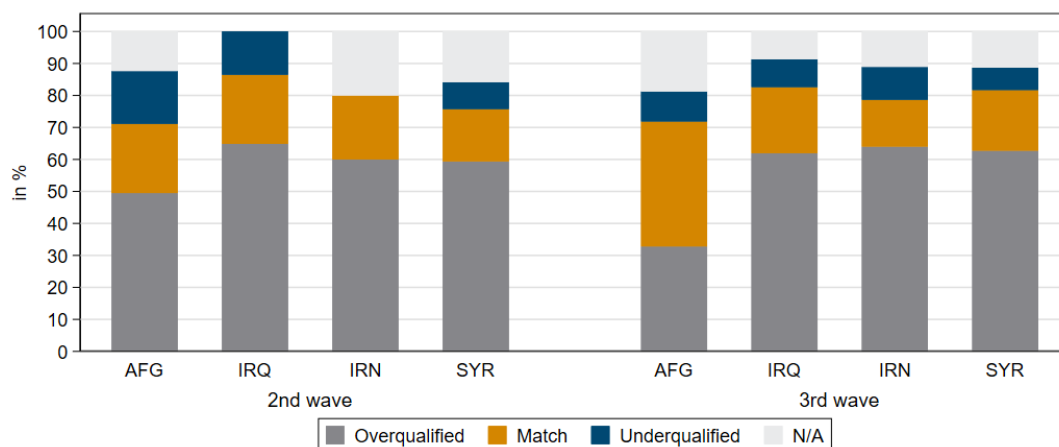
Sources: FIMAS+ and FIMAS+2; own calculations.

The higher educational attainment groups show a higher share of persons who feel ‘overqualified’ in their current jobs (Figure 13). This is as expected, but the share of the highly educated (those with tertiary degrees) who consider themselves overqualified is surprisingly high and has increased from 69% in the second wave to 74% in the third wave. However, the proportion of the low-educated who think that their qualifications and work experience ‘match’ the jobs for which they are employed has increased from 27% in the second wave to 39% in the third.

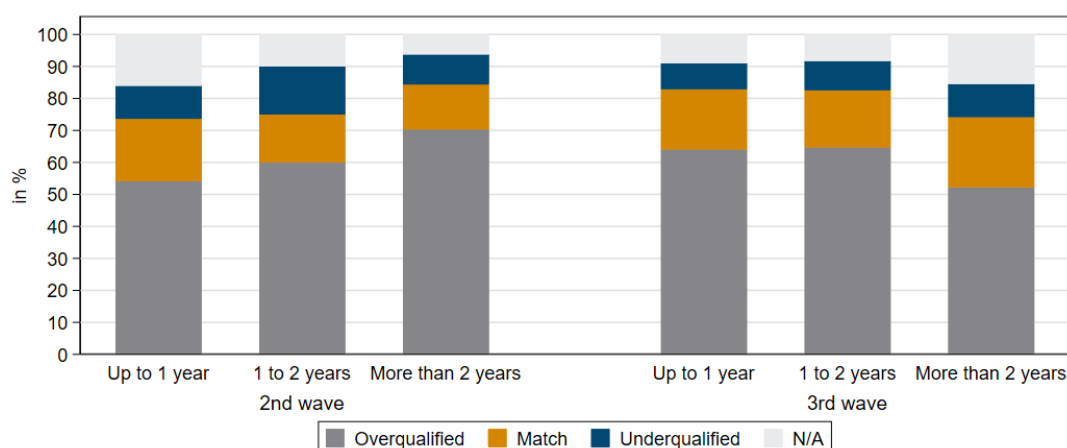
Figure 13 / Job-skills mismatch by highest educational attainment level on arrival in Austria

Sources: FIMAS+ and FIMAS+2; own calculations.

Significantly more refugees from Iraq, Iran and Syria think that they are ‘overqualified’ for the jobs they are undertaking than refugees from Afghanistan (Figure 14). This is in line with the evidence we have that refugees from Afghanistan also have a higher share of persons with low educational attainment levels than the other groups of Middle Eastern refugees and so this accords with what we have seen in Figure 13.

Figure 14 / Job-skills mismatch by country of birth

Sources: FIMAS+ and FIMAS+2; own calculations.

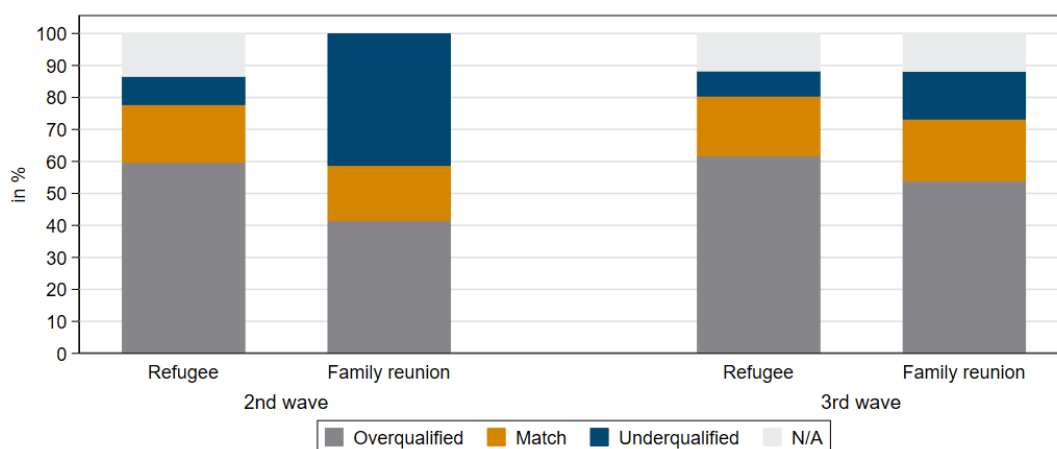
Figure 15 / Job-skills mismatch and the time that has elapsed between arrival in Austria and a positive asylum decision

Sources: FIMAS+ and FIMAS+2; own calculations.

Results on job-skills mismatch and the time since arrival in Austria differs between the two survey waves (Figure 15). It is of great interest whether the job-skills assessments of refugees improve over time, i.e. whether the share of refugees who consider that they have higher qualifications than required by their current jobs diminishes the longer they have been in Austria. The two survey waves give different results on this issue: in the second wave, a higher share of refugees who have been longer than two years in Austria feel that they are 'overqualified', compared with those who arrived in Austria more recently; in the third wave, the opposite result is obtained. The latter result would be a good sign, indicating an improvement in the (self-assessed) job-skills match. Full analysis of the reason for the discrepancy would need to take into account differences in the compositional mix of refugees in the various categories (time since arrival), such as in age composition, countries of origin, gender etc., and differences between the two waves. We shall investigate this issue further through multivariate econometric analysis in the future.

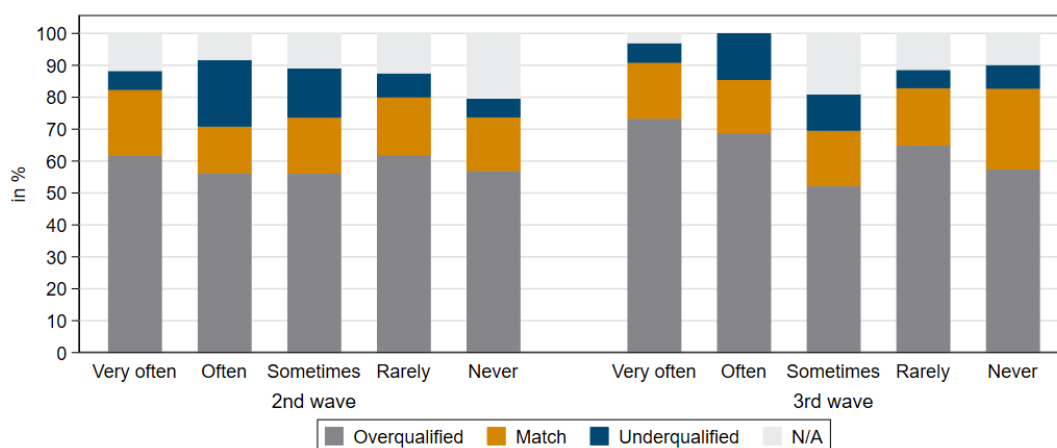
Refugees who come to Austria through family reunion show a lower (although still substantial) share of persons who feel ‘overqualified’ for the jobs they are doing (Figure 16). Here again, there are differences in the extent to which this is the case across the two waves of the survey, but the direction is the same: among those who come through family reunion to Austria, a lower share feel ‘overqualified’, but the difference between the two groups of refugees becomes much smaller in the third wave than in the second wave. We should keep in mind that there are many more persons who achieved refugee status through family reunion in the third than in the second wave.

Figure 16 / Job-skills mismatch by intake category



Sources: FIMAS+ and FIMAS+2; own calculations.

Figure 17 / Job-skills mismatch and perceived discrimination



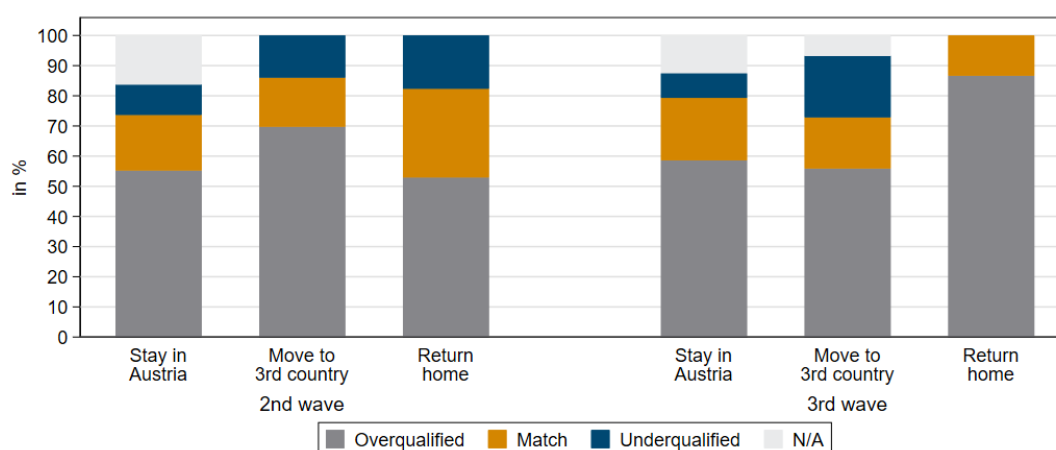
Sources: FIMAS+ and FIMAS+2; own calculations.

There is some evidence that persons who feel discriminated against show a higher degree of self-assessment that they are ‘overqualified’ for the jobs they are doing (Figure 17). This result emerges particularly in the third wave of the survey, where there seems to be a clear correlation between persons who feel ‘often’ or ‘very often’ discriminated against and those who feel to a high degree ‘overqualified’ in the job they are doing. This can be interpreted both ways: persons who work in jobs for which they are overqualified (we have seen that these are also more often people with higher

levels of educational attainment) also feel more often that they face discrimination; or that discrimination 'leads to' refugees getting jobs for which they are 'overqualified'.

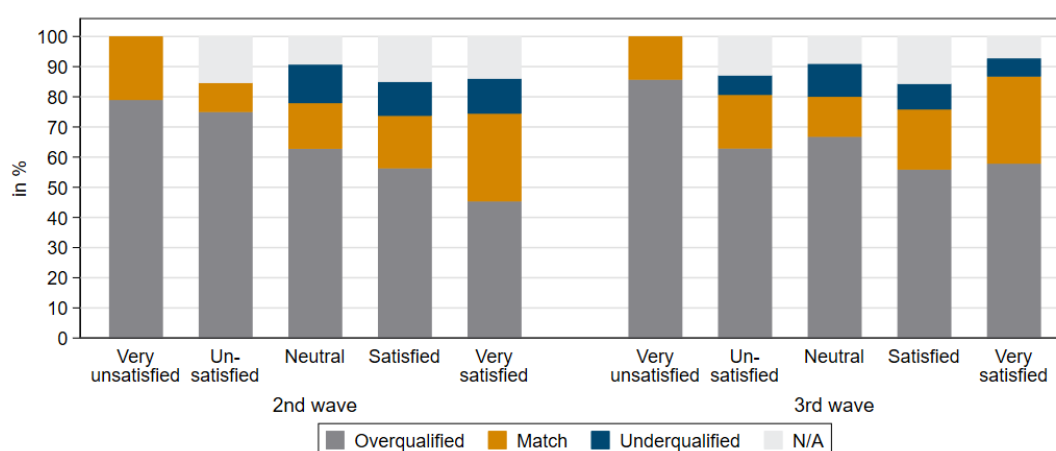
Persons with high perceptions that they are 'overqualified' are also more likely to want to move to a third country or return home (Figure 18). Again, causality cannot be established in this type of analysis, but we see that among those who want either to move to a third country (second wave) or who want to return home (third wave), there is a higher share of people who feel that they are 'overqualified' for the jobs they currently hold. As there are many motives to want to move to another country (than Austria) or return home, this relationship cannot directly be interpreted as implying that it is (or to what degree it is) the experience of being 'overqualified' in the job that leads to a wish to move to another country or return home.

Figure 18 / Job-skills mismatch and further migration plans



Sources: FIMAS+ and FIMAS+2; own calculations.

Figure 19 / Job-skills mismatch and satisfaction with life in Austria

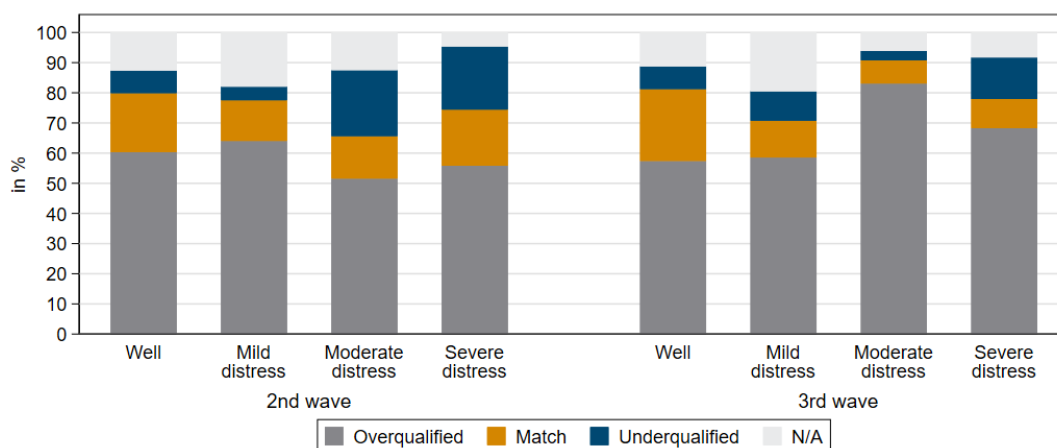


Sources: FIMAS+ and FIMAS+2; own calculations.

Among those who are satisfied (or very satisfied) with life in Austria, there is also a higher share of persons that feel that their skills ‘match’ the job requirement (Figure 19). This presents a complementary picture to Figure 18, in that those who are more satisfied with life in Austria have a lower share of people who feel overqualified for their jobs; and, among those who are unsatisfied (or very unsatisfied) with life in Austria, there are significantly more who feel overqualified. Again, the relative importance of this factor in determining general (dis)satisfaction with life in Austria would require a more complete assessment of the range of factors responsible.

Persons who report moderate or severe stress show different assessments with regard to job-skills (mis)matches in the different waves of the survey (Figure 20). Although the results regarding stress and its relationship to job-skills (self-) assessment differ in the two waves of the survey, it is nonetheless interesting to point to some of the results. In the second wave, a relatively high share of those who report moderate or severe stress report also that they feel that they are ‘underqualified’ for the jobs they are doing. An interpretation of this could be that the feeling of lacking the necessary skills or job experience contributes to that mental stress. Conversely, however, especially in the third wave, persons with moderate or severe stress show a significantly higher share who feel ‘overqualified’ for the jobs they are doing, leading to the opposite interpretation that the (subjective) experience of ‘overqualification’ also contributes to mental stress. We mention these contradictory results and interpretations, to point to further analysis investigating the relationship between experiences at work and mental health that needs to be undertaken on the basis of the surveys. For an analysis using the results from the second wave survey, see Leitner et al. (2019).

Figure 20 / Job-skills mismatch and mental health

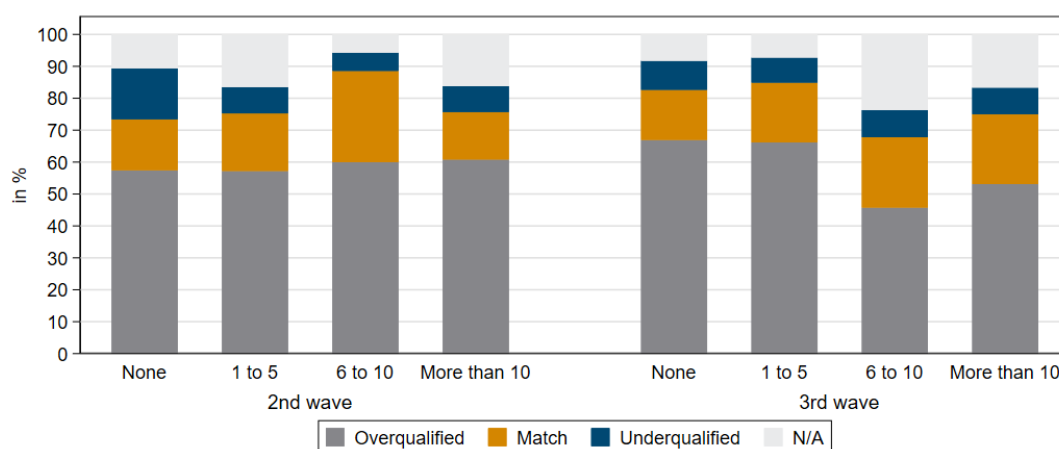


Note: Mental health is captured by the Kessler Psychological Distress Index (K10), which is based on ten questions about anxiety and depressive symptoms that a person has experienced in the last four weeks and yields a global measure of distress. Responses to the questions are used to calculate a total score which ranges from 10 to 50. People with a score below 20 are considered to be well. People with a score between 20 and 24 are considered to have a mild mental disorder, while those with scores between 25 and 29 are considered to have moderate mental disorder. Finally, scores of 30 and over indicate severe mental disorder.

Sources: FIMAS+ and FIMAS+2; own calculations.

Social integration with the host population can reduce job-skills mismatch (Figure 21). We see, in the third wave, a significantly lower share of people who report that they are ‘overqualified’ in their jobs among those who mention that they have a larger network of people from the host population with whom they have regular contact. We also see that in the second wave, a higher share of those with regular contacts with six to ten persons from the host population also declare that their qualifications and experience match the job requirement. Both these findings indicate that a wider social network with the host population goes along with a better job-skills match.

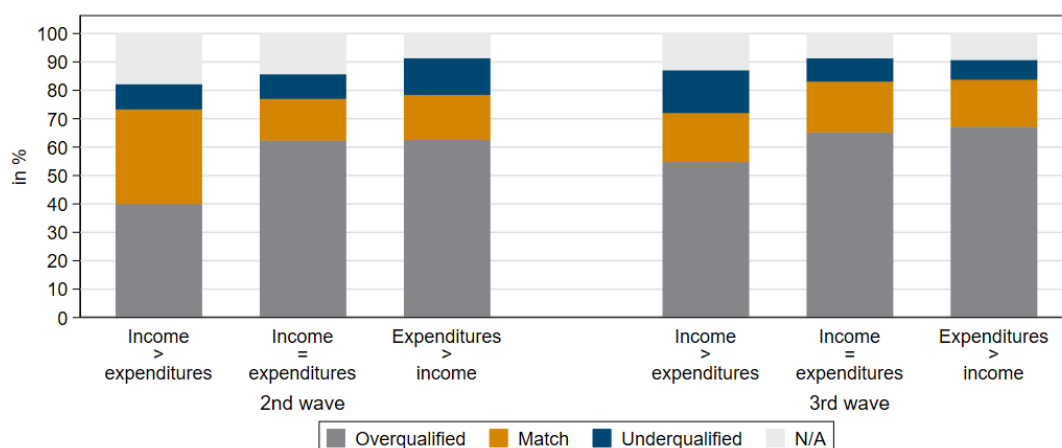
Figure 21 / Job-skills mismatch and social integration: networks with Austrians (number of persons)



Sources: FIMAS+ and FIMAS+2; own calculations.

Better financial situation (income exceeding expenditure) goes along with higher job-skills match and a lower (self-) assessment of being ‘overqualified’ (Figure 22). Here again, causality could go both ways: having a job for which one is overqualified can lead to a worse financial outcome (expenditure exceeding income) as spending aspirations might be higher than income received; alternatively, a precarious financial situation might lead to the acceptance of jobs for which one feels overqualified.

Figure 22 / Job-skills mismatch and financial situation



Sources: FIMAS+ and FIMAS+2; own calculations.

6. Summary and conclusion

This paper attempts to shed light on two issues of importance for the integration processes of the recent wave of Middle Eastern refugees into the Austrian labour market:

The first issue related to '*occupational trajectories*', i.e. which changes in occupational positions or 'occupational status' migrants (in this case refugees) experience when they first enter employment in the country of destination, compared with the jobs they had back home; and further, to which occupations they switch when they move to new jobs. We examined these 'occupational trajectories' by using an index (ISEI) that provides a measure of 'occupational status' based on international information regarding income and educational requirements attached to different (three-digit ISCO) occupations.

The second issue investigated related to *job-skills mismatches* and was based on the self-assessment of refugees as to whether they feel 'overqualified' or 'underqualified' (given their educational background and work experience) in their current jobs.

Both these issues were investigated on the basis of the information collected in two survey waves (see ICMPD, 2018; Hosner et al., 2019) that were conducted in 2017-2018 and 2019 respectively with a representative sample of refugees from Syria, Iraq, Afghanistan and Iran who came to Austria mostly during the period of the high refugee influx since 2014.

The **first exercise** that addressed the issue of **occupational trajectories** confirmed the sharp drop in 'occupational status' that the move from a home country to a new country of destination entails, particularly in the case of refugees. Refugees are at a particular disadvantage compared with other types of migrants as they can rarely influence the timing of their move to the new country, and so can hardly prepare for the move (in terms of language acquisition, or acquiring specific qualifications in advance). They also have less of an influence in choosing the country of destination and can rely less on an existing network of contacts, and so are less likely to have familiarity with its culture, mode of operation etc. There are further specificities that characterise refugees, such as traumatic experiences of their flight and forced separation from family members. All of this might make integration more difficult and loss of occupational status particularly acute in the first phase of integration and access to the host country's labour market. Hence, one would expect a sharp drop in 'occupational status' in this first 'occupational trajectory' (from home country to first employment in the country of destination).

The literature then predicts for migrants in general a 'U-shape' recovery of 'occupational status' as migrants gain greater familiarity with the workings of the country's labour market, as they acquire additional qualifications (especially language skills), and benefit from recognition of job experiences by other employers. However, the precise shape of the 'U' is open to empirical investigation and, particularly in the case of refugees, one would expect an extended 'floor part' of the 'U', as the disadvantages of refugees mentioned above might also hinder rapid recovery of 'occupational status'. On top of this, the need to earn money quickly and (depending on circumstances) to support family might impose further constraints on job search and the possibility of a better job-skills match.

In the case of our investigation, it must be remembered that we are capturing refugees in the early phase of their integration into the Austrian labour market (the big bulge of Middle Eastern refugees arriving in Austria in 2014-2016, with surveys being conducted over the period 2017-2019). In addition, there is a delay between arrival and obtaining the positive asylum status required for full access to the labour market. Therefore, we expected to capture with our data predominantly the first sharp fall in occupational status of the first 'occupational trajectory' and then a rather shallow recovery in the second 'occupational trajectory' (moving from the first job in Austria to the current job). Given the time horizon covered by these survey waves, we did not expect to capture yet a more accentuated recovery of occupational status which might happen over a longer period of time.

This is exactly what we found, as shown in Figure 10 above, summarising the two trajectories for a number of sub-groups of refugees. It showed that the initial loss of occupational status was particularly high among the most highly educated. This group then showed a somewhat stronger upgrade in the subsequent second transition, while the low-educated showed no significant upward move in occupational status over time (second transition). In a detailed analysis of cross-occupational mobility, the study found that the occupational loss was particularly strong for refugees who worked as professionals, senior officials and managers before leaving their home countries and who then, in their first job in Austria, mainly worked as service and sales workers or in elementary occupations (a few also became skilled agricultural workers). Many refugees in higher-level occupations in their home countries then worked as service and sales workers or in elementary occupations in their first job in Austria. At the same time, many refugees who worked as service and sales workers, professionals (true for both waves) or craft and related trade workers (second wave only) before leaving their home countries maintained their occupations in their first job in Austria.

As regards the second transition, from first to current job in Austria, refugees who worked in elementary occupations in their first job in Austria underwent the most widespread upward mobility, with almost 20% moving to a service and sales job and around 10-12% becoming technicians and associated professionals or plant and machine operators and assemblers (this refers to figures obtained in the third wave of the survey). By contrast, the pronounced downward mobility into service and sales jobs observable during the first transition seems to be more permanent, as 70% to 80% of service and sales workers have a service and sales job as their first and current job in Austria.

The results differed between the two surveys to some extent regarding gender differences and whether someone obtains refugee status as a first-time asylum applicant or through family reunion: in the second wave there was clear evidence of a much stronger fall in occupational status for females than for males in the first job they obtained in Austria, but in the third wave such differentiation is no longer visible. Similarly, we obtained a different picture with respect to the mode of entry: in the third wave only, persons who obtained refugee status through family reunion showed a stronger decline in occupational status than the group of first-time applicants. Both these features may be related to the timing of the two waves of the survey: the second one took place about one year later than the first, by which time women might have had more opportunity to participate in the labour market and to find a more adequate job (and may also have had more of a chance to take advantage of specific support programmes for women). Regarding family reunion, there was a much higher number of persons in the wave of refugees from the Middle East who came to Austria via family reunion captured in the third wave of the survey than in the second wave. This revealed a more persistent pattern of differentiation between the two groups of refugees.

As to the **second exercise** that addressed the issue of **job-skills mismatches**, the aggregate result was that about 60% of the refugees in both survey waves regarded themselves as 'overqualified' (given their past education/training and job experiences) in relation to the jobs they were currently employed in. Only 18-19% thought that their qualifications 'matched' the requirements of their current job, and 8-10% thought they were 'underqualified'. This reveals a rather dramatic picture of (self-assessed) job-skills mismatch. In further analysis, we broke down this aggregate picture by different sub-groups of refugees and also related job-skills mismatch to a number of other factors.

To summarise the most important/interesting findings: females were less likely than males to self-assess as being overqualified for the jobs they held. There was a clear ranking of persons with higher levels of education recording a higher level of (self-assessed) overqualification; on the other side, a relatively high share of persons with low educational attainment levels declared that their qualifications matched the job requirements. The important issue of whether the (perceived) degree of job-skills mismatch declines with the length of stay in Austria could not be properly investigated in this report as changes in the compositional mix of refugees in the different waves and by length of stay have to be controlled for. There is evidence that refugees who come to Austria via family reunion experience less of a feeling of 'overqualification' than do first-time applicants, but this again could be due to compositional differences (such as more women than men represented in the family reunion group). There is a positive correlation between experience of discrimination and a higher degree of self-assessed 'overqualification', while mixed (and contradictory) results were obtained with respect of experiencing high levels of mental stress and the perceived level of 'overqualification'. There are clear positive relationships between better job-skills match and satisfaction with life in Austria, a larger network of contacts with Austrians, and a reduced wish to move to another country or back home, although in all these relationships one should avoid causal interpretations at this stage. Finally, a stronger self-assessment of being overqualified also goes along with a more precarious financial situation (expenditure exceeding income).

Overall, the two surveys yielded many insights regarding occupational trajectories of refugees since their arrival in Austria as well as into refugees' assessments of job-skills mismatches. The material in the two survey waves used in this study covers, however, in most instances only the first two to three years of labour market experiences of the recent wave of Middle Eastern refugees in Austria. It will be important to continue to follow the pattern of labour market integration (and its perception by the refugees themselves) over a longer period of time to detect successful and less successful aspects of such integration and to design policies in relation to the insights gained.

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IMPRESSUM

Herausgeber, Verleger, Eigentümer und Hersteller:

Verein „Wiener Institut für Internationale Wirtschaftsvergleiche“ (wiiw),
Wien 6, Rahlgasse 3

ZVR-Zahl: 329995655

Postanschrift: A 1060 Wien, Rahlgasse 3, Tel: [+431] 533 66 10, Telefax: [+431] 533 66 10 50
Internet Homepage: www.wiiw.ac.at

Nachdruck nur auszugsweise und mit genauer Quellenangabe gestattet.

Offenlegung nach § 25 Mediengesetz: Medieninhaber (Verleger): Verein "Wiener Institut für Internationale Wirtschaftsvergleiche", A 1060 Wien, Rahlgasse 3. Vereinszweck: Analyse der wirtschaftlichen Entwicklung der zentral- und osteuropäischen Länder sowie anderer Transformationswirtschaften sowohl mittels empirischer als auch theoretischer Studien und ihre Veröffentlichung; Erbringung von Beratungsleistungen für Regierungs- und Verwaltungsstellen, Firmen und Institutionen.

