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Immigration and the Social Welfare State in Austria, Germany, and Switzerland: A Comparative Meta-Study

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VIENNA INSTITUTE OF DEMOGRAPHY

WORKING PAPERS

18/2017

**IMMIGRATION AND THE SOCIAL WELFARE
STATE IN AUSTRIA, GERMANY AND
SWITZERLAND: A COMPARATIVE META-STUDY**

**WANDA SPAHL, SABINE WEISS, JUDITH KOHLENBERGER AND
ISABELLA BUBER-ENNSER**

Abstract

This meta-study investigates recent research on the effects of immigration on the welfare state in Austria, Germany and Switzerland. Due to the 2015 arrival of high numbers of refugees into Europe, the focus is on studies about asylum seekers, recognized refugees and, more generally, on forced migrants. In total, twenty recently published studies are scrutinized in a scoping review. Thereby, fiscal and macroeconomic consequences as well as the integration potential in the labour market are key topics. The studies included in the current meta-analysis yield diverse results and often do not find clear positive or negative effects, but present a variety of scenarios with differing assumptions. Our findings highlight several research gaps. First, existence as well as access to relevant data is scarce, especially at the individual level. Moreover, the funding situation for studies in the field deserves closer attention. Given the timeframe, there is a paucity of longitudinal data. Second, the majority of studies fail to clearly distinguish between different groups of migrants. Third, various recent studies have been commissioned by public or private sponsors and have not undergone scientific peer review. Moreover, a lack of self-reflexivity about possible limitations can be observed. Regarding future routes for research, two findings can be highlighted. First, nearly all studies stress the importance of human capital as a key factor for successful labour market integration. This includes educational levels as well as professional qualifications. The use of this human capital in the host country's labour market depends crucially on policy efforts. Second, results vary substantially by nationality, legal status, gender and other characteristics of immigrants.

Keywords

Immigration, welfare state, refugees, forced migrants, Austria, Germany, Switzerland.

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Immigration and the Social Welfare State in Austria, Germany, and Switzerland: A Comparative Meta-Study

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1. Introduction

The escalation of the Syrian war in 2014 as well as ongoing violent conflicts in countries in the Middle East and Africa resulted in high numbers of people fleeing their homes. While the majority of refuge-seeking persons are internally displaced or reside in neighbouring countries (e.g. Lebanon, Jordan), many travelled further, resulting in high numbers of asylum applications in Europe. The inflow of more than one million asylum seekers to Europe in 2015 sparked debates about moral obligations, identity, cultural unity, integration requirements, the role of religion and diversity. This study aims to provide an overview of recent publications on the effects of immigration on the welfare state in the host countries. To address the research question *What are the economic effects of immigration on the social welfare state in Austria, Germany and Switzerland*, a meta-synthesis of selected studies and an extensive scoping review were conducted. In total, twenty studies – most of them published in 2016 and 2017 – were selected as relevant and then examined in detail. This included six Austrian, eleven German and three Swiss publications. Furthermore, insights from studies examining effects of immigration in other countries were taken into consideration for comparison and contrast.

2. Background

In Austria in 2015, an extraordinarily high number of 88,349 applications for asylum were filed (BMI 2017). In the same year, 476,649 forced migrants applied for asylum in Germany (BAMF 2017), and 39,523 in Switzerland (EJDP 2016).¹ In 2016, the corresponding numbers amounted to 42,285 in Austria, 745,545 in Germany and 27,207 in Switzerland (aida 2017, BMI 2017, SEM 2016). In 2016, 22,307 asylum seekers were granted recognition as refugees in Austria (BMI 2017), compared to 256,136 in Germany (aida 2017) and 2,365 in Switzerland (SEM 2016).

Comparison with the total population in the host countries helps to assess these dimensions. In Austria, the large number of asylum applications in 2015 corresponds to one per cent of the total population. Positively evaluated asylum applications in 2016

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¹ The numbers of asylum applications in the previous years as well as in 2016 were as follows: Austria: 17,503 in 2013; 28,064 in 2014; 42,285 in 2016 (BMI 2017).

Germany: 127,023 in 2013; 202,834 in 2014 (BAMF 2017); 745,545 in 2016 (aida 2017).

Switzerland: 21,465 in 2013; 23,765 in 2014 (EJDP 2016); 27,207 in 2016.

made up approximately 0.3 percent of the entire population both in Austria and Germany, but only 0.03 percent of the entire population in Switzerland

2.1. Immigrant Groups and Legal Statuses

Forced migrants can hold different legal statuses, including asylum seeker, refugee, or person living under subsidiary protection.² These statuses vary in terms of labour market access, and can thereby considerably shape economic effects on the host country. According to the 1951 Geneva Convention (UNHCR 2017b), a refugee in the juridical sense is a person who has been officially recognized by a host country as a refugee. This chapter focuses on the Austrian legal context, we do not further elaborate on the legal situation in Germany and Switzerland.

Once legally recognized, a refugee receives a temporary residence permit, which can be renewed after three years with an indefinite timeframe (Asylgesetz 2005 §3). Subsidiary protection is a common legal status among forced migrants, which is granted to persons who do not fulfil the requirements for full refugee status, but who are in need of protective measures due to reasons such as a dangerous situation in the home country (UNHCR Österreich 2015). Subsidiary protection is granted for one year and can be renewed for two years several times (Asylgesetz 2005 §8; UNHCR Österreich 2015). In contrast to these recognized statuses, asylum seekers are migrants awaiting a decision on their asylum application. Forced migrants, in the broad sense, might furthermore be individuals who reside in a country illegally without having filed any claim for protection.

Access to the host country's labour market differs by legal status of forced migrants. In Austria, refugees have full access to the labour market and to social benefits equal to that of Austrian citizens. Persons with subsidiary protection status enjoy full access to the labour market as well. Asylum seekers, however, have no access to the labour market, with few exceptions, such as self-employment under certain conditions (Martin et al. 2016) or access to specific branches with a high number of job openings (so-called 'Mangelberufe'), for example tourism.³

2.2. Qualifications of Refugees

Apart from different legal statuses to which varying challenges and opportunities are attached, qualifications of immigrants are important for economic integration (Clark and

² Other possible, but less common refugee statuses are "*Duldung*" (i.e. suspension of deportation) and "*humanitäres Bleiberecht*" (Fremdenpolizeigesetz 2005)

³ Moreover, *Duldung* does not allow access to the labour market, individuals with this legal status are reliant on social welfare support (UNHCR 2009).

Drinkwater 2008; Friedberg 2000) and, more generally, for migrants' effects on the welfare system of the host country.

In general, immigrants tend to be younger than the population in the receiving country and thus contribute to an increase of the potential labour force as well as to deceleration of population aging (Champion 1994; Schmertmann 1992; Steinmann 1991). From a demographic perspective, Bock-Schappelwein and Huber (2016) refer to Eurostat (2015), showing that the majority of asylum seekers are between 18 and 34 years of age. According to the Austrian Ministry for the Interior (BMI), among the asylum seekers arriving in Austria in 2015, minors below the age of 16 comprised 6 percent. The majority (70 percent) was between ages 16 and 45, a small proportion was aged 46-60 years (6 percent) and less than one percent were above 60 years (Kohlenberger et al. 2017).

In a recent country report on Austria, Batini and Stepanyan (2016) claim that immigrants have attained lower education levels compared to the native-born population except for tertiary education. This has the potential to increase the expenditures of the host countries on immigrants and decelerates their labour market integration. Regarding the immigration of highly qualified workers, their findings suggest that although Austria is able to attract more high-skilled immigrants than the EU average, it still lacks behind top recipients of high-skilled labour. In line, Zeugin (2011) finds that Switzerland would profit from immigration since immigrants are on average younger than the Swiss, highly qualified and work on average more hours than the native-born population.

The educational level of forced migrants arriving in Austria in 2015 turned out to be high compared with the average level in their country of origin (Buber-Ennser et al. 2016). In particular, Syrian and Iraqi migrants display consistently high levels of education: with roughly one in two surveyed Syrians and Iraqis having at least an upper secondary education, this share was below 30% among the Afghans. No or minimal formal education turned out to be higher among Afghans (25%), while very low among Syrians and Iraqis (7-9%), indicating large variation across nationalities. The findings by Buber-Ennser et al. (2016) on educational attainment of Syrian, Iraqi and Afghan forced migrants are corroborated by further recently collected data in Austria and Germany (Abteilung Statistik des Landes OÖ 2017; AMS 2017; Brücker, Rother and Schupp 2016; Kohlbacher et al. 2017; Mitterndorfer 2017; Neske 2017). Additionally, the German Institute for Employment Research (IAB) suggests that refugees coming to Germany may not be too different from the native-born German population in terms of their ideals and educational prospects (IAB 2016). To add to this, recent refugees from Syria are more skilled than previous refugee groups such as people fleeing the Balkan wars in the 1990s (Batini and Stepanyan 2016).

In the context of qualifications, Bock-Schappelwein and Huber (2016, p.165) analysed microcensus data from 2014, which revealed that two thirds of the formal qualifications and degrees of refugees were not recognised and that individuals who migrated to Austria between 2005 and 2014 had low levels of German skills. The authors also highlight the problem of settlement of refugees in regions where their skills may not be in

demand or where access to language courses and contact with Austrians are restricted. Still, in the long-run, Bock-Schappelwein and Huber (2016) maintain that recognized refugees can catch up faster with other immigrant groups when it comes to learning new skills, which might be connected with the wish to build a sustainable, peaceful future in the new country.

3. Methods

3.1. Meta-synthesis and Scoping Review

Methods applied in this study include meta-synthesis and scoping review. Generally, meta-studies have two main forms: where quantitative studies are concerned, the approach is called meta-analysis⁴, while the review of qualitative studies is called meta-synthesis (Lipsey and Wilson 2001). A systematic literature review is a main tool used in meta-synthesis. Walsh and Downe (2005) describe it as an attempt to integrate results from a number of different but interrelated qualitative studies. The technique has an interpretive, rather than aggregating intent, in contrast to a meta-analysis of quantitative studies. However, examples from the literature indicate that some aspects of the technique have not been fully established yet. Nonetheless, the meta-synthesis is an important technique for qualitative research and can deepen understanding of the contextual dimensions of a given subject.

The second method employed in this paper is the scoping review. Colquhoun et al. (2014, p.5) define it as “a form of knowledge synthesis that addresses an exploratory research question aimed at mapping key concepts, types of evidence, and gaps in research related to a defined area or field by systematically searching, selecting and synthesizing existing knowledge.” It is used across disciplinary fields and frequently described as a method of knowledge synthesis. A considerable drawback, however, is that there is a lack of consensus on scoping review terminology, definition and methodological conduct. Arksey and O'Malley (2003) propose several steps for conducting scoping reviews, such as identifying the research question, searching for relevant studies, selecting studies, charting the data, collating it, summarizing and reporting the results, and consulting with stakeholders to inform or validate study findings. In addition, Colquhoun et al. (2014) argue that a quality assessment for included studies should be introduced.

⁴ Lipsey and Wilson (2001) provide an overview on meta-analysis. A meta-analysis is conducted when the research is empirical, produces quantitative results and if the same constructs and relationships are examined. Thus, the general comparability between the studies under investigation has to be high. The effect size which compares findings (standardized mean difference, correlation coefficient, odd and ratios) makes the meta-analysis possible. Benefits of this approach are that it has a clear procedure and represents findings in a more differentiated and sophisticated manner than conventional reviews. Moreover, it helps to study relationships across studies that would have been lost and protects against over-interpreting differences across studies. However, a typical drawback is the mechanical approach, which might prohibit more qualitative distinctions between studies. Additionally, comparability is often subjectively argued and selection biases pose a continual threat.

This study followed the above steps of the scoping review to address the following research question: *What are the economic effects of immigration on the welfare state in Germany, Austria and Switzerland?* Approximately forty-five relevant studies on this topic were identified, out of which twenty were selected based on temporal proximity (their publication dates roughly covering the time frame between 2013 and 2017) and thematic relevance. We identified several key characteristics (country, research scope, analysed group, results, policy recommendations, data, methods, period examined, quality measures, funding agency), as portrayed in the taxonomy in Figure 1, as basis for comparison. Data were charted in an excel sheet for summarizing the scoping review (see Appendix 2). Unfortunately, consultation with stakeholders goes beyond the scope and resources of this meta-study, but would be a fruitful further route to explore.

Table 1: Taxonomy-categories identified for scoping review.

Country	RQ(s)	Group	Results	Policy recommendations	Data	Methods	Period examined	Quality measure	Funding agency
Germany, Austria, Switzerland, others	Financial aspects, effects on labour market, cultural aspects	Refugees, immigrants in general, others	Multiple answer options	Multiple answer options	Various data sources	Qualitative, Quantitative, Mixed methods, Literature review/meta study	Previous inflows of immigrants, inflows around 2015, forecasts	Peer-reviewed paper, working paper	Independent study, Stiftungen, Ministries, NGOs, etc.

4. Results

4.1. Context: Time Period and Immigrant Groups

All selected Austrian, Swiss and most German studies⁵ have been published between 2016 and 2017. With the exception of studies on Switzerland, all studies tend to focus on the arrival of high numbers of refugees in Europe in 2015, although with different time frames. Three broad groups can be identified: namely studies that analyse arrivals of refugees before 2014-2016 and thus adopt, to a certain extent, a historical perspective (Bock-Schappelwein and Huber 2016; Hainmüller, Hangartner and Lawrence 2016; Weber and Weingand 2016); studies that examine the inflow of forced migrants around 2015 (Huber 2016; Worbs et al. 2016); and studies which model the effects of the 2015 immigration, develop scenarios and thus forecast future impacts (Bach et al. 2017; Brühl 2016; Stähler 2017; Fratzscher and Junker 2015; Berger et al. 2016; Batini and Stepanyan 2016; Holler and Schuster 2016; Prettenhaler et al. 2017; Raffelhüschen and Moog 2016; Bonin 2016). Most Austrian studies examine the time period from 2015 to 2025, whereas most Swiss studies focus on earlier inflows of refugees and migrants.

⁵ See Appendix 1 for an overview of examined studies.

Findings about the economic effects of immigration on the social welfare state crucially depend on the respective immigrant group that is being studied. Several studies in the sample consider a range of immigrant groups, including highly skilled labour migrants, refugees as well as intra EU migrants for their analyses. Investigating migrants in Germany, Bonin (2014) concludes that immigration is a relief for the social security system. Brücker (2013) finds neutral or positive effects for the labour market in the long run, with qualifications as the determining factor. Other studies based on comparative data for the EU region confirm the positive economic potential of immigration (Barrett and Maître 2013; Boeri 2010).

There are, however, also several key studies that focus on specific immigrant groups and their particular effects on the receiving country. A Swiss study about cross-border workers (Beerli and Peri 2017) and a German study about Romanian immigrants entering the country before they were granted unlimited access to the labour market (Jobelius and Stoiciu 2014) find positive economic effects for the respective host countries. With the exceptions of these two studies, a strong focus on refugees can be observed in sixteen of the twenty studies examined in this paper. This group is especially prominent in many Austrian and German studies that have been published in the last two years, due to the countries' relevance as two of the major European host societies for forced migrants in the summer and fall of 2015. In this context, it is important to note, however, that forced migrants themselves are a diverse group with varying socio-demographic characteristics, including nationality, gender, education, socio-economic and legal status. Several studies in the sample (Bonin 2016, Brühl 2016, Fratzscher and Junker 2015, Raffelhüschen and Moog 2016) do not consistently take the latter into account, which may explain a certain variation in terms of the economic effects of refugees found by these studies.

Several studies do provide nuanced analyses depending on forced migrants' legal status. Huber (2016) describes the economic effects of immigration in a meta-study and provides policy recommendations for forced migrants in general, while stressing the highly restricted integration potential of asylum seekers who are not granted labour market access. Batini and Stepanyan (2016) investigate immigration to Austria and find positive economic effects of refugees due to their young age structure, which can lead to a relief of the pension and health system.

Only two forecast studies reflect on migrants' differences in terms of legal status. The model provided by Holler and Schuster (2016) is based on the 2015 acceptance rate of 62.7 percent of asylum applications filed in Austria. The study does not, however, distinguish between recognized refugees with labour market access and other immigrant groups with more restricted labour market access. A similar approach can be observed in Stähler (2017). Yet, varying integration options for different groups of forced migrants are being recognized in the underlying model.

Hainmüller, Hangartner and Lawrence (2016) conclude that long asylum application times make labour market integration difficult, hence factoring in the varying consequences of different legal statuses. Similarly, Bock-Schnappelwein and Huber (2016)

are sensitive about diverging opportunities. The study stresses the disadvantageous situation of asylum seekers without labour market access and finds gender to be an important category when it comes to structural integration. Especially women are in a disadvantaged position. Berger et al. (2016) and Prettenthaler et al. (2017) clearly distinguish between asylum seekers and recognized refugees. The former include reflections about the temporariness of subsidiary protection status, and even include the effects of social spending on transitioning migration. The latter present legal differences between persons with subsidiary protection and convention refugees. Yet, these distinctions are not consistently mirrored by the study design. Persons with *Duldung* (i.e. suspension of deportation) are also mentioned, yet no specifics about the precarious legal situation or its economic consequences are specified. One study (Weber and Weigand 2016) compares the effects of refugee and non-refugee migration concluding that initial differences level out over time.

4.2. Methods and Data

Several surveyed studies employ a mixed-methods approach and combine literature reviews with statistics (Bock-Schappelwein 2016; Huber 2016; Beerli and Peri 2017; Aiyar et al. 2016). A large number of studies are based exclusively on quantitative methods or simulation models. Most German studies examine the effect of increased immigration in 2015 by modelling scenarios (Bach et al. 2017; Bonin 2016; Brühl 2016; Stähler 2017; Fratzscher and Junker 2015). Several Austrian studies also employ this method (Batini and Stepanyan 2016; Berger et al. 2016; Holler and Schuster 2016; Prettenthaler et al. 2017).

Especially for the German context, generational accounting seems to be a popular method. Two German studies (Bonin 2016; Raffelhüschen and Moog 2016) use generational accounting as a method of measuring the fiscal impact of the 2015 refugee immigration. It is a dynamic accounting approach that estimates on a per capita basis how much net transfer payments a generation pays in taxes aggregated over the remaining lifetime. The future payments are calculated against the expected received public benefits. The underlying assumption is that public finances are restricted by future obligations to repay national debt. The benchmark for a sustainable national budget is whether the net tax payments by current and future generations can account for the current state deficit (Auerbach et al. 1994; Bonin 2014). Three studies use qualitative methods, such as literature reviews (Jobelius and Stoiciu 2014; Huber 2016) or case studies (Martin et al. 2016). In contrast, the study by Spies and Schmidt-Catran (2016) is theory-based and refers to Allport's 1954 contact theory. Thus, almost all of the studies under review employ a quantitative approach; mere literature reviews are as rare as case studies.

The data sources used in the studies under review can be grouped into three main categories. The first group is data issued by state governments or data from government-related foundations. This includes all Swiss studies under review (Beerli and Peri 2017; Hainmüller, Hangartner and Lawrence 2016), but also several German (e.g. Brühl 2016;

Brücker 2013; Fratzscher and Junker 2015; Jobelius and Stoiciu 2014) and Austrian ones (e.g. Prettenthaler et al. 2017). The second group uses data issued by the European Union (e.g. (Barrett and Maître 2013; Boeri 2010; Goodman and Wright 2015). The third group uses data from international organizations, such as UNHCR and OECD (e.g. Batini and Stepanyan 2016; Berger et al. 2016; Bock-Schappelwein and Huber 2016; Aiyar et al. 2016). The study by Worbs et al. (2016), which used collected survey data, presents an exception in this review.

Overall, recent data on 2015 refugee arrivals are still scarce due to the short time frame. Several studies extrapolate from previous years to allow for estimations on newly arrived immigrants. Especially in the Austrian context, a paucity of longitudinal and individualized data can be observed. We hence follow Martin et al. (2016:20) in their assessment that “refugee-related data collection should be addressed in a more systematic, harmonised and structured manner in all EU Member States.”

4.2. Quality Measures and Funding

Peer-reviewed, independent research is scarce in the selection sample of studies. Only three studies, one of which is German (Brühl 2016) and two are Swiss (Hainmüller, Hangartner and Lawrence 2016, Spies and Schmidt-Catran 2016), have been published in scientific journals, thereby passing external quality controls like double-blind peer review. Most other studies are reports or working papers and did not undergo extensive external evaluation. Similarly, most studies do not elaborate on limitations and methodological challenges, while a minimum standard of internal review has been met.

All Austrian studies investigated are contract research; funding institutions include international organizations (Batini and Stepanyan 2016, for the International Monetary Fund) and government institutions or their operational agencies (Berger et al. 2016, for the Austrian Chamber of Commerce and the Austrian Federal Ministry for Europe, Integration and Foreign Affairs; Huber 2016, for Austrian Development Agency). Furthermore, private advisory committees (Holler and Schuster 2016, for the Austrian Fiscal Advisory Council (Fiskalrat)) and humanitarian organisations (Prettenthaler et al. 2017, for Caritas and the Red Cross) funded work on the economic effects of the recent refugee immigration.

Three out of eleven German studies were conducted for state institutions, and research institutes themselves had commissioned two. Nearly half of the German studies have been conducted for foundations. One was commissioned by the Green Party foundation (Bonin 2016 for Heinrich-Böll-Stiftung), another by the Social Democratic Party foundation (Jobelius and Stoiciu 2014 for Friedrich-Ebert-Stiftung), while the other foundations are not associated with political parties.

4.3. Research Scope and Findings

In Austria, most of the topics of investigation focus on fiscal questions, such as the costs of immigration and the effects on the public budget (Batini 2016; Berger 2016; Holler and Schuster 2016). The situation is similar in Germany where all studies with one exception look at the cost and the fiscal effects of immigration. Bock-Schappelwein and Huber (2016) investigate the effects of immigration on the Austrian labour market, while Huber (2016) and Prettenthaler et al (2017) examine both the labour market and the fiscal situation. The Swiss study by Beerli and Peri (2017) explores effects of immigration on the labour market by CBWs.

In general, Swiss studies are more concerned about cultural topics like attitudes towards immigration by natives (Spies and Schmid-Catran 2016) or the effects of asylum application duration (Hainmüller, Hangartner and Lawrence 2016). In Germany, Worbs et al. (2016) analyse the living situation of refugees, while for Austria, no study with a focus on the socio-cultural dimension of integration was identified. Some studies (Berger et al. 2016; Brühl 2016; Fratzscher and Junker 2016; Weber and Weigand 2016) additionally include medium-term effects of integration policy. For instance, Weber and Weigand (2016) find that non-refugee immigration has beneficial medium-term effects on GDP and the labour market, while other studies arrive at similar conclusions for a different time frame (Berger et al. 2016; Fratzscher and Junker 2016; Brühl 2016). Holler and Schuster (2016) find short-term effects in terms of positive demographic effects of migration in countering population aging.

The majority of studies find that expenditures for refugees will be beneficial (Prettenthaler et al. 2017; Bach et al. 2017; Bonin 2016; Stähler 2017) or neutral (Brücker 2013; Brühl 2016) for the receiving country if sensible policy measures are implemented. However, Holler and Schuster (2016) find that expenditures and national debt will rise in the long run, while the necessity of national investments into integration is acknowledged. Goodman and Wright (2015), on the other hand, conclude that there is little evidence that mandatory integration requirements produce tangible, long-term integration effects.

At the same time, the majority of studies across countries remain vague about the effects of immigration on the national budget, while policy measures to achieve a clear positive effect are recommended (Bock-Schappelwein and Huber 2016; Holler and Schuster 2016; Huber 2016; Prettenthaler 2017; Hainmüller, Hangartner and Lawrence 2016; Spies and Schmidt-Catran 2016; Brühl 2016; Stähler 2017; Weber and Weigand 2016; Barrett and Maître 2013; Boeri 2010; Goodman and Wright 2015; Martin et al. 2016). Beneficial contributions of immigrants to the host country are dependent on several factors, such as professional qualifications (Raffelhüschen and Moog 2016; Stähler 2017, Brühl 2016), educational levels (Bach et al. 2017; Bonin 2014, 2016), language skills (Weber and Weigand 2016; Martin et al. 2016), as well as formal recognition of the existing qualifications (Holler and Schuster 2016; Huber 2016).

Several studies conclude that access to the labour market is key for successful integration and lowering the costs for the welfare state (Holler and Schuster 2016; Huber 2016; Brühl 2016; Weber and Weigand 2016; Martin et al. 2016; Worbs et al. 2016). Additionally, Prettenthaler et al. (2017) find a surplus of unemployed young male refugees and asylum seekers for whom job opportunities need to be created. Moreover, the female employment quota among refugees and migrants in general needs to be raised.

4.4. Labour Market Compatibility

Several studies link the demands of the host country's labour market to the qualifications of the immigrants. Thereby, two main topics arise. Firstly, negative tendencies are discussed, such as displacement processes of native-born workers. Secondly, the role of human capital (education and professional qualifications) is emphasized. Providing immigrants with educational opportunities is key for countering a gap in skilled labour supply, which can be observed in all countries under review. Thirdly, the compatibility of immigrants' qualifications and skills with the host country's demands on the labour market, e.g. in terms of sectors such as elderly care, is not explored in depth, but might pose a promising area for future research.

Most Austrian studies describe the effects of immigration on the labour market as negative in terms of substitution effects and downward pressure on wages. In discussing such dynamics, Bock-Schappelwein and Huber (2016) and Prettenthaler et al. (2017) refer to refugees, while Batini and Stepanyan (2016) and Huber (2016) analyse immigrants in general. The four studies highlight (potential) displacement processes of native-born workers in low-wage sectors and a mismatch in the labour market. Their findings indicate that some refugee groups might not be qualified enough to fill the need for skilled labour. Bock-Schappelwein and Huber (2016) observe a special mismatch between female refugees and the labour market. In suggesting the potential of an adjusted tax-benefit system for creating better incentives for immigrants, Batini and Stepanyan (2016) acknowledge the key role of the political framework.

In the German context, the compatibility of immigrants' qualifications with the host country's labour market is portrayed more optimistically than in the Austrian studies. Qualification is thus treated as a dependent variable and accordingly, policy measures to increase educational levels and professional skills are emphasized. Not distinguishing between immigrant groups, Bonin (2014) and Brücker (2013) highlight the role of qualified immigration in helping solving problems resulting from an aging population in Germany, a lack of skilled labour, and economic challenges. Hence, granting (forced) migrants access to higher qualification is key so that they may counteract the lack of skilled labour and the oversupply of workers in low-wage sectors (Brühl 2016). Counter to insights from recent data about qualification levels, Weber and Weigand (2016) assume current low qualification levels of refugees. Hence they forecast negative effects and a labour supply shock in the medium-run due to assumed human capital mismatches and poor

compatibility with the German labour market. While Raffelhüschen and Moog (2016) also find negative economic effects of refugee immigration, qualified immigration is highlighted for its potential to raise the GDP. Finally, and contrary to the Austrian studies included in this review, Stähler (2017) evaluates the increased competition produced by immigration on the labour market as macro-economically positive. His model includes labour substitution effects and assumes that while initially, immigrants do not compete with natives they will eventually do so after having acquired language and educational skills for the German labour market.

In the case of Switzerland, most of the studies do not discuss labour market compatibility dynamics, with the exception of Beerli and Peri (2017), who find that CBWs do not cause crowding out effects for natives. Finally, in a broad study on refugee immigration across Europe, Aiyar et al. (2016) find little evidence of negative consequences for native-born workers. Effects on wages and unemployment have been modest in previous periods of refugee immigration.

4.5. Policy Recommendations

The majority of studies under review emphasize the positive effects of successful labour market integration (Batini and Stepanyan 2016; Bock-Schappelwein and Huber 2016; Holler and Schuster 2016; Huber 2016; Prettenthaler et al. 2017; Hainmüller, Hangartner and Lawrence 2016; Bach et al. 2017; Bonin 2014,2016; Brücker 2013; Brühl 2016). While Berger et al. (2016) and Raffelhüschen and Moog (2016) remain sceptical, only Raffelhüschen and Moog (2016) recommend stricter immigration policy, including restrictive Schengen border controls, immigration quota, and lower social security provisions in case of unemployment.

With one notable exception (Fratzscher and Junker 2015), the studies under review can be grouped into three categories of policy recommendations namely a) enhance educational and vocational training, b) implement reforms of the labour market and access for asylum seekers, and c) reform and restructure the asylum application system. For the latter, Hainmüller, Hangartner and Lawrence (2016) find that marginally reducing asylum decision waiting times by 10 percent leads to savings of over \$5 million per year in Switzerland. The large scale EU-wide study by Aiyar et al. (2016) confirms the significance of these three policy areas. In addition, recommendations include assistance for neighbouring countries of conflict areas, free travel for refugees, affordable housing and easier access to financial services such as bank accounts.

Some studies (Bock-Schappelwein and Huber 2016; Prettenthaler et al. 2017; Jobelius and Stoiciu 2014; Worbs et al. 2016) also present policy recommendations for specific groups of migrants. Prettenthaler et al. (2017) and Worbs et al. (2016) argue for raising employment rates among female refugees, while Bock-Schappelwein and Huber (2016) propose a heightened focus on dual vocational training positions for young asylum

seekers. Bach et al. (2017) propose to provide asylum seekers with access to integration and values courses, which are currently only available to recognized refugees.

5. Discussion and Conclusion

This meta-study examined the economic effects of immigration on the social welfare state in Austria, Germany and Switzerland by comparing twenty recent studies. Thereby, the core interest was to look at the arrival of high numbers of refugees into Europe in 2015 and the social and macroeconomic consequences for the receiving countries. Two studies (Berger et al. 2016, Raffelhüschen and Moog 2016) conclude with negative fiscal consequences of immigration for the social system, while seven studies (Bach et al. 2017, Batini and Stepanyan 2016, Beerli and Peri 2017, Bonin 2014, Bonin 2016, Fratzscher and Junker 2015, Jobelius and Stoiciu 2014) emphasize positive effects. Overall, results vary substantially depending on groups and characteristics of immigrants, country context, methods and data used. Accordingly, the meta-study revealed several determining factors for the effect of immigration on host societies' welfare systems, such as human capital, size of migration inflows, and legal conditions. Quantitative models in particular may vary extensively due to diverging assumptions. Further significant variations can be derived from varying timeframes under examination and differing data sets.

Three main limitations in the recent research about refugee immigration and its consequences on the social welfare state in Austria, Germany and Switzerland can be observed. Overall, and especially for Austria, peer-reviewed research is still scarce. Some studies included in this review lack critical self-reflexivity about the adopted methodological approach and concurrent limitations. In contrast, most Swiss studies incorporated in this meta-study are academic journal articles. Yet, very few studies examine recent immigration to Switzerland due to generally low numbers of migrants. It seems that in contrast to Austria and Germany, refugee immigration to Switzerland did not result in increased research interest and commissioned research for evidence-based policies.

Furthermore, while some studies include differences in migrants' legal status in their analyses and accordingly the consequences for varying integration potentials, others lack such clear distinctions. While the diversity in terms of legal status may result in substantially different opportunities of (forced) migrants for achieving successful economic integration, these limitations are seldom included in the research design of the surveyed studies.

Lastly, recent and individual, rather than highly aggregated data on newly arrived refugees is sparse. Especially in the Austrian context, access to data is limited due to data protection concerns, while longitudinal data on forced migrants is simply not yet available. Panel studies with comprehensive categories for differentiation and investigation over time are needed. Additionally, a combination of methods and the use

of qualitative methods can help to enhance scientific understanding of factors for integration and economic impact.

Due to time restraints and limited scope, this study faces several important limitations. The selection of the twenty studies under examination in this paper is based on a broader scoping review conducted in German and English and contains relevant studies according to actuality, relevance and temporal proximity roughly covering the time frame between 2013 and 2017. Some aspects of the studies under examination have not been comparable. The immigrant groups under investigation differed, even within the subgroup of forced migrants. In addition, research questions and scope varied extensively. While Swiss studies tend to focus on cultural aspects, Austrian and German studies put financial aspects in the foreground. This might be due to the fact that Switzerland received a substantially lower number of refugees in relative terms to the host population than the other two countries. Furthermore, some methods are not easily comparable, such as forecasts and investigations of previous migration flows, as well as quantitative and qualitative approaches.

In regard to future routes for research, four findings can be highlighted. First, nearly all studies present human capital as a key factor for successful labour market integration. Appropriately, a common policy recommendation, next to reforms of labour market access for asylum seekers, is investment into educational levels and vocational training. Thereby, initially high public investment into refugees' professional qualifications amortizes in the long run, and is macro-economically more sustainable than fast integration into low-skilled sectors. Second, the funding situation for studies on immigration and the welfare state deserves closer scrutiny. The fact that all six Austrian studies under investigation have been contract research reveals the need for independently financed studies and opportunities for peer review after finalization. Third, Austrian studies in particular find low labour market compatibility of recent refugee arrivals. Displacement processes of native-born workers, low levels of qualification and incompatibility with labour demand in Austria are emphasized. This stands in contrast to German findings, which present a more nuanced picture, and include discussions about the potential of recent refugee arrivals to counter a shortage in skilled labour supply. Altogether, none of the studies under investigation examines the effects of recent refugee immigration on the labour market in detail by sectors or branches. Fourth, the different effects of different immigrant groups on the social welfare state deserve closer attention. Whether one investigates skilled or unskilled immigrants will yield considerably different results, as will a research focus on asylum seekers and/or recognized refugees on EU or non-EU immigrants.

A research design for estimating the effects of the refugee immigration in 2015 on the Austrian social welfare state might take several key aspects into consideration, including, above all, the legal status of immigrants and according rights in the country of residence, such as access to the labour market and earning limits for asylum seekers. More research is needed comparing subgroups such as asylum seekers and recognized refugees while accounting for comparable cohorts in the native population. Furthermore, the scope of

investigation is crucial. For instance, studies focusing on labour demand tend to find more positive economic effects in the periods after arrival than studies that solely focus on aspects of labour supply.

Finally, funding conditions and data availability deserve closer attention. Peer-reviewed journal articles on recent refugee immigration and its economic consequences on the social welfare state are still sparse, given the relatively short time frame. Establishing a sound empirical basis for future analyses is pertinent. This includes aspects of data collection, such as longitudinal studies and individualized data, as well as scientific access to existing data.

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APPENDIX 1: Overview of Examined Studies

This section gives a detailed overview of the content, scope, and key results of the studies under investigation. Due to the thematic focus of this meta-study and the high academic and institutional output in the research area, most studies display a focus on refugees as a distinct immigrant group. Two of the studies under review shed light on other immigrant groups, namely cross-border workers (CBWs) in Switzerland and Romanian immigrants in Germany.

Economic Effects of Immigration in General

In a study for the German Bertelsmann Stiftung, Bonin (2014) finds that immigration relieves the social security system. In 2012, foreigners without a German passport accounted for a relief of 22 billion Euros, amounting to annually 3,300 Euro per person. Based on empirically grounded cash flow and generational accounting, several scenarios are presented. The study concludes that qualified future immigration relieves the fiscal burden on the local population. In a follow-up paper, Bonin (2015, p. 268) concludes that “fiscal relief requires that future migrants are on average at least medium-skilled and hence better qualified than the current population of foreign nationals in Germany”, which calls for selective migration policies with a strong labour market focus.

Brücker (2013) investigate the effects of immigration for Germany on the labour market and the social welfare state. Different scenarios regarding the qualification structure of immigrants are investigated. The study was commissioned for the German Bertelsmann Stiftung and finds neutral or positive effects for the labour market in the long run. Especially qualified immigration is economically positive. With the qualification increase of newly arrived immigrants, which can be observed since 2000, and the expected better labour market integration the net contribution to the social welfare state is supposed to continue to increase, which is mainly due to a beneficial age composition.

For Switzerland, based on historic data and previous studies, Spies and Schmidt-Catran (2016) examine attitudes towards immigrants in order to assess whether migrants who are economically and culturally integrated into their host society raise the same economic and cultural concerns among native-born citizens as would economically poorly integrated and culturally distant migrants. The authors apply mixed methods, including structural equation modelling (SEM). Findings indicate that the number of migrants as well as their economic and cultural integration has little or no impact on attitudes by Swiss native-borns.

Economic Effects of Immigrants, in particular Asylum Seekers and Refugees

In a study by the Austrian Development Agency (ADA), Bock-Schappelwein and Huber (2016) used 2014 data and insights from previous refugee immigration to understand the expected employment dynamics of the 2015 immigration and assess to which extent asylum seekers are integrated into the Austrian labour market. Mixed methods and a

literature review are applied, concluding that especially recently arrived female asylum seekers find themselves in an unfavourable position on the labour market.

Hainmüller, Hangartner and Lawrence (2016) analyse panel data on asylum seekers and refugees in Switzerland for the period 1994 to 2004 to determine in how far the length of the period that is spent awaiting the asylum decision affects the subsequent integration and labour market success of refugees. Using econometrics, they conclude that longer waiting times for the asylum decision strongly reduces the employment integration of refugees. This effect turns out to be similar across subgroups.

With a macro-econometric modelling approach complemented by instrumental variable techniques, the Institute for Employment Research (IAB) of the German Federal Employment Agency examines migration impacts on the German economy. Thereby, Weber and Weigand (2016) compare refugee immigration and non-refugee immigration based on yearly data for the period 1970 until 2014. Refugee immigration is measured by the number of asylum applications. Short run effects of 'refugee immigration shocks', i.e. high numbers of refugee arrivals, are found to be positive. The authors find high multiplier effects on the demand side based on immediate investments, social assistance payments and employment needs in administration, education and social work professions. Yet, in the medium run, adverse effects on the unemployment rate, per capita GDP and the wage share are observed. The latter two are mostly offset in the long run. For non-refugee migration, Weber and Weigand (2016) find positive economic effects also in the medium run and on the labour market. The authors conclude that immigration is likely to have no adverse effects on the German economy.

Huber (2016) conducts a literature review to explore the effects of immigration and inflows of refugees on the labour market, specifically in Austria. Findings indicate that there are both risks and benefits involved as labour market integration crucially depends on the qualifications of the immigrants. Furthermore, wages of highly qualified persons increase through the influx of lower qualified immigrants, whereas there is a pressure on the wages of lower qualified native-borns.

Researchers at the Federal Office for Migration and Refugees shed light on the life situation of refugees in Germany, who obtained their status between 2008 and 2012 and thus have secured legal status including access to the labour market (Worbs et al. 2016). The data set employed comprises 22,201 respondents, who filled out a paper-and-pencil questionnaire in 2014. Regarding social benefits, results reveal that more than 60 percent of the households included in the sample receive at least one transfer payment, which thus contributes to the household income. Often, these are basic social benefits. The majority of households achieve a monthly income below 1,500 Euros. Results reveal that employed persons and persons who have resided in Germany for a longer period of time have higher incomes, indicating an improvement of the financial situation over time (Worbs et al. 2016).

In a macroeconomic simulation model, Bach et al. (2017) examine macroeconomic impacts of the integration of refugees into the German labour market. Persons who are in need of heightened protection, including asylum seekers and recognized refugees, are in the focus of this study financed by the German Federal Ministry for Labour and Social Affairs. The authors conclude that integration efforts into the labour market draw high fiscal rates of return and that investment into language competencies as well as additional educational qualifications amortize quickly and achieve high returns in the long run.

Brühl (2016) uses a financial-economic simulation model to calculate the costs of integrating refugees in Germany based on data from the Federal Office for Migration and Refugees (BAMF). Fiscal and macroeconomic costs are distinguished: provided that labour market integration of refugees is successful, the former can amortize by 2031, the latter by 2025. Fiscal costs are thereby defined as taxes and contributions of employed refugees and as public sector expenses for unemployed refugees who do not participate in the labour market. Economic costs include the gross value added contributions of employed refugees and the costs of integration as well as support for refugees in unemployment.

The central bank of the Federal Republic of Germany (Deutsche Bundesbank) commissioned Stähler (2017) to assess the potential economic consequences and transmission mechanisms associated with refugee migration. A macroeconomic simulation model reveals that qualifications, i.e. human capital, are the key element for assessing the impact of (forced) migration on social welfare systems. Stähler's model distinguishes between demand and supply-side effects; by simulating initial asylum-seeker status, the model assumes that forced migrants are transfer recipients for one year and thereafter successively become active labour market participants after having obtained legal status. In this model, the macroeconomic impact of refugee migration turns out to be rather modest. The study assumes that a 'failed' labour market integration of 800,000 forced migrants, i.e. refugees who will only work in low-skilled sectors, will lead to a reduction of per capita output in Germany by 0.43 percent and consumption by 0.48 percent. Successful integration on the basis of solid educational levels and professional qualifications will result in an additional output of 0.34 percent and consumption of 0.38 percent per capita. Accordingly, migrants whose educational levels are comparable to the native-born population do not account for noteworthy GDP and consumption variations.

In a macroeconomic simulation model for the time frame 2015-2035, Fratzscher and Junker (2015) show that initial costs associated with the arrival of refugees in Germany can be considered as investments for future contributions. Return investments include both eventually positive economic effects caused by the contribution of employed refugees and expenses for refugee accommodation and integration, which act as an economic stimulus. Findings indicate that even in a pessimistic scenario, the economic contribution of refugees will exceed public expenses for refugee integration after a time period of ten years, provided that labour market integration is successful. The authors conclude that the long-term gains are likely to exceed initial costs.

For Austria, similar study designs have been employed to model previous as well as future economic effects of refugee immigration. Berger et al. (2016) estimate the fiscal and economic effects caused by the 2015 refugee immigration until 2020. They apply a quantitative simulation model, focusing on asylum seekers and persons with subsidiary protection status. Results indicate that in the short and medium run, refugees can lead to a rise in the welfare state's net expenditures of up to EUR 4.1 billion until 2019. The largest shares of these expenditures are spent on basic and needs-based minimum income. In conclusion, Berger et al. (2016) are optimistic that despite Austria's potential accumulation of debts, expenditures for refugees may very well be seen as an investment that can lead to economic growth provided that refugees can indeed use their human capital on the Austrian labour market.

Batini and Stepanyan (2016) investigate the period between 2010 and 2016 by looking at the effects of reforms affecting asylum seekers and refugees on the Austrian public budget. A mixed-methods approach is employed, including model scenarios based on two OECD datasets from 2013 and 2015. The results yield that young, well-educated immigrants can create notable economic benefits as long as supportive policies are put in place to facilitate labour market integration. Further, simulation analysis suggests that the higher inflow of migrants can have positive impacts on Austria's economic output and reduce spending on pensions and health care.

Holler and Schuster (2016) examine the impact of migration on the Austrian economic budget, focusing on asylum seekers and refugees. With a quantitative simulation model covering the time period from 2015 to 2060, several scenarios are developed. In the short run, expenditures for refugees might rise, mostly due to minimum income support. However, in the medium run, when refugees start to join the labour force tax revenues will rise and expenditures on refugee integration will decrease as will social transfers. In the long run and final scenario, an aging refugee population might present a burden to the pension system and health expenditures may rise. Still, results indicate that from a demographic perspective, immigration can have positive effects on the welfare state even if debts are increased. Only a sensibly targeted set of policy measures can encourage positive effects and decrease overall expenditures.

Prettenthaler et al. (2017) investigate the time frame from 2015 to 2025 for Austria. Their research question is two-fold, including both the costs and benefits of immigration and its implications for the labour market. Refugees and asylum seekers are distinguished in this model. A mixed-methods approach is employed, including the AUSTRIO model for simulation analysis. Results indicate that young male refugees comprise the largest share of unemployed forced migrants. A clear positive impact of earlier refugee cohorts on the host society's resource allocation, welfare and revenues is found. Therefore, supporting the conclusion that recent inflows of forced migrants into Austria have the potential to benefit the host country's economy if appropriate investments are being made.

Generational accounting is used by Raffelhüschen and Moog (2016) in a study for the Stiftung Marktwirtschaft to examine the fiscal costs of the 2015 immigration into Germany. In a baseline scenario, which assumes no differences between immigrants and German citizens in terms of age and qualifications, the authors find negative fiscal effects due to ageing. Another scenario assumes lower skills among immigrants, resulting in lower net contributions during employment and six years for successful integration. A third scenario assumes higher numbers of refugee arrivals. The authors conclude that the 2015 refugee arrivals cannot solve the demographic problem in Germany due to low qualifications of some groups. Yet, qualified immigration with high labour market participation and condensed timeframes needed for economic integration has positive fiscal effects on the national budget.

In a study published by the Heinrich Böll Stiftung, Bonin (2016) employs generational accounting and finds that the pace of economic integration and vocational qualification is decisive for the long-term fiscal costs of refugees. Taking the demographic structure of Germany, population ageing and relatively high initial costs of refugee accommodation and integration into account, Bonin concludes that investments into vocational qualifications can lead to positive effects on the budget discharges in the medium and long run.

Effects of Other Immigrant Groups

The meta-study also includes two recent studies focusing on specific immigrant groups, namely cross-border workers in Switzerland and Romanian immigrants in Germany.

Beerli and Peri (2017) analyse the time frame between 1999 and 2007, when EU citizens had been gradually granted access to the Swiss labour market. A relevant labour force group for the Swiss context were so-called cross-border workers, abbreviated as CBWs, from neighbouring countries. Findings indicate that opening the border to CBWs had positive effects on the Swiss labour market, including higher wages for native-borns.

In light of the unrestricted opening of the labour market to Romanians in 2014, a study commissioned by the Friedrich-Ebert-Stiftung examines the social benefit reception by Romanian immigrants residing in Germany (Jobelius and Stoiciu 2014). Findings indicate that Romanians are a comparatively well-qualified and highly integrated immigrant group. In 2013, only 7.4 percent of Romanians were recipients of social benefits, compared to 7.5 percent of Germans and to 16.2 percent across all immigrant groups. However, precarious labour conditions and violation of employment rights are identified as serious problems for Romanian immigrants.

Cross-country Studies

The following four studies are not included in the taxonomy as they provide cross-country comparisons, rather than focusing on specific national contexts. Boeri (2010), Barrett and Maître (2013) and Goodman and Wright (2015) assess the effects of immigration on the social welfare state in general and do not find negative economic

results. Martin et al. (2016) focus on asylum seekers and refugees and investigate their labour market integration.

Boeri (2010) examines the effect of migration on the net fiscal position of native-borns. Analysing EU-SILC data from 2004 to 2007 for fifteen EU-countries, he finds no evidence that legal migrants, notably skilled migrants, are net recipients of state transfers. Yet, residual dependency on non-contributory transfers and self-selection of unskilled migrants in countries with generous welfare systems can be observed. The findings for Austria and Germany suggest that the native-born population is less likely to be net fiscal contributors than migrants.

Barrett and Maître (2013) use EU-SILC 2007 data to examine whether immigrants are more likely to receive welfare payments than native-borns across a range of European countries, including Austria and Germany. Using descriptive statistics and probit regressions, the authors conclude that immigrants are not intensive users of welfare. Yet, results also indicate higher rates of poverty among immigrants.

Goodman and Wright (2015) investigate panel data from the European Social Survey between 2002 and 2012 to assess whether mandatory integration requirements matter. The CIVIX (Civic Integration Policy Index) is used to examine immigration as a whole, without distinguishing between different nationalities or legal statuses. The authors find little evidence that mandatory integration requirements produce tangible, long-term integration effects. Still, they can fulfil a meaningful gate-keeping role.

Martin et al. (2016) review literature and case studies between 2010 and 2015 for nine EU member states, including Austria and Germany, with the aim of assessing as to what extent the average performance of immigrants differs from that of native-borns and whether these differences can be explained by structural effects. Results indicate that employers and professional stakeholders attribute utmost importance to German language skills for further qualification, which is reflected by the implementation of new policy measures. However, successful labour market integration considerably depends on the willingness of companies to employ refugees.

APPENDIX 2: Summary of the Scoping Review

Author(s), Year	Titel	Research question(s)	Group	Results	Policy recommendations	Data	Methods	Period examined	Quality measure	Funding agency
Austria										
Batini and Stepanyan (2016)	Austria's long-run fiscal sustainability in light of current tax and expenditure trends	Should the consolidation of public finances be achieved and if so, which types of expenditure can be cut without dampening growth over the medium to long term?	Immigrants (refugees as thematic anchor)	<ul style="list-style-type: none"> - Young, well-educated immigrants result in notable economic benefits. - Higher numbers of immigrants can yield positive impact on Austria's potential output and could reduce spending on pensions and health care. 	<ul style="list-style-type: none"> - Early and sustained efforts in the fields of language training, school access, health, etc., are required for successful integration of refugees. - Labor market deregulations facilitate labour market integration. - The "inactivity trap" can be countered by a modified interaction of social benefits and labor taxation in lower wage sectors. - Early and sustained efforts in the fields of language training, school access, health, etc., are required for successful integration of refugees. - Labor market deregulations facilitate labour market integration. - The "inactivity trap" can be countered by a modified interaction of social benefits and labor taxation in lower wage sectors. 	OECD (2013, 2015)	Mixed methods (statistics, simulation model, literature)	Moment, scenario	Institutional Paper	International Monetary Fund (IMF)
Berger et al. (2016)	Ökonomische Analyse der Zuwanderung von Flüchtlingen nach Österreich	What are the fiscal costs and economic effects for Austria caused by the current refugee migration over the next few years?	Refugees (asylum-seekers, convention refugees, people with subsidiary protection)	<ul style="list-style-type: none"> - The cumulative additional expenditure would be € 8.1 billion for the state budget between 2015 and 2019 - The additional revenue will increase from around € 160 million in 2015 to € 1.4 billion in 2019. - The debt level will be € 4.1 billion more in 2019 than in the baseline scenario. 	<ul style="list-style-type: none"> - Interface management needed on the labor market to match open positions with refugees. 	UNHCR (2015), UIS (2014), ILO (2009, 2010, 2011, 2012, 2013), European Commission (2015)	Quantitative (Equilibrium model PuMA)	Moment, scenario (2015-2019)	Institutional Paper	Austrian Chamber of Commerce (WKO), Austrian Federal Ministry for Europe, Integration and Foreign Affairs (BMEIA)
Bock-Schappelwein and Huber (2016)	Zur Arbeitsmarkt-integration von Asylsuchenden in Österreich	How well are asylum seekers integrated into the Austrian labor market?	Refugees (asylum-seekers, convention refugees)	<ul style="list-style-type: none"> - Especially recently arrived female asylum seekers find themselves in an unfavourable position on the labour market. 	<ul style="list-style-type: none"> - Quicker asylum processes are needed as well as special support. - Young asylum seekers need apprenticeship positions. - Quicker asylum processes are needed as well as special support. - Young asylum seekers need apprenticeship positions. 	UNHCR (2014), ILO (2012)	Mixed (Literature review, statistics)	Moment	Institutional Paper	Austrian Institute of Economic Research (WIFO)
Holler and Schuster (2016)	Langfristeffekte der Flüchtlings-zuwanderung 2015 bis 2019 nach Österreich	What is the impact of migration on the Austrian economic budget?	Refugees (asylum-seekers, convention refugees)	<ul style="list-style-type: none"> - From a demographic perspective migration is good in the short-run. - In the long run and final scenario, an aging refugee population might present a burden to the pension system and health expenditures may rise. 	<ul style="list-style-type: none"> - Faster integration into the labour market and recognition of qualifications is needed. 	Ageing Report 2015 for Austria, Eurostat (EUROPOP 2013)	Quantitative (simulation model)	Scenario, moment	Institutional Paper	Austrian Fiscal Advisory Council (Fiskalrat)
Huber (2016)	Auswirkungen von Migration auf die Wirtschaft: Was wir wissen, was wir nicht wissen, was wir tun sollten	What are the effects of migration on the Austrian labor market as well as the entire national economy?	Immigrants (refugees as thematic anchor)	<ul style="list-style-type: none"> - There is potential and risk concerned with integration. 	<ul style="list-style-type: none"> - Better recognition of qualifications, care and easier access to the labor market are needed. 	Literature	Meta-study (Literature review)	Moment	Institutional Paper	Austrian Development Agency (ADA); conducted by Austrian Foundation for Development and Research (ÖFSE)

Author(s), Year	Titel	Research question(s)	Group	Outcomes	Policy recommendation	Data	Methods	Period examined	Quality measures	Funding agency
Prettenthaler et al. (2017)	Ökonomische Effekte von Asylberechtigten in Österreich	What are the implications for the labour market?	Refugees (asylum-seekers, convention refugees, subsidiary protection status)	- There are costs associated with the immigration but the long-term benefits are overwhelming. - Men peak in the Austrian labor market.	- Faster integration into the labor market is needed. - More women should be employed.	AMDB (2015, 2016) and macroeconomic modeling (federal state level)	Mixed (Literature review, AUSTRIO model)	Moment, scenario	Institutional Paper	Caritas, Red Cross; conducted by Joanneum Research
Switzerland										
Beerli and Peri (2016)	The Labor Market Effects of Opening the Border: Evidence from Switzerland	What are the effects of cross-border workers on the Swiss labour market?	Cross-border workers	- Opening the border to cross-border workers had positive effects on the Swiss labour markets like higher wages for natives.	Not provided	Swiss Earnings Structure Survey (SESS) (1998-2010), BFS (2010)	Mixed (Literature review and statistics)	Historical	Institutional Paper	KOF Swiss Economic Institute
Hainmüller, Hangartner and Lawrence (2016)	When lives are put on hold: Lengthy asylum processes decrease employment among refugees	How does the length of the period during which asylum seekers are forced to wait for their asylum decision affect their subsequent integration and success?	Refugees (asylum seekers, convention refugees)	- Waiting longer in limbo for the asylum decision strongly reduces the employment integration of refugees. - This effect is fairly similar across subgroups- Waiting longer in limbo for the asylum decision strongly reduces the employment integration of refugees. - This effect is fairly similar across subgroups.	- Policy reform needed: marginally reducing asylum decision wait times by only 10% would lead to savings of about \$5.6 million in a single year alone.	Swiss Federal Statistical Office (2015)	Quantitative (Econometrics)	Historical	Journal Article (Science Advances)	Independent study
Spies and Schmidt-Catran (2016)	Migration, migrant integration and support for social spending: The case of Switzerland	Do migrants who are economically and culturally integrated into their host society raise the same economic and cultural concerns among native citizens as would economically poorly integrated and culturally distant migrants?	Immigrants (integration level distinguished)	- Objective measures of the number of migrants as well as their economic and cultural integration are of little or no relevance for the welfare support of Swiss natives.	Not provided	Swiss Foundation for Research in Social Sciences (FORS) (2012) Swiss Electoral Studies (Selects) 2011.	Mixed methods (SEM model and contact theory)	No specific time frame	Journal Article (Journal of European Social Policy)	Independent study
Germany										
Bach et al. (2017)	Abschätzung von Effekten der Integration von Flüchtlingen	What are the macroeconomic and fiscal effects of investments in the labor market integration of the 2015 arrived refugees?	Refugees (broad understanding)	- Integration efforts into the labor market draw high fiscal rates of return. - Investment into language competencies and additional educational qualifications achieve high returns in the long-run.	- Integrational courses shall be open also to asylum applicants. - Vocational and educational preparation measures shall be raised. - Integrational courses shall be open also to asylum applicants. - Vocational and educational preparation measures shall be raised.	Socio-economic Panel since 1995 (IAB-SOEP-Migrationsstichprobe)	Quantitative (macroeconomic simulation model until 2030)	Scenario (simulation until 2030)	Institutional Paper	Federal Ministry for Labour and Social Affairs; conducted by German Institute for Economic Research (DIW Berlin) and Institute for Employment Research (IAB)
Bonin (2014)	Der Beitrag von Ausländern und künftiger Zuwanderung zum deutschen Staatshaushalt	Do foreigners who live in Germany get more social benefits than the taxes they pay? How can migration stabilize the public budget?	Immigrants (undifferentiated)	- Foreigners already living in Germany contribute significantly more to the welfare state system than they receive social benefits. - Qualified future immigration relieves the fiscal burden on the local population.	- Policies that raise the level of education and qualification of immigrants have to be installed. - Qualified immigration has to be fostered.	Federal Statistical Office Census 2011, Socio-economic Panel 2014 (IAB-SOEP-Migrationsstichprobe)	Quantitative (Cash flow accounting, generational accounting, sustainability accounting)	Moment (2012), scenario	Institutional Paper	Bertelsmann Stiftung; conducted by Centre for European Economic Research (ZEW)

Author(s), Year	Titel	Research question(s)	Group	Results	Policy recommendations	Data	Methods	Period examined	Quality measure	Funding agency
Bonin (2016)	Gewinne der Integration. Berufliche Qualifikation entscheiden über die langfristigen fiskalischen Kosten der Aufnahme Geflüchteter	What are the consequences of the humanitarian immigration on the public budget? Can it contribute to solving the demographic problem?	Refugees (broad understanding)	- In case of succesful labour market integration, humanitarian immigration can alleviate the burden on public finances in the long run.	- Public investments in vocational training and faster economic integration of refugees lead to additional tax income and lower expenses in the medium- and long-run.	Centre for European Economic Research (ZEW)	Quantitative (generational accounting)	Scenario	Institutional Paper	Heinrich Böll Stiftung
Brücker (2013)	Auswirkungen der Einwanderung auf Arbeitsmarkt und Sozialstaat: Neue Erkenntnisse und Schlussfolgerungen für die Einwanderungspolitik	- What are the effects of immigration on the labour market and the social welfare state? - What impact does the higher qualification of immigrants since 2000 have?	Immigrants (qualification levels distinguished)	- For the labour market, neutral or positive effects can be expected in the long run. - With the qualification increase of newly arrived immigrants and the beneficial age composition, net contribution to the social welfare state will continue to increase.	- Legal conditions and recruitment strategies have to be installed to attract skilled labor and immigrants with needed vocational training, also from third countries.	Micro census to new immigrants in the years 2008/2009	Simulation (based on the estimation approach)	Scenario	Institutional Paper	Bertelsmann Stiftung
Brühl (2016)	Die Kosten der Flüchtlingskrise in Deutschland – eine Investition in die Zukunft?	What are the costs of the refugee crisis and when will they be recouped fiscally?	Refugees (broad understanding)	- The "fiscal break-even" point can be reached by the year 2031 and the "economic break-even" point by 2025.	- To reach the break-even points, labour market integration with high investment in qualification and flexible use of labour policy tools is essential.	Federal Office for Migration and Refugees	Financial-economic simulation model	Scenario (optimistic scenario calculates amortization of fiscal costs by 2031 and of macroeconomic costs by 2025)	Journal Article (Wirtschaftsdienst)	Independent study
Fratzscher and Junker (2015)	Integration von Flüchtlingen-eine langfristig lohnende Investition	What are the long-term economic effects of successful refugee integration?	Refugees (broad understanding)	- With succesful integration, the economic contribution by refugees exceeds the public expenses after five to ten years.	- The debate about refugee immigration has to be shifted. - Instead of focusing on the short-term costs, long-term economic potential of a successful integration has to be put in the foreground.	Federal Ministry of the Interior, Federal Statistical Office, Socio-economic Panel (IAB-SOEP-Migrationsstichprobe)	Quantitative (Simulation model)	Scenario (for 2015-2035)	Institutional Paper	Deutsches Institut für Wirtschaftsforschung (DIW Berlin)
Jobelius and Stoiciu (2014)	Die Mär vom »Sozialtourismus«. Zuwanderung rumänischer Staatsbürger nach Deutschland und in andere EU-Mitgliedsländer	What is the factual situation about the reception of social benefits by Romanian citizens who came to Germany before 2014?	Romanian immigrants	- Beliefs in the 'misusage of social services' are wrong. Romanians are a comparatively well qualified and integrated immigrant group.	- Substandard working conditions for imigrants in certain regions and sectors for immigrants long for political action.	Literature; numbers from i.e. Federal Statistical Office, Federal Ministry for Labour and Social Affairs	Literature review	Historical	Institutional Paper	Friedrich-Ebert-Stiftung

Author(s), Year	Titel	Research question(s)	Group	Results	Policy recommendations	Data	Methods	Period examined	Quality measure	Funding agency
Raffelhüschen and Moog (2016)	Zur fiskali-schen Dividende der Flüchtlings-krise. Eine Generationen-bilanz	What are the fiscal costs of the 2015 immigration?	Refugees (broad understanding)	<ul style="list-style-type: none"> - Uncontrolled immigration cannot solve the demographic problem and leads to negative fiscal effects. - Qualified immigration, with high labor market participation and few integration time, has positive fiscal effects on the national budget. 	- Controlled immigration shall secure that the average of immigrants is relatively qualified. This can be achieved by common European policies such as restrictive Schengen border controls, immigration quota and low social security provisions.	Data from 2013: Socio-economic Panel (IAB-SOEP-Migrations-stichprobe), Deutsche Rentenversicherung, Federal Statistical Office, Federal Office of Administration	Quantitative (generational accounting)	Scenario	Institutional Paper	Stiftung Marktwirtschaft; published as study in "Kosten und Chancen der Migration" (2016), ifo Schnelldienst
Stähler (2017)	A model-based analysis of the macroeconomic impact of the refugee migration to Germany	What are the potential economic consequences and transmission mechanisms associated with refugee migration?	Refugees (asylum seekers, convention refugees)	<ul style="list-style-type: none"> - Measures that cause the migrant qualification structure to closely match that of the native population prevent GDP and consumption losses as well as higher unemployment. - Overall, the macroeconomic impact of refugee migration is small. 	- Only implicit (stating that integration measures which improve the qualification structure yield positive fiscal outcome).	German Federal Statistical Office	Quantitative (macroeconomic simulation model (New Keynesian DSGE model GEAR))	Scenario	Institutional Paper	Central Bank of the Federal Republic of Germany (Deutsche Bundesbank)
Weber and Weigand (2016)	Identifying macroeconomic effects of refugee migration to Germany.	What are migration impacts on the German economy, explicitly distinguishing refugee immigration and non-refugee immigration?	Immigrants (refugees and non-refugees distinguished)	<ul style="list-style-type: none"> - Non-refugee immigration has more beneficial medium-run effects on GDP and the labour market - High refugee immigration first causes positive demand-side reactions, but then lowers per capita GDP as well as the wage share and increases the unemployment rate - These effects decrease over time. 	- Significant initial investments are required in the fields of integration, language skills, qualification, use of informal competencies and labor market access.	Yearly data for the period 1970-2014 from Federal Office for Migration and Refugees, German Federal Statistical Office	Quantitative (macroeconomic modelling approach complemented by instrumental variable techniques)	Historical (1970-2014)	Institutional Paper	Institute for Employment Research (IAB)
Worbs, Bund and Böhm (2016)	Asyl - und dann? Die Lebenssituation von Asylberechtigten und anerkannten Flüchtlingen in Deutschland.	What is the life situation of people entitled to asylum and recognized refugees in Germany?	Refugees (people entitled to asylum, convention refugees)	<ul style="list-style-type: none"> - In a minimum of 60,8% of the questioned households, at least one transfer payment contributes to the household income. - The majority of households achieves a monthly income lower than 1.500 euros. - Persons who have resided in Germany for a longer period of time have higher income. 	<ul style="list-style-type: none"> - Fast integration into the labor market with the typical immigrant segments like food service and packaging is not sustainable in the long run. That is because low and middle qualified jobs will be rare in the future and career advancement opportunities are not given. Instead, investing in language and qualification courses in the beginning pays off. - The potential of women and higher qualified refugees has to be used with targeted measures. 	Self-collected data by means of a standardized quantitative survey in writing	Quantitative (survey)	Moment (2014)	Institutional Paper	Federal Office for Migration and Refugees (BAMF)

Remark: Studies revealing positive effects are marked in green, those with neutral effect of immigration on the social welfare state in yellow, and research revealing negative effects is marked in red.

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