Immigration and Swiss-EU Free Movement of Persons: Question of a Safeguard Clause

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Abstract: *The issue of migration is a current topic in different European countries. In this paper, we concentrate on the case of Switzerland. After the adoption of the Mass Immigration Initiative on 9 February 2014, Switzerland is faced with a challenging task. It needs to implement the constitutional mandate to manage migration autonomously, although Switzerland has a bilateral free movement of persons agreement with the EU. We present an approach to a solution for discussion. The basic idea is to maintain the principle of freedom of movement without fixed quotas or national priority but with a safeguard clause for (statistically) exceptional situations. An exceptional situation occurs if serious social, economic or political difficulties arise. As an objective method to determine serious difficulties, we choose an excessive percentage in net migration, defined on the basis of the situation in the EU/EFTA. If the net migration in Switzerland is getting excessive, the safeguard clause could be called. In addition, we take other factors into account such as the amount of the EU/EFTA foreigners and the labor market.*

KEYWORDS: Immigration, Swiss-EU relations, EU-policy, EU Free Movement of Persons, Safeguard Clause

Introduction[1]

Political Debate in Switzerland

The issue of immigration is a current topic in different European countries.[2] This is especially also the case for Switzerland. The Swiss problem is twofold:

(i) The immigration rate in comparison with comparable countries is relatively high. As an example, the percentage of foreigners in 2012 in Switzerland is 23% and the immigration rate 1,9%. The figures in other countries are Austria 11% and 1,1%, Belgium 11% and 1,3%, France 6% and 0.5%, Germany 9% and 0,7%, Netherlands 4% and 0,7% and Sweden 7% and 1.1%, respectively.[3] High immigration can lead to – real or only perceived – problems, especially in densely populated countries.

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[1] We thank the two anonymous reviewers for their valuable comments.

[2] "Immigration policy is one of the most debated and controversial topics today. Whether in Switzerland or elsewhere, the relationship between the "nation state", its borders and its population is far from being settled". A statement that has already been made in 2001 in Lavenex (2001: 95 –118); see also, for example, Jopson (2014), Grant (2014), and Warrell (2014).

[3] Calculated with data from EUROSTAT (Statistical office of the European Union).

(ii) On 9 February 2014, the Swiss electorate had to vote on the initiative *Gegen die Masseneinwanderung*[4] ("against mass immigration", MEI). The initiative reached both the required majority of Swiss voters (50.3%) and the majority of the cantons (14.5 out of 23). The Swiss Constitution provides the possibility to change the constitution via initiatives. This instrument is often used, which can be seen in the fact that the Swiss electorate had to vote on 282 initiatives in the last 24 years (BFS 2014). The new constitutional article 121a says that the stay of foreigners in Switzerland has to be limited through ceilings and quotas and that treaties in contradiction with this new article have to be renegotiated within a period of three years. This mandate eyes in particular the bilateral agreement between Switzerland and European Union on the free movement of persons (FMP), concluded in 1999, In other words, the Swiss Government could be bound to introduce quotas in a renegotiated FMP Agreement. The EU has emphasized at different occasions that it is not willing to negotiate such a modification, as it would be in contradiction with the fundamental principle of FMP. This incompatibility could lead to a denunciation of the FMP Agreement (by either side). This act would then lead to the automatic denunciation of the 6 other bilateral agreements[5] plus most likely the Schengen-Dublin association agreement. Such denunciations would shake up the fundament of the Swiss-EU relations.

These relations are of course more important to Switzerland, due to the differences in size of the populations (in 2013: EU: 505,7 million; Switzerland: 8,1 million). However the EU is also benefiting from good relations: The economic exchange between Switzerland and the EU is 1 billion CHF per day (goods and services); Switzerland is the second most important buyer of EU goods, the fourth most important supplier of goods, and the second most important trading partner in services.[6] 1'190'000 EU citizens live and 264'000 EU cross-border commuters work in Switzerland while 442'000 Swiss live and only 17'000 Swiss cross-border commuter work in the EU.[7]

Due to the importance of the Swiss relationship with the EU, the current internal debate is rather lively. According to the official voter's information, opponents of the new constitutional article were arguing that the initiative would not be compatible with the bilateral agreements Switzerland-EU and predicted serious damage to the Swiss economy. The proponents mainly emphasized the problems that arise by enlarging the Swiss population each year by a city of the size of Lucerne. The discussion is now about how to implement the new constitutional article. Essentially, there are two schools of thought: (a) a strict literal interpretation and (b) a more flexible approach in the sense and spirit of the Constitution. In the case of the second variant, the question then arises if the constitutional text will have to be revised *ex post* or if the approval of the implementation measures (law, treaty) by the parliament and – in case of a referendum – by the majority of voters is sufficient.

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[4] BV Art. 121 and Art. 121a (new); UeBest Art. 197.9 (new).

[5] Namely, the Agreements on technical obstacles to trade, public procurement market, agriculture, research, civil aviation and overland transport.

[6] 10% of the EU export of goods are going to Switzerland and 6% of the import of goods into the EU are coming from Switzerland in 2013. 12% of the EU export of services are going to Switzerland and 12% of the EU import of services is coming from Switzerland in 2013. Data from: European Commission, GD Trade.

[7] Data from: Swiss Customs Administration (EZV), Swiss Federal Statistical Office (BFS) and Swiss National Bank (SNB) and Statistical office of the European Union (EUROSTAT) (2012).

Proposal for the Implementation of Art. 121a

We propose to implement the constitutional article based on 3 pillars
 1) For *Non-EU States*: Fixed quotas and national priority;
 2) For *EU States:* General freedom of movement without fixed quotas or a national priority but with a safeguard clause for (statistically) exceptional cases (according to our proposal here);
 3) For *Switzerland*: Accompanying internal measures.

Accompanying measures can generally be divided into (i) measures that lower the demand for foreign workers and (ii) measures that cushion possible negative consequences of immigration. The measures (i) include, for example, incentive systems (such as taxes), a better utilisation of labour resources (women, elderly workers, refugees), strengthening of the education and training in understaffed professions[8] or adjusted policy regarding attracting foreign companies. The measures (ii) include building laws, land use planning or actual implementation of flanking measures (workers' protection) and fight against abuse.

The internal accompanying measures need to be carried out extensively and diligently so as to prevent excessive net migration in the first place. Various proposals concerning the accompanying measures have already been made (see, e.g., Schellenbauer 2014, Epiney 2014, Leimgruber 2014 or Eichenberger 2014). It is not the purpose of the present research note to elaborate on these *internal* policy reform proposals, but rather on the *external* aspects of the question.

Existing Research

Two fields of research are of particular interest to embed the current article in the existing research:

i) the issue of migration, and
ii) the more general issue of the relation between Swiss and European legislation.

i) Current research on migration, in numerous studies, analyzes the relevant facts on migration, explores the reasons for migratory movement, and describes integration. A good overview of the recent literature in migration research and the Swiss migration policy is provided by Lavenex and Manatschal (2014) or Piguet (2006). They include a historical overview of the different phases in Swiss immigration policy and an analysis of the Swiss migration policy in the area of tension between economy, society, international norms and the general public, as well as the driving forces behind immigration policies. A general overview of the EU migration policy is given by Boswell (2010). A more specific analysis of the Swiss-EU relations and immigration is given by Koch (2006). Also, various quantitative methods and models are used in migration research (e.g. macroeconomic gravity models, human capital models, push and pull models; see, e.g., Mayda 2010). Literature about the EU in the field of quantitative methods is mostly focused on EU internal questions and often on the effect of the eastward enlargement (e.g. Galgóczi 2011; Kahanec 2014). Questions about the bilateral relationships between Switzerland and the EU concerning consequences on the labor market have also been analyzed in depth (e.g., Favre 2013). Yet, to our knowledge, questions regarding

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[8] E.g. Motion SR16.6.14.

quantitative restrictions of migration in a free movement of persons area have not been addressed in scientific literature. This is what we would like to do in the following paragraphs.

ii) Regarding the question of the relationship between Switzerland and the EU, various analyses of the influence on Switzerland by the European Union, namely the European integration process, are published in a recent issue of this journal and briefly assessed in Lehmkuhl (2014). In particular, analyses of Europeanization are presented in the area of legislation (Linder 2014; Jenni 2014) and policy-making (Gava 2014), while the concept and consequences of differentiated integration are discussed by Schimmelfennig (2014).

The Idea of the Safeguard Clause Concept

Regarding the external aspect of the problem mentioned above, we would suggest to change as little as possible to the basic concept of the Free Movement of Persons Agreement (FMPA), and in particular not to abandon the principle of free movement. We propose to simply modify the agreement by introducing a safeguard clause which could, under certain predefined strict conditions, unilaterally be applied. Such a modification could for instance be introduced in an Additional Protocol to the existing FMPA.

The reasoning behind the safeguard clause is motivated by the intention to avoid big increases of immigration which could cause economically difficult imbalances. This idea is also inspired by (i) FMPA Art. 14(2)[9], a general clause in the event of serious economic or social difficulties,[10] and (ii) FMPA Art. 10(4),[11] the former safeguard clause which allowed Switzerland to take measures restricting migration.

This proposition is about striking a balance between the two obvious possibilities of either a strict interpretation of the constitution and a probable termination of the bilateral agreements Switzerland-EU, or a complete revision of the constitution and no changes in the bilateral agreements.

The safeguard clause would enable to take restrictions on the free movement of persons in statistically exceptional situations. Exceptional situations occur if the net immigration is excessive. We propose an excessive percentage in net migration of EU/EFTA citizens as a reference value.[12] To define excessiveness, we suggest to look at the average and the spread of the relative (i.e. per permanent resident) net migrations in the relevant free movement

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[9] FMPA Art. 14(2): In the event of serious economic or social difficulties, the Joint Committee shall meet, at the request of either Contracting Party, to examine appropriate measures to remedy the situation. The Joint Committee may decide what measures to take within 60 days of the date of the request. This period may be extended by the Joint Committee. The scope and duration of such measures shall not exceed that which is strictly necessary to remedy the situation. Preference shall be given to measures that least disrupt the working of this Agreement.

[10] In Switzerland this clause is often called "*Ventilklausel*".

[11] FMPA Art. 10(4): Notwithstanding the provisions of paragraph 3, the Contracting Parties have agreed on the following arrangements: if, after five years and up to 12 years after the entry into force of the Agreement, the number of new residence permits of either of the categories referred to in paragraph 1 issued to employed and self-employed persons of the European Community in a given year exceeds the average for the three preceding years by more than 10%, Switzerland may, for the following year, unilaterally limit the number of new residence permits of that category for employed and self-employed persons of the European Community to the average of the three preceding years plus 5%. The following year, the number may be limited to the same level.

[12] Excessiveness shall not be defined according to Swiss sensitivities, nor should it be a fixed value. It should be defined in relation to the situation in the EU/EFTA.

of persons area. Our proposal is in line with what we would call a diplomatic/negotiation engineering approach.[13]

We suggest to consider the relative net migration of EU/EFTA citizens into the 32 States inside the EU/EFTA region as relevant population group. The migration of citizens of State i into or out of the State i itself is not considered.[14] The considerations and calculations exclude citizens from third countries and its own citizens[15] respectively as these groups are not subject to the FMPA between Switzerland and the EU.

In the case of a normal distribution (Gauss distribution), the conventional sizes to characterize the distribution are the mean value m and the standard deviation σ, the latter being a measure for the spread of the distribution. In statistical examinations reference is often made to the x-fold standard deviation, x being any number, normally $x \in \mathbb{N}$, typically 1, 2 or 3. For normally distributed data, 15.9% of the cases are above $m + 1\sigma$; 2.3% are above $m + 2\sigma$; and 0.1% are above $m + 3\sigma$.[16]

If we consider hypothetically the distribution of the relative net migrations of the EU/EFTA States approximately being normally distributed, we can easily define an illustrative threshold value above which the relative net migration can be considered as excessive in the form of $m + x\sigma$. Figure 1 shows a histogram with the distribution of the 32 relative net migration values averaged over the five-year period 2008-2012.[17] Note that all values of the EU/EFTA citizens migration balance are equally weighted independent of the total population or county size.

We will consider the *one*fold, *two*fold and *three*fold deviations in our calculations. Although we believe the twofold deviation to be the most reasonable one. Why? In case of a normal distribution we consider being in the top 16% of net migrations not yet extreme. Therefore a *one*fold deviation of the mean value as a threshold value after which the safeguard clause can be called upon does not seem that suitable. On the other hand, to choose a *three*fold deviation of the mean value would mean that only 0.1% of the cases would be considered very extreme and the safeguard clause could be barely ever be applied. Hence, a *two*fold standard deviation seems to be a reasonable basis for a threshold value.

Therefore, we would suggest for the safeguard clause the mean value of relative net migrations from EU/EFTA States plus 2 standard deviations. In case the data was normally distributed this would mean that 97.8% of the cases are below this value which means free movement of persons would be generally guaranteed and the safeguard clause could only be applied in exceptional cases. Practically, only 1 or 2 of the 32 EU/EFTA-States would have been over a threshold defined as above in the last 5 years.

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[13] By negotiation engineering we mean the application of a process by which a complex negotiation problem is divided into sub-problems in order to make them easier to solve and the use of scientific or other methods based on objective criteria to solve the mentioned sub-problems.

[14] In the results section, EUROSTAT raw data excluding the reporting State are used.

[15] As an illustration: If a Portuguese leaves Switzerland to live in France, the absolute net migration in Switzerland is lowered by 1 person in our consideration and is increased by 1 person in France. However, a Swiss returning from Portugal to Switzerland is only counted in Portugal. Just as a Belgian leaving from New Zealand to Switzerland is only included in our calculations as immigrant in Switzerland.

[16] For a normal distribution $\phi(x) : \int_{-\infty}^{m+\sigma} \phi(x) = 0,841, \int_{-\infty}^{m+2\sigma} \phi(x)dx = 0,977, \int_{-\infty}^{m+3\sigma} \phi(x) = 0,999$.

[17] The actual yearly data sets of the 32 States in the last 5 years clearly exhibits a single peak, while symmetry is only approximately given (as expected with 32 values). Nevertheless, Figure 1 shows that the distribution of the 32 values resemble a normal distribution. Other measures (than the mean value and standard deviation) to describe distributions of the relative net migrations could be the median, the spread, the range or quantiles (i.e. concepts of descriptive statistics).

Figure 1: *Intra EU/EFTA migration balance per thousand residents (average over 2008-2012). Indicated are the unweighted mean value m and the simple two-sided standard deviation σ. The entry for Switzerland (CH) is shown in black.*

m	2.0
±σ	± 3.6
CH	6.6
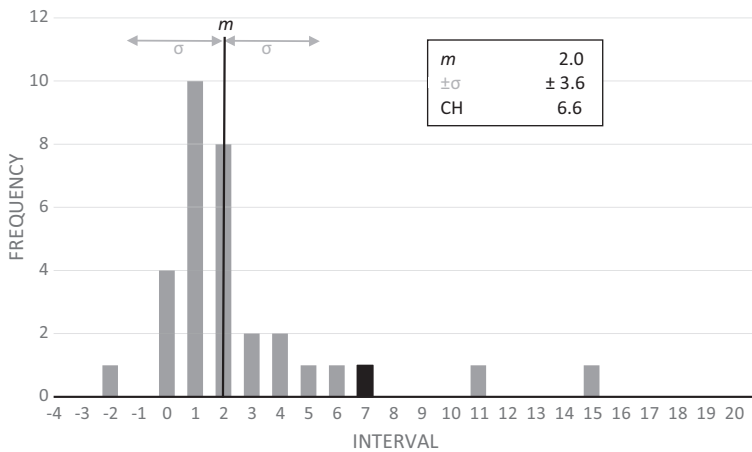
Source of raw data: EUROSTAT

In addition, we will refine the formula for the threshold value and take other factors into account, namely the quantity of EU/EFTA citizens and the macroeconomic parameter of the labour market that we consider to be crucial to adequately model political, social or economic difficulties.

Table 1 summarizes the unweighted mean values of the relative net migrations on the one hand for all 32 States and on the other hand for 30 States whereas the two extreme values (highest and lowest) are excluded, together with their *two*fold standard deviation and the weighted mean values for the years 2008-2012.

Only Luxemburg and Cyprus exceed the value of Switzerland in the average over the time period from 2008 to 2012. If we consider each year separately, Norway and Liechtenstein had sometimes relative net migration values above Switzerland. The data used for these statistics are listed in Table A1 in the annex.[18] Note that the mean value of the relative net migrations of the EU/EFTA States does not have to be zero. This is the case because the 32 migration balances of the different States are not weighted. On the other hand, EU/EFTA citizens can emigrate from the EU/EFTA and EU/EFTA citizens can return from non-EU/EFTA States. Further, persons from the reporting country are not included in the migration statistics of their own country here.

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[18] The data sets have gaps to some extent. Data records for immigration and emigration of EU27 citizens into EU27 countries are almost complete for the period of 2008-2012. However, not all data are available for Croatians and EFTA citizens, as well as migration into Croatia and EFTA States (neither collective EFTA data, nor separately for Switzerland, Liechtenstein, Norway, Iceland). The following procedure was adapted throughout the paper: if at least the data for the net migration of EU27 citizens exists in a certain year, the value is listed and taken into account for the calculations of the mean value. If parts of the data for EFTA citizens and/or Croatians exist, they are added into the calculation. If the minimum requirement is not met, i.e. no data is available for EU27 migration, the respective State is not included in the calculations of mean value and standard deviation. For the parameters that are specific for every State i (the quantity of EU/EFTA citizens and unemployment, see below) the following rules were applied: if a value is missing for a State i during time τ, it is set to 1 and State i remains included in the analysis for time τ.

Table 1: Net migration per thousand residents of the 32 EU/EFTA States without third countries and own citizens for every year and in average for 2008-2012.

	2008	2009	2010	2011	2012	Ø 08-12
Mean value m (unweighted*) [32 States]	2.8	1.3	1.9	2.2	1.9	2.0
Mean value without highest and lowest value [30 States]	2.4	1.1	1.6	1.9	1.6	1.7
Mean value (values weighted by total population) [32 States]	1.3	0.7	0.9	1.2	1.2	1.1
*Two*fold standard deviation s [32 States]	8.4	5.7	7	8.3	6.8	7.2
*Two*fold standard deviation without highest and lowest value [30]	6.8	3.5	5.3	6.2	3.8	5.1
Net migration of Switzerland	9.9	6.7	5.7	5.6	5.3	6.6

Note: *In the unweighted mean value all States are included independent of their total population or size

Formula

Basic Structure

We define the relative (i.e. per permanent resident) threshold d_i for a State i (Equation 1) based on data of the preceding time interval τ. If the net migration of EU/EFTA citizens in State i reaches this threshold, measures can be taken to limit migration to the threshold value d_i:

$$d_i = m + s \tag{1}$$

$$s = x\sigma \tag{2}$$

m is the mean value of the relative net migration of EU/EFTA citizens in the 32 EU/EFTA States, s the x-fold standard deviation σ of these 32 values. We consider the cases where x is equal to 1, 2 or 3. All values refer to the same time interval τ.[19] The mean value m is calculated as:

$$m = \frac{1}{32} \sum_{i=1}^{32} \frac{I_i}{P_i} \tag{3}$$

I_i is the absolute balance of the migration of State i of EU/EFTA citizens (excluding the reporting State) and P_i the permanent resident population. According to the principle of the sovereign equality each State is taken into account for the mean value independent of its size or population. Therefore, m is an unweighted mean. States such as Luxemburg or Liechtenstein have the same weight here as States like Germany or Italy. This leads to a

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[19] From a mathematical point of view the following question is of interest: Assuming that in the relevant area *all* States with a real migration above $m+s$ would apply the safeguard clause. What would happen in the very long run in the year t_n ($n \rightarrow \infty$)? Would there be the risk that in extremis the migration in the whole area ceases to exist? This would only be the case if s was set 0. Then we could have a theoretical convergence of m to 0. As in our case s is > 0, namely $s = x \sigma (x \geq 1)$, there is no imperative convergence of m towards 0.

substantially higher mean value than a weighted average and increases the threshold. The standard deviation is calculated as

$$\sigma = \sqrt{\frac{1}{32} \sum_{i=1}^{32} \left(\frac{I_i}{P_i} - m\right)^2} \qquad (4)$$

Note that m and σ are independent of the index i, i.e. the same for all States. This means that when the threshold value d_i is calculated for State i, then State i is also included in the mean value and standard deviation. In our approach, we include all 32 States. Alternatively, only the 31 other States would be taken into account for the calculation of m and σ in the formula for State i. As this would make a cross comparison difficult, we do not follow this approach. Our approach ensures an equal and fair starting point for all States and considers the 32 EU/EFTA-States as parts of one area and one distribution with one mean value and one standard deviation enabling a cross comparison.

Additional Factors

Two more factors are added to this basic structure: the current *quantity of EU/EFTA citizens* that already live in State i in relation to the average of all the EU/EFTA States α_i (not a flux value as m) and the macroeconomic parameter of the *cyclical unemployment* in relation to the average of all the other EU/EFTA States β_i (see definition, below). Equation 5 summarizes the complete formula as it will be used in the results section:

$$d_i = m + \alpha_i \beta_i s \qquad (5)$$

α_i being a function of the quantity of EU/EFTA citizens and β_i a function of the employment market. In the following, the formula will be discussed in more detail and finally illustrated based on data of the years 2008-2012.[20]

The choice of the *time interval τ* over which the threshold is calculated is chosen to be 1 year or 3 years. Multi-year averages smooth the calculated thresholds providing stability and predictability. The interval could also be chosen according to economic cycles for example.

Of course, the implementation of a variety of *other factors* are imaginable as well as modified definitions of the factors in Equation 5.

α_i – a Factor for the EU/EFTA Foreigners Quantity
The parameter α_i is a function of the EU/EFTA foreigners quantity in the State i and defined as:

$$\alpha_i = \frac{\bar{a}}{a_i}, \qquad \text{if } a_i > \bar{a}$$
$$\alpha_i = 1, \qquad \text{otherwise} \qquad (6)$$

$\bar{a}$ being the unweighted average of the relative share of EU/EFTA foreigners of all EU/EFTA States and a_i the current relative share of EU/EFTA foreigners of State i in the

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[20] Raw data obtained from EUROSTAT (Statistical office of the European Union).

time period τ. For each State i the ratio of foreigners is defined as

$$a_i = \frac{R_i}{P_i} \tag{7}$$

with R_i being the number of EU/EFTA foreigners in State i and P_i the permanent resident population.

α_i allows for a downward adjustment of the threshold value d_i ($\alpha_i < 1$). The idea here is that if a State X has already a large proportion of EU/EFTA foreigners compared to a State Y while both having comparable percental migration flows from EU/EFTA citizens, State X should have a lower threshold value than State Y. States with a very low EU/EFTA foreigners quantity do not get "punished", though, with an $\alpha_i > 1$ (which could become very big). In this case α_i is set to 1.

β_i – a Factor for the Cyclical Unemployment

β_i is a function of the employment market. As unemployment is not defined equally in all member States and to accommodate the different circumstances in the member States, we focus on the cyclical unemployment ("konjunkturelle Arbeitslosigkeit") $u_{k,i}$. We define:

$$u_{k,i} = u_i - u_{l,i} \tag{8}$$

with u_i the current rate of unemployment of State i during period τ and $u_{l,i}$ the 10-year average[21] of the rate of unemployment in country i.[22] We calculate the EU/EFTA average of the cyclical unemployment $\bar{u}_k$ unweighted as:

$$\bar{u}_k = \frac{1}{32} \sum_{i=1}^{32} u_{k,i} \tag{9}$$

We define the factor for the cyclical unemployment β_i as

$$\beta_i = \frac{1}{1 + (u_{k,i} - \bar{u}_k)}, \text{if } u_{k,i} > \bar{u}_k$$
$$\beta_i = 1, \text{otherwise} \tag{10}$$

β_i allows for a downward adjustment of the threshold value d_i ($0 < \beta_i < 1$).

Other Possible Factors

The parameters used in Equation 5 are chosen as we believe them to be the crucial factors to determine serious social, ecological, economic or political situation. In order to contribute to the discussion, we would like to stress that there are of course also other factors which could be taken into account. As examples we mention the following factors, although we do *not* believe them actually to be relevant.

If we include the possibility to collect more data, we could take into account additional factors regarding the *determination of "EU/EFTA foreigners"*. In order to avoid a possible

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[21] We take $u_{l,i}$ as an indicator of the structural, i.e. long-term unemployment.
[22] We assume here that $\tau < 10$ years.

distortion due to unequal naturalization conditions, one could envisage a calculatory mechanism putting all foreigners on an equal footage. For such a case e would be defined as the years of the shortest naturalization period in the EU/EFTA area. In addition to this, the formula would also allow to downscale the weight of foreigners that are already living for a longer time in a country and have been integrated:

$$a_i = a_{e,i} + \sum_{y=e}^{E} a_{y,i}(1 - \frac{y-e}{E-e}) \tag{11}$$

With $a_{e,i}$ the quantity of EU/EFTA foreigners that live less than e years in country i at the time of the threshold value evaluation and $a_{y,i}$ the quantity of EU/EFTA foreigners living for y years in country i. e the minimal number of years of the waiting period for naturalization in any EU/EFTA State. y the number of years that a EU/EFTA foreigner is living in State i at the time of evaluation ($y \geq e$). E is the end of the calculation period (after E years, a foreigner is not counted any more as foreigner; although, from a legal point of view he still is not a national of the residence country).

Further, to counteract the problem of *misuse of social welfare* the introduction of a factor for the potential of misuse is imaginable. This factor could 'punish' countries that do not stringently combat misuse by setting the threshold value higher. National data is missing here as well and there is no general criteria how to measure misuse.

Other parameters could be *socio-economic*, e.g. the social spending per person, or the GDP. The *regions* on which the formula is applied (in our calculations States) could be divided in smaller units. In Switzerland this could be for example the German, the French and the Italian part. Furthermore, the *population density* could be included or the number of *foreigners from third countries*, a factor that could be relevant in cases where the overseas community is important.

Practical Application

Practically, the procedure could be as follows: every calendar year in January one would calculate d_{CH} with the data from the last year ($\tau = 1$) or the last 3 years $(\tau = 3)$.

$$d_{CH} = \frac{1}{\tau}\sum_{y=1}^{\tau} d_{CH,y} \tag{12}$$

With $d_{CH,y}$ being the threshold value for the number of years y before the present year. d_{CH} would be the relevant threshold for Switzerland for the actual calendar year and could be enforced unilaterally after the necessary procedural information exchanges and consultations. The question of the exact modalities and conditions should be subject to the negotiations. Basically, there are two options. i) without precondition: If the actual percental net migration in the present year was equal or above the calculated threshold d_{CH}, the safeguard clause could be enforced. Switzerland could then limit the EU/EFTA net migration in the current calendar year on the level of d_{CH} to ensure that the calculated threshold will not be exceeded further. Or ii) with precondition: the threshold could only be implemented in the current year if the actual net migration of the last year (3 years) was above the threshold in the previous year (3 years). In both cases i) and ii), the

procedure would again be applied in the next year. The threshold could be bigger or smaller compared to the year before, depending on the new data.

Results for the Intervention Threshold d_i

In order to better assess the practical meaning of the results and to allow comparison with other States we calculated the threshold values not only for Switzerland but for of all countries in the EU/EFTA area.

Results for the Basic Structure ($d_i = m + s$)

To illustrate the range of values that our threshold formula can result in, depending on the different factors included, we use recent data and calculate actual values for d_i in absolute numbers (i.e. d_i multiplied with the total population P_i of State i) for $\tau = 1$ year and for $\tau = 3$ years.

The yearly values for $d_{CH} \cdot P_{CH}$ for the years 2008-2012 according to Equation 1 range from 32'361-53'064 for $s = 1\sigma$, 54'336-85'047 for $s = 2\sigma$ and 76'310-117'030 for $s = 3\sigma$ (while α_{CH} and β_{CH} as defined in Equation 5 are 1; m and σ are shown in Table 1, P_{CH} is given in Table A1 in the annex). If the calculated values for $d_{CH} \cdot P_{CH}$ are compared to the actual net migration of EU/EFTA citizens in the corresponding following years (Table A1 in the annex), the intervention possibilities for Switzerland can be determined, i.e. when the actual net migration was above the calculated threshold. Depending on the choice of the number of standard deviations applied in the formula, Switzerland could sometimes have taken measures to restrict migration from EU/EFTA States in the last years. Without taking into account any other factors (i.e. α and β), Switzerland's actual net migration was above the threshold calculated with the data from the previous year in the case of $s = 1\sigma$ in the years 2010 and 2011. The potential intervention effect, i.e. the difference between the calculated threshold and the actual data, would have been between 4% and 36% of the actual net migration of EU/EFTA citizens in these years.

Results including α_i and β_i

The factor for the EU/EFTA foreigner quantity, α_i (definition see Equation 6) is summarized for all EU/EFTA States in Subtable A2.1. Note that the calculated average is unweighted[23] and only considers EU/EFTA citizens. The effect of the exact definition of α_i, i.e. the choice between weighted and unweighted means, as well as of the choice between EU/EFTA foreigners and the total foreigners can be up to the order of almost 2. In the case of Switzerland, the unweighted EU/EFTA foreigner factor is 0.34[24] (weighted: 0.2[25]), while the unweighted total foreigner factor is 0.4 (weighted: 0.3) averaged over the years 2008-2012.

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[23] $\bar{a} = \left(\frac{1}{32} \sum_{i=1}^{32} \frac{R_i}{P_i} \right), not : \bar{a} = \frac{1}{32} \left(\frac{\Sigma R_i}{\Sigma P_i} \right).$

[24] Meaning that the relative share of EU/EFTA foreigners in Switzerland is $\frac{1}{0.34} = 2.95$ times higher than the unweighted EU/EFTA average.

[25] Meaning that the relative share of EU/EFTA foreigners in Switzerland is $\frac{1}{0.2} = 5$ times higher than the weighted EU/EFTA average. The weighted ratio means the ratio of *all* EU/EFTA foreigners in the 32 EU/EFTA countries *as a whole* which means all EU/EFTA citizens living in EU/EFTA but not in their home country.

Figure 2: *Illustration of the relative EU/EFTA foreigners quantity (a_i) for 31 EU/EFTA States (Croatia is missing) for the year 2012.*
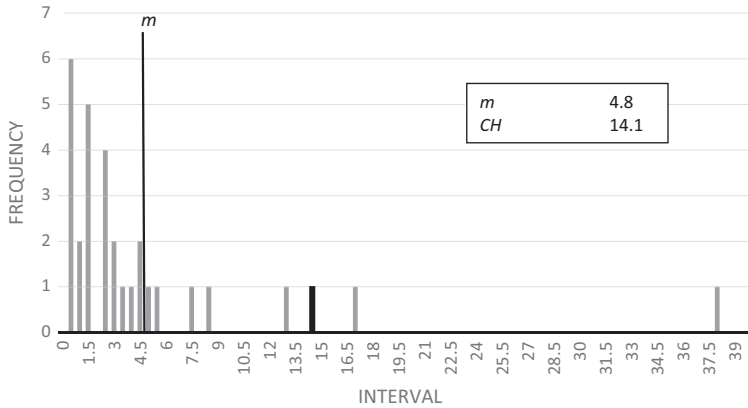
m is the unweighted mean of these values. Liechtenstein and Luxemburg have values above Switzerland. The latter is indicated in black

Figure 2 illustrates the parameter a_i, which is the EU/EFTA foreigner quantity of State i (see Equation 6) for all EU/EFTA States except Croatia in the year 2012. α_{CH} is 0.29-0.36 in the period under consideration. The factor for the cyclical unemployment, β_i (Equation 10) is shown in Subtable A2.2 for the years 2008-2012. β_{CH} is always 1 during the years 2008-2012 and does therefore not lower d_{CH}.

If we compare the intervention threshold d_{CH} (Equation 5) in absolute numbers (i.e. $d_{CH} \cdot P_{CH}$; values are shown in Table A3 in the annex) for $\tau = 1$ year from 2008-2011 in three variations with $s = 1\sigma$, $s = 2\sigma$ and $s = 3\sigma$ (m and σ as in Table 1, P_{CH} as in Table A1), always including the additional factors α_{CH} and β_{CH} (Table A2 in the annex), with the actual net migration of EU/EFTA citizens in the respective following year from 2009-2012 (Table A1 in the annex), Switzerland would have had intervention possibilities in all the three variations (see the colored values in Table A3 in the annex).[26] In the case of $s = 1\sigma$ and $s = 2\sigma$ in all 4 years from 2008-2011. The difference between the threshold value and the actual net migration of EU/EFTA citizens ranges from about 30-60% for $s = 1\sigma$ and from 2-42% for $s = 2\sigma$. In the case of $s = 3\sigma$, Switzerland could only limited EU/EFTA migration in the years 2008-2010. The difference between threshold value and actual net migration here ranges between 1-32%. In short, under the assumption of our proposition ($s = 2\sigma$, α_i and β_i included), Switzerland could have taken measures to restrict migration from EU/EFTA States in all the years in the time span of 2008-2011.

Results for 3-year Period

Table 2 shows the results for $d_i \cdot P_i$ (d_i according to Equation 5 and Equation 12) in 3-year averages ($\tau = 3$), i.e. for 2008-2010, 2009-2011 and 2010-2012 for all 32 EU/EFTA States.

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[26] Note again that we compare intervention thresholds calculated with data from year t-1 (or t-1,t-2,-t-3) and compare it with actual migration numbers of the year t. Put simply, at the beginning of the year 2013 we do in reality not have the migration data for 2013. We have to take data from the previous year(s), i.e. 2012 (or 2010-2012) to fix a threshold for the actual year. The comparisons are therefore made between different years leading to the fact that only the calculated values from 2008-2011 have real immigration data from 2009-2012 for comparison.

Table 2: Calculations for d_i according to Equation 5 multiplied by the total population P_i for time averages over 3 years ($\tau=3$) for the years 2008-2012 for $s = x\,\sigma$, with $x = 1,2$ or 3. If a value is lower than the actual migration data of EU/EFTA citizens in the following year the value is marked in grey. Note that no values are marked in the period of 2010-2012 as no data for 2013 was available yet. (Raw data from EUROSTAT; order according to EUROSTAT)

| | $s = 1\sigma$ with α_i and β_i $\tau=3$ | | | $s = 2\sigma$ with α_i and β_i $\tau=3$ | | | $s = 3\sigma$ with α_i and β_i $\tau=3$ | | |
	2008-2010	2009-2011	2010-2012	2008-2010	2009-2011	2010-2012	2008-2010	2009-2011	2010-2012
Belgium	43 224	48 611	52 572	64 859	77 412	82 976	86 495	106 214	113 381
Bulgaria	41 362	39 443	42 047	67 698	65 395	69 211	94 034	91 348	96 374
Czech Republic	57 574	55 669	59 795	94 246	92 293	98 422	130 917	128 917	137 049
Denmark	22 193	20 378	24 215	33 327	30 673	37 208	44 461	40 968	50 201
Germany	453 971	435 431	466 485	743 052	721 918	767 835	1 032 133	1 008 404	1 069 186
Estonia	5 109	4 020	5 492	7 532	5 614	8 301	9 956	7 209	11 110
Ireland	10 280	9 459	10 617	11 513	10 633	12 012	12 746	11 808	13 407
Greece	55 188	39 413	31 941	87 897	58 511	41 387	120 605	77 610	50 834
Spain	119 128	104 695	113 504	145 689	124 756	132 812	172 250	144 818	152 120
France	327 036	344 285	370 547	524 854	570 785	609 917	722 673	797 285	849 286
Croatia	23 844	22 877	21 420	39 029	37 929	34 179	54 214	52 981	46 939
Italy	299 617	315 046	307 240	480 850	522 314	494 725	662 082	729 583	682 210
Cyprus	2 451	2 348	2 325	3 306	3 199	2 952	4 161	4 051	3 580
Latvia	8 047	5 218	6 534	11 748	6 591	8 870	15 448	7 965	11 207
Lithuania	12 421	8 323	10 366	18 443	10 974	14 544	24 465	13 625	18 722
Luxemburg	1 125	1 135	1 294	1 261	1 352	1 552	1 398	1 570	1 810
Hungary	29 704	29 303	34 856	39 244	40 393	49 570	48 783	51 482	64 284
Malta	2 030	2 201	2 370	3 235	3 648	3 900	4 440	5 096	5 431
Netherlands	79 564	88 239	94 975	126 011	146 290	156 328	172 458	204 341	217 681
Austria	39 187	44 597	47 718	61 611	73 937	78 484	84 036	103 278	109 251
Poland	211 067	203 806	219 097	345 483	337 889	360 633	479 899	471 973	502 170
Portugal	30 752	29 028	30 485	40 276	38 816	39 644	49 800	48 604	48 804

Table 2: Continued

	$s = 1\sigma$ with α_i and β_i $\tau=3$			$s = 2\sigma$ with α_i and β_i $\tau=3$			$s = 3\sigma$ with α_i and β_i $\tau=3$		
	2008-2010	2009-2011	2010-2012	2008-2010	2009-2011	2010-2012	2008-2010	2009-2011	2010-2012
Romania	102 909	107 987	115 184	164 647	179 039	189 596	226 384	250 091	264 007
Slovenia	11 126	9 963	10 020	18 178	16 205	15 900	25 230	22 447	21 779
Slovakia	29 788	28 675	30 771	48 758	47 540	50 648	67 729	66 406	70 526
Finland	29 463	28 489	30 658	48 228	47 232	50 464	66 994	65 975	70 269
Sweden	39 172	45 435	53 634	59 754	73 852	88 264	80 336	102 269	122 894
United Kingdom	222 060	236 867	299 410	319 558	359 789	471 606	417 056	482 712	643 803
Iceland	909	930	1 283	1 182	1 280	1 924	1 454	1 630	2 564
Liechtenstein	135	89	99	199	113	124	262	137	150
Norway	23 817	25 899	28 065	38 009	42 935	46 194	52 200	59 972	64 323
Switzerland	22 761	23 867	26 182	30 088	33 539	36 474	37 415	43 210	46 766

The range of $d_{CH} \cdot P_{CH}$ varies from 22'761 ($s = 1\sigma$, with α and β included, years 2008-2010) to 46'766 ($s = 3\sigma$, with α and β included, years 2010-2012). If we take these two extreme values as an example this would mean: Switzerland could have limited the net migration in the year 2011 to a very extreme, small value of 22'761 (in the case of a *low* threshold), whereas the real net migration average was 57'076 in the period 2008-2010 and 43'777 in 2011; and that Switzerland could have limited the net migration in 2013 to 46'766 (in the case of a *high* threshold), whereas the real net migration average was only 43'227 in the period 2010-2012. The difference between the threshold value (years 2008-2010 and 2009-2011) and the actual net migration of EU/EFTA citizens (2011 and 2012) are 48% and 43% in the case of $s = 1\sigma$, 31% and 20% for $s = 2\sigma$, 15% and 0% for $s = 3\sigma$.

Summary of Results

- Altogether our calculations have shown that from a numerical point of view the suggested formula yields to numbers in the right order of magnitude and a threshold value in a reasonable range.
- We find it useful to consider a time period of 3 years ($\tau = 3$) in the calculations of the thresholds to get a smoother time series of threshold values providing stability and predictability. In addition, in the existing FMPA Art. 10(4) the period of reference is 3 years (see also Footnote 11).
- It seems reasonable to include the additional parameters α and β to describe the situation of a country more accurately eventhough β does not have any effect for Switzerland at this time.
- As outlined above, we believe that $s = 2\sigma$ (see Equation 2, with $x = 2$) is the most reasonable choice.

Concluding Remarks

Discussion of the Approach

Persistency on incompatible positions seldom leads to a result. An objective, transparent approach based on quantitative criteria allows for a more constructive discussion beyond the defence of incompatible positions.

Assumption: We assume that (i) a new popular vote on a constitutional revision is only advisable if the problems (real or perceived ones) are seriously addressed beforehand and that (ii) both the new article of the Swiss Constitution (flexibility on the basis of the concrete wording) and the general set-up of the Swiss constitutional law (flexibility due to the fact that implementation legislation needs not to be identical with the Constitution) leave room for manoeuvre. Our approach could be a practicable way.

Advantages: On the one hand, the approach does not undermine the essential EU-principle of the free movement of persons in its substance. On the other hand, Switzerland obtains the security to be able to take migration limiting measures in exceptional situations. The formula is not oriented towards Swiss sensitivities which means – purely theoretically – that it could be applied in any other EU/EFTA State as well. Further, with the EU being a frame of reference a dynamic development is respected. The formula is showing solidarity: Switzerland makes its contribution to the proper functioning of the EU internal market, however not an unlimited one. Finally, safeguard clauses are not alien to

the Brussels reasoning,[27] as well as the basic approach to solve "political" problems via "technical" approaches.[28]

Possible disadvantages: The above mentioned advantage (that the model is conceived in nondiscriminatory way on objective EU statistical data) could be viewed as a disadvantage because the proposal could be interpreted as "external Switzerland" wants to suggest a modification to the "EU internal" free movement of persons system as the concept could theoretically also be applicable by EU Member States. This is not our intention. In a way it would be paradoxical that the fact that the concept is based on EU data would be considered as negative by the EU side. The current EU internal discussion on possible modification (if at all) seems to turn around the question in what way a Member Country could be allowed to take measures against the access to the social security system or the abuse[29] of these systems. Our proposal is based on the pure *size* of migration. It makes no direct reference to an *anti-abuse-clause* although in the concept of avoidance of excessive migration the avoidance of abuse is indirectly also addressed.

Outlook

To analyze to which extent a proposal is suited to achieve a target (i.e. the reconciliation of the constitutional mandate regarding migration with the bilateral agreements with the EU), the following three criteria should be considered:

i) The legal compatibility with the Swiss legal system, in particular Art. 121a of the Swiss Constitution.

ii) The political acceptance within Switzerland. Are the measures sufficient from the viewpoint of the Parliament and the Swiss population?

iii) The acceptance in the EU.

Comment:

Ad iii): In our view, an approach with a safeguard clause could be accepted by the EU, if the clause is not so restrictive that the principle of free movement of persons is questioned. Even more so as the proposal is in line with the already existing safeguard clause and could be seen as a clarification with regard to the legal term of "serious economic or social difficulties" mentioned in FMPA Art. 14(2) (see also, e.g., Kaddous 2014).

Ad ii): Conversely, for the acceptance within Switzerland it is important that the clause could have an effect. Another essential factor for the Swiss acceptance will be the shaping of the accompanying, internal measures (see above). The actual implementation of accompanying measures as well as stringent controls over potential abuse are indeed

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[27] See e.g., Art. 10, Agreement on Agriculture, 21. June 1999; Art. 10(4), FMPA [exp. 12 years after entry into force] 21. June 1999; Art. 46, Art. 47, Art. 48, Land Transport Agreement 21. June 1999; Art. 7(5a), Schengen Association Agreement; Art. 4 [„order public" clause] Fight against Fraud; Art. 112 EEA Agreement, 2. May 1992.; Art. 24 and 26 Free Trade Agreement, 22. July 1972.

[28] See e.g., Regulation (EU) No 253/2014 of the European Parliament and of the council of 26 February 2014amending Regulation (EU) No 510/2011 to define the modalities for reaching the 2020 target to reduce CO_2 emissions from new light commercial vehicles; Regulation (EU) No 134/2014 of 16 December 2013 supplementing Regulation (EU) No 168/2013 of the European Parliament and of the Council with regard to environmental and propulsion unit performance requirements and amending Annex V thereof.

[29] See e.g., the EUCJ judgment, 11.11.14, regarding the denial of local benefits for EU migrants.

crucial. The design of these measures should be such that the safeguard clause does not have to be applied or only in exceptional circumstances.

Ad i): It would require further clarifications to judge to what extent a referendum would be sufficient for a possible political legitimization to verify the constitutionality of this proposal.

The proposal for a solution presented here is thought to be a basis for discussion and a contribution to the research in a political sensible issue. The form of the equations, the relevant parameters and their weights should be subject to the real negotiations between the parties involved.

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Annex

Table A1: Actual net migration of EU/EFTA citizens into EU/EFTA States for 2008-2012 together with the total population of the corresponding State (raw data EUROSTAT; see also Footnote 18; order according to EUROSTAT)

	net migration EU/EFTA (without reporting country)					total population				
	2008	2009	2010	2011	2012	2008	2009	2010	2011	2012
Belgium	:	:	32 649	33 158	34 344	10 666 866	10 753 080	10 839 905	11 000 638	11 094 850
Bulgaria	1	:	:	:	3 847	7 518 002	7 467 119	7 421 766	7 369 431	7 327 224
Czech Republic	14 989	9 833	-1 449	5 744	9 529	10 343 422	10 425 783	10 462 088	10 486 731	10 505 445
Denmark	8 637	2 800	3 393	4 350	5 093	5 475 791	5 511 451	5 534 738	5 560 628	5 580 516
Germany	18 304	43 404	91 525	160 952	232 437	82 217 837	82 002 356	81 802 257	81 751 602	81 843 743
Estonia	722	751	335	-235	-58	1 338 440	1 335 740	1 333 290	1 329 660	1 325 217
Ireland	3 371	-14 456	-12 013	-14 489	-11 062	4 457 765	4 521 322	4 549 428	4 570 881	4 582 707
Greece	3 813	:	-6 443	-6 423	-1 323	11 182 224	11 190 654	11 183 516	11 123 392	11 123 034
Spain	81 204	-5 461	-6 846	23 316	-33 321	45 668 939	46 239 273	46 486 619	46 667 174	46 818 219
France	13 916	919	27 544	49 679	26 716	64 007 193	64 350 226	64 658 856	64 978 721	65 287 861
Croatia	489	:	:	394	710	4 311 967	4 309 796	4 302 847	4 289 857	4 275 984
Italy	198 539	118 334	105 151	99 943	87 889	58 652 875	59 000 586	59 190 143	59 364 690	59 394 207
Cyprus	5 187	:	11 331	12 522	5 119	776 333	796 930	819 140	839 751	862 011
Latvia	:	:	:	-314	17	2 191 810	2 162 834	2 120 504	2 074 605	2 044 813
Lithuania	-129	-143	-426	208	334	3 212 605	3 183 856	3 141 976	3 052 588	3 003 641
Luxemburg	7 238	5 727	6 074	8 633	8 991	483 799	493 500	502 066	511 840	524 853
Hungary	15 406	10 939	10 173	12 656	3 282	10 045 401	10 030 975	10 014 324	9 985 722	9 931 925
Malta	1 018	856	580	621	863	407 832	410 926	414 027	414 989	417 546
Netherlands	38 248	20 895	22 876	24 294	20 814	16 405 399	16 485 787	16 574 989	16 655 799	16 730 348
Austria	22 534	16 331	19 693	25 541	30 267	8 307 989	8 355 260	8 375 290	8 404 252	8 408 121
Poland	829	-3 637	-6 606	-4 843	6 462	38 115 641	38 135 876	38 167 329	38 529 866	38 538 447
Portugal	3 931	3 875	2 098	2 233	1 061	10 553 339	10 563 014	10 573 479	10 572 721	10 542 398
Romania	3 960	3 879	5 494	2 536	2 947	20 635 460	20 440 290	20 294 683	20 199 059	20 095 996
Slovenia	2 116	1 173	853	1 095	1 355	2 010 269	2 032 362	2 046 976	2 050 189	2 055 496
Slovakia	7 480	5 705	5 205	3 108	2 433	5 376 064	5 382 401	5 390 410	5 392 446	5 404 322

Table A1: Continued

	net migration EU/EFTA (without reporting country)					total population				
	2008	2009	2010	2011	2012	2008	2009	2010	2011	2012
Finland	5 079	4 095	5 434	6 602	8 146	5 300 484	5 326 314	5 351 427	5 375 276	5 401 267
Sweden	20 372	16 320	12 087	13 361	12 933	9 182 927	9 256 347	9 340 682	9 415 570	9 482 855
United Kingdom	66 172	61 246	80 363	86 669	87 608	61 571 647	62 042 343	62 510 197	63 022 532	63 495 303
Iceland	5 148	-789	-105	238	768	315 459	319 368	317 630	318 452	319 575
Liechtenstein	:	:	126	196	203	35 356	35 589	35 894	36 149	36 475
Norway	28 119	22 220	26 699	34 194	28 654	4 737 171	4 799 252	4 858 199	4 920 305	4 985 870
Switzerland	75 296	51 869	44 062	43 777	41 843	7 593 494	7 701 856	7 785 806	7 870 134	7 954 662

Table A2: Subtable 1) Overview of α_i (Equation 6) for the years 2009-2012. Note that for a better comparability, values above 1 are not set to 1 in this table. Subtable 2) Overview of β_i (Equation 10) for the years 2009-2012. For the calculation of β_i for the year 2009, only the last 9 (not 10) years were available

1) α_i						2) β_i			
	2009	2010	2011	2012		2009	2010	2011	2012
Belgium	0,75	0,75	0,76	0,74	Belgium	1,00	1,00	1,00	1,00
Bulgaria	45,07	44,65	44,84	46,59	Bulgaria	1,00	1,00	1,00	1,00
Czech Republic	3,40	3,74	3,96	3,54	Czech Republic	1,00	1,00	1,00	1,00
Denmark	2,00	1,96	1,92	1,80	Denmark	0,60	0,51	0,50	0,92
Germany	1,41	1,45	1,47	1,38	Germany	1,00	1,00	1,00	1,00
Estonia	6,61	5,97	5,41	4,69	Estonia	0,23	0,16	0,57	1,00
Ireland	0,52	0,55	0,60	0,61	Ireland	0,13	0,13	0,13	0,16
Greece	3,32	3,40	3,76	3,79	Greece	1,00	0,49	0,14	0,08
Spain	1,07	1,11	1,16	1,15	Spain	0,13	0,13	0,11	0,09
France	2,28	2,34	2,42	2,36	France	1,00	1,00	1,00	1,00
Croatia	:	:	:	:	Croatia	1,00	1,00	1,00	0,37
Italy	2,46	2,32	2,27	2,08	Italy	1,00	1,00	1,00	0,54
Cyprus	0,49	0,40	0,42	0,41	Cyprus	0,79	1,00	0,37	0,17
Latvia	17,85	17,89	18,21	18,61	Latvia	0,14	0,14	0,26	0,54
Lithuania	44,53	47,40	55,63	51,18	Lithuania	0,30	0,17	0,27	0,71
Luxemburg	0,13	0,13	0,14	0,14	Luxemburg	0,68	1,00	1,00	1,00
Hungary	4,33	4,12	4,02	6,14	Hungary	0,28	0,30	0,36	0,56
Malta	1,95	1,63	1,82	1,76	Malta	1,00	1,00	1,00	1,00
Netherlands	2,70	2,62	2,56	2,37	Netherlands	1,00	1,00	1,00	1,00
Austria	1,07	1,25	1,23	0,98	Austria	1,00	1,00	1,00	1,00
Poland	98,77	126,04	126,75	105,40	Poland	1,00	1,00	1,00	1,00
Portugal	5,94	5,53	5,27	5,00	Portugal	0,27	0,28	0,25	0,18
Romania	163,06	:	:	147,72	Romania	1,00	1,00	1,00	1,00
Slovenia	8,58	8,19	8,12	7,56	Slovenia	1,00	1,00	0,68	0,67
Slovakia	7,78	6,78	6,55	5,08	Slovakia	1,00	1,00	1,00	1,00
Finland	4,83	4,64	4,47	4,02	Finland	1,00	1,00	1,00	1,00
Sweden	1,50	1,51	1,57	1,54	Sweden	0,52	1,00	1,00	1,00
United Kingdom	1,65	1,60	1,58	1,39	United Kingdom	0,39	0,67	0,59	1,00
Iceland	:	0,91	0,98	0,99	Iceland	0,22	0,31	0,41	1,00
Liechtenstein	0,18	0,19	0,20	0,19	Liechtenstein	1,00	1,00	1,00	1,00
Norway	1,36	1,26	1,16	1,01	Norway	1,00	1,00	1,00	1,00
Switzerland	0,35	0,35	0,36	0,35	Switzerland	1,00	1,00	1,00	1,00

Table A3: Calculations for d_i times the total population according to Equation 5 for the years 2008-2012 with $\tau = 1$ year; if a value is higher than the actual migration data form EU/EFTA citizens in the following year, the entry is marked in grey (raw data taken from EUROSTAT)

	$s = 1\sigma$ with α_i and β_i					$s = 2\sigma$ with α_i and β_i					$s = 3\sigma$ with α_i and β_i				
	2008	2009	2010	2011	2012	2008	2009	2010	2011	2012	2008	2009	2010	2011	2012
Belgium	42 881	37 490	49 300	59 042	49 373	56 150	60 479	77 950	93 808	77 171	69 418	83 468	106 599	128 575	104 969
Bulgaria	52 536	31 375	40 176	46 778	39 187	84 201	52 680	66 214	77 292	64 126	115 866	73 985	92 251	107 807	89 064
Czech Republic	72 280	43 806	56 635	66 565	56 185	115 846	73 553	93 338	109 987	91 940	159 411	103 299	130 042	153 410	127 696
Denmark	29 303	16 848	20 429	23 856	28 361	43 404	26 264	30 313	35 441	45 869	57 505	35 680	40 198	47 026	63 378
Germany	574 541	344 552	442 821	518 920	437 714	920 835	578 517	729 804	857 431	716 271	1 267 129	812 483	1 016 788	1 195 943	994 827
Estonia	9 353	2 669	3 305	6 085	7 087	14 990	3 537	4 070	9 236	11 598	20 628	4 404	4 835	12 386	16 108
Ireland	14 016	6 995	9 827	11 553	10 470	15 657	7 893	10 988	13 019	12 028	17 298	8 791	12 148	14 485	13 586
Greece	78 142	47 020	40 403	30 816	24 603	125 240	78 949	59 501	37 084	27 576	172 339	110 877	78 599	43 352	30 549
Spain	168 322	79 658	109 403	125 024	106 085	209 862	96 958	130 247	147 065	121 125	251 401	114 259	151 090	169 105	136 165
France	360 706	270 382	350 019	412 454	349 170	543 721	453 983	576 858	681 513	571 379	726 736	637 585	803 698	950 573	793 587
Croatia	30 132	18 109	23 293	27 230	13 736	48 294	30 405	38 388	44 993	19 157	66 455	42 702	53 484	62 756	24 577
Italy	330 533	247 904	320 415	376 818	224 487	498 238	416 242	528 069	622 632	333 474	665 943	584 580	735 723	868 445	442 461
Cyprus	2 700	1 954	2 700	2 389	1 885	3 245	2 834	3 840	2 924	2 093	3 789	3 713	4 980	3 460	2 302
Latvia	15 316	3 780	5 046	6 828	7 729	24 548	4 643	6 052	9 079	11 481	33 780	5 507	7 058	11 329	15 233
Lithuania	22 450	6 989	7 825	10 155	13 118	35 981	9 685	9 663	13 573	20 395	49 512	12 380	11 502	16 992	27 672
Luxemburg	1 395	787	1 192	1 425	1 264	1 447	909	1 428	1 720	1 508	1 498	1 031	1 663	2 016	1 752
Hungary	37 966	21 594	29 552	36 764	38 254	48 044	29 661	40 025	51 492	57 193	58 123	37 728	50 499	66 220	76 133
Malta	2 122	1 727	2 241	2 634	2 233	3 112	2 899	3 694	4 353	3 654	4 101	4 071	5 146	6 071	5 075
Netherlands	79 699	69 269	89 726	105 723	89 477	113 854	116 305	147 875	174 690	146 419	148 009	163 342	206 024	243 657	203 361
Austria	37 116	35 107	45 338	53 346	44 469	51 167	58 945	74 721	88 146	72 587	65 219	82 784	104 103	122 946	100 704
Poland	266 353	160 237	206 612	244 569	206 110	426 893	269 044	340 512	404 111	337 276	587 433	377 852	474 413	563 653	468 443
Portugal	39 375	22 532	30 350	34 202	26 903	49 453	30 819	40 556	45 072	33 305	59 531	39 106	50 763	55 942	39 707
Romania	112 981	85 885	109 861	128 214	107 477	168 675	144 204	181 060	211 853	175 874	224 370	202 523	252 259	295 492	244 271
Slovenia	13 757	8 539	11 081	10 270	8 709	21 933	14 338	18 262	16 016	13 421	30 110	20 137	25 444	21 761	18 132
Slovakia	37 568	22 615	29 180	34 229	28 903	60 212	37 972	48 091	56 557	47 297	82 855	53 329	67 002	78 886	65 691
Finland	37 040	22 380	28 969	34 120	28 887	59 365	37 577	47 743	56 377	47 270	81 690	52 773	66 517	78 635	65 654
Sweden	40 976	26 119	50 421	59 765	50 716	56 459	39 755	83 048	98 753	82 991	71 942	53 392	115 675	137 740	115 266
United Kingdom	248 388	151 954	265 837	292 809	339 583	325 846	220 240	412 588	446 540	555 691	403 304	288 526	559 339	600 272	771 798
Iceland	1 173	635	921	1 234	1 696	1 471	838	1 236	1 765	2 770	1 768	1 042	1 552	2 296	3 845
Liechtenstein	247	66	92	109	95	396	85	116	138	119	545	103	139	168	143
Norway	24 988	20 165	26 299	31 232	26 665	36 826	33 858	43 343	51 605	43 635	48 663	47 551	60 387	71 979	60 604
Switzerland	25 862	18 029	24 390	29 182	24 974	30 644	25 672	33 948	40 996	34 478	35 426	33 314	43 505	52 810	43 983

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