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On the Distribution of Refugees in the EU

The current situation regarding the migration of refugees can only be handled efficiently through closer international cooperation in the field of asylum policy. From an economic point of view, it would be reasonable to distribute incoming refugees among all EU countries according to a distribution key that reflects differences in the costs of integration in the individual countries. An efficient distribution would even out the marginal costs of integrating refugees. In order to reach a political agreement, the key for distributing refugees should be complemented by compensation payments that distribute the costs of integration among countries. The key for distributing refugees presented by the EU Commission takes account of appropriate factors in principle, but it is unclear in terms of detail. The compensation payments for countries that should take relatively high numbers of refugees for cost efficiency reasons should be financed by reallocating resources within the EU budget.

In 2015 the number of asylum seekers in the European Union increased considerably, and the development of a coherent European asylum policy has taken on utmost importance. However, disparate regionalism still dominates the public debate on refugees in Europe, and the distribution of refugees among the individual member states is very uneven. As a functioning European distribution system for refugees does not exist, the number of refugees in host countries depends on factors such as geographical location, the level of benefits offered in the asylum procedure and the refugees' intention to join existing networks of their own ethnicity. If refugees are

spread in such an uncoordinated manner, the total costs of protecting them are likely to be considerably higher than if their distribution was determined according to economic considerations. A further problem is that the conditions of admission and the procedures for granting the right of asylum strongly differ from country to country. Low standards of benefits might to some extent result from local authorities, such as those of Greece and Cyprus, being temporarily overburdened. However, if asylum systems in member states are not coordinated, governments have an incentive to decrease their own standards of benefits. If Europe is to meet the refugee challenge, it should address both the uneven distribution of the burden and the adverse incentive structure.

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Considering the significance of asylum policy in Europe today, it appears quite remarkable that a comprehensive agreement has not yet been reached. In this article, we will take a closer look at the barriers hampering an agreement and consider the scope for policy to overcome the current dilemma. Below we give a brief quantitative overview of the challenge posed by the influx of refugees. We then discuss the costs and benefits of accepting refugees for an individual country, along with the free-rider problem in the European Union's asylum policy. The main

* A previous version of this paper was published in German. See M. Altemeyer-Bartscher, O. Holtemöller, A. Lindner, A. Schmalzbauer, G. Zeddies: Ökonomische Überlegungen zur Verteilung von Flüchtlingen und zur Finanzierung der Kosten der Flüchtlingsmigration in der EU, in: IWH Konjunktur aktuell, Vol. 3, No. 5, 2015, pp. 229-242.

arguments in favour of a common distribution system for refugees in Europe are then discussed, followed by arguments that such a system might have to be complemented by side payments among member states in order to overcome political resistance. We then explore in more detail the determinants of the costs of receiving refugees, showing in particular how the integration of refugees into the labour market differs among countries. Finally, we propose a simple key for distributing refugees and discuss the conditions for financing side payments within the framework of the EU's budgetary rules.

Data on the refugee situation

In recent years, war and serious violations of human rights have driven increasing numbers of people away from their homes, especially in the Middle East and in Africa. More and more of these refugees have been seeking asylum in the European Union. In 2015 this trend increased dramatically. According to Frontex, the number of illegal crossings of EU borders increased, from 107 000 in 2013 to 283 000 in 2014, and to 1.82 million in 2015.¹ During spring 2016, however, the number of refugees has fallen drastically, since borders along the Balkan route have been closed and an agreement between the EU and Turkey restricts illegal border crossings.

Two-thirds of those applying for asylum in the European Union in 2015 came from only six countries: Syria (28.9%), Afghanistan (14.2%), Iraq (9.7%), Kosovo (5.3%), Albania (5.3%) and Pakistan (3.7%).² The number of applications for asylum is distributed very unevenly among EU member states. The following countries received about 81% of all applications for asylum: Germany (35.2%), Hungary (13.9%), Sweden (12.4%), Austria (6.8%), Italy (6.6%) and France (5.6%). In relation to population size, the number of applications for asylum was especially high in Hungary, Sweden, Austria and Germany. Germany's net migration of refugees in 2015 is estimated to be about 740 000.³

The free-rider problem in EU asylum policy

Apparently, some member states intend to keep their contributions to asylum protection as low as possible,

although there is in fact a common EU interest fulfilling underlying humanitarian obligations. International agreements such as the Geneva Convention on Refugees can only be stable in the long term if the EU, as one of the main contracting partners, complies with the requirements.⁴ Furthermore, providing insufficient support for asylum seekers is hardly consistent with the basic moral principles essential to the European identity. Accordingly, the EU as a whole benefits from asylum protection by an individual member state.⁵ This is why the protection of asylum seekers represents, similar to climate protection or defence alliances,⁶ an international public good.⁷ Typically, if a public good is provided in an uncoordinated, decentralised manner, individual decision-makers have a tendency to free-ride. The Common European Asylum Policy currently faces this dilemma. While the handling of the humanitarian crisis jointly affects the member states, the associated costs are presently incurred primarily at a national level. Thus, member states may be tempted to free-ride on the benefits of the contributions made by others.⁸

Generally, the costs of protecting asylum seekers that are incurred by the receiving countries are complex. In addition to expenditures for a preliminary accommodation, which at present make up a considerable share of the total expenditure, claims for benefits in the social security systems of the receiving countries are to be expected in the medium term. For example, in Germany refugees are rapidly integrated into the general social security system.⁹ At the same time, it is likely that only a small proportion of them can be integrated into the labour market straight away. In order to ensure that refugees can soon participate in the economy, various

- 1 However, it should be noted that some of these asylum seekers may have been counted twice, especially those who crossed borders multiple times on their way from Turkey or the Balkans to Central Europe. Such asylum seekers may have crossed the Greek and then the Hungarian border, for example.
- 2 Eurostat: Record number of over 1,2 million first time asylum seekers registered in 2015, News release, 44/2016, 4 March 2016.
- 3 See Projektgruppe Gemeinschaftsdiagnose: Aufschwung bleibt moderat – Wirtschaftspolitik wenig wachstumsorientiert, Gemeinschaftsdiagnose Frühjahr 2016, Munich, p. 50.

- 4 The Geneva Convention on Refugees stipulates in particular that no refugees are sent back to where they are being persecuted (the principle of non-refoulement); see also European Council: Presidency Conclusions, European Council (Tampere), 15 and 16 October 1999.
- 5 Protecting asylum seekers generates non-exclusive, non-rival benefits for the member states. In the context of an international security policy, it is possible to speak of a security public good, and in the context of fulfilling moral obligations, it is possible to speak of an altruistic public good. See A. Betts: Public Good Theory and the Provision of Refugee Protection: The Role of the Joint-Product Model in Burden-Sharing Theory, in: *Journal of Refugee Studies*, Vol. 16, No. 3, 2003, pp. 274-300.
- 6 See W. Nordhaus: *Managing the Global Commons: The Economics of Change*, Cambridge MA 1994, MIT Press.
- 7 See M. Olson Jr., R. Zeckhauser: *An Economic Theory of Alliances*, in: *The Review of Economics and Statistics*, Vol. 48, No. 3, 1966, pp. 266-279.
- 8 For a comprehensive analysis of the public good problem in international asylum policy, see E. Thielemann: *Between Interests and Norms: Explaining Burden-Sharing in the European Union*, in: *Journal of Refugee Studies*, Vol. 16, No. 3, 2003, pp. 253-273.
- 9 Recognised refugees are entitled to unemployment benefit 2 (ALG 2) from the day on which they are recognised in accordance with Section 7 Paragraph 1 Clause 3 of Book II of the Social Code (SGB II).

measures have to be taken.¹⁰ Offering language courses and access to schools and universities are important examples. In Germany, as in many other countries, the influx of refugees will necessitate considerable additional capacity in the field of education in the coming years.¹¹ Last but not least, forced migration creates additional administrative tasks associated with implementing the asylum procedure. It is difficult to estimate the medium- and long-term costs of forced migration for the member states at present. These costs will mainly depend on the average length of stay, the intensity of immigration in the future, the costs of investing in new infrastructure and the success of the integration policy.

Granting asylum results in both costs and positive effects that are exclusive to the receiving country. In particular, successful integration of migrants increases the potential workforce. Especially in countries that will be affected by significant natural declines in the population in the coming years, swiftly integrating immigrants into the labour force would have positive effects.¹² Furthermore, it is conceivable that accepting asylum seekers would help larger member states in pursuing hegemonic goals. In the past, by granting asylum, receiving countries were able to increase their influence in the refugees' countries of origin once the situation improved.¹³ For example, the US established an important basis through which it could influence norms in Vietnam in the post-war period (i.e. after 1975) by offering humanitarian aid to refugees.

Besides, some member states might be able to improve their standing in the EU by actively contributing to the resolution of the crisis. Similar to other humanitarian measures, a good conscience about having made a contribution produces a "warm glow" effect when it comes to national asylum policies. This is why, apart from the aggregate contribution level, the national share plays a role.¹⁴ By creating both a non-rival benefit at the European level as well as a local benefit, the protection of asylum seekers can be interpreted as a joint public good. The local side effects in the receiving countries

increase the incentives for individual countries to contribute towards protecting asylum seekers. However, in most cases, these side effects will only mitigate and not fully counteract the free-riding behaviour in an international context.

Arguments for a common European distribution system for refugees

In 2008, with the European Pact on Immigration and Asylum, the member states agreed on guidelines in order to align the levels of benefits available across the bloc.¹⁵ Taking a closer look at the division of responsibilities in the European asylum policy, however, we find that states still have ample scope concerning both the level of benefits and the procedures of applying for asylum. There are still considerable opportunities to influence the conditions of admission, the length or quality of the asylum procedure and the acceptance rates on a country-by-country basis. If one member state opts for a more restrictive asylum policy, this leads *ceteris paribus* to a higher number of applications for asylum in other member states.¹⁶ Conversely, increasing the benefit levels in one country will cause an increase in applications in that location and a corresponding reduction in the rest of the EU.¹⁷ The national governments, which are mainly committed to their own voters, ignore these externalities in their decision-making processes. In the absence of a mechanism that monitors the inter-regional distribution of refugees, a process of downward competition among member states is to be expected: if benefits are reduced in one country, other countries may be more inclined to reduce theirs as well.¹⁸ This "race to the bottom" creates additional hardships for refugees, which could be prevented by a more coordinated asylum policy.¹⁹ In addition, the process of downward competition produces pressures to cut expenditures for integration services that promote the rapid integration

10 See Federal Ministry of the Interior: Report of the Independent Commission on Migration, Berlin 2001.

11 See Deutscher Städtetag: Gemeindefinanzbericht 2015 – Herausforderung Flüchtlinge: Kommunen finanziell entlasten, Integration ermöglichen, Berlin 2015.

12 See Institut für Arbeitsmarkt und Berufsforschung: Aktuelle Berichte: Flüchtlinge und andere Migranten: Der Stand am deutschen Arbeitsmarkt im September 2015, Aktuelle Berichte No. 14/15.

13 See A. Suhrke: Burden-Sharing During Refugee Emergencies: The Logic of Collective Action Versus National Action, in: Journal of Refugee Studies, Vol. 11, No. 4, 1998, pp. 396-415.

14 See J. Andreoni: Impure Altruism and Donations to Public Goods: A Theory of Warm-Glow Giving, in: Economic Journal, Vol. 100, No. 401, 1990, pp. 464-477.

15 See Council of the European Union: European Pact on Immigration and Asylum of 24 September 2008, Brussels 2008.

16 See S. Angenendt, M. Engler, J. Schneider: Europäische Flüchtlingspolitik: Wege zur fairen Lastenteilung, Stiftung für Wissenschaft und Politik, SWP-Aktuell No. 65, Berlin 2013.

17 The scope of a migration externality caused by benefit standards being determined in a decentralised manner mainly depends on the mobility of the recipient of the benefits; see C.C. Brown, W.E. Oates: Assistance to the Poor in a Federal System, in: Journal of Public Economics, Vol. 32, No. 3, 1987, pp. 307-330.

18 The national standards of benefits in a particular country represent a "strategic substitute" of the benefit standards in the other member states; see J.I. Bulow, J.D. Geanakoplos, P.D. Klemperer: Multi-market Oligopoly: Strategic Substitutes and Complements, in: Journal of Political Economy, Vol. 93, No. 3, 1985, pp. 488-511.

19 See M. Dahlberg, K. Edmark: Is there a "race-to-the-bottom" in the Setting of Welfare Benefit Levels? Evidence from a Policy Intervention, in: Journal of Public Economics, Vol. 92, No. 5-6, 2008, pp. 1193-1209.

of refugees. A coordinated EU asylum policy would take these types of migration externalities into consideration.

Additional arguments for the implementation of an inter-regional distribution system relate to the spatial dimension of the problem. Fragmented coordination in the current system means that the refugees determine their own destination. The migration routes that developed in 2015 are inefficient for a number of reasons. First of all, uncoordinated migration routes lead to considerable mobility costs for the refugees, who have few resources and little information at their disposal.²⁰ Furthermore, planning by the authorities is difficult, since the main routes are difficult to predict.

A more general argument for a common European distribution system relates to cost efficiency. The total costs of humanitarian aid will be minimised if the distribution of refugees complies with the *principle of equal marginal costs*. Accordingly, the costs of accommodating additional migration (marginal costs) should be equalised across member states. If the marginal costs of granting asylum differ, efficiency can be improved by diverting migration to regions with lower marginal costs until these are finally balanced.

A European distribution system might also include the regional preferences of asylum seekers when it comes to their initial reception.²¹ Those asylum seekers that are not assigned to their preferred location should be allowed to change their location after a brief integration period. The lock-in effects on the labour market of the initial country of reception are of a similar nature to those that apply to EU citizens.²² Such barriers to other regional labour markets should be reduced by suitable coordination measures. In principle, a European distribution system for refugees should only apply to the initial acceptance of refugees and should not be linked to a requirement of long-term residency for refugees. It is advisable that, after a specified period of integration, the refugees gain full access to the common European labour market, thereby enjoying the right of freedom to move, just like EU citizens. Contrary to the aforementioned uncoordinated refugee migration, refugees' voting with their feet once inside the common European labour market is in line with the EU's efficiency goals.

20 Hunderte Flüchtlinge gen Österreich zu Fuß auf Autobahn (Hundreds of migrants walk along the motorway towards Austria), Zeit-Online, 4 September 2015.

21 See M.J. Fernández-Huertas, H. Rapoport: Tradable Refugee-Admission Quotas (TRAQs), the Syrian Crisis and the New European Agenda on Migration, IZA Discussion Paper No. 9418, 2015.

22 During the integration period, certain qualifications may be acquired that are specific to the labour market in the receiving country and might result in switching costs.

Overcoming national resistance to a distribution system

Current willingness to improve the coordination of the European asylum policy, for example by introducing a distribution system, varies considerably among member states. Some countries are pushing for a European distribution system, while others oppose it. A possible explanation for the different positions could be the heterogeneous costs and benefits of granting asylum. In member states whose public budgets exhibit considerable sustainability gaps and which are therefore already under considerable pressure to consolidate, the added burden of accepting refugees will have a relatively high impact in budgetary terms.²³ This type of funding constraint is absent in other countries, such as Germany.²⁴ The extent of the positive side effects of accepting refugees might also vary considerably from country to country. The capacity to receive immigrants depends, to a large degree, on the current macroeconomic health of the member state. Long-term prospects also play a role, as the refugees will have a positive effect on the size of the potential workforce in the medium term.

At present, however, due to different national interests, the implementation of a European distribution system for refugees in accordance with the principle of equal marginal costs appears to be out of reach. Compensation payments would be a suitable way of overcoming the discrepancies.²⁵ These should be based on the economic capacities of the countries and on the positive external effects that benefit members that take relatively few refugees.

Furthermore, when designing a system for burden sharing, it is important to take account of the fact that the protection of asylum seekers has an impact that stretches well beyond the borders of the EU. Member states are not only confronted with a free-riding problem within the borders of the EU, but also with respect to non-member

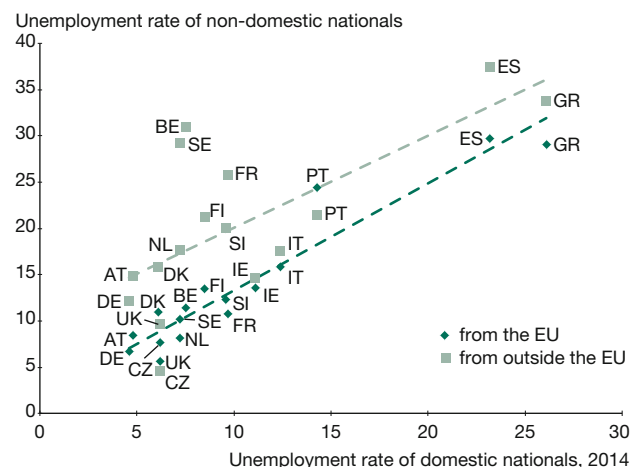
23 In the current political negotiations, the willingness of certain member states to contribute is therefore linked very closely to a temporary relaxation of the Stability and Growth Pact.

24 Insofar as the Federal Republic of Germany is concerned, despite its relatively high contribution, a breach of the Stability and Growth Pact is not expected in 2015; see Advisory Board of the Stability Council of the Federal Republic of Germany, 4th Statement regarding the observation of the ceiling for the structural macroeconomic funding deficit in accordance with Section 51 Paragraph 2 of the German Budgetary Procedures Act (HGrG) of 9 December 2015.

25 For a general discussion of the underlying mechanism, see M. Altemeyer-Bartscher, A. Markandya, D.T.G. Rübelke: International Side-payments to Improve Global Public Good Provision when Transfers are Refinanced through a Tax on Local and Global Externalities, in: International Economic Journal, Vol. 28, No. 1, 2014, pp. 71-93.

Figure 1
Unemployment rates by nationality, 2014

in %



AT = Austria, BE = Belgium, CZ = Czech Republic, DE = Germany, DK = Denmark, ES = Spain, FI = Finland, FR = France, GR = Greece, IE = Ireland, IT = Italy, NL = Netherlands, PT = Portugal, SE = Sweden, SI = Slovenia, UK = United Kingdom.

Sources: Eurostat; IWH.

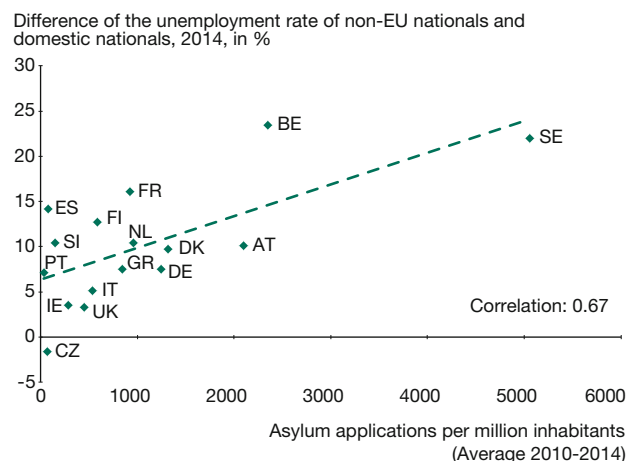
states. It is therefore reasonable for the EU to include important non-member states, for example Turkey, in its efforts to coordinate asylum policy, and also into the system for burden sharing.

Dealing with the current migration crisis

The reception of asylum seekers in large numbers is associated with costs, at least in the short and medium term. Clearly, the relevant concept of costs comprises not only costs for accommodation and care, but also for the integration of refugees into society in general and in particular into the labour market. It appears plausible to assume that such costs per refugee increase with the number of refugees. The absorbing capacity of the labour market is limited, as is the availability of suitable housing and the provision of targeted language courses. Under this assumption, an optimal distribution of refugees minimising the total costs in the EU implies that the number of refugees hosted by each individual member state should be such that the marginal costs in all states are the same.

The exact marginal costs cannot be determined empirically; however, it is plausible to assume that important indicators for their size are the size of the country (measured by the number of inhabitants), its economic capacity (measured e.g. by gross national product per capita),

Figure 2
Labour market situation for non-EU foreigners in relation to the number of applications for asylum



AT = Austria, BE = Belgium, CZ = Czech Republic, DE = Germany, DK = Denmark, ES = Spain, FI = Finland, FR = France, GR = Greece, IE = Ireland, IT = Italy, NL = Netherlands, PT = Portugal, SE = Sweden, SI = Slovenia, UK = United Kingdom.

Sources: Eurostat; IWH.

and the soundness of the labour market, usually measured by the unemployment rate, is an important determinant of the successful economic integration of refugees. Successful integration also depends on the numbers and origins of immigrants already living in the countries. Ideally, EU-wide uniform statistics that would disclose unemployment rates according to residency status and country of origin should be consulted. However, such data is not available. Eurostat publishes labour market data related to the country of origin only for the broad sub-groups of domestic nationals, nationals of other EU member states and nationals of non-EU member states. The unemployment rate of EU nationals in most countries is slightly higher than that of domestic nationals; these rates are almost perfectly correlated for all member states. The unemployment rate of citizens from non-EU member states is significantly higher than that of domestic nationals in almost all countries; the dispersion of the rates is also significantly greater (see Figure 1). This is an important observation for assessing the costs of integrating asylum seekers: if, as seems plausible, these costs are a function of the expected unemployment rate of refugees, it should be approximated by that of people from outside the EU instead of the overall rate.

Forced migration can help explain the wider dispersion of these rates. The unemployment rate of non-EU citizens is markedly higher than that of domestic nationals

in countries like Sweden and Belgium that have received particularly high numbers of asylum applications relative to their population size in recent years. In fact, there is a positive correlation between the number of applications for asylum in recent years and the difference in the unemployment rates of domestic nationals and of citizens from non-EU member states (see Figure 2). This indicates that the marginal costs of integrating refugees do indeed increase as the number of refugees grows.

Large differences between nationals and foreigners from non-EU countries can also be observed when it comes to the employment rate. In most countries, the employment rate is considerably lower for non-EU citizens than for domestic nationals; this is the case especially for women, but it applies to men as well. While the employment rate of male non-EU foreigners increases at least somewhat with the employment rate of male domestic nationals, the employment rate of female non-EU foreigners is largely disconnected from the domestic rate (see Figure 3).

The integration of refugees is more difficult than that of other migrant groups. Surveys carried out in Germany (the IAB-SOEP migration survey) and throughout Europe (the European Labour Force Survey) reveal that it takes about 15 years before refugees reach the same employment rate as other migrant groups.²⁶

However, the immigration of refugees also generates positive side effects. A key aspect is the effect on the size of the potential workforce, since most refugees are young adults.²⁷ Moreover, member states will be affected by ageing and a decline of the labour pool to varying degrees in the coming years. With regard to the optimal distribution of refugees within the EU, this means that member states with a lower share of working age people (15 to 64 years of age) in the total population should, *ceteris paribus*, take more refugees.

A simple distribution key

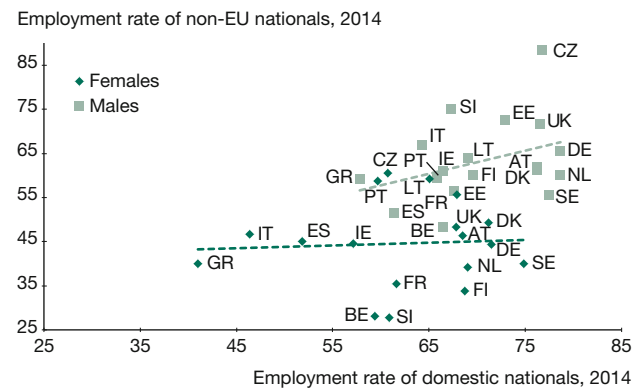
In September 2015 the European Commission presented to the Council and to the European Parliament a key for relocating refugees within the European Union.²⁸ This key takes account of the population size, the gross na-

²⁶ See Institut für Arbeitsmarkt- und Berufsforschung: Flüchtlinge und andere Migranten: Der Stand am deutschen Arbeitsmarkt im September 2015, Aktuelle Berichte No. 14/2015.

²⁷ See for Germany Institut für Arbeitsmarkt- und Berufsforschung: Flüchtlingseffekte auf das Erwerbspersonenpotenzial, Aktuelle Berichte No. 17/2015.

²⁸ See also European Commission: Proposal for a Regulation of the European Parliament and of the Council, COM(2015) 450 final.

Figure 3
Employment rates by nationality and gender
in %



AT = Austria, BE = Belgium, CZ = Czech Republic, DE = Germany, DK = Denmark, ES = Spain, FI = Finland, FR = France, GR = Greece, IE = Ireland, IT = Italy, NL = Netherlands, PT = Portugal, SE = Sweden, SI = Slovenia, UK = United Kingdom.

Sources: Eurostat; IWH.

tional product, the unemployment rate and the average number of applications for asylum over the last five years relative to the total population. The higher the total population and the gross national product, the higher the proportion of refugees allocated to that country; the opposite is true for the unemployment rate and the number of previous applications for asylum.

How should the EU Commission's proposal be assessed in relation to the theoretical and empirical issues addressed in this paper? Does the key capture the marginal costs of accepting refugees? A large proportion of the costs of integration may well depend not on the absolute number of refugees, but on the relation of that number to the local population or to the size of the economy measured in terms of the gross domestic product. Moreover, successful integration into the labour market is more likely if the unemployment rate is lower. Finally, assuming increasing marginal costs of accepting refugees, with all other things remaining equal, the refugees should be distributed to those places where the influx has been relatively low. The Commission thus chose plausible parameters for the capacity to receive refugees, although it did not consider the positive side effects of migration, which are, admittedly, difficult to determine.

Looking at the problem from a political economy point of view, we find another important requirement for a distribution key: it should be transparent, and manipulation should be difficult. Therefore, only a limited number of indicators should be used to determine the capaci-

Box 1

A transparent key for the distribution of refugee quotas within the EU

The distribution quota *Share* of a member state *i* is the weighted average of four factors. The first factor provides the distribution quota of a member state *i* according to the share of its population (*POP*) in the total population of the EU. The second factor then modifies this proportion of the population in accordance with the wealth of the member state, as measured by the gross national income per capita (*GNIHEAD*): it is the product of the population share and the gross national income per capita of country *i* in relation to the average GNI per capita in the European Union. The sum of these figures over all countries, however, is usually not exactly 1. In order to achieve this, the proportion of the member state *i* calculated initially is then divided by the sum of all the proportions calculated in this way. The third factor takes the proportion of the population and modifies it in accordance with the unemployment rate *UN* of non-EU citizens in the member state *i*. This is the product of the population share and the relation between the EU unemployment rate and the unemployment rate in country *i*. Here too, this figure must be divided by the sum of the weighted proportions. The fourth factor modifies the population size in accordance with the number of applications for asylum (*ASYLUM*) made in a member state *i* between 2010 and 2015.

The weightings of the four factors, $(1 - \alpha - \beta - \gamma)$, α , β and γ can be varied as desired. The formula is as follows:

$$\begin{aligned} Share_i = & (1 - \alpha - \beta - \gamma) \cdot \frac{POP_i}{POP_{EU}} + \alpha \left(\frac{POP_i}{POP_{EU}} \cdot \frac{GNI_{HEAD,i}/GNI_{HEAD,EU}}{\sum_{i=1}^{28} (GNI_{HEAD,i}/GNI_{HEAD,EU})} \right) \\ & + \beta \left(\frac{POP_i}{POP_{EU}} \cdot \frac{UN_{EU}/UN_i}{\sum_{i=1}^{28} (UN_{EU}/UN_i)} \right) \\ & + \gamma \left(\frac{POP_i}{POP_{EU}} \cdot \frac{ASYLUM_{ex\ post\ EU}/ASYLUM_{ex\ post\ i}}{\sum_{i=1}^{28} (ASYLUM_{ex\ post\ EU}/ASYLUM_{ex\ post\ i})} \right) \end{aligned}$$

where $0 \leq \alpha, \beta \leq 1, \gamma \leq 1, \alpha + \beta + \gamma \leq 1$.

An example can be used to illustrate how the allocation quota is calculated based on the population share modified by the unemployment rate: The Union consists of country A with 50 million residents and country B with 50 million residents. The unemployment rate in A is 12%, and the unemployment rate in B is 6%. Initially, the quota is $0.5 \cdot 9/12 = 3/8$ for country A and $0.5 \cdot 9/6 = 6/8$ for country B. The sum of these is 9/8. After dividing the proportions from the first round of calculations by 9/8, country A is assigned a share of 1/3 and country B is assigned a share of 2/3. The total key gives this distribution as well for $\beta=1$.

ties of the individual member states to receive refugees (or, in economic terms, for the position of the marginal cost curves), and these should be easily measurable. It should also be easy to calculate the allocation quotas on the basis of the indicators. Finally, decisions regarding the weighting of the individual indicators must be made in a clear and transparent manner. A positive point to note here is that the Commission has limited itself to a small number of criteria which can be easily measured.

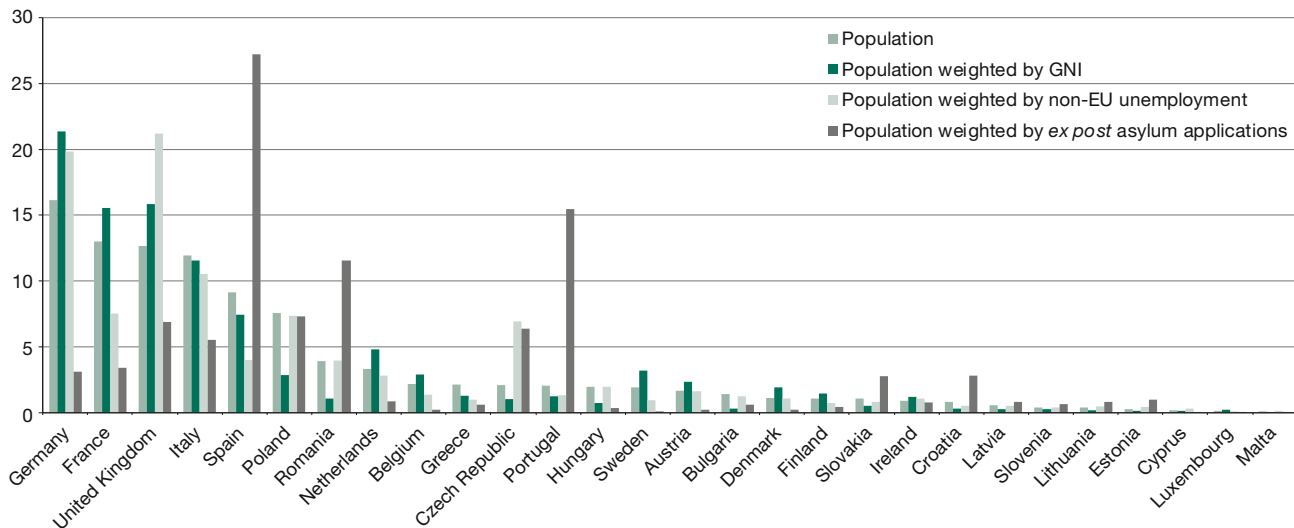
However, the design of the indicator proposed by the Commission is not transparent because caps are imposed arbitrarily on the influence of the unemployment rate. As a result, the effect of the labour market situation on the allocation is quite limited.²⁹

²⁹ See S. Poppe: Der Flüchtlingsschlüssel der EU-Kommission: Alles andere als simple und transparente Arithmetik, Crowdcountry.de, 20 September 2015.

Figure 4

A key for the distribution of refugees in the European Union: extreme cases of indicator weighting

in %



Sources: Eurostat; IWH.

In Box 1, a distribution key is presented for allocating refugee quotas to the member states in a transparent manner. This key uses the following indicators, which are similar to those chosen by the Commission: population, gross national income per capita, the unemployment rate of non-EU citizens in the country and the number of applications for asylum made in the country between 2010 and 2014 relative to the population size. The quota of a member state is the weighted average of four sub-quotas: The first indicator provides the sub-quota of a member state i according to the share of its population in the total population of the EU. The second indicator modifies this population share accounting for the productivity of the member state economy, measured by the gross national income (GNI) per capita. The third indicator takes the population share and modifies it to account for the unemployment rate of non-EU citizens in the member state. The fourth indicator modifies it to account for the number of asylum applications made in the previous years (in relation to the population size). Figure 4 illustrates the allocation of refugees in the four extreme cases of indicator weighting: if only the population were to play a role, or only the population size adjusted for the GNI per capita, only the population size adjusted for the unemployment rate or only the population size adjusted for the recent applications for asylum. Germany's quota would be 16% if the population size alone were to play a role, 21% if this were modified to take account of the relatively high GNI in Germany, 26% if based on the relatively low unemployment rate of

non-EU citizens, and only three per cent if modified to account for the figures relating to the most recent applications for asylum only. If the weighting factors are chosen so that more than one of the four criteria play a role, quotas for distribution that lie within the extreme values will result.

Financing expenditures that result from migration into the EU

In order to ensure the political enforceability of an efficient distribution system for refugees, additional compensation payments for individual member states are probably necessary. The question arises as to how these payments should be funded. Difficulties may arise due to the low flexibility of the EU budget in the short term.

In principle, a permanent additional expenditure should be financed by increases in revenues or expenditure cuts elsewhere. In contrast, a higher funding deficit should be accepted if additional expenditures are only temporary. The extent to which the additional expenditure triggered by migration is permanent depends on the recognition rate of asylum seekers, but also on the speed of their integration into the labour market. As long as asylum seekers, after being recognised, receive permanent transfers from the state, this additional expenditure ought to be financed via additional revenues or expenditure cuts. If asylum seekers are not recognised

or if they take up employment subject to social security contributions after they are recognised, a higher deficit should be accepted for the temporary additional expenditure. However, the EU's budgetary principles prescribe a balanced budgetary position.³⁰ Furthermore, additional expenditure is only possible if the ceilings laid down in the Multiannual Financial Framework of the EU are not exceeded.³¹ Moreover, these ceilings apply not only for total expenditure but also for individual sub-categories. For the category "Security and Union citizenship", which also covers the fields of asylum, migration, integration and securing the external borders, financial margins are already exhausted for 2016.³² It is possible to change the ceiling, but all member states would have to agree.

Increasing the level of expenditure would automatically lead to higher payments to the EU by the member states (GNI-based own resources) due to the principle of a balanced budget. This could either tempt the member states to increase their revenues or to demand that the Fiscal Pact criteria be relaxed. Both of these options should be avoided, in particular considering the structural problems in some member states. As it is not yet possible to anticipate the extent to which the additional expenditure associated with forced migration is of a structural nature, additional revenues should not be raised. Instead, resources should be reallocated within the EU budget.

In 2015 the EU already reallocated resources to finance additional expenditure associated with migration, albeit to a limited extent. Resources from the fields of agriculture and fishing and from the EU Solidarity Fund were reassigned. However, the reassignment of resources from other fields is only possible if expenditure ceilings are maintained and fewer resources are requested or required in these expenditure categories than originally planned. Thus, the possibilities to reassign resources are limited in the short term: by amending its budgetary plans for 2015 and 2016, the EU increased its funds allocated to refugee migration by no more than €1.7 billion.

Given the challenges resulting from very high levels of immigration currently, increased flexibility in terms of the

utilisation of the EU budget would be required, both intertemporally as well as between categories of expenditure. The costs of such a reallocation of resources could actually be very low: EU expenditure on the Common Agricultural Policy, the largest item in the EU budget, is expected to total over €55 billion in 2016. This is almost 40% of the total expenditure.³³ There are good reasons to suppose that the Common Agricultural Policy is inefficient.³⁴ Reallocating resources would therefore even be desirable. Until this occurs, funding will remain predominantly the task of the member states, and an appropriate distribution of the fiscal costs of migration among the member states can only be accomplished by distributing refugees among member states according to sensible economic criteria.

Concluding remarks

The current challenge posed by the high numbers of refugees coming to Europe can only be handled efficiently through closer cooperation among EU member states. From an economic point of view, it would be reasonable to distribute incoming refugees among all EU countries according to a key that reflects the differing costs of integration in the various member states. An efficient distribution would even out the marginal costs of integrating refugees, whilst taking account of the positive effects, for example in terms of the potential workforce additions in countries with declining populations and ageing societies. Such a key may imply that individual countries are affected to very different degrees. In order to reach a political agreement, a system of side payments among member states might be necessary. These should be based on the economic capacity of the countries and on the positive external effects that are beneficial for countries that take relatively few refugees.

The distribution key presented by the EU Commission takes account of appropriate factors in principle, but it is unclear in terms of detail and could be improved. The compensation payments made to countries that, for cost efficiency reasons, should take relatively high numbers of refugees should be financed by reallocating resources within the EU budget.

30 See Article 268 EC Treaty and Article 310 TFEU.

31 The ceiling on own resources for payments in 2016 (1.23% of the EU's gross national income) and the ceiling for commitments (1.31%) are significantly higher than what is planned in the EU budget for 2016. However, spending plans must remain well below the ceilings, so that there is no risk that they are exceeded.

32 The flexibility instrument has already been used for 2016 in order to cover additional expenditure that cannot be financed within the ceilings.

33 In contrast, agriculture, forestry and fishing represented just 1.6% of the gross added value of the EU in 2014.

34 See T. Gylfason: *The Macroeconomics of European Agriculture*, Princeton Studies in International Finance, No. 78, Princeton University, 1995.