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Personal transfers in the balance of payments: estimation under changing migration patterns[1]

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Personal Transfers in the Balance of Payments: Estimation under Changing Migration Patterns

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Abstract

Personal transfers as part of remittances are becoming increasingly relevant due to growing migration movements influenced by rising income inequalities, political conflicts and increasing environmental challenges. Their impact on countries´ economies call for reliable estimations to be used in policy decision making and economic analysis. After a revision of recent demographic changes in Germany, evidence of growing migration and heterogeneity in its diaspora composition lead to a revision of the current personal transfers estimation approach in the Balance of Payments framework. As Germany is a net sender country, the revision is focused on the debit side. Within the revision approach, alternative data sources are analysed, from which the socio-economic panel (SOEP) conducted on German households is selected together with additional administrative data on population statistics to develop an alternative estimation approach. The proposed new method uses SOEP information on socioeconomic markers such as age, employment status or migration background, which allow for a deeper understanding of personal transfers dynamics in Germany. First results appear to be more accurate and enhanced although showing a decrease in total volume of personal transfers and a slight change in country composition compared to the current estimation approach.

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Introduction

Increasing economic inequality, growing political conflicts and tensions, climate change and rising environmental challenges around the globe are some of the reasons for increasing worldwide migration. As a consequence, remittances, which are an important source of income for many families, are also on the rise and playing an increasing role in international payments. Therefore, reliable information on remittance flows becomes key for policy decision making and economic analysis.

Remittances are one of the indicators of the sustainable development goals of the United Nations 2030 Agenda[2], and have reached a volume three times the amount of official development assistance provided by official donors worldwide[3] (USD 222 billion vs. USD 645 billion in remittances in 2022). These flows amount in some countries up to 50 percent of their GDP[4] and can therefore have a stabilising effect in several economies. Hence the importance of an accurate, timely and granular estimation of remittance flows.

The Balance of Payments is currently the most relevant source of information on remittances. Within remittances[5], personal transfers refer to transfers between households of two different economies. Their compilation is especially challenging, because single transfers are often below reporting thresholds and may be routed through unregulated channels, making it difficult to obtain reliable information. Therefore direct reporting often needs to be augmented by further estimation methods.

In Germany an estimation method is in place that uses bank reports and employment data by German labour authorities to estimate personal transfer debits. As a country with relatively high income[6] and wages[7], it has a long history of work migration [Hanewinkel, Oltmer; 2018]. With the presence of diasporas in Germany

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[2] Remittances are an indicator contained in objective "17.3 Mobilize additional financial resources for developing countries from multiple sources". United Nations Sustainable Development Goals, available at https://www.un.org/sustainabledevelopment/globalpartnerships/ (cited on 04.01.2024)

[3] Remittances vs. other resource flows. Migration. World Bank, available at https://www.worldbank.org/en/topic/migration (cited on 04.01.2024)

[4] Personal remittances received as percentage of GDP. World Bank, available at https://data.worldbank.org/indicator/BX.TRF.PWKR.DT.GD.ZS?most_recent_value_desc=true (cited on 04.01.2024)

[5] Personal transfers are part of remittances, which also include compensation of employees, less Taxes and social contributions payable that are related to compensation of employees, and less Transport and travel expenditures plus Capital transfers receivable from households [BPM6 12.27].

[6] Since 1970 Germany ranks among the top 20 countries with respect to Adjusted net national income per capita (current US$), World Development Indicators, Data Bank, World Bank, available at https://databank.worldbank.org/reports.aspx?source=2&series=NY.ADJ.NNTY.PC.CD&country=# (cited on 27.12.2023)

[7] Since 1991 Germany ranks among the top 20 available countries with respect to Gross Average Monthly Wages, UNECE Statistical Database, available at https://w3.unece.org/PXWeb2015/pxweb/en/STAT/STAT__20-ME__3-MELF/60_en_MECCWagesY_r.px/table/tableViewLayout1/ (cited on 27.12.2023)

from the 1950ies and 1960ies[8] *Gastarbeiter* ("guest-worker"), to the EU's freedom of movement act, effective since 2005[9], and migration partly driven by the conflicts in the Balkans, Syria and Ukraine, the composition of diasporas in Germany has become more heterogeneous. With a growing number of migrants and increasing heterogeneity of migrant communities in Germany, a revision of the current estimation method and the search for further data sources becomes worthwhile.

This paper introduces a revised estimation approach that combines further data sources from German labour authorities, official migrant registers and the German Socio-Economic Panel (SOEP) to estimate personal transfers for the years 2016 to 2020. To achieve this, current demographical developments in Germany are discussed, for the estimation to take these changing migration patterns into account. Available data sources are studied, and subsequently the SOEP data is analysed, since it allows incorporating various socioeconomic markers like age, employment status, and citizenship or migration background. These characteristics give an insight on the drivers of personal transfers in Germany, and allow for a derivation of an estimation approach whose results are presented and discussed.

Changing Migration Patterns

According to the *Ausländerzentralregister* (AZR), Germany´s foreign population amounted to just over 13 million people in 2022, 16% of the country´s population, and it has grown by 85.5% in the last decade. To understand the current patterns of migration in Germany, it is important to understand Germany's several migration inflows, which play a role when analysing the population engaged in making personal transfers.

Germany´s first post World War II wave of immigration started in the mid-1950ies and lasted until the end of the1960ies. In this period, Germany had a high demand for labour which was partly met by recruiting *Gastarbeiter* ("guest-workers"). During this time, Germany had bilateral agreements with several countries that included the recruitment of workers. Guest-workers under these treaties came from Turkey, Italy, Greece, Portugal, former Yugoslavia, Morocco, Tunisia and Spain, and the purpose of their stay was regulated work. Though guest-worker agreements were intended to be temporal, many of these people settled permanently in Germany, thus still representing a large part of Germany's foreign diaspora (see Figure 1). It is safe to assume that migrants that arrived with these first immigration inflows had high participation rates in the German labour market and also had a very high inclination to remit.

Germany´s second migrant influx happened during the mid-1990ies due to the Balkan War. Probably because of the already present Yugoslavian diaspora, a notable number of persons sought refuge from this conflict in Germany. This migration can

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[8] Germany recruited guest-worker via treaties with Italy (1955), Greece and Spain (1960), Turkey (1961), Morocco (1963), Portugal (1964), Tunisia (1965) as well as Yugoslavia (1968).

[9] Directive 2004/38/EC of the European Parliament and of the Council of 29 April 2004 on the right of citizens of the Union and their family members to move and reside freely within the territory of the Member States.

be seen in Figure 1 as an increase in the number of persons from guest-workers' countries in the mid19990ies. It is worth noting that the number of persons from guest workers' countries decreases after 1995 with the end the Bosnian war. This is largely due to migrants returning to their countries.

In 2015, the armed conflict in Syria led to an additional inflow of population. The most recent demographic development has been the increase of the Ukrainian population in 2022 due to the war. All these migration inflows have impacted the population in Germany, making its foreign population larger by numbers and more diverse. Note for example the declining share foreign citizens from guest workers' countries compared to total foreign citizens in Germany, and how these recent demographic developments are reflected in the foreign population composition.

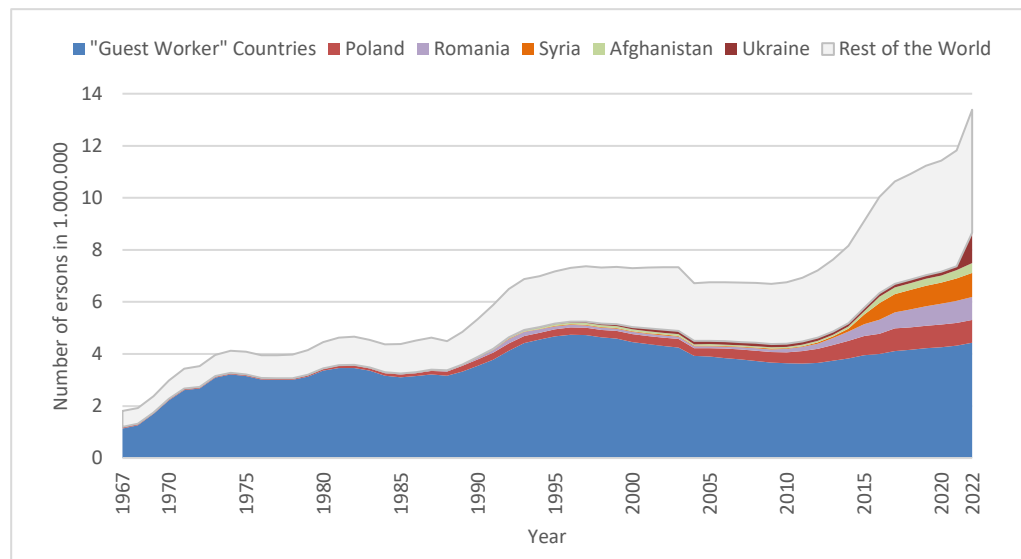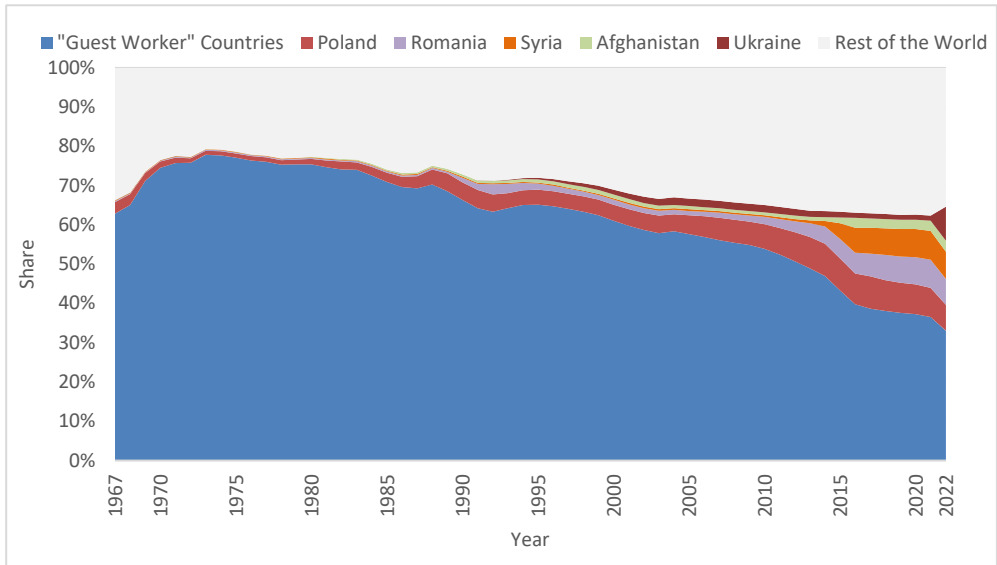*Figure 1: Number of Persons with Foreign Citizenship in Germany*

Figure 2: Persons with Foreign Citizenship in Germany (Share of Selected Groups)

Focusing on working-age foreign population (18 to 65 years of age), which is traditionally more likely to remit, this group represents 12% of Germany´s population in 2022, and has grown 74% over the last decade. This group is diverse and accounts for 75% of total foreign population in 2022. It contains people from over 200 different countries, though half of the foreign population is citizen of eight of them: Turkey, Poland, Ukraine, Romania, Syria, Italy, Bulgaria and Croatia.

Around 75% of the total population with foreign citizenship in Germany comes from 21 countries. Turkey is, since many years and by a wide margin, the largest group with foreign citizenship, amounting, to 12 % of it in 2022, and followed by Poland with 7 %. However stable these nationalities might be, the German foreign population has seen a significant increase in Ukrainian citizens due to the war, increasing a staggering 506 % in 2022, reaching a 7% of total foreign citizenship[10].

These countries would be expected to be the main counterpart economies of personal transfers. When looking at the population with foreign citizenship by region over time, the increase in heterogeneity can be seen when comparing 2002 foreign population composition to that of 2022 (see Figure 3). In 2002, three main regions accounted for 80% of total population with foreign citizenship in Germany: non-EU Europe and Central Asia, European Union not from the Euro Area, and Euro Area countries. In 2022 a fourth group emerges to account for the same percentage: Middle East and North African countries, which reflects the influx of Syrian and Afghan citizens over the past decade. Moreover, during this period, the proportion of non-EU Europe and Central Asia countries experience a decrease despite the Ukrainian influx, European Union without Euro Area countries increase due to the influx of the Balkan countries, and the share of Euro Area countries is reduced. It should be pointed out, that persons with citizenships mentioned above often migrated at different times with different incentives and have reached different levels of integration into the

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[10] See "Tables" section for further details.

German society. Therefore statistics compilers may have to treat them differently when attempting to estimate personal transfers.

Figure 3: Foreign population composition in Germany by region
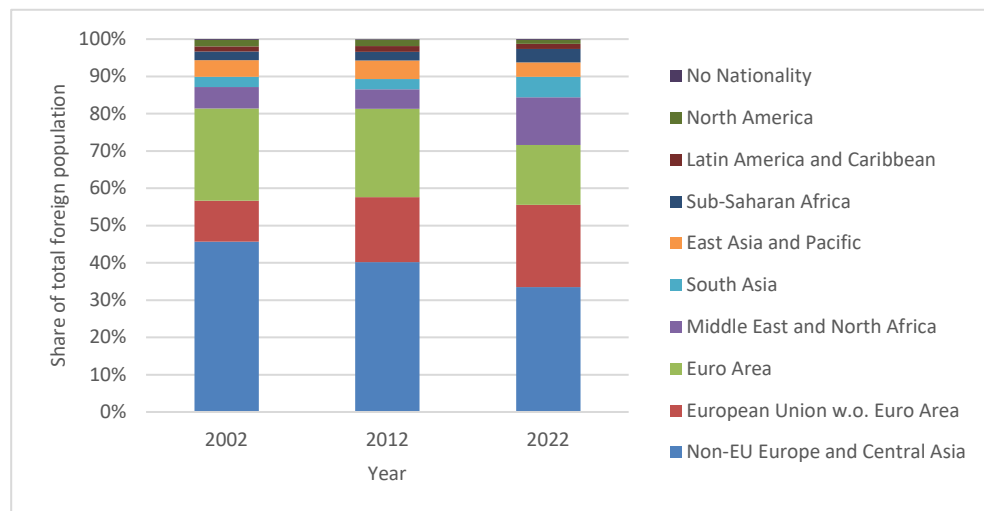
Additionally, macroeconomic factors may influence the inclination to make personal transfers. Among them is the possibility gain income. As mentioned above, Germany ranks relatively high in average gross monthly Wages as well as in adjusted net national income per capita. When analysing GDP per capita[11], we find that Germany has a higher ratio than the main foreign nationalities in Germany in 2022: USD 48.718 vs. USD 10.674 in Turkey and 18.688 USD in Poland. Additionally, Germany has one of the lowest unemployment rates of OECD[12] countries. These economic conditions may be an important factor for migrants who want to support their families back home. On the other hand however, integration of extra-EU citizens into the German labour market is below EU-average and faces several challenges as Tangermann and Grote point out [Grote, Tangermann; 2018]. In fact, according to the *Bundesagentur für Arbeit* (BA) Ukrainian, Syrian and Turkish nationals make up 17% of total unemployed citizens in Germany, 47% of all unemployed foreign citizens[13].

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[11] World Bank national accounts data, and OECD National Accounts data files. Available at https://databank.worldbank.org/reports.aspx?source=2&series=NY.GDP.PCAP.PP.CD&country= (cited on 05.01.2024)

[12] OECD National Accounts. Rate of Unemployment as % of Labour Force, available at https://stats.oecd.org/BrandedView.aspx?oecd_bv_id=mei-data-en&doi=data-00046-en# (cited on 05.01.2024)

[13] Unemployed according to nationality (monthly data). *Bundesagentur für Arbeit* (BA), available at https://statistik.arbeitsagentur.de/SiteGlobals/Forms/Suche/Einzelheftsuche_Formular.html?topic_f=nat-ins (cited on 04.01.2024)

Moreover, while the guest-workers' cohorts of the 1950ies and 1960ies were predominantly employed by resident employers, recently self-employment becomes a more relevant source of income among migrant communities[14].

In summary, the migrant communities settled in Germany decades ago have changed over time. With increasing numbers of migrants and increasing heterogeneity of migrant groups and migrants' sources of income, the task of estimating personal transfers accurately in the framework of the balance of payments becomes increasingly challenging.

Estimating Personal Transfers

The current estimation of personal transfer debits consists of a combination of voluntary reporting by intermediaries in the personal transfers market, providing information on small volume private transfers, and administrative data on employment of foreign population subject to social security contributions from the *Bundesagentur für Arbeit* (BA). As Friedrich et al. describe in their work, a per capita personal transfer is calculated assuming it falls within a range of amounts to account for payments not included in the reports, and then grossed up assuming all migrants included in BA data engage in personal transfers [Friedrich et.al.; 2007].

As mentioned above, the growing number of persons with family ties abroad, the recent changes in migration patterns in Germany and the trend among migrant communities to earn income from self-employment rather than employment suggest a revision of the current estimation approach for personal transfers is worthwhile.

Data Sources

Estimating personal transfers starts with searching and analysing available sources and choosing one, or a combination of them, that allow for an adequate estimation. Accuracy, timeliness, coverage and frequency are important features to take into account when selecting sources. There are a number of possible data sources for estimating personal transfers in Germany.

Direct reports by Money Transfer Operators (MTOs) can provide information on personal transfers´ flows, both inbound and outbound, and a geographical detail of their origin and destination. However, some of these entities may report net amounts, which can lead to a misinterpretation of the geographical allocation and the volume reported. In addition, MTOs may only represent a portion of the total personal transfer flows, since other channels such as unregulated channels might be also used. Therefore, taking into account only this source might be an underestimation of the actual personal transfer flows. Moreover, according to §67 (2) 1 of the

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[14] Migrant Entrepreneurs in Germany from 2005 to 2014 - Their Extent, Economic Impact and Influence in Germany's Länder, Dr. Andreas Sachs, Markus Hoch, Claudia Münch, Hanna Steidl, Bertelsmann Stiftung, 2016, https://www.bertelsmann-stiftung.de/fileadmin/files/BSt/Publikationen/GrauePublikationen/NW_Migrant_Entrepreneurs_2016.pdf (cited on 27.12.2023)

Außenwitschaftsverordnung (AWV)[15], the reporting threshold for transactions between residents and non-residents is 12.500€, an amount significantly above of what an average personal transfer would be expected to be. MTOs that report transactions below this amount do so willingly.

Household surveys are second data source available in Germany. The *Deutsches Institut für Wirtschaft* (DIW) provides the SOEP (Socio-Economic Panel)[16] since 1984. The SOEP is an annually conducted private panel survey that is representative of private households in Germany. This survey has taken place for 38 years now and has the advantage of following the same individuals through time, expanding and diversifying the sample each year to keep it representative for Germany. It reached roughly 22.000 interviewed households in 2022. Since questions of migration have become more relevant for researchers, the SOEP started to maintain subsamples that represent migrant communities, thereby allowing for relatively robust estimations concerning them.

One of the numerous questions asked in this survey is if the interviewee has received or has sent financial aid from or to other people from or outside of Germany, and how much. Furthermore, this data-source contains a variety of sociodemographic data that allows for the characterization of senders and receivers of personal transfers. Some examples are gender, education, age, employment, nationality and income. By its questioning it covers regulated as well as unregulated flows, which makes it unique in coverage. However, it has to be mentioned, that though a wide array of socio-demographic information is present in the SOEP and it would theoretically be able to cover numerous personal transfers related questions, error margins tend to increase remarkably when granular results are calculated. Another drawback is the timeliness of available results. Personal transfer related items are published with a three year time lag.

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[15] "Außenwirtschaftsverordnung vom 2. August 2013 (BGBl. I S. 2865), die zuletzt durch Artikel 1 der Verordnung vom 27. September 2023 (BGBl. 2023 I Nr. 264) geändert worden ist". Currently in revision.

[16] Website of SOEP: https://www.diw.de/en/diw_01.c.615551.en/research_infrastructure__socio-economic_panel__soep.html (cited on 29.12.2023)

To augment and stabilise the results that can be estimated using the SOEP, some administrative sources and secondary sources of data are available in Germany. An example of them, already cited, are the statistics compiled from the German *Ausländerzentralregister* (AZR)[17]. They provide the number of foreign population living in Germany, by gender and migrant generation in a very timely and granular manner. This source allows to determine the potential migrant population engaged in sending personal transfers and the possible recipient countries. The information is aggregated and disseminated by the Federal Statistical Office of Germany (Destatis). This institution also offers data on naturalizations by country[18], which can be helpful to determine the proportion of persons with German citizenship that send money abroad.

Additionally, the *Bundesagentur für Arbeit* (BA) provides a variety of information concerning migration in the German labour market[19]. Among them are the number employees subject to social security with foreign citizenship, narrowing those foreigners with more economic capacity to engage regularly in making personal transfers. This administrative source also provides very timely and granular information.

Mirror data can be a useful tool to detect bilateral asymmetries and refine the estimation method. However, little information is readily available, and this would entail a more thorough communication with the main counterpart countries.

Another useful source in the estimation of personal transfers are macroeconomic indicators such as GDP per capita or unemployment rates offered by the OECD and Eurostat, which might result helpful in identifying asymmetries, and understand the reasons for migration and the propensity to remit.

Estimation Approach

To estimate personal transfers made from Germany to other countries, the data sources SOEP, AZR and BA can be combined by common items, making it possible to link the sources on aggregated level. Therefore it is possible to take estimates for shares of the population in Germany and average volumes transferred from the SOEP, and apply the results to data from statistics provided by Destatis and AZR for reporting years 2016 to 2020.

In a first step, SOEP is taken to estimate the population share of citizens in Germany involved in personal transfers and average annual amounts of personal transfers made. Breakdowns by citizenship, employment status, migration

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[17] AZR statistics can be found using code "12521" at Destatis' data service genesis online: https://www-genesis.destatis.de/genesis/online?operation=find&suchanweisung_language=en&query=12521 (pages in German, cited on 29.12.2023)

[18] Statistics on naturalisations in Germany can be found using code "12511" at Destatis' data service genesis online: https://www-genesis.destatis.de/genesis/online?operation=find&suchanweisung_language=en&query=12511 (pages in German, cited on 29.12.2023)

[19] Statistics on migration in the German labour market, Bundesagentur für Arbeit, https://statistik.arbeitsagentur.de/DE/Navigation/Statistiken/Themen-im-Fokus/Migration/Migration-Nav.html (pages in German, cited on 29.12.2023)

background and other characteristics are useful to allow for linkage with other statistics.

The statistics by Destatis and AZR are full census sources that provide high accuracy and timeliness. They can be used to provide a reliable frame to gross up into, and to make up for timeliness issues of the SOEP that have been already mentioned.

Socio-Demographic Drivers: Evidence from SOEP Results

An analysis of the information provided by the SOEP proves useful for the understanding of personal transfers' drivers and behaviour in Germany[20], and for the selection of relevant characteristics that combined with administrative data will result in a final estimation.

For the review at hand, a five year period from survey year 2017 to the most recent survey year 2021 of the SOEP is taken[21]. In a first step, shares of the population in Germany engaged in personal transfers and surveyed amounts are calculated. Table 1 shows the results. While the share as well as the number of persons making personal transfers yield relatively stable results, most grossed up amounts have double digit relative standard errors. Still, the values can serve as a rough guess for realistic personal transfer amounts.

German Residents Making Personal Transfers

For Reporting Years 2016 to 2020 — Table 1

Year	Share of Persons	rel. Standard Error	Number of Persons (Mill.)	rel. Standard Error	Amount transferred in Mill. Euro[22]	rel. Standard Error
2016	2,4%	5,8%	1.667	5,9%	3.282	9,2%
2017	3,3%	5,2%	2.301	5,3%	3.214	8,7%
2018	3,3%	5,7%	2.264	5,8%	4.050	9,9%
2019	3,3%	5,9%	2.277	6,0%	3.546	9,2%
2020	3,4%	7,2%	2.370	7,4%	4.268	9,7%

Sources: Socio-Economic Panel (SOEP) v38

Next, results broken down by citizenship are explored. Vindicating common assumptions, SOEP results show that German residents with foreign citizenship have

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[20] There are publications based on SOEP information that specifically deal with remittances. See [Holst, Schrooten; 2006], [Holst et.al.; 2008] and [Holst et.al.; 2010]

[21] Note that amounts reported as personal transfers are reported for one year prior to the survey year. So information on personal transfers can be investigated for the reporting years 2016 to 2020.

[22] It is important to stress that the amounts shown in this section correspond to calculations made exclusively from SOEP data, and they are obtained differently than the amounts described in the "Results" section, which combine SOEP data with other sources.

significantly larger inclination to make personal transfers than German citizens (see Figure 4).

SOEP: Persons in Germany making Personal Transfers Abroad
by German/Foreign Citizens, Grossed Up Values and Standard Errors

Data source: Socio-Economic Panel (SOEP), data surveys 2017 to 2021, EU Edition
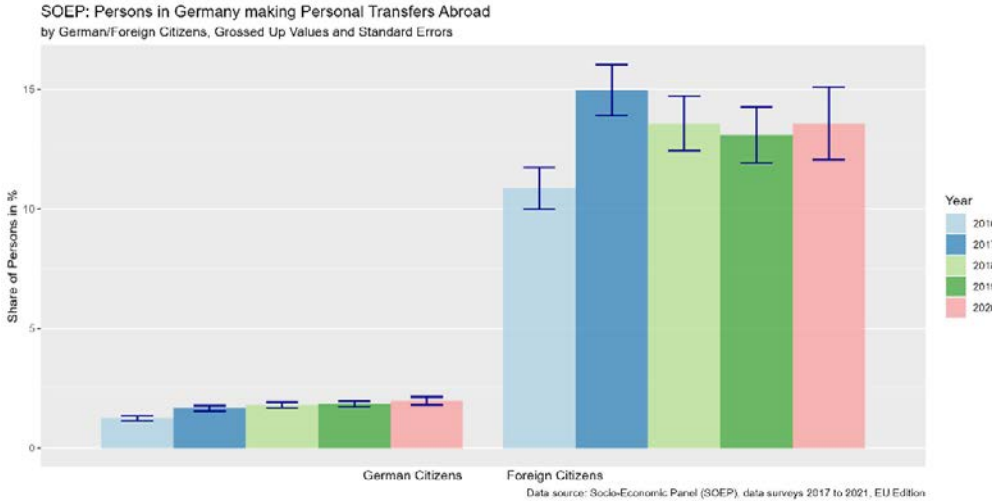
Although the group of German residents with German citizenship is much larger than the group of foreign citizenship residents, the number of persons as well as the amounts transferred are of similar magnitude for both groups (see Figure 5 and Figure 6). This finding supports the notion that a model for German personal transfer debits should include methods to estimate personal transfers for persons of foreign and German citizenship separately.

SOEP: Persons in Germany making Personal Transfers Abroad
by German/Foreign Citizens, Grossed Up Values and Standard Errors

Data source: Socio-Economic Panel (SOEP), data surveys 2017 to 2021, EU Edition

Figure 5

SOEP: Amount of Personal Transfers Made
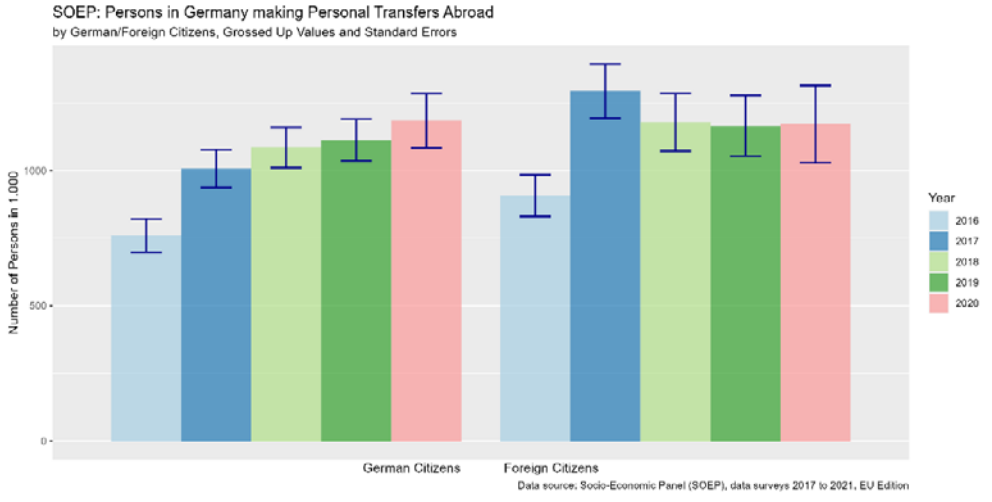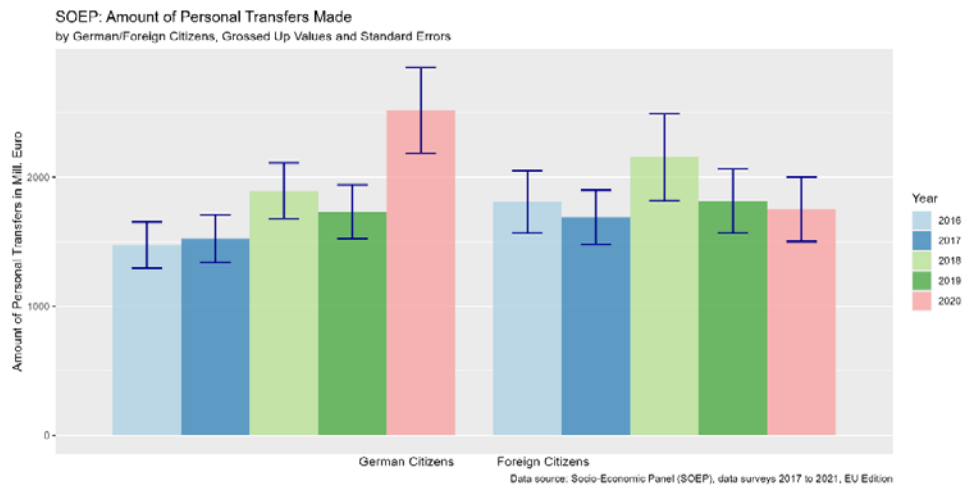by German/Foreign Citizens, Grossed Up Values and Standard Errors

Foreign population

Table 2 shows SOEP results for the share of persons with foreign citizenship living in Germany that make personal transfers, as well as their number and the amounts transferred. The results for amounts are not as robust as desirable but they can serve as rough guesses of the amounts probable.

Foreign Citizens Resident in Germany Making Personal Transfers

For Reporting Years 2016 to 2020						Table 2
Year	Share of Persons	rel. Standard Error	Number of Persons (Mill.)	rel. Standard Error	Amount transferred in Mill. Euro[1,23]	rel. Standard Error
2016	10,9%	8,0%	907	8,5%	1.807	13,4%
2017	15,0%	7,1%	1.293	7,7%	1.691	12,5%
2018	13,6%	8,4%	1.178	9,0%	(2.155)	15,6%
2019	13,1%	8,9%	1.165	9,6%	1.815	13,8%
2020	13,6%	11,2%	1.182	12,1%	1.751	14,3%

[1] () denote values with more than 15% relative standard error

Sources: Socio-Economic Panel (SOEP) v38

Keeping in mind that BA provides accurate and granular data on persons employed or looking for work by employment status, it is useful to look for stable patterns regarding employment status in the SOEP. Figure 7 to Figure 9 show the shares of persons making personal transfers abroad and their number, as well as the transferred amounts by employment status. It shows that shares are highest among

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[23] It is important to stress that the amounts shown in this section correspond to calculations made exclusively from SOEP data, and they are obtained differently than the amounts described in the "Results" section, which combine SOEP data with other sources.

persons in full or part time employment. Persons not employed at all and persons in marginal employment show some inclination to make personal transfers as well.

Figure 6

SOEP: Foreign Citizens making Personal Transfers Abroad
by Employment Status, Grossed Up Values and Standard Errors

Data source: Socio-Economic Panel (SOEP), data surveys 2017 to 2021, EU Edition

Figure 7

SOEP: Foreign Citizens making Personal Transfers Abroad
by Employment Status, Grossed Up Values and Standard Errors

Data source: Socio-Economic Panel (SOEP), data surveys 2017 to 2021, EU Edition

Figure 8

SOEP: Foreign Citizens making Personal Transfers Abroad; Amount of Personal Transfers
by Employment Status, Grossed Up Values and Standard Errors

Data source: Socio-Economic Panel (SOEP), data surveys 2017 to 2021, EU Edition
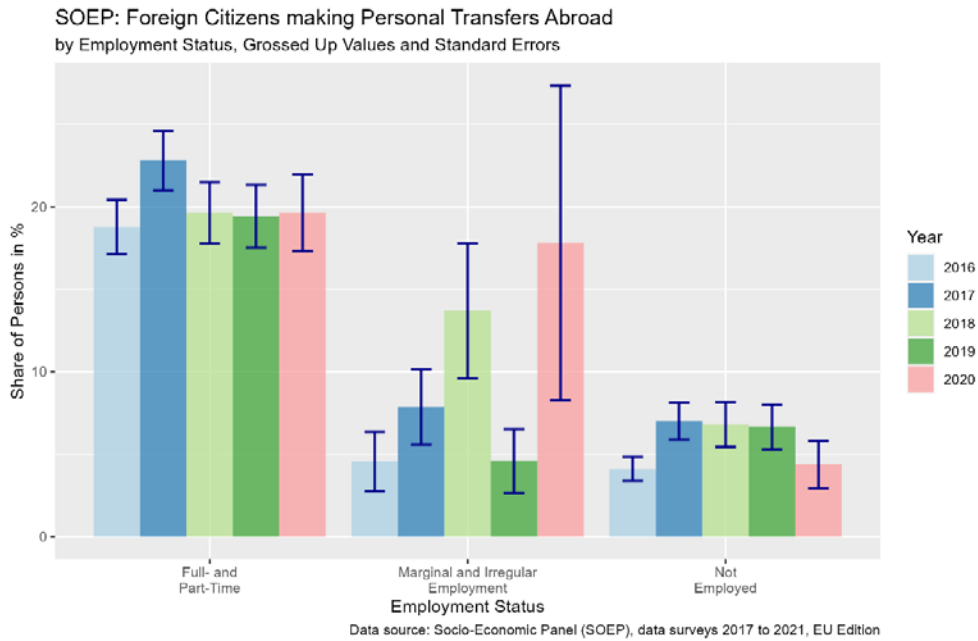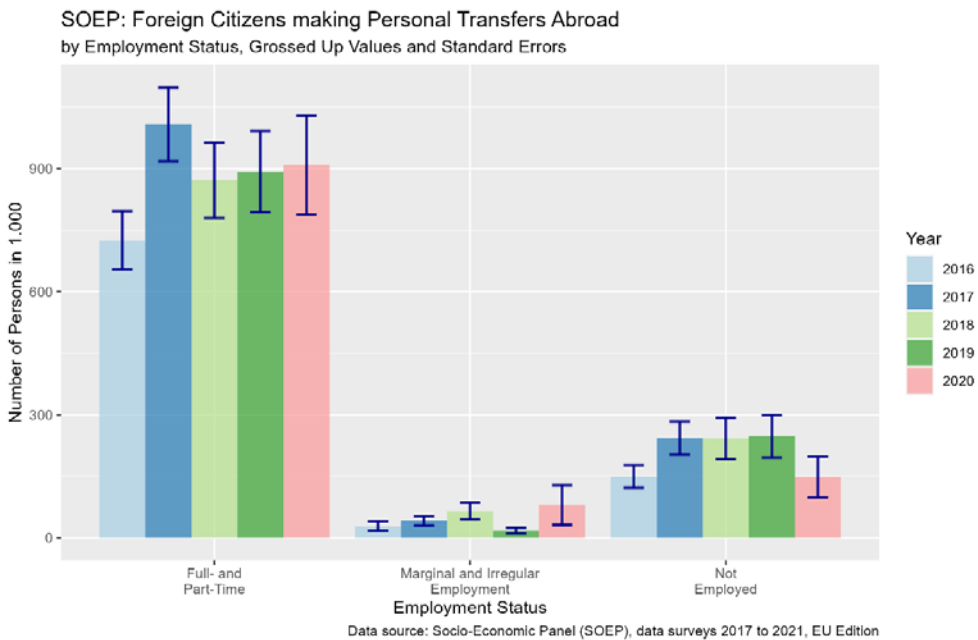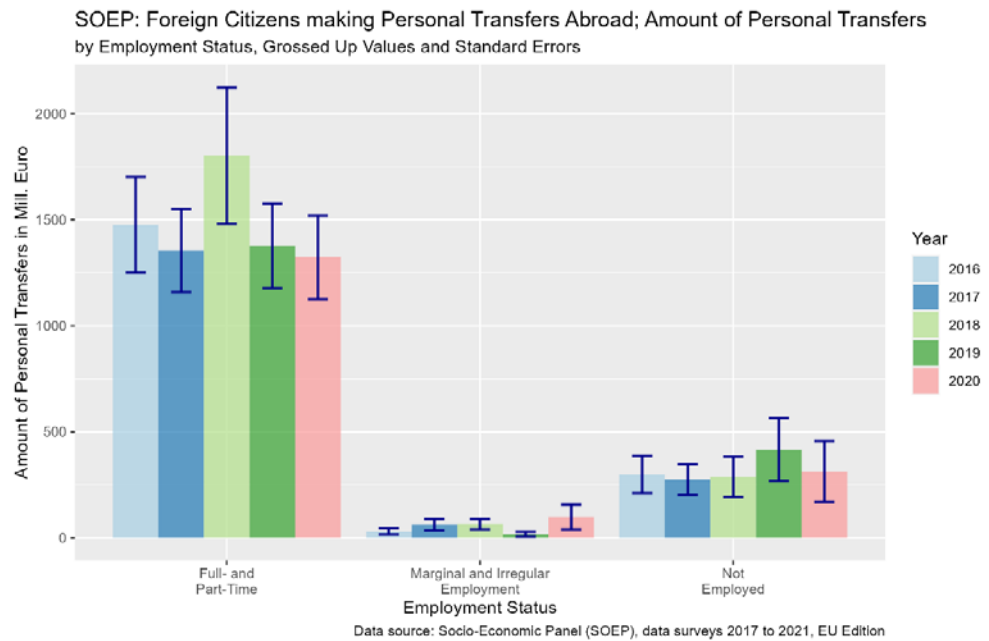
Another driver for the share of persons transferring and for amounts transferred may be the average income in home countries of persons sending personal transfers. To assess possible effects, SOEP results can be aggregated by country income classes according to the World Bank classification[24] for observations concerning foreign citizens. Figure 10 shows that shares of persons making personal transfers is highest among citizens from low and middle income countries, and lowest among citizens of high income as well as of low income countries. Since the number of observations is relatively small for low income countries (see Figure 11) it is difficult to calculate robust results, though it can be assumed that amounts for these countries are relatively low. For the other income classes, results seem plausible, though the variation in amounts transferred makes it difficult to estimate robust results for more detailed breakdowns.

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[24] World Bank Country and Lending Groups. For simplification income classes for the reference year 2020 have been used. Classification is available online at https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups (cited on 2.1.2024)

Figure 9

SOEP: Foreign Citizens making Personal Transfers Abroad
by Country Income Class, , Grossed Up Values and Standard Errors

Figure 10

SOEP: Foreign Citizens making Personal Transfers Abroad
by Country Income Class, Grossed Up Values and Standard Errors

Figure 11

SOEP: Foreign Citizens making Personal Transfers Abroad; Amount of Personal Transfers
by Country Income Class, Grossed Up Values and Standard Errors

Therefore, to estimate personal transfers made by German residents with foreign citizenship, SOEP results and AZR data are combined in the following steps. Firstly, taking SOEP data, the average personal transfer sent by foreign population living in Germany is modelled according to their employment status and the

income classification of their country of origin, as indicated by the World Bank[25]. Secondly, the number of foreign citizens that potentially make personal transfers is estimated applying SOEP-obtained proportions to the foreign population provided by the AZR, which is subsequently distributed by country according to the AZR. Then, each country amount is distributed according to employment status SOEP proportions. Finally, each employment status per country is multiplied by the modelled SOEP personal transfer amounts according to the income class of each country of origin, because it is assumed they will most likely be sending back to their countries of origin. However, it could be the case that they are sending to another country where their families settled[26]. These cases are not observed separately in this methodology. The output of this process is a yearly amount of personal transfers per country.

German population

For German residents with German citizenship, the share of persons making personal transfers is relatively small, while the numbers of persons and amounts transferred are unneglectable. Table 3 shows results from the SOEP.

German Citizens resident in Germany Making Personal Transfers

For Reporting Years 2016 to 2020   Table 3

Year	Share of Persons	rel. Standard Error	Number of Persons (Mill.)	rel. Standard Error	Amount transferred in Mill. Euro	rel. Standard Error
2016	1,2%	8,0%	760	8,0%	1.475	12,2%
2017	1,7%	6,9%	1.009	6,9%	1.522	12,2%
2018	1,8%	6,9%	1.085	6,9%	1.895	11,4%
2019	1,8%	6,9%	1.112	6,9%	1.732	12,0%
2020	2,0%	8,4%	1.187	8,5%	2.517	13,2%

Sources: Socio-Economic Panel (SOEP) v38

There are some challenges with estimating personal transfers for the group of German citizens. First off, there is no straight forward assumption for a geographical allocation of the volumes transferred because without a foreign citizenship there is no immediate hint for a probable destination given, and there is little evidence of possible destinations found on the SOEP. Furthermore some recipients of transfers may be persons who are abroad for educational purposes. The volumes transferred to them would fall under travel. Therefore, additional estimation steps are necessary to cover personal transfers of German citizens accurately. After a thorough analysis of SOEP data, a separation between German citizens according to migration

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[25] World Bank Country and Lending Groups. For simplification income classes for the reference year 2020 have been used. Classification is available online at https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups (cited on 2.1.2024)
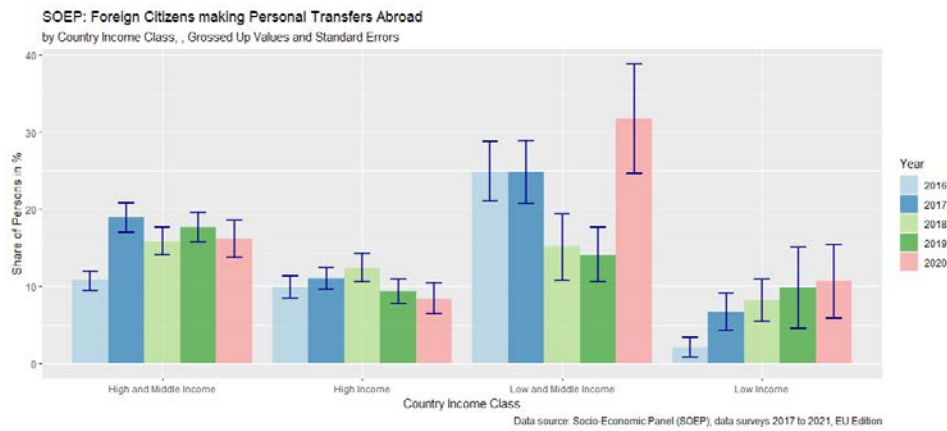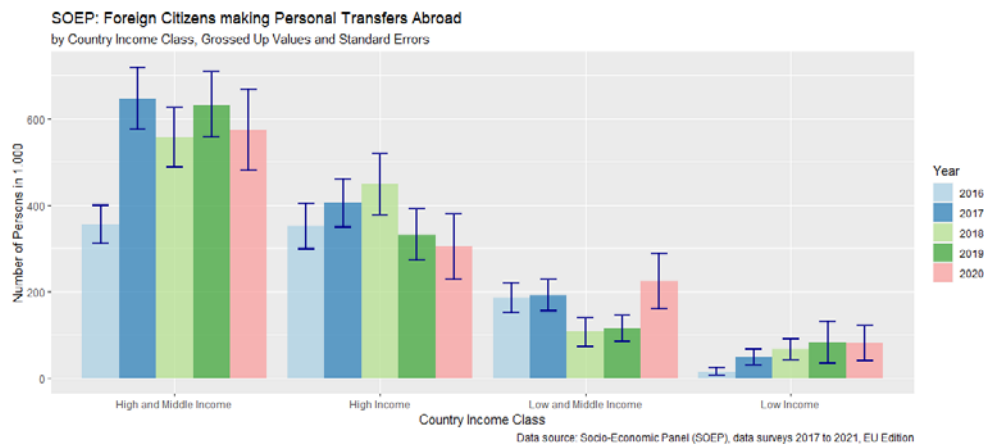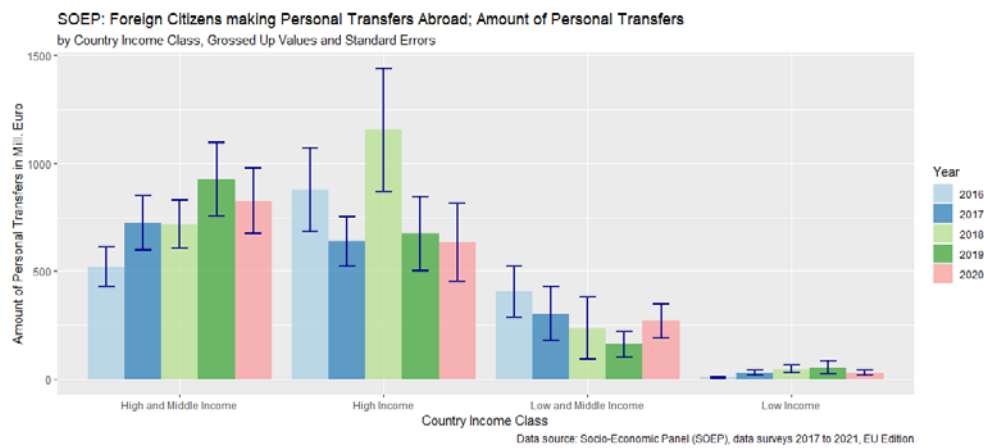
[26] These would be the so called re-emigrants: an Afghan family could have moved to Syria and then to Germany, and then, from Germany and still with Afghan nationality they could be sending remittances back to Syria because that is where the rest of the family is.

background is found to be most convenient to estimate volumes and geographical allocation of personal transfers sent, from which a deduction of payments made to support students abroad will be made.

Migration Background

Figure 13 and Figure 14 show the amount of personal transfers and number of German citizens living in Germany by migration background according to SOEP. Migration background is a SOEP-item that does not state a country of origin. However Destatis' statistics on naturalisations provide detailed information on former citizenships of persons naturalised that can serve as a geographical distribution for persons with migration background.

Figure 12

SOEP: Share of German Citizens making Personal Transfers Abroad
by Migration Background (MB), Grossed Up Values and Standard Errors

Data source: Socio-Economic Panel (SOEP), data surveys 2017 to 2021, EU Edition

Figure 13

SOEP: Number of Persons Paying Personal Transfers
German Citizens by Migration Background (MB), Grossed Up Values and Standard Errors

Data source: Socio-Economic Panel (SOEP), data surveys 2017 to 2021, EU Edition

Figure 15

SOEP: Amount of Personal Transfers Made
German Citizens by Migration Background (MB), Grossed Up Values and Standard Errors

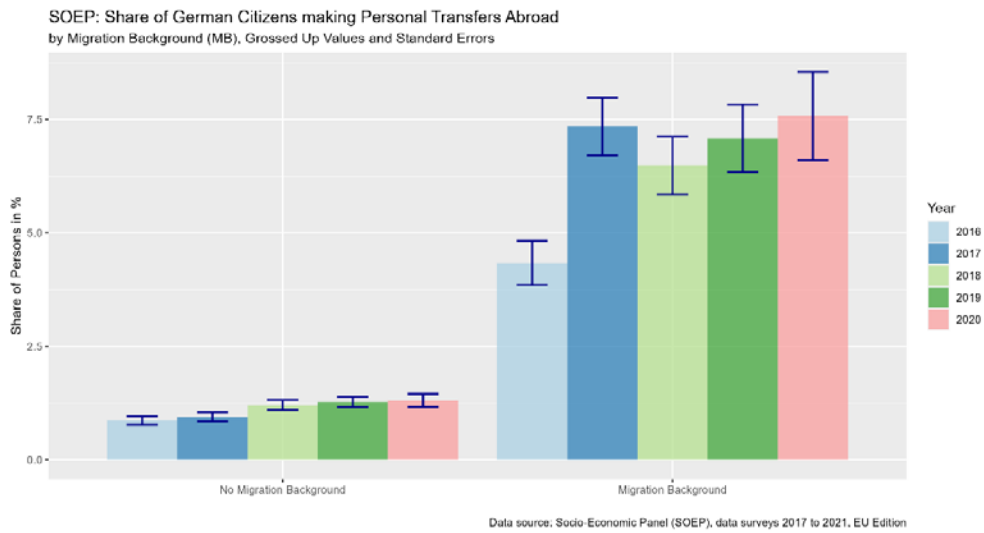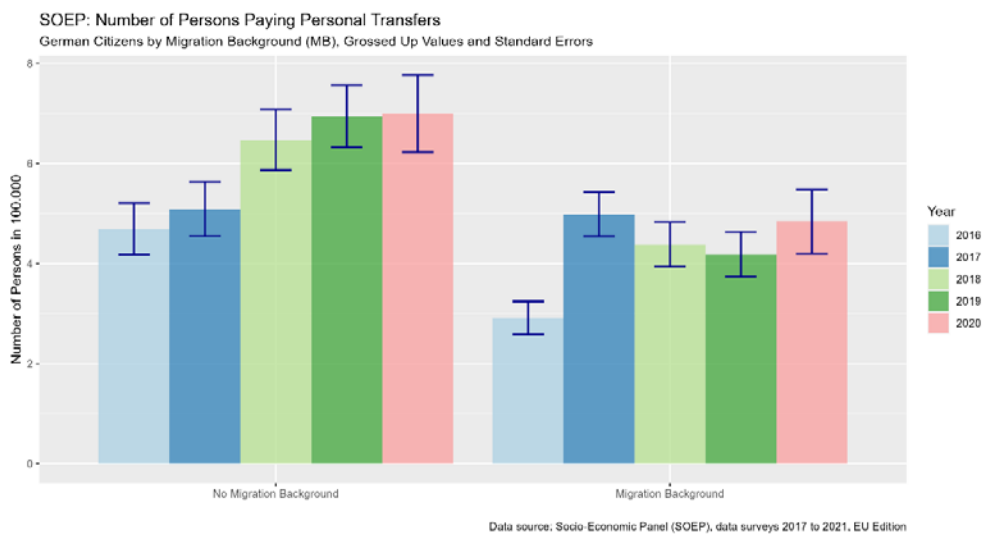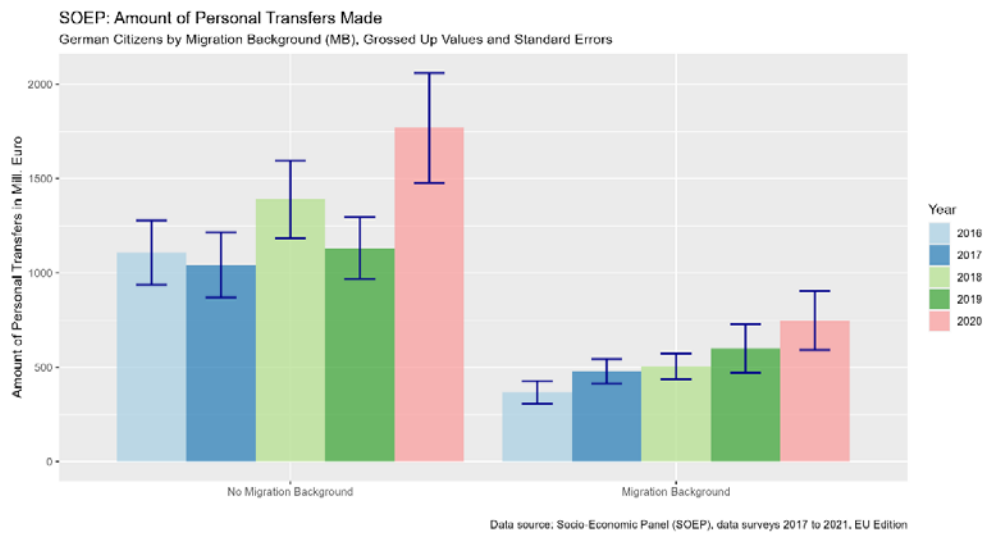Data source: Socio-Economic Panel (SOEP), data surveys 2017 to 2021, EU Edition

By assuming that persons with migration background will be distributed according to the geographical allocation of persons naturalised in Germany in recent years, it is possible to allocate transfers. Table 4 shows relative numbers of naturalisations in Germany for the years 2017 to 2021 and for the decade 2012 to 2021 combined.

German Naturalisations

For Reporting Years 2017 to 2021 as well as decade 2012-2020   Table 4

Year	2017	2018	2019	2020	2021	2012-2021
Turkey	13,7%	15,1%	12,9%	10,8%	9,9%	17,2%
Poland	6,1%	5,6%	4,8%	4,7%	4,4%	5,2%
Syria	2,3%	2,6%	3,1%	6,2%	15,4%	3,9%
Romania	3,9%	3,9%	4,6%	5,5%	5,6%	3,7%
Iraq	3,2%	3,7%	3,7%	4,4%	3,6%	3,4%
United Kingdom	6,3%	5,7%	10,9%	4,0%	1,9%	3,4%
Italy	3,9%	3,7%	3,6%	3,8%	4,1%	3,3%
Kosovo	3,6%	3,5%	3,0%	3,2%	2,7%	3,3%
Ukraine	2,5%	2,2%	3,4%	2,1%	1,5%	3,0%
Greece	3,1%	2,9%	2,5%	2,5%	2,6%	2,9%
Iran	2,5%	2,8%	3,0%	3,7%	3,3%	2,7%
Rest of the World	49,1%	48,3%	44,5%	49,0%	45,1%	47,9%

Sources: Statistisches Bundesamt (Destatis), 2023 | Stand: 02.01.2024

Therefore, to estimate personal transfers made by German citizens with migration background, SOEP results and Destatis' naturalization statistics are combined in the following steps. Firstly, taking SOEP data, the average personal transfer sent by German nationals is modelled according to whether the citizen has migrant background (direct or indirect) or not. Then, the migration amounts are

multiplied by the number of naturalizations per country of origin and yearly personal transfer amounts per country are obtained.

No Migration Background

The last volumes to allocate are those sent by German citizens without migration background. The SOEP allows to break down these volumes by receivers.

Figure 146

SOEP: Recipients of Personal Transfers
made by German Citizens without Migration Background, Grossed Up Values and Standard Errors

Data source: Socio-Economic Panel (SOEP), data surveys 2016 to 2020, EU Edition

Figure 17

SOEP: Recipients of Personal Transfers; Amount of Personal Transfers
made by German Citizens without Migration Background, Grossed Up Values and Standard Errors

Data source: Socio-Economic Panel (SOEP), data surveys 2016 to 2020, EU Edition
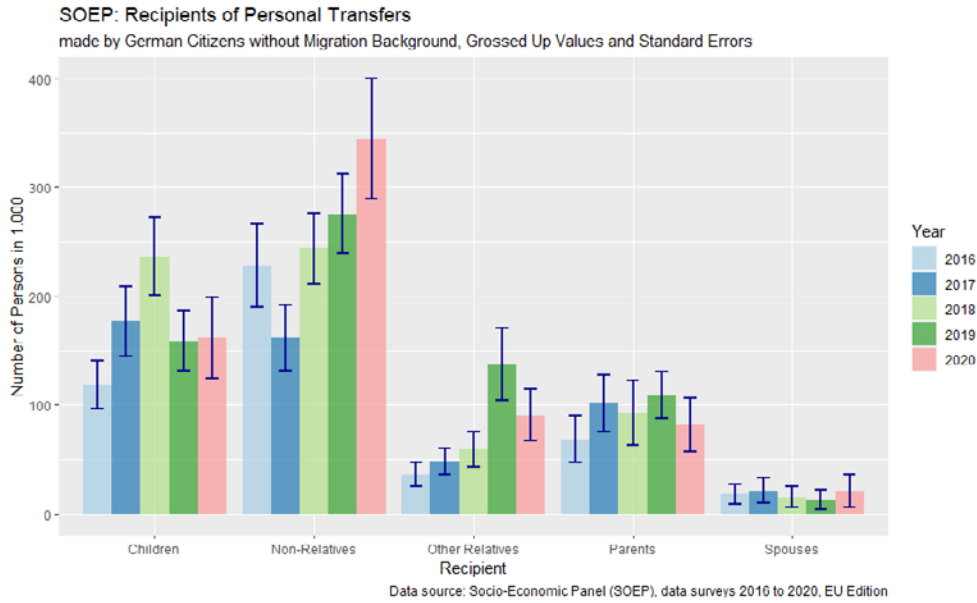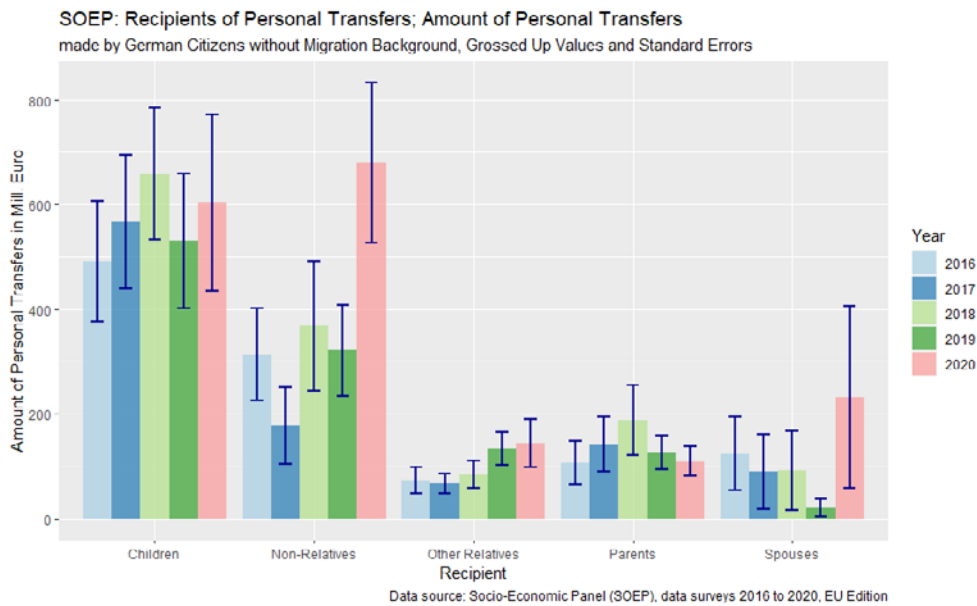
From an analysis on type of receiver, the most volatile type, and with a slightly different behaviour, are the non-relative receivers. Particularly noticeable are increases in transfers to this type of receivers in 2020 coinciding with the first year of the COVID19-Pandemic. This variation together with the assumption that senders lack

of personal ties with the recipients can be an indicator of personal transfers being sent to help alleviate these situations. These payments would no longer be considered personal transfers, as many of them are routed through NGOs.

However, funds that are sent to students have to be deducted, as students are not considered residents of their host country (see BPM6 4.120). The main countries in which German students choose to study are shown in Table 5. These amounts are to be deducted from a total amount for German citizens with no migration background according to their geographical allocation. An 80% of citizens sending no non-relatives is deducted to account for payments not considered personal transfers. Since there is little to no evidence in the SOEP as to the possible ties of Germans with no migration background engaging in personal transfers with persons in other countries, the number of Germans living abroad is taken as a proxy for a possible relationship. This information is taken from UNDESA, which publishes a statistic on current migrant stock by country of origin and destination. To arrive at a probable geographic allocation, the diaspora is weighted with GDP per capita information available at World Bank[27].

German Students Studying Abroad[28]

Most relevant countries for Reporting Years 2017 to 2021   Table 5

Year	2016	2017	2018	2019	2020
Austria	20,0%	20,5%	21,7%	22,1%	25,6%
Netherlands	15,6%	15,7%	15,9%	16,4%	18,5%
United Kingdom	11,2%	11,3%	11,4%	10,4%	9,6%
Switzerland	10,4%	10,4%	8,6%	8,4%	9,0%
United States of America	7,2%	7,2%	6,9%	6,8%	4,1%
China	5,8%	5,6%	6,0%	5,9%	2,6%
France	4,3%	4,6%	3,2%	3,5%	2,9%
Turkey	2,4%	2,6%	2,9%	2,9%	3,2%
Hungary	2,3%	2,3%	2,6%	2,5%	2,6%
Denmark	2,5%	2,2%	2,2%	2,1%	2,5%
Rest of the World	18,5%	17,7%	18,7%	19,0%	19,6%

Sources: Statistisches Bundesamt (Destatis), 2024 | Stand: 02.01.2024

[27] World Development Indicators. DataBank. GDP per capita (current USD), available at: https://databank.worldbank.org/reports.aspx?source=World-Development-Indicators (cited on 08.01.2024)

[28] German students abroad can be found using code "21721-0002" at Destatis' data service genesis online: https://www-genesis.destatis.de/genesis/online?operation=find&suchanweisung_language=en&query=21721-0002 (pages in German, cited on 2.1.2024)

Results

The estimation methods described above are based on SOEP-obtained characteristics, and are calculated for a time horizon spanning from 2016 to 2020. As a result of the combination of demographic statistics and SOEP data, three different population groups are distinguished, one for foreign citizens living in Germany, and two for German citizens living in Germany according to whether they have a migration background or not. To obtain a final personal transfers result, all three estimation results have to be added. Results are then compared with the amounts published by the *Deutsche Bundesbank*, as a benchmark.

Table 6 shows the number of foreign citizens that engage in personal transfers compared to the total foreign population in Germany. Numbers show that, for the studied time horizon, the average proportion of foreign population engaged in personal transfers is 13%, with a peak in 2017 (46% growth from the previous year). When looking at the growth rate of total foreign population, the peak occurs in 2016 with a 10% increase, coinciding with the influx of population from the Middle East. This suggests that migrants do not immediately engage in personal transfers when they first arrive to the country, but sometime later. If this information is contrasted with employment numbers, an increase of 42% and 47% can be observed in 2017 in full-time and part-time employment and in marginal employment, possibly meaning that foreigners start engaging in personal transfers when their employment status becomes relatively stable. Note the fact that foreign population not being employed amounts to 20% of those sending personal transfers, backing the assumption, that income from employment is not the sole driver for making personal transfers.

Foreign population living in Germany

Number of persons. Reporting Years 2016 to 2020   Table 6

Year	Total foreign population living in Germany	Estimation of foreign population engaging in personal transfers	of which: Full-time and Part-time employed	of which: Marginal and irregular employed	of which: Not employed
2016	10.039.110	1.089.742	871.899	38.433	179.409
2017	10.623.945	1.586.111	1.236.919	50.791	298.400
2018	10.915.440	1.479.929	1.094.021	81.669	304.240
2019	11.228.275	1.468.061	1.124.929	31.136	311.995
2020	11.432.490	1.538.353	1.182.888	148.467	192.987

Source: Ausländerzentralregister (AZR), SOEP, own calculations

On the other hand, German citizens engaging in personal transfers out of total German residents represent a smaller proportion than in the case of foreign citizens, an average of 1% for the studied time horizon. While the population remains stable in relative terms, the number of German citizens engaged in personal transfers increases significantly in 2017 (by 71%), with more emphasis on those without migration background (82%) than on those with it (60%). An increase of 21% occurs in 2020 for German population with migration background, which might be explained

as a support effort to relatives abroad during the COVID19 crisis. It can also be observed that, the proportion of Germans without migration background is slightly higher than the proportion of Germans with migration background.

German population living in Germany

Number of persons. Reporting Years 2016 to 2020   Table 7

Year	German citizens living in Germany	Estimation of German citizens that engage in personal transfers	of which: with migration background	of which: without migration background
2016	71.391.890	612.706	284.689	328.017
2017	71.116.055	1.049.863	454.248	595.616
2018	70.697.560	1.081.650	469.907	611.743
2019	70.619.725	1.084.584	465.761	618.823
2020	70.742.510	1.157.378	565.245	592.133

Source: Destatis, SOEP, own calculations

When comparing the estimated population segments involved in personal transfers with that currently used in the methodology of the *Deutsche Bundesbank*[29], several differences can be found. The estimation method proposed includes the population with German citizenship, as their involvement in personal transfers is confirmed by SOEP data. Moreover, naturalization statistics show that every year an increasing number of foreign citizens obtain the German nationality, and they may still have ties to their countries of origin, or there might be German citizens without migration background who may support family members abroad. As for the foreign population, two different population sources are used, the AZR and the BA. The AZR takes into account the whole population with foreign citizenship and not just those employed subject to social security contributions. There is evidence in SOEP data of foreign citizens in Germany of different employment status sending money back home. Additionally, the approach proposed applies shares to the identified sub populations. The assumption that only a portion of respective sub group is engaged in personal transfers is backed by SOEP data evidence and may have several reasons. For example, the longer the stay of a foreign migrant the weaker the ties to their country of origin. Also, the more immediate family members are together with the migrant in the host country the less reasons he will have make personal transfers.

As for the estimated amounts of personal transfers, when combining amounts from all three populations, the volumes shown in Table 8 are obtained. As expected, amounts sent by foreign citizens are the largest with an average weight of 56% over the observed period, followed by amounts sent by German citizens with no migration background (31%), and Germans with migration background (14%).

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[29] Friedrich, Walter, Zeitschel; The German remittance market – an overview"; Deutsche Bundesbank; 2007;
https://www.bundesbank.de/resource/blob/615638/5146380aa292d0398096bbdb72e51701/mL/the -german-remittance-market-data.pdf; (cited on 20.10.2023)

Estimated amount of personal transfers

Million Euros. Reporting Years 2016 to 2020   Table 8

Year	Deutsche Bundesbank estimation of personal transfers	Estimation of personal transfers	of which: from foreign citizens	Of which: from German citizens with migration background	Of which: from German citizens with no migration background
2016	4.196	3.488	2.067	365	1.056
2017	4.613	3.761	2.060	439	1.262
2018	5.142	4.702	2.744	546	1.413
2019	5.431	4.061	2.339	668	1.055
2020	5.908	4.806	2.350	878	1.578

Source: Deutsche Bundesbank, Ausländerzentralregister (AZR), SOEP, own calculations

The amounts show an increasing trend over the observed years. An exception is the year 2018, for which a local peak is estimated. This is mainly explained by relatively high amounts of personal transfers surveyed for foreign citizens in that year in the SOEP. It can be seen that volumes attributed to German citizens with no migration background are higher than those attributed to those with migrant background. This probably occurs because of the higher average personal transfer amounts obtained when modelling SOEP data due to the different dynamics of these two separate population segments. Note further that the amounts obtained by using the population statistics provided by Destatis and AZR as a stable aggregation frame yield very similar to those grossed up from SOEP directly (see Table 1), vindicating the assumption that estimation steps taken to add detailed geographical allocation taken from AZR and Destatis sources, do not bias results remarkably.

Out of the more than 200 countries to which personal transfers have been allocated, 8 concentrate 50% of total volume, 22 account for 75%, and the remaining 25% is greatly dispersed. Country corridors accounting for 50% of all personal transfers in 2020 can be seen in Figure 18, which shows their evolution between the years 2016 to 2020. Turkey stands out as the main counterpart country followed by Poland, Italy, Greece, Romania, the Russian Federation, the United Kingdom and Croatia. Most of these countries match the main nationalities of foreign citizens in Germany reported by the AZR and the BA during those years. In addition, the geographical allocation of personal transfers shows a relatively stable structure throughout the observed period. For the top three countries, Turkey´s weight on total volume stays between 13% and 16%, Poland´s weight stays between 7% and 9%, and Italy´s between 6% and 7%.

Figure 18. Personal transfers by country. Countries representing 50% of total amount.
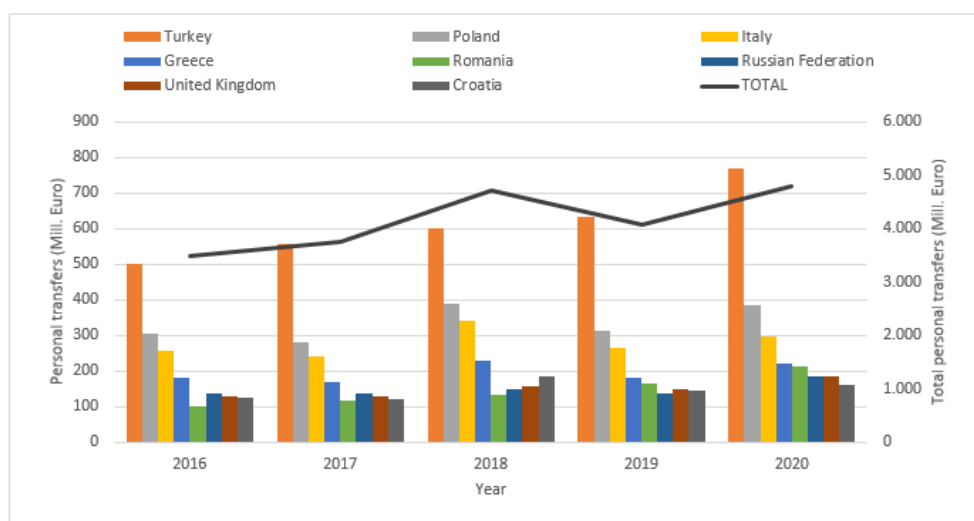
The estimated personal transfer amounts are 18% smaller than those published by the *Deutsche Bundesbank* in 2020, which seems counter intuitive because the estimation approach described here covers more sub populations than the current estimation method. The methodological difference leading to this outcome is the application of smaller shares of residents engaged in personal transfers based on SOEP findings, which deviates from the current apporach, that assumes that all foreign citizens resident and employed in Germany make personal transfers.

Regarding the geographical allocaton, the estimated amounts being more widely spread among countries than the currently published data by the *Deutsche Bundesbank*[30], since countries accounting for 75% of the data amount to 21 as opposed to 18, respectively. Moreover, due to the assumptions made in this estimation method, the country composition of this 75% changes slightly, although the top three countries remain the same: Turkey, Poland and Italy. Rising through the ranks are the United Kingdom, Spain, France, the United States and Austria, which are more represented with our estimation method, since part of the German population is assumed to send personal transfers to these countries where family members are located.

It can be said that results are reasonable, since volumes and country composition do not vary widely in comparison to current benchmarks. The estimation method proposed constitutes a comprehensive approach to estimating personal transfers, since it covers all German residents, and it allows for a more precise approach thanks to SOEP data, which enables a better understanding of dynamics in German personal transfers.

[30] See "Figures"-section for further details.

Discussion and Outlook

This paper focuses on personal transfers within the German balance of payments, relying on the SOEP as a data source with its wealth of socio-demographic variables, enabling an examination of relevant subpopulations. However, estimating robust average transfer amounts poses a significant challenge due to high variability and limited number observations. To enhance precision, exploration of additional data sources with specific transfer amounts information can be worthwhile.

SOEP's detailed data is available with a delay, impacting timeliness, critical for balance of payments analysis. To address this, integrating forecasting methods based on more prompt data from the AZR and Destatis is necessary, compensating for delayed SOEP releases.

Despite SOEP's advantages, challenges in estimating averages, addressing timeliness, and navigating complexity require exploration of supplementary data sources, implementing forecast methods, and refining the proposed approach. This iterative process can ensure adaptability to evolving data landscapes, contributing to nuanced insights into personal transfers within the German economy.

Looking forward, our focus is on refining the methodology and expanding the analysis scope. The immediate priority is to check the obtained results with mirror data for asymmetries to adjust the model when necessary. Moreover, addressing challenges in estimating robust averages involves a research initiative to identify additional data sources focused on transfer volumes for a more accurate depiction. Emphasizing timeliness, we aim to enhance forecast methods for real-time decision-making.

In conclusion, our strategic outlook focuses on refining the estimation process, enhancing timeliness, and expanding the analysis scope.

Addressing these objectives aims to contribute to a comprehensive understanding of personal transfers and financial activities within the German balance of payments landscape.

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[Holst et al.; 2010] Holst, Schäfer, Schrooten; Gender, Transnational Networks and Remittances: Evidence from Germany; SOEPpapers on Multidisciplinary Panel Data Research 296; 2010, https://www.diw.de/documents/publikationen/73/diw_01.c.356346.de/diw_sp0296.pdf (cited on 20.10.2023)

Tables

Working age foreign population in Germany (18-65 years old)

Percentages over total foreign population for Reporting Years 2002, 2012 and 2022   Table A.1

Citizenship	Share of total working age foreign population			Evolution of working age foreign population	
	2002	2012	2022	2012	2022
Turkey	24%	21%	12%	-9%	-2%
Poland	5%	8%	7%	71%	53%
Ukraine	2%	2%	7%	8%	675%
Romania	1%	3%	7%	134%	290%
Syria	0%	1%	6%	57%	1.862%
Italy	8%	7%	5%	-10%	15%
Bulgaria	1%	2%	3%	168%	218%
Croatia	3%	3%	3%	-8%	77%
Greece	5%	4%	3%	-18%	16%
Afghanistan	1%	1%	2%	0%	482%
Russia	2%	3%	2%	35%	38%
Kosovo	-	2%	2%	-	91%
Iraq	1%	1%	2%	1%	224%
India	1%	1%	2%	45%	240%
Serbia	-	2%	2%	-	37%
Hungary	1%	2%	2%	90%	82%
Bosnia Herzegovina	2%	2%	2%	-1%	41%
Spain	2%	2%	1%	-6%	50%
China	1%	1%	1%	31%	57%
Austria	3%	2%	1%	-17%	-6%
Iran	1%	1%	1%	-32%	150%
Total foreign population. Working age. Persons	5.581.162	5.752.314	9.984.360	3%	74%
Total foreign population. Persons	7.335.592	7.213.708	13.383.980	-2%	86%

Sources: Ausländerzentralregister (AZR)

Counterpart country comparison for 2020

Ranking of countries representing 75% of total amount

Deutsche Bundesbank	Own estimation
Turkey	Turkey
Romania	Poland
Poland	Italy
Italy	Greece
Syria	Romania
Croatia	Russian Federation
Serbia (incl. Kosovo)	United Kingdom
Bulgaria	Croatia
Greece	Spain
Hungary	France
Russian Federation	United States of America
Bosnia Herzegovina	Serbia (incl. Kosovo)
Afghanistan	Hungary
Spain	Bulgaria
Iraq	Austria
Portugal	Switzerland
India	Canada
Ukraine	Iraq
	Netherlands
	Portugal
	Bosnia and Herzegovina

Sources: Deutsche Bundesbank, own estimation

German Residents

For Reporting Years 2016 to 2020; Figures 4, 5, 6

Year	Citizenship	Number of Persons in 1.000	Standard Error	Share of Persons in %	Standard Error	Amount transferred in Mill. Euro	Standard Error
2016	Foreign Citizens	907	77	10,9%	0,9%	1.807	243
2017	Foreign Citizens	1.293	99	15,0%	1,1%	1.691	211
2018	Foreign Citizens	1.178	107	13,6%	1,1%	2.155	337
2019	Foreign Citizens	1.165	112	13,1%	1,2%	1.815	250
2020	Foreign Citizens	1.171	142	13,6%	1,5%	1.751	250
2016	German Citizens	760	61	1,2%	0,1%	1.475	180
2017	German Citizens	1.007	70	1,7%	0,1%	1.522	185
2018	German Citizens	1.085	75	1,8%	0,1%	1.895	216
2019	German Citizens	1.112	77	1,8%	0,1%	1.732	208
2020	German Citizens	1.184	100	2,0%	0,2%	2.517	331

Sources: Socio-Economic Panel (SOEP) v38

German Residents with Foreign Citizenship

By Employment Status, For Reporting Years 2016 to 2020; Figures 7, 8, 9   Table A.4

Year	Employment Status	Number of Persons in 1.000	Standard Error	Share of Persons in %	Standard Error	Amount transferred in Mill. Euro	Standard Error
2016	Full- and Part-Time	726	71	18,8%	1,7%	1.476	226
2016	Marginal and Irregular Employment	29	11	4,6%	1,8%	31	14
2016	Not Employed	149	27	4,1%	0,7%	300	88
2017	Full- and Part-Time	1.008	90	22,8%	1,8%	1.355	197
2017	Marginal and Irregular Employment	41	11	7,8%	2,3%	62	26
2017	Not Employed	243	40	7,0%	1,1%	274	72
2018	Full- and Part-Time	871	92	19,6%	1,9%	1.803	322
2018	Marginal and Irregular Employment	65	20	13,7%	4,1%	64	24
2018	Not Employed	242	50	6,8%	1,4%	287	95
2019	Full- and Part-Time	893	99	19,4%	1,9%	1.378	200
2019	Marginal and Irregular Employment	18	7	4,6%	1,9%	17	11
2019	Not Employed	248	52	6,7%	1,4%	416	149
2020	Full- and Part-Time	909	121	19,6%	2,3%	1.323	197
2020	Marginal and Irregular Employment	80	49	17,8%	9,6%	99	59
2020	Not Employed	148	50	4,4%	1,4%	313	143

Sources: Socio-Economic Panel (SOEP) v38

German Residents with Foreign Citizenship

By Country Income Class, For Reporting Years 2016 to 2020; Figures 10, 11, 12 Table A.5

Country Income Class	Year	Number of Persons in 1.000	Standard Error	Share of Persons in %	Standard Error	Amount transferred in Mill. Euro	Standard Error
High Income	2016	350,9	52,3	9,9%	1,4%	878,1	193,0
High Income	2017	404,9	54,9	11,0%	1,4%	637,3	115,8
High Income	2018	448,3	70,7	12,5%	1,8%	1.155,5	284,2
High Income	2019	331,7	60,0	9,3%	1,6%	673,6	172,3
High Income	2020	304,2	75,8	8,4%	2,0%	633,3	181,0
High and Middle Income	2016	355,5	44,0	10,7%	1,3%	518,9	90,6
High and Middle Income	2017	646,8	71,7	18,9%	1,9%	724,6	124,9
High and Middle Income	2018	557,7	68,7	15,8%	1,8%	717,6	110,3
High and Middle Income	2019	632,9	75,4	17,7%	1,9%	926,5	168,7
High and Middle Income	2020	573,9	93,9	16,1%	2,4%	827,1	153,0
Low and Middle Income	2016	185,8	34,5	24,9%	3,9%	404,5	116,2
Low and Middle Income	2017	191,5	37,2	24,8%	4,1%	302,2	124,4
Low and Middle Income	2018	106,1	33,5	15,1%	4,3%	236,2	142,3
Low and Middle Income	2019	115,3	30,9	14,1%	3,6%	160,0	58,1
Low and Middle Income	2020	223,7	64,7	31,7%	7,1%	268,7	80,1
Low Income	2016	14,7	9,1	2,1%	1,3%	5,8	3,7
Low Income	2017	48,2	18,7	6,7%	2,4%	27,2	12,2
Low Income	2018	66,3	23,5	8,2%	2,7%	45,3	18,2
Low Income	2019	82,8	49,0	9,8%	5,3%	53,8	28,7
Low Income	2020	80,2	39,8	10,7%	4,7%	26,7	12,9

Sources: Socio-Economic Panel (SOEP) v38

German Residents with German Citizenship by Migration Background

For Reporting Years 2016 to 2020; Figures 13, 14 and 15

Table A.6

Year	Migration Background	Number of Persons in 1.000	Standard Error	Amount transferred in Mill. Euro	Standard Error
2015	direct mig. backg.	354,6	35,8	692	280
2016	direct mig. backg.	262,4	30,8	490	111
2017	direct mig. backg.	451,1	41,0	515	99
2018	direct mig. backg.	392,5	41,2	504	79
2019	direct mig. backg.	378,6	41,7	530	121
2015	indirect mig. backg.	53,8	22,2	31	12
2016	indirect mig. backg.	28,8	11,1	29	14
2017	indirect mig. backg.	48,4	13,7	41	18
2018	indirect mig. backg.	45,6	13,9	55	18
2019	indirect mig. backg.	39,8	15,2	70	45
2015	no mig. backg.	470,2	53,3	1.429	350
2016	no mig. backg.	469,0	50,5	1.570	253
2017	no mig. backg.	509,0	53,3	1.335	226
2018	no mig. backg.	647,0	59,2	2.526	410
2019	no mig. backg.	694,0	60,8	2.240	624

Sources: Socio-Economic Panel (SOEP) v38

German Residents with German Citizenship
without Migration Background

By year and recipient type; Refer to Figures 16 and 17   Table A.7

Year	Recipient	Number of Persons in 1.000	Standard Error	Amount transferred in Mill. Euro1	Standard Error
2016	Children	118,5	21,8	491,1	115,1
2017	Children	176,7	32,3	567,6	127,8
2018	Children	236,5	35,6	658,9	124,7
2019	Children	159,1	27,8	530,6	128,6
2020	Children	161,7	37,2	603,8	168,1
2016	Non-Relatives	228,0	37,7	313,6	88,6
2017	Non-Relatives	161,6	29,8	177,5	73,4
2018	Non-Relatives	243,9	32,6	368,2	123,8
2019	Non-Relatives	275,6	36,9	321,1	86,4
2020	Non-Relatives	344,6	55,1	679,9	152,3
2016	Other Relatives	36,1	11,1	73,5	25,3
2017	Other Relatives	48,3	11,9	65,9	18,8
2018	Other Relatives	59,1	16,2	83,9	26,1
2019	Other Relatives	137,8	33,1	133,8	31,1
2020	Other Relatives	90,8	23,5	144,1	45,8
2016	Parents	68,6	22,0	106,0	42,1
2017	Parents	101,0	26,0	141,6	52,2
2018	Parents	92,5	29,6	187,5	66,6
2019	Parents	108,7	21,5	126,2	33,0
2020	Parents	81,9	24,8	109,3	28,4
2016	Spouses	17,7	8,9	123,4	70,0
2017	Spouses	21,3	11,9	89,7	70,6
2018	Spouses	15,1	9,7	91,5	75,5
2019	Spouses	12,8	9,3	20,1	16,9
2020	Spouses	21,1	14,9	231,8	173,8

Sources: Socio-Economic Panel (SOEP) v38

Personal transfers sent from Germany

Millions of euros. Ranking of countries representing 75% of total amount; Refer to Figure 18

<div align="right">Table A.9</div>

Country	2016	2017	2018	2019	2020
Total personal transfers	3.488	3.761	4.703	4.062	4.806
Turkey	499	556	602	633	771
Poland	304	281	389	312	384
Italy	257	240	340	263	297
Greece	179	168	228	179	219
Romania	100	117	131	164	212
Russian Federation	135	136	147	138	184
United Kingdom	128	128	158	149	184
Croatia	124	119	184	145	159
Spain	111	106	135	105	137
France	105	110	135	102	127
United States of America	108	110	136	100	126
Serbia (incl. Kosovo)	66	73	82	93	109
Hungary	79	73	101	80	99
Bulgaria	49	58	63	78	98
Austria	80	81	114	86	89
Switzerland	54	56	67	51	70
Canada	23	26	64	45	68
Iraq	40	44	47	56	66
Netherlands	58	57	83	62	63
Portugal	50	47	65	50	58
Bosnia and Herzegovina	35	39	44	52	56

Sources: *Ausländerzentralregister (AZR), SOEP,* own estimation

Personal Transfers in the Balance of Payments

Estimation under Changing Migration Patterns

María Pía Cobián (Banco de España), Jörg Feuerhake (Deutsche Bundesbank), Madrid 13.02.2024

Agenda

Introduction

Changing Migration Patterns in Germany

Estimating Personal Transfers

- Data Sources
- Evidence from Socioeconomic Panel
- Estimation Approach

Results

Outlook

Picture Source: Wikimedia Downloadend on 01/26/2024

Introduction

"Personal transfers consist of all current transfers in cash or in kind made or received by resident households to or from nonresident households."

(BPM6; IMF 2019, International Transactions in Remittances: Guide for Compilers and Users)

Selected Global Transfers

World Personal Transfers Received

Net Official Development Assistance Received

Source: World Bank

13.02.2024

Changing Migration Patterns in Germany

Legend: ■ "Guest Worker" Countries ■ Poland ■ Romania ■ Syria ■ Afghanistan ■ Ukraine ▢ Rest of the World

Y-axis: Number of persons in 1.000.000
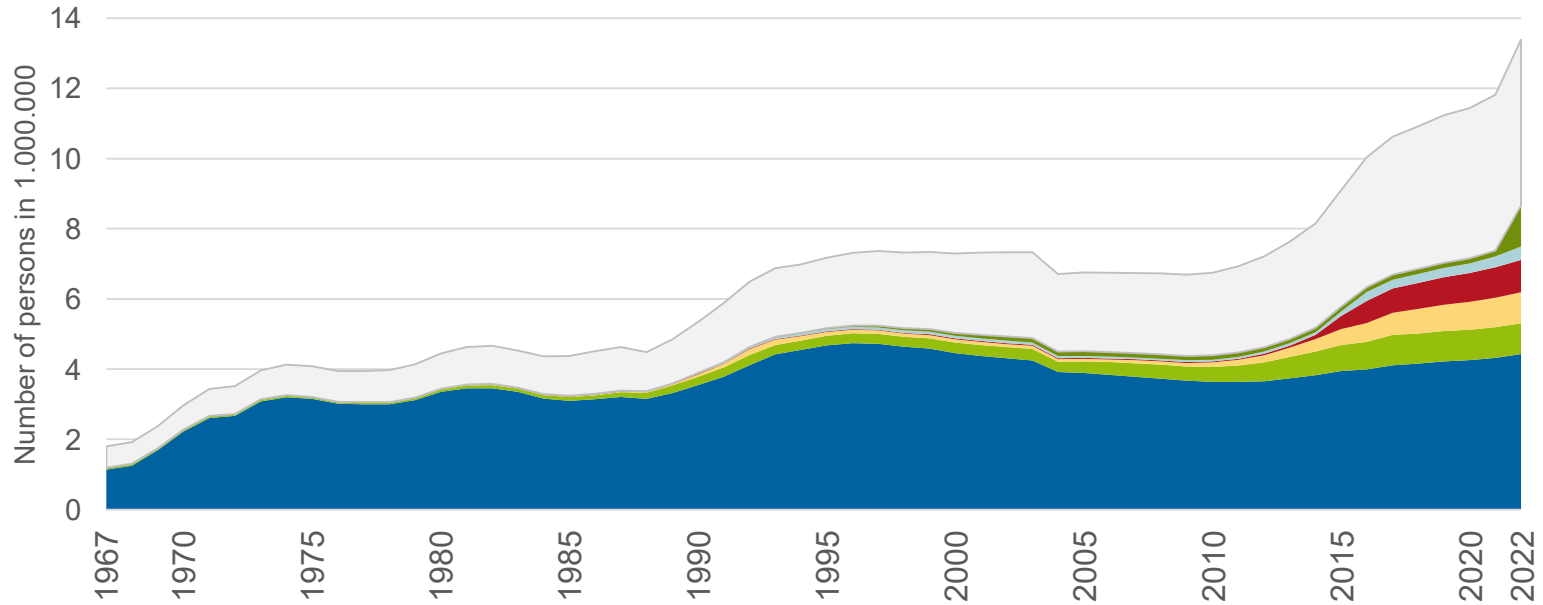
Changing Migration Patterns in Germany: Relevant Regions

Legend:
- No Nationality
- North America
- Latin America and Caribbean
- Sub-Saharan Africa
- East Asia and Pacific
- South Asia
- Middle East and North Africa
- Euro area
- European Union w.o. Euro Area
- Non-EU Europe and Central Asia

X-axis: 2002, 2012, 2022

Source: *Ausländerzentralregister* (AZR), World Bank

13.02.2024
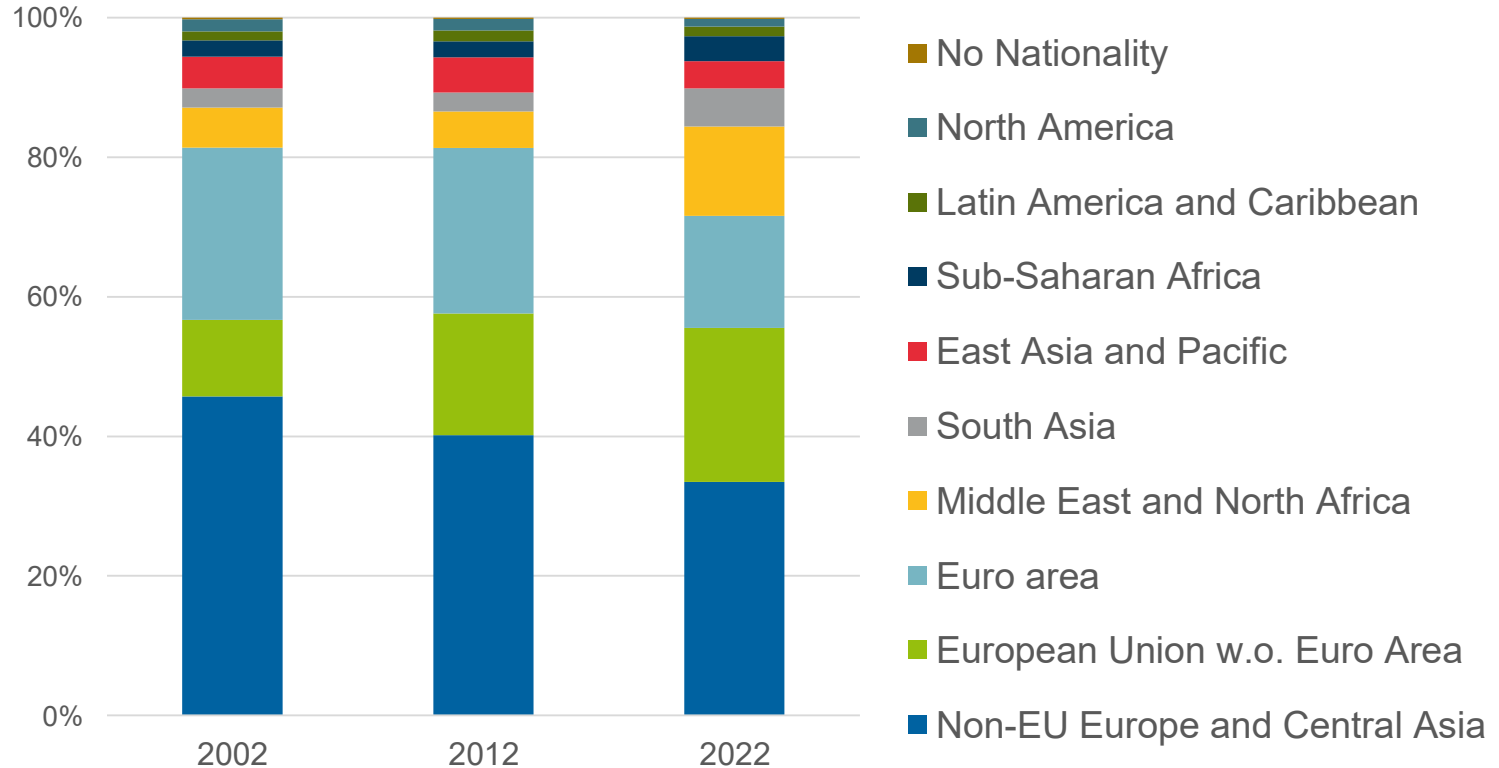
Estimating Personal Transfers: Data Sources

SOEP: Socio-Economic Panel Survey on German Households. Socio-economic information on respondents available on a microdata level

Ausländerzentralregister (AZR): total foreign population numbers by citizenship, age and sex

Other sources: population statistics and macroeconomic indicators available at Federal Statistical Office Germany (Destatis), the World Bank and UNDESA

Estimating Personal Transfers: Data Sources

Socio-Demographic Patterns

SOEP The Socio-Economic Panel

GLM estimates for

Population Shares
and
Average Amount Sent

Estimating Personal Transfers: Data Sources
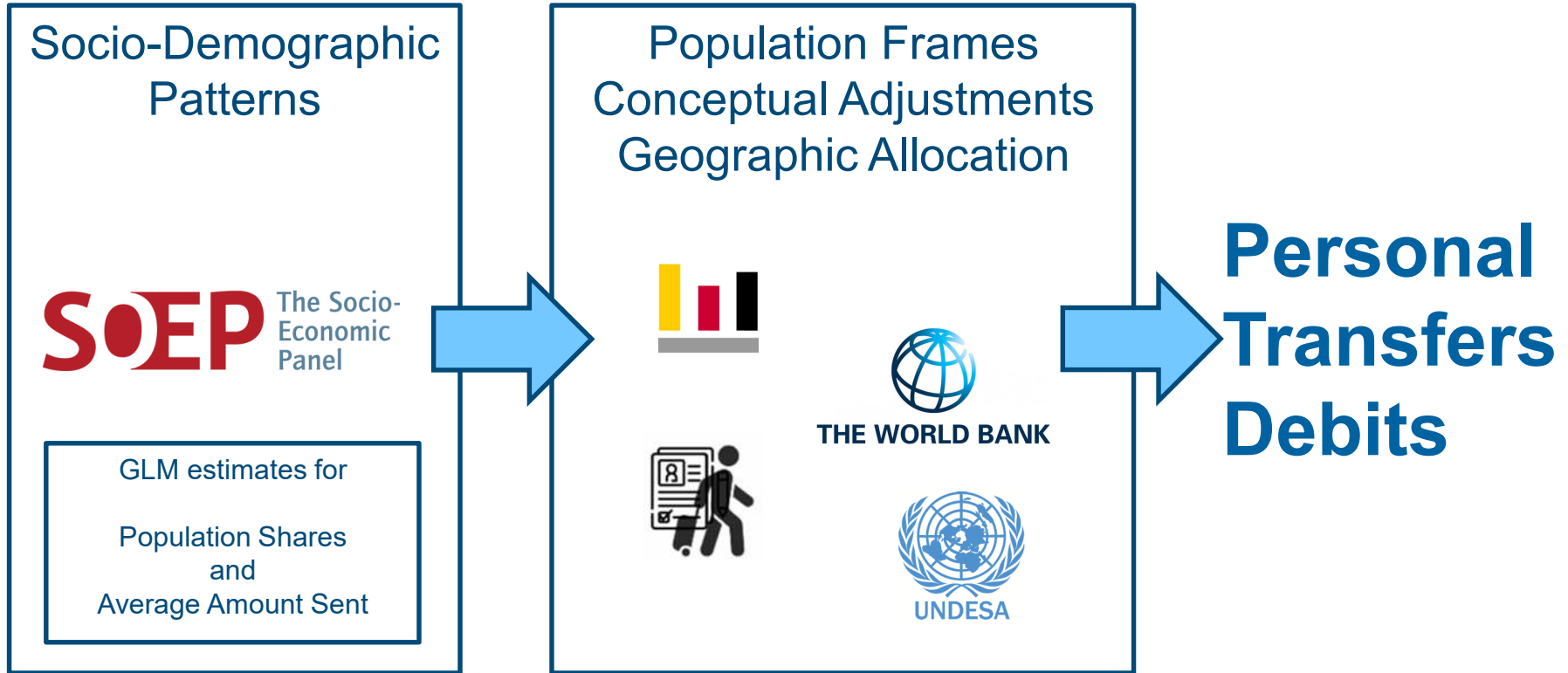
The German Socio-Economic Panel (SOEP)

Residents in Germany making personal transfers

Results using solely SOEP data for reporting years 2016-2020

Year	Share of Persons	rel. Standard Error	Number of Persons (Mill.)	rel. Standard Error	Amount transferred in Mill. Euro	rel. Standard Error
2016	2,4%	5,8%	1.667	5,9%	3.282	9,2%
2017	3,3%	5,2%	2.301	5,3%	3.214	8,7%
2018	3,3%	5,7%	2.264	5,8%	4.050	9,9%
2019	3,3%	5,9%	2.277	6,0%	3.546	9,2%
2020	3,4%	7,2%	2.370	7,4%	4.268	9,7%

Source: Socio-Economic Panel (SOEP) v38

The German Socio-Economic Panel (SOEP)

SOEP: Persons in Germany making Personal Transfers Abroad
by German/Foreign Citizens, Grossed Up Values and Standard Errors

Data source: Socio-Economic Panel (SOEP), data surveys 2017 to 2021, EU Edition

SOEP: Amount of Personal Transfers Made
by German/Foreign Citizens, Grossed Up Values and Standard Errors

Data source: Socio-Economic Panel (SOEP), data surveys 2017 to 2021, EU Edition
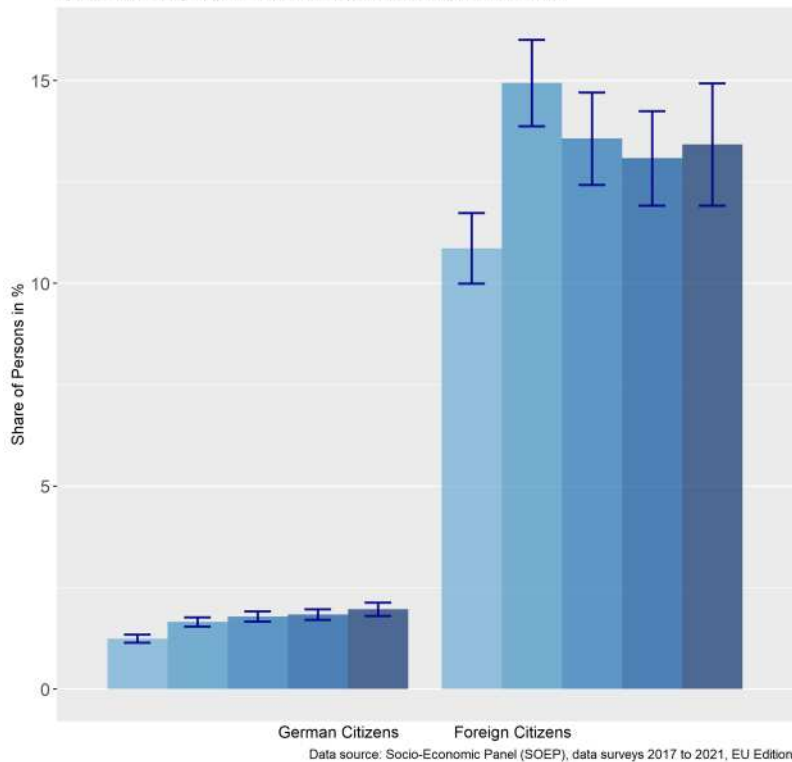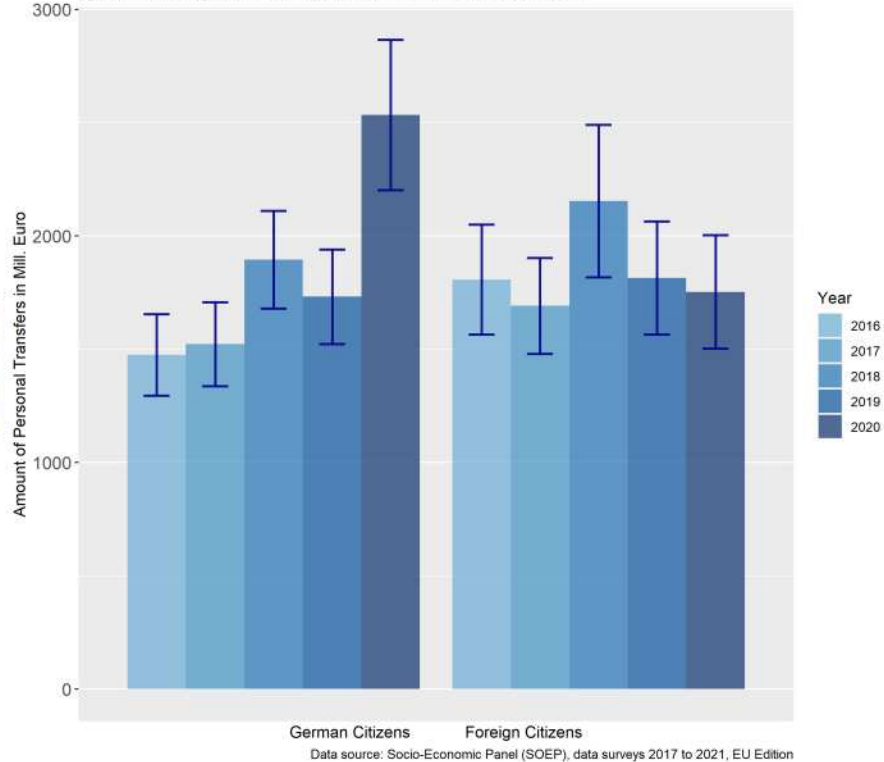
Subpopulations observed within SOEP

German Residents

Subpopulations observed within SOEP

German Residents

Foreign Citizens

German Citizens
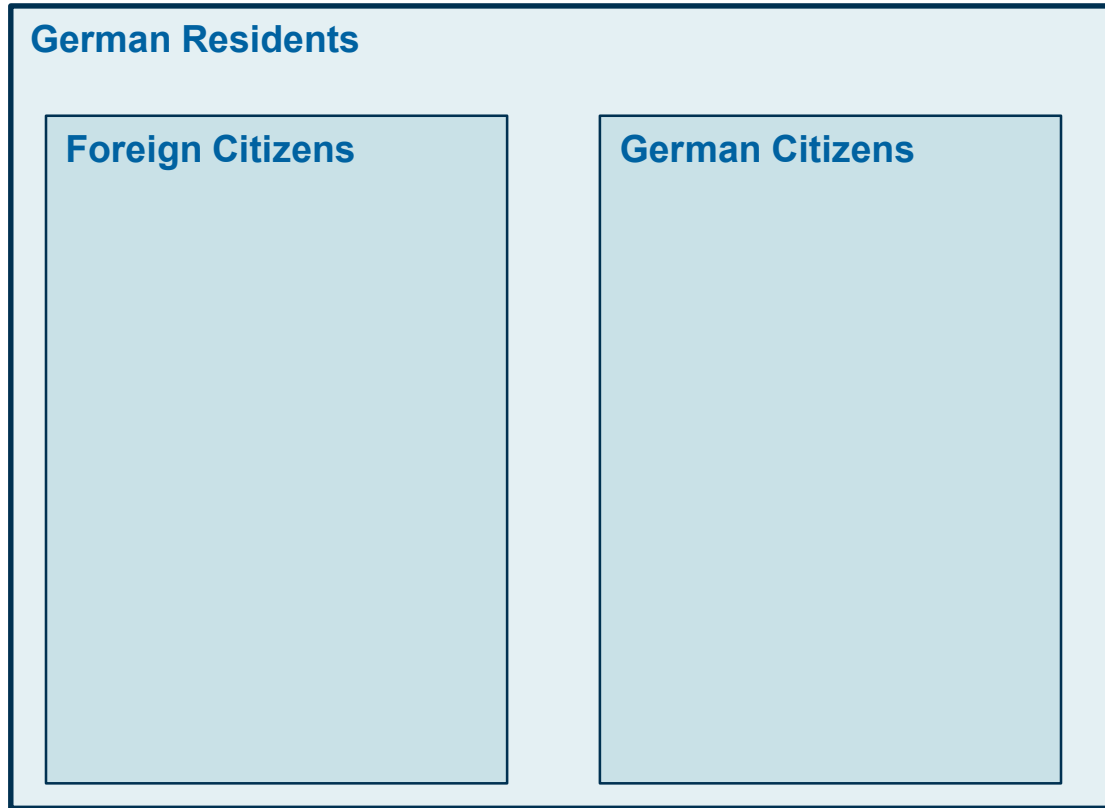
Subpopulations observed within SOEP
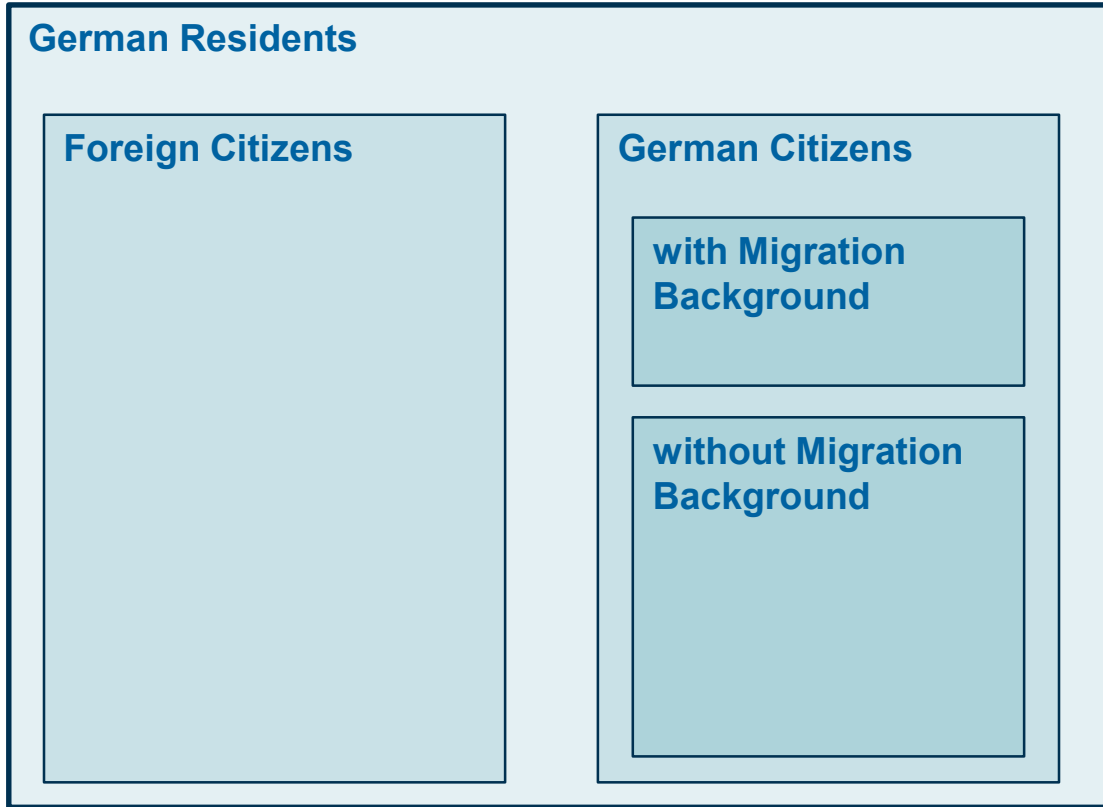
Foreign Citizens – Employment Status

SOEP: Foreign Citizens making Personal Transfers Abroad
Persons and Standard Errors by Employment Status

Number of Persons in 1.000

Full- and Part-Time / Marginal and Irregular Employment / Not Employed
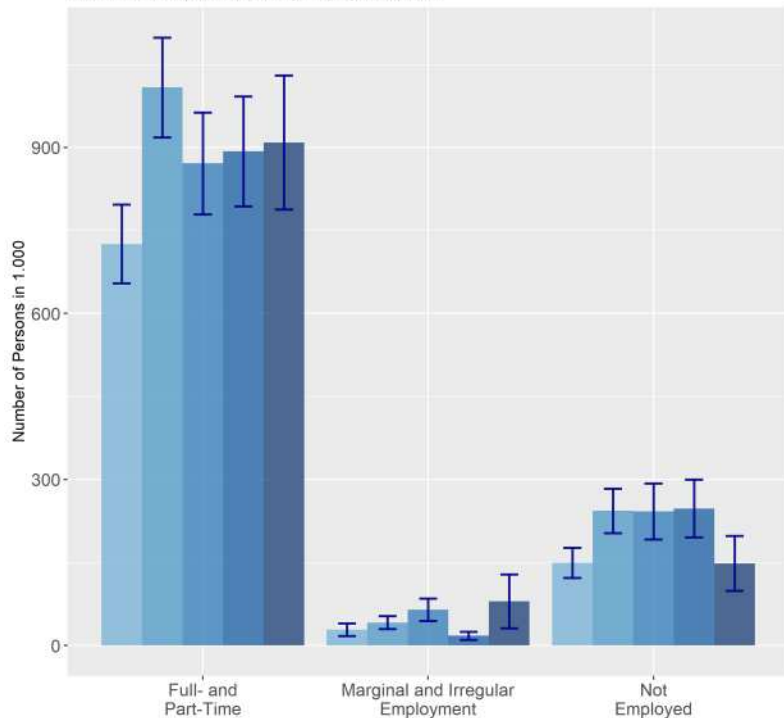
Data source: Socio-Economic Panel (SOEP), data surveys 2017 to 2021, EU Edition

SOEP: Foreign Citizens making Personal Transfers Abroad
Personal Transfers and Standard Errors by Employment Status
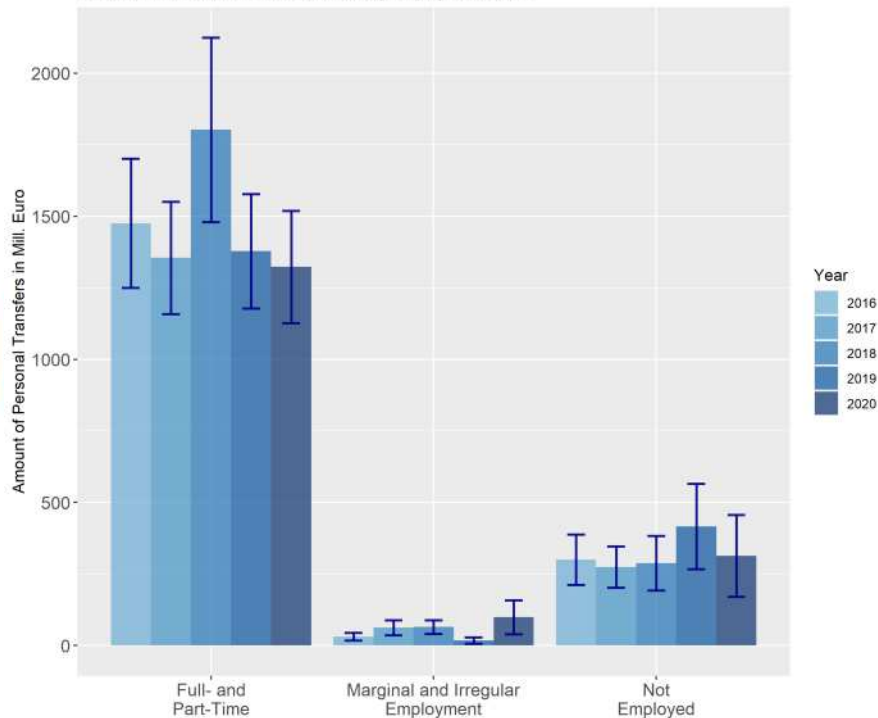
Amount of Personal Transfers in Mill. Euro

Full- and Part-Time / Marginal and Irregular Employment / Not Employed

Year
2016
2017
2018
2019
2020

Data source: Socio-Economic Panel (SOEP), data surveys 2017 to 2021, EU Edition

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Foreign Citizens – Home Country Income

SOEP: Foreign Citizens making Personal Transfers Abroad
Persons and Standard Errors by Country Income Class
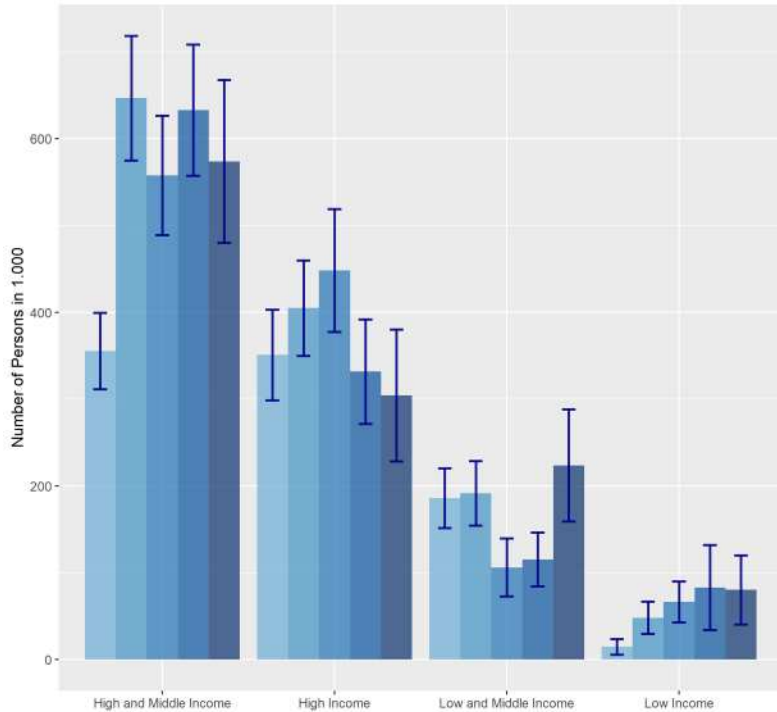
Data source: Socio-Economic Panel (SOEP), data surveys 2017 to 2021, EU Edition

SOEP: Foreign Citizens making Personal Transfers Abroad; Amount of Personal Transfers
Personal Transfers and Standard Errors by Country Income Class

Data source: Socio-Economic Panel (SOEP), data surveys 2017 to 2021, EU Edition

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Estimating Personal Transfers: Foreign Citizens

Socio-Demographic
Patterns

GLM estimates
by Employment Status and
Country Income Class
for

Population Shares
and
Average Amount Sent

Estimating Personal Transfers: Foreign Citizens

Socio-Demographic Patterns

SOEP — The Socio-Economic Panel

GLM estimates
by Employment Status and
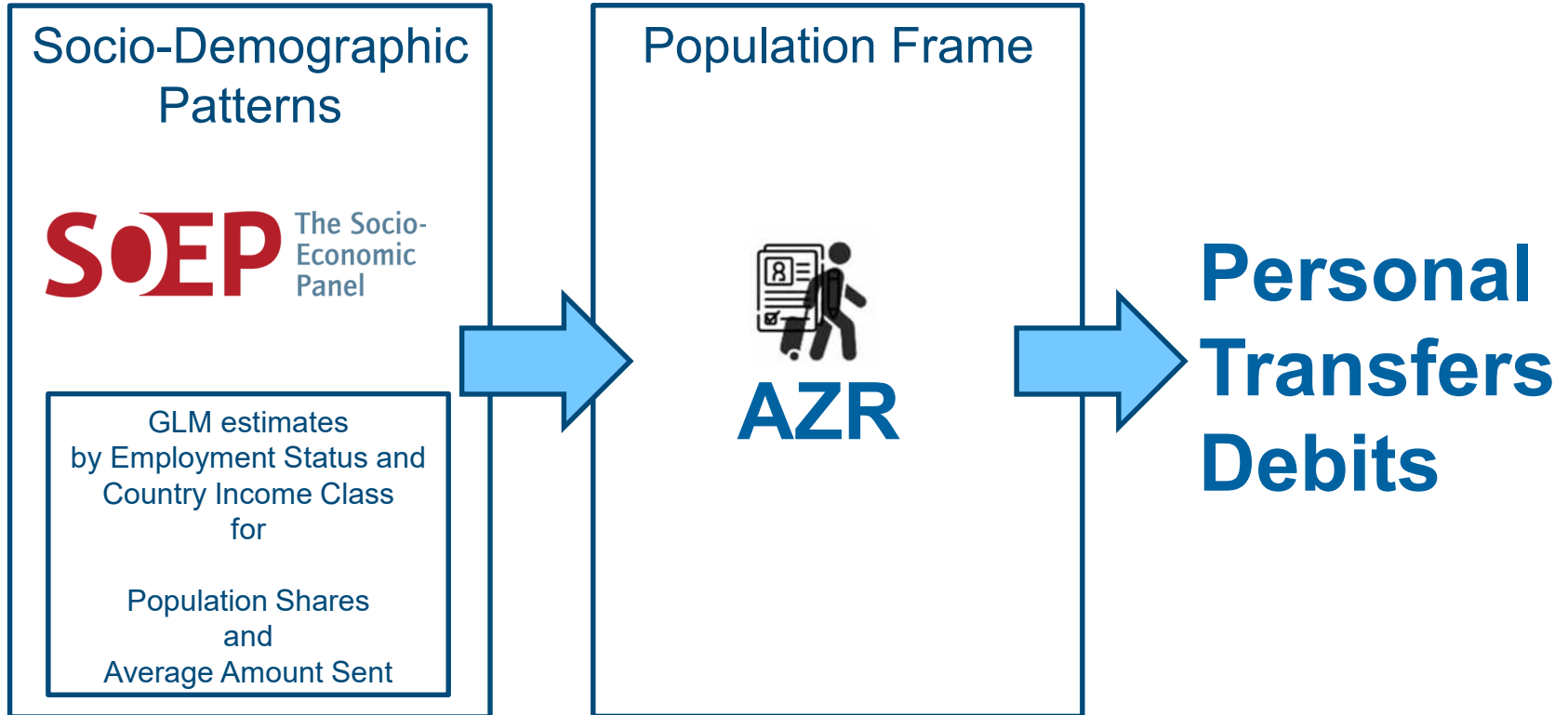Country Income Class
for

Population Shares
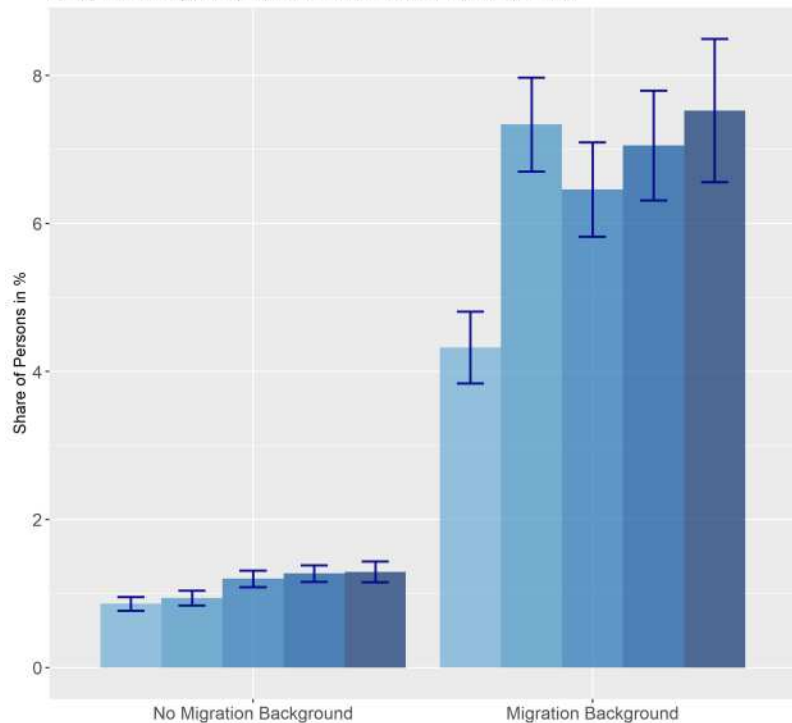and
Average Amount Sent

Population Frame

AZR
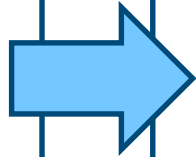
German Citizens – By Migration Background

SOEP: Share of German Citizens making Personal Transfers Abroad
by Migration Background (MB), Grossed Up Values and Standard Errors

Data source: Socio-Economic Panel (SOEP), data surveys 2017 to 2021, EU Edition

SOEP: Amount of Personal Transfers Made
German Citizens by Migration Background (MB), Grossed Up Values and Standard Errors
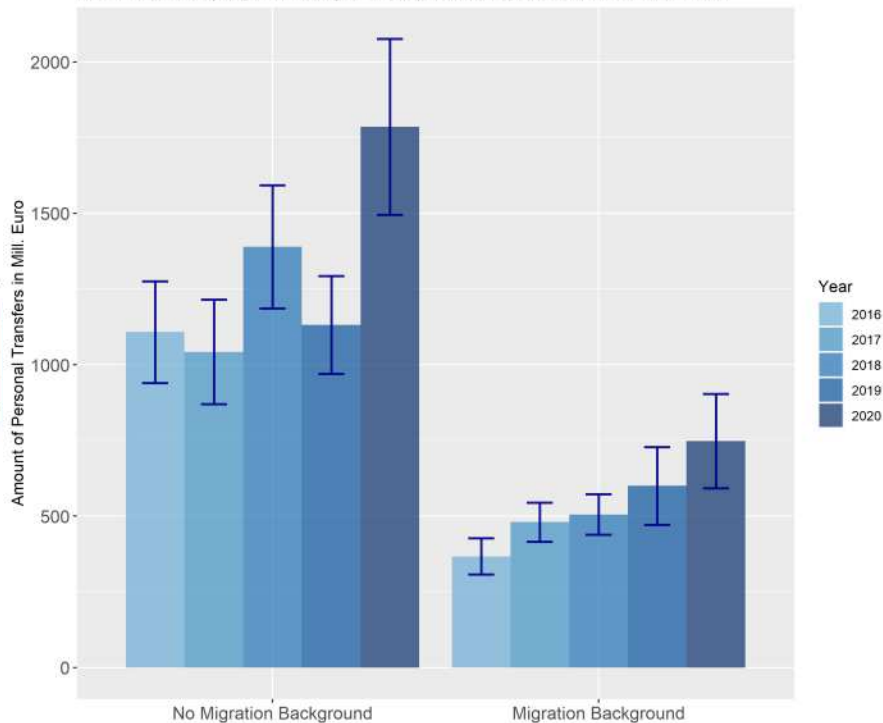
Data source: Socio-Economic Panel (SOEP), data surveys 2017 to 2021, EU Edition

Estimating Personal Transfers:
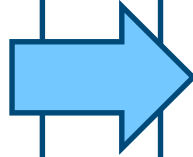# German Citizens with Migration Background

Socio-Demographic Patterns

SOEP The Socio-Economic Panel

GLM estimates
by Migration Background
for
Population Shares
+
Average Amount Sent

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Estimating Personal Transfers:
German Citizens with Migration Background

Socio-Demographic Patterns

GLM estimates
by Migration Background
for
Population Shares
+
Average Amount Sent

Geographic Allocation

Naturalisations

Estimating Personal Transfers:
German Citizens with Migration Background

Germans Citizens without Migration Background

SOEP: Personal Transfers by Recipient
German Citizens without Migration Background and Standard Errors

Data source: Socio-Economic Panel (SOEP), data surveys 2016 to 2020, EU Edition

SOEP: Amounts of Personal Transfers by Recipient
made by German Citizens without Migration Background and Standard Errors

Data source: Socio-Economic Panel (SOEP), data surveys 2016 to 2020, EU Edition

Estimating Personal Transfers:
German Citizens without Migration Background

Socio-
Demographic
Patterns

SOEP The Socio-
Economic
Panel

GLM estimates
by Migration
Background
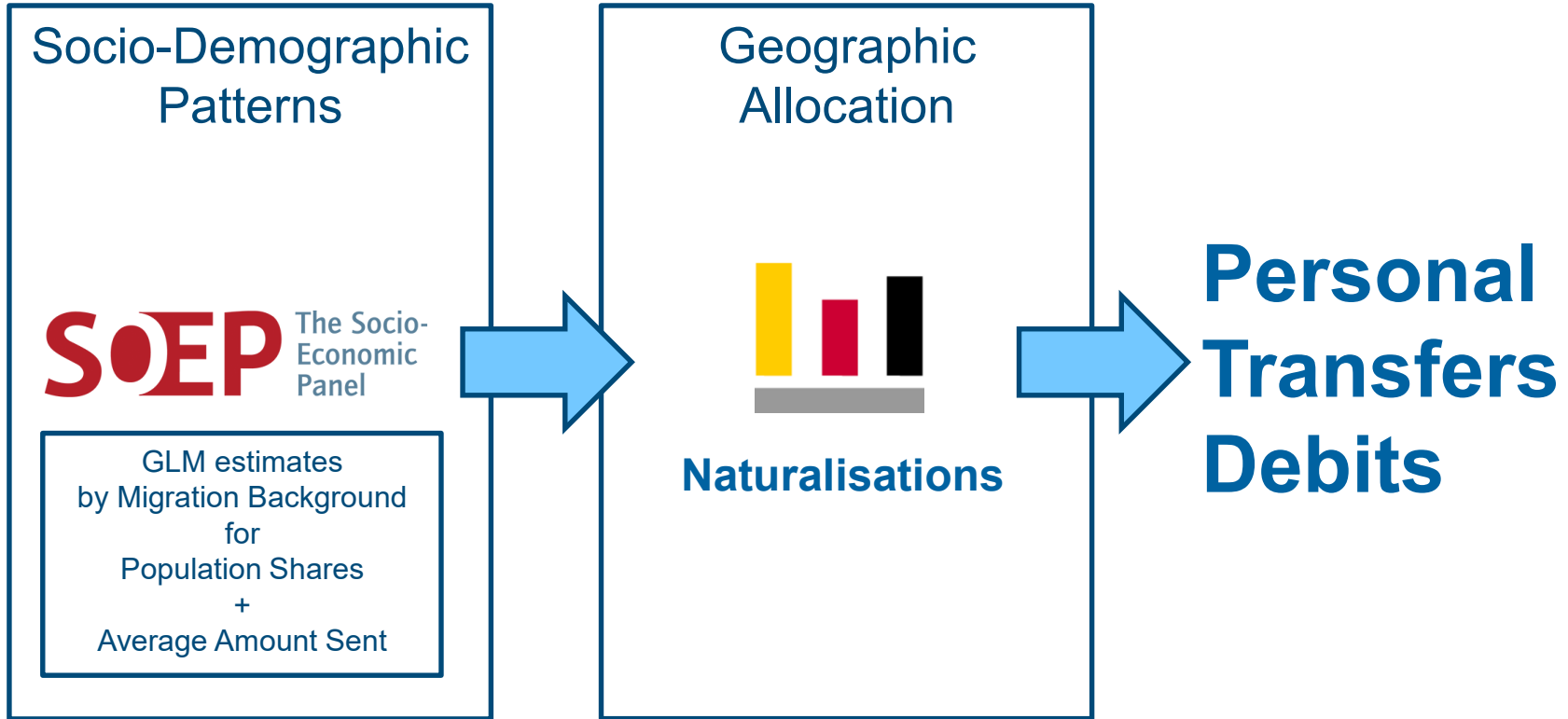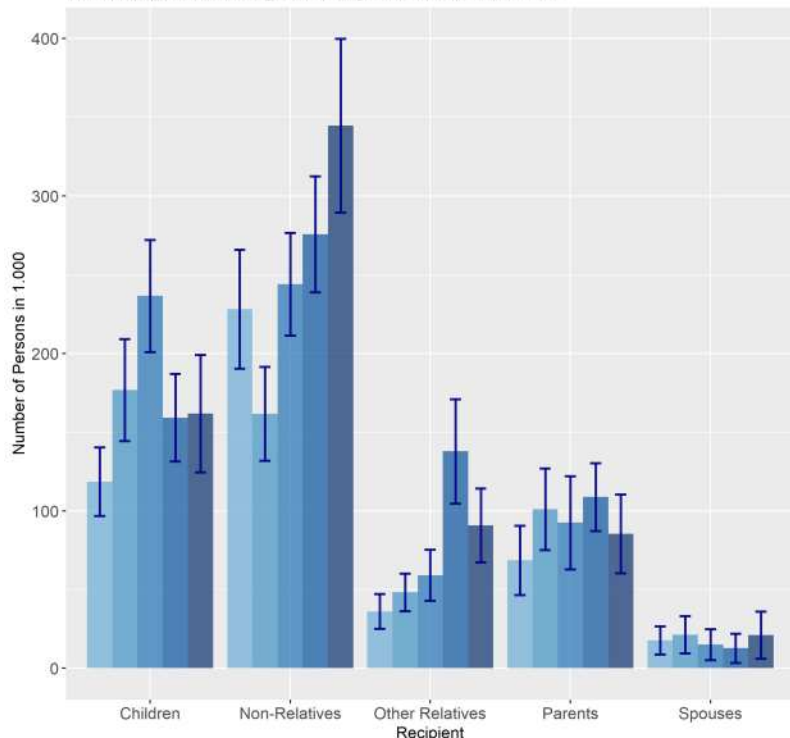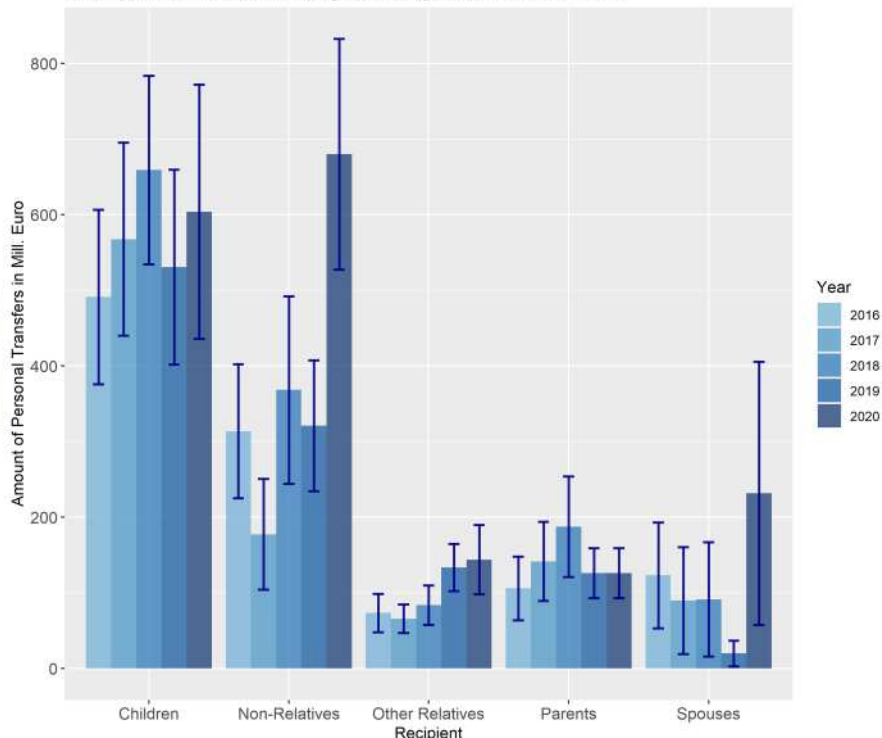for
Population Shares
+
Average Amount Sent

Estimating Personal Transfers:
German Citizens without Migration Background

Socio-Demographic Patterns

GLM estimates
by Migration
Background
for
Population Shares
+
Average Amount Sent

Conceptual Adjustments

Amounts sent to Non-Relatives and Students

Estimating Personal Transfers:
German Citizens without Migration Background

Socio-Demographic Patterns

GLM estimates
by Migration
Background
for
Population Shares
+
Average Amount Sent

Conceptual Adjustments

Amounts sent to
Non-Relatives and
Students

Geographic Allocation

UNDESA

THE WORLD BANK

UNDESA International
Migrant Stock Report
adjusted with GDP per
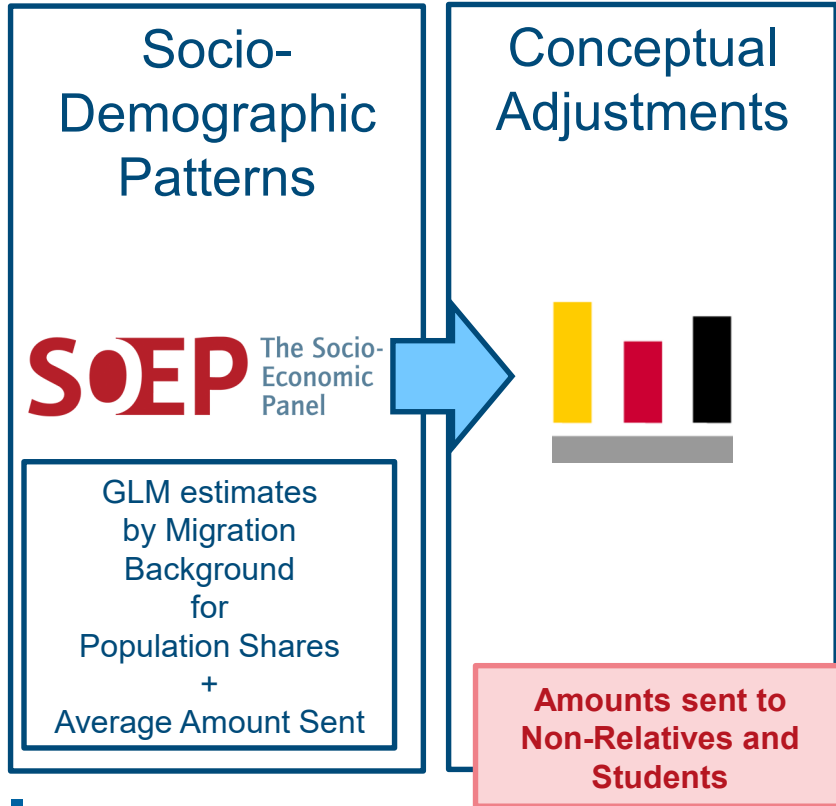Capita Ratios

13.02.2024

Estimating Personal Transfers:
German Citizens without Migration Background

Socio-Demographic Patterns

SOEP — The Socio-Economic Panel

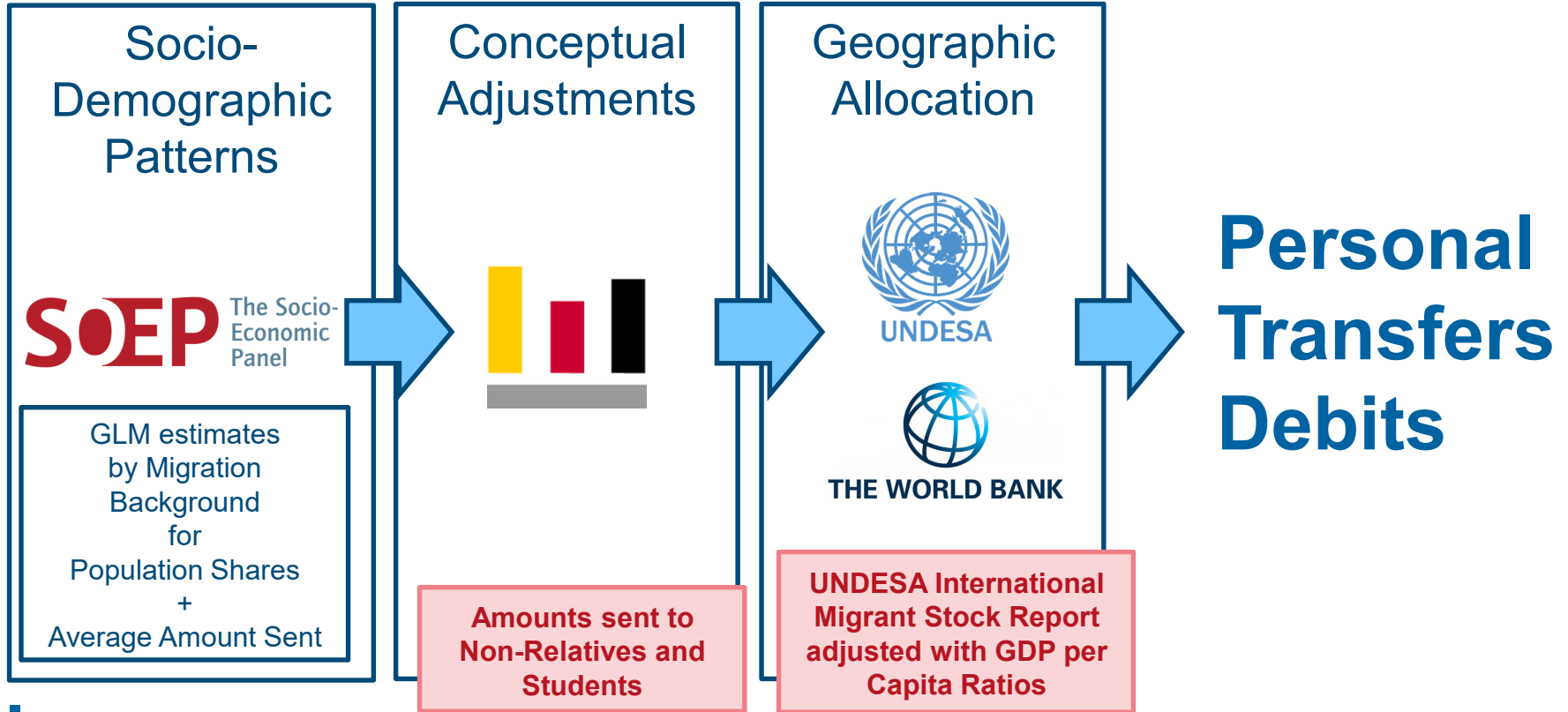GLM estimates by Migration Background for Population Shares + Average Amount Sent

Conceptual Adjustments

Amounts sent to Non-Relatives and Students

Geographic Allocation

UNDESA

THE WORLD BANK

UNDESA International Migrant Stock Report adjusted with GDP per Capita Ratios

Personal Transfers Debits

Estimating Personal Transfers: Population Frames

Foreign Citizens living in Germany

Number of persons. Reporting years 2016-2020

Year	Total	… engaging in personal transfers	of which: Full-time and Part-time employed	of which: Marginal and irregular employed	of which: Not employed
2016	10.039.110	1.089.742	871.899	38.433	179.409
2017	10.623.945	1.586.111	1.236.919	50.791	298.400
2018	10.915.440	1.479.929	1.094.021	81.669	304.240
2019	11.228.275	1.468.061	1.124.929	31.136	311.995
2020	11.432.490	1.538.353	1.182.888	148.467	192.987

Source: Destatis, SOEP, own calculations

Estimating Personal Transfers: Population Frames

German Citizens living in Germany
Number of persons. Reporting years 2016-2020

Year	Total	German citizens that engage in personal transfers	of which: with migration background	of which: without migration background
2016	71.391.890	612.706	284.689	328.017
2017	71.116.055	1.049.863	454.248	595.616
2018	70.697.560	1.081.650	469.907	611.743
2019	70.619.725	1.084.584	465.761	618.823
2020	70.742.510	1.157.378	565.245	592.133

Source: Destatis, SOEP, own calculations

Personal Transfers: Results
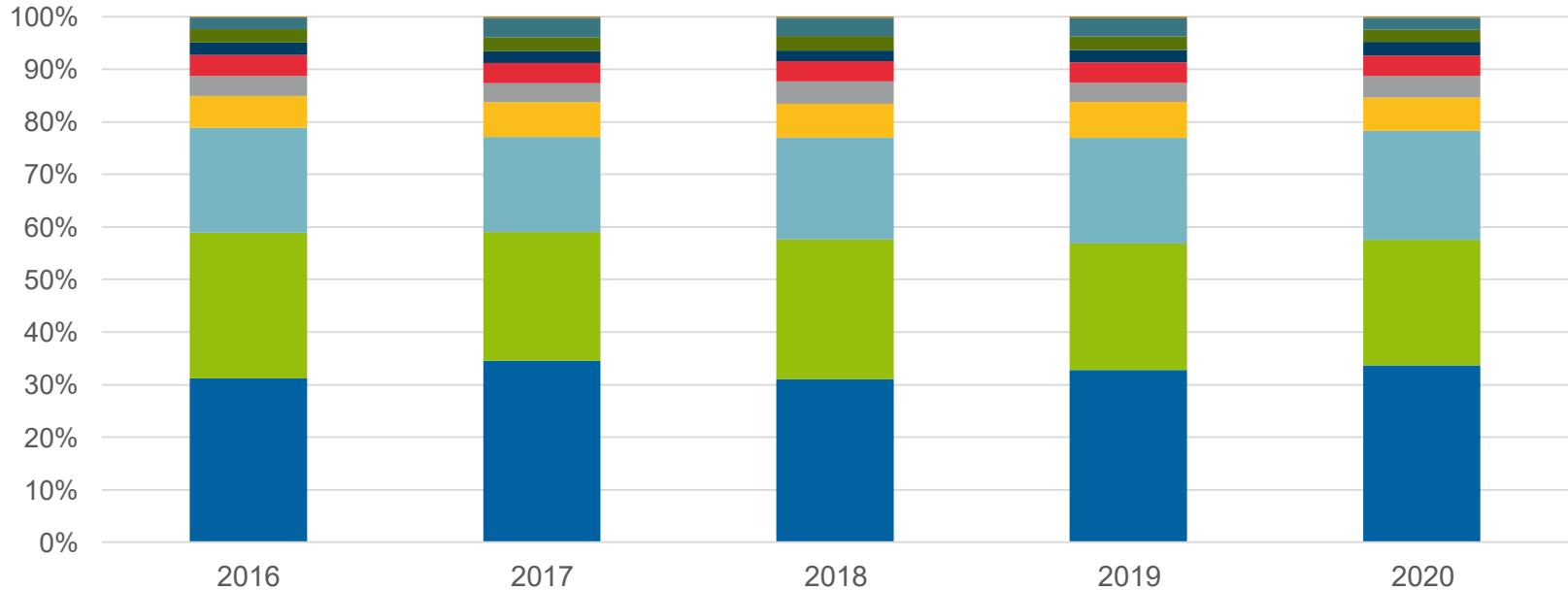
Estimated amount of Personal Transfers
Million Euros. Reporting years 2016-2020

Year	Current Estimation of Personal Transfers	Proposed Estimation of Personal Transfers	of which: by Foreign citizens	of which: by German citizens with migration background	of which: by German citizens without migration background
2016	4.196	3.488	2.067	365	1.056
2017	4.613	3.761	2.060	439	1.262
2018	5.142	4.702	2.744	546	1.413
2019	5.431	4.061	2.339	668	1.055
2020	5.908	4.806	2.350	878	1.578

Source: Deutsche Bundesbank, Ausländerzentralregister (AZR), SOEP, own calculations

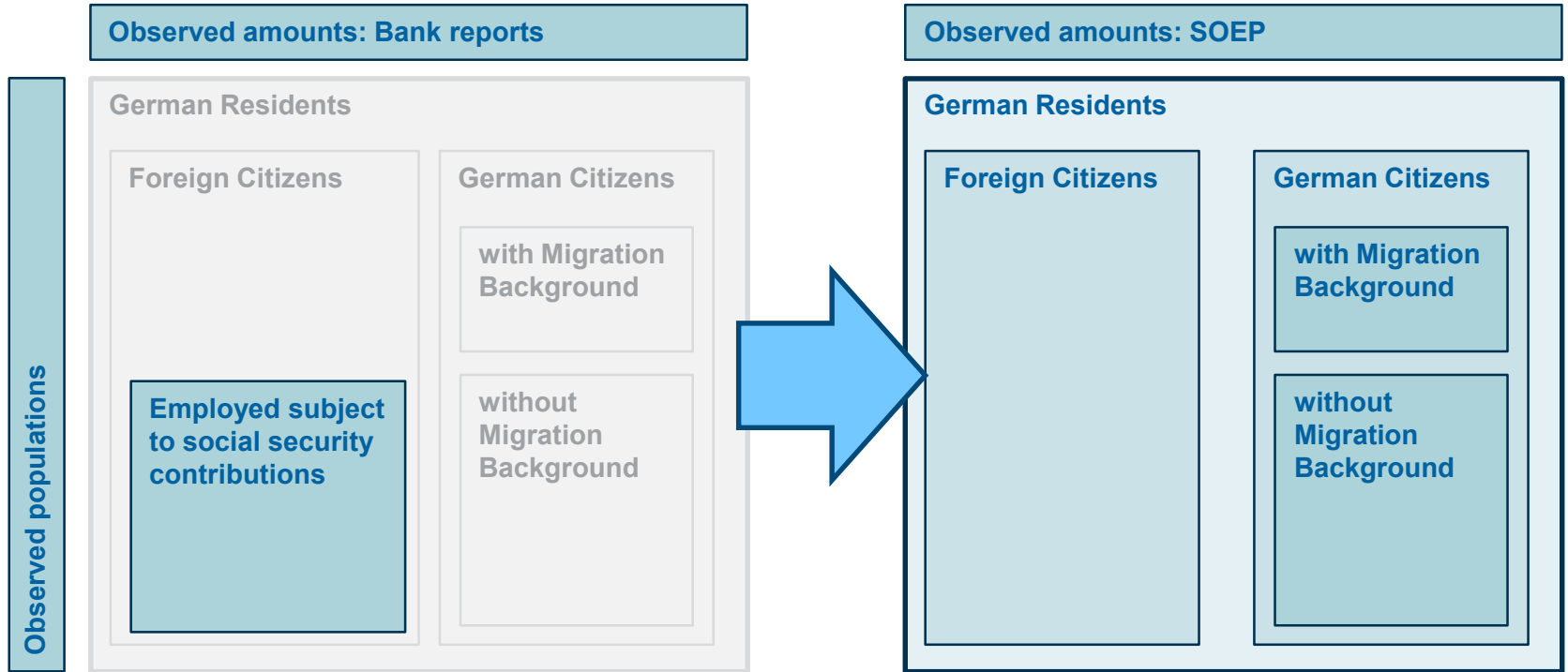# Personal Transfers: Regional Composition

Legend:
- Non-EU Europe and Central Asia
- Euro area
- European Union w.o. Euro Area
- Middle East and North Africa
- North America
- East Asia and Pacific
- Latin America and Caribbean
- South Asia
- Sub-Saharan Africa
- No Nationality

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Personal Transfers - Year 2020 - Top 10 Countries by Share

Current Estimation Approach		Proposed Estimation Approach	
Country	Weight	Country	Weight
Turkey	**14%**	**Turkey**	**16%**
Romania	**9%**	**Poland**	**8%**
Poland	**9%**	**Italy**	**6%**
Italy	7%	Greece	5%
Syria	5%	Romania	4%
Croatia	4%	Russian Federation	4%
Serbia (incl. Kosovo)	4%	United Kingdom	4%
Bulgaria	4%	Croatia	3%
Greece	4%	Spain	3%
Hungary	2%	France	3%

13.02.2024

Results: Comparing the Current Approach

Observed populations

Observed amounts: Bank reports

German Residents

Foreign Citizens

German Citizens

with Migration Background

Employed subject to social security contributions

without Migration Background

Observed amounts: SOEP

German Residents

Foreign Citizens

German Citizens

with Migration Background
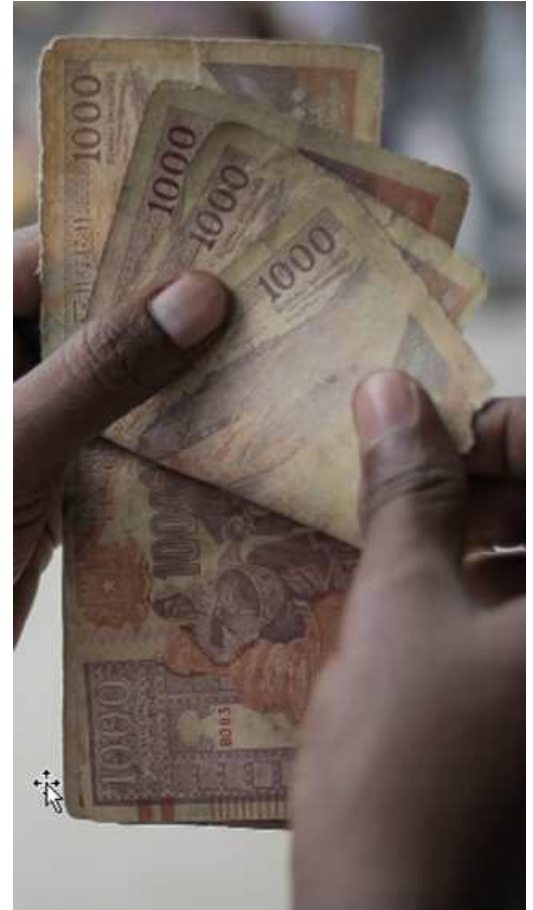
without Migration Background

Shares of Persons making Personal Transfers are much smaller throughout all Subpopulations

Outlook

Bilateral asymmetry checks

Implementing Forecasting
Methods

Expanding analysis scope to the
credits

Thank You!