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Immigration to Switzerland
The Case of the Former Republic of Yugoslavia

by

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Abstract

From less than 5% in 1980, the share of residents from the former Republic of Yugoslavia in the total foreign population in Switzerland rose to almost 25% in 2000, to become one of the largest foreign communities. The largest increase occurs mostly between 1985 and 1998 and represents a unique development in the composition of immigration to Switzerland as it coincides with a new policy, which from 1995 gives priority to workers from the European Union for new permits and severely restricts work permits for migrants from the rest of the world. The empirical analysis shows that when there is no discriminatory treatment by immigration policy, immigrant workers from the former Yugoslavia respond to financial and cultural incentives in the same way as their unskilled counterparts from Southern European countries. The restriction on permit availability in the mid-1990s appears to have weakened the financial and cultural attractiveness of Switzerland for immigrants from the former Yugoslavia. This may signal a change in the characteristics of migrants from the region toward higher skill levels.

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1. Introduction

Throughout the 20th century, immigration to Switzerland was organized around the needs of the domestic labor market and like many other Western European countries it filled its shortage of mostly unskilled labor by hiring foreign workers. Historically the countries that supplied most of the migrant workforce were Italy, Spain and Portugal and in 1970, even though there was a Yugoslav community in Switzerland it was small and represented only 23,000 of the one million foreign permanent residents. However, things started to change drastically in the mid-1980s with an unprecedented conjunction of events, among which a strong economic recovery in Switzerland, specificities of the Swiss immigration legislation and later, political crises in the former Republic of Yugoslavia (also called Yugoslavia hereafter). From less than 5% in 1980, the share of nationals from the region in the total foreign population rose to almost 25% in 2000, to become one of the largest foreign communities with Italy. The Yugoslav group expanded quickly in spite of changes in the Swiss immigration policy in the early 1990s that gave priority to workers from the European Union and limited severely access to the Swiss labor market by immigrants from all other countries of the world.

Interestingly, the growth in the Yugoslav population in Switzerland was mostly generated by large numbers of workers obtaining long-term permits throughout the 1980s and the subsequent inflow of family members. While political crises and wars certainly played a role in the growing emigration from Yugoslavia, in the case of Switzerland, it worked mostly indirectly by inflating the number of workers receiving permits. Very few people obtain permanent resident status in Switzerland through the asylum system. Hence, at first sight, it seems that, despite the political circumstances, immigration from the former Yugoslavia to Switzerland has been generated by similar factors as immigration from countries like Italy,

Spain, Portugal or Turkey and therefore, it can be mostly labeled as economic rather than political immigration.

In this paper we evaluate the stability of the determinants of immigration inflows to Switzerland in the face of changes in immigration policy. The analysis is performed on two distinct periods: First from 1981 to 1995, when worker migration to Switzerland was limited by overall quotas with no differentiated treatment across source-countries; second, from 1995 to 2003, when priority was progressively given to workers from the European Union and immigration from all other countries was severely limited to specific skills. Over each period we investigate the extent to which factors driving immigration varied across source countries and possibly skill levels. We also specifically focus on immigrants from Yugoslavia who became one of the main sources of foreign labor in the 1980s and early 1990s and whose immigration was severely restricted with the new policy.

The paper shows that during the earlier period, immigration from the former Yugoslavia (considered a single country throughout the period) responded to income and cost incentives in a very similar way as Southern European countries which are the major suppliers of unskilled workers. During the second period, however, immigrants from Bosnia-Herzegovina, Croatia, FYR Macedonia and Serbia-Montenegro appear to have become less sensitive to the relatively high real income in Switzerland than their counterparts from other Southern European countries. This weaker attraction for financial returns may be linked to heavier weight put by migrants from the former Yugoslavia on non-monetary benefits of migration. Indeed they show a much lower probability to return home than nationals from Southern European countries. Also, the cost advantage provided by cultural networks while still positive and significant is also weaker in recent years for nationals from the former Yugoslavia than for other Southern groups. Interestingly, this combination of effects

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characterizes skilled immigration from Northern European countries. Thus, the change in migration factors for Yugoslav nationals is consistent with the new emphasis on skilled immigration for non-EU countries. Hence, generally speaking, under similar conditions immigrants from the former Republic of Yugoslavia tend to respond in a similar fashion as workers from other countries.

The paper is organized as follows. Section 2 presents a short survey of immigration policy in Switzerland since the 1970s. In Section 3, a statistical picture of immigration from the former Yugoslavia is presented and compared with that of other major foreign communities in Switzerland. In Section 4, we present the results of the estimation of an augmented gravity equation for the inflow of migrants by source country to Switzerland and Section 5 concludes.

2. A brief overview of Swiss immigration policy

The stated goals of Swiss immigration policy have always been, and still are, to control the level of foreign resident population while accommodating the demand for labor by the economy. Since 1970 and until 1990, the government implemented a policy based on quotas for work permits, which applied indifferently to citizens from all source countries. However, in the early 1990s, after the rejection of participation to the European Economic Area (EEA) by popular vote, pressures started to build for more open relations with the European Union, particularly with respect to labor mobility (see Gross, 2006, for details). This new environment encouraged the government to amend its immigration policy and to introduce differentiated treatment for immigrants from EU/EFTA countries and from other countries of the world. As a consequence, the former Republic of Yugoslavia and the countries issued from it saw the conditions for their migrants change significantly, in particular through increasingly difficult access to the Swiss labor market.

Since the first immigration legislation in 1932, immigration policy in Switzerland has been implemented through the allocation of joint work and residence permits to foreigners with job contracts. A description of the various permits is given in Table 1. Until its phasing out in the late 1990s and its total abolition in 2002, the main type of temporary permit is the seasonal permit. It has a maximum duration of 9 months per year and is renewable provided the worker gets another job contract. The holder must return to his/her home country for the remaining months of the year and is not allowed to bring family members to Switzerland.[1]

Workers with job contracts for at least 12 months receive a renewable one-year permit. Family reunion is permitted (without waiting period since 1993) and statistically holders of such permits are considered permanent residents. After 10 years of successive renewals, the one-year permit can be converted into an establishment permit valid indefinitely with no constraint on mobility. Similarly, after a maximum of 10 years of uninterrupted seasonal work, the person can apply for a one-year permit provided he/she has a contract for a regular job. Family members and newborns receive the same type of permit as their parent. Finally, asylum seekers who obtain the right to stay in Switzerland receive in most cases a one-year permit.

Since 1970, new work permits (seasonal and one-year permits) are limited by overall quotas as they are directly linked to the growth in foreign resident population. The level of quota for new one-year permits has evolved between 8,500 (in the early 1980s) and 21,000 (in 1970) and for seasonal permits, between 90,000 (in 1998) and more than 200,000 (in 1970; Piguet and Mahnig, 2000). Until 1990, there is no country-specific policy for immigrants. Only, some countries, which have historical ties with the Swiss labor market, have agreements for preferential treatment of their seasonal workers. For example Italy, Spain and Portugal

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[1] Since 1990, seasonal permits are available only to citizens from EU/EFTA and a few other selected European countries. A new short-term permit was introduced in 2000 for people with contract shorter than 12 months (see Gross, 2006, for details).

obtained a reduction of the waiting period for conversion of seasonal permits into one-year permit from 10 to 5 years in 1964, 1989, and 1990, respectively and Italy obtained a further reduction to 4 years in 1976.[2] Yugoslavia, despite its long history of ties with Switzerland, illustrated by a free mobility agreement signed in 1888 already, did not have a similar agreement (IMES, 2004b).

In 1990, the government began to implement a new immigration policy which resulted from events that developed in the preceding years. In the late 1980s, the Swiss economy was growing fast again, quotas were progressively relaxed under the pressing demands from enterprises and a new political environment was developing. The debate about joining the European Economic Area (EEA), and free mobility of labor which would result, took center stage and it was becoming clear that some aspects of the existing immigration policy (for example, seasonal permits) were incompatible with a participation in the EEA. Consequently, the government, anticipating on free mobility with countries from the European Union (EU), introduced modifications to the immigration policy and, in particular, allowed for a differentiated treatment for workers from different source countries.[3] The new *3-circle policy* identifies three categories of source countries: First, EU/EFTA members, with which the aim is to reach free mobility and abolish the status of the seasonal worker in the medium term (Italy, Spain and Portugal benefit from this change); second, countries economically and culturally close to Switzerland such as North America and Eastern Europe for which the system is unchanged, i.e., one-year and seasonal permits are under quota with more emphasis

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[2] Agreements on recruitment of workers were common in the 1950s and 1960s between countries in need of workers, such as Germany, France and Switzerland and emigration countries. Switzerland signed its first agreement with Spain in March 1961, with Italy, in August 1964 (CH, 2004a, 2004b).
[3] Membership in the EEA was rejected in 1992 by popular vote but the Government immediately begins bilateral negotiations with the EU on a number of economic issues, among which, free mobility of people (see Gross, 2006, for details).

on skills in shortage; third, all other countries, from which workers are accepted only under exceptional circumstances.

Initially, Yugoslavia was in the second category and there is no significant change in the access by its citizens to the Swiss labor market. However, in 1991, the government decided to move Yugoslavia to the third category because of its human rights record. As a consequence, it lost access to seasonal permits and immigration to Switzerland became limited to skilled workers. Immediately pressures arose from Swiss businesses against that decision, in particular, from the construction and hospitality sectors, which would be greatly affected by restrictions on hiring unskilled temporary and permanent Yugoslav workers. The government partly backed down by allowing a transition period such that, the period for conversions of seasonal permits into one-year permits was extended until 1995 and the issuance of seasonal permits was extended until 1996 when it would definitely stop (Hirter et.al., 2002). In essence, the new propositions gave four additional years to seasonal workers from Yugoslavia to cumulate the required years for obtaining longer-term status while allowing employers to seek other seasonal workers in the EU. Nevertheless, the 3-circle policy was shown to violate international agreements signed by Switzerland on human rights, and in 1995, all non EU/EFTA countries were merged under the same provisions, that is no access to seasonal permits and access to one-year permits only after EU-nationals have been given priority. As a result, workers from Yugoslavia since then have access to the Swiss labor market only under exceptional circumstances. Note that these amendments set the stage for a new immigration legislation developed after free mobility with EU/EFTA countries came into effect starting in June 2002.

The next section provides a survey of how, over the past 25 years, citizens from the former Republic of Yugoslavia ended up forming one of the largest foreign community in

Switzerland and how immigration flows have been influenced by both the new provisions in the Swiss immigration policy and political turmoil in the Balkans.

3. Immigration from Yugoslavia to Switzerland

Immigration from the former Republic of Yugoslavia to Switzerland is not a recent phenomenon; however, the evolution of the resident Yugoslav population since the 1980s is quite unique compared to that of immigrants from other European countries. From 1960 to 2003, the share of Yugoslav citizens in the foreign population rose hundred fold, from 0.2% to 23.8% and in 2003, for the first time, it overtook Italy as the largest foreign community in Switzerland. However, the community is heterogeneous and at the beginning of the 21st century, it is issued from five distinct countries (Bosnia-Herzegovina, Croatia, FYR of Macedonia, Serbia-Montenegro, and Slovenia).

In the 1950s and 1960s, citizens from France, Germany, Italy, and Spain made up more than ¾ of the foreign population[4] (see Table 2). In 1960, the Yugoslav community was extremely small and similar in size to that of Turkey or Portugal. They each represented less than 0.2% of the foreign population. During the following 20 years, Yugoslavia's and Turkey's shares increased quite rapidly and at almost the same rate to reach, respectively, 4.9% and 4.3% of the foreign population in 1980. Portugal's, however, lagged behind and reached only 2% (columns 3 and 4). Part of the explanation lies in the fact that the governments of Yugoslavia and Portugal, though both dictatorial at the time, had very different positions toward emigration of their workers. Until the democratic Carnation Revolution in April 1974, emigration from Portugal was very strictly controlled. Also, because of its comparative weak

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[4] In 1968, the immigration of permanent residents from Germany, France, Italy and Spain was 15,588, 8,702, 57,489 and 18,035 respectively for a total inflow of 137,901 of which 75% were workers (OFE, 2001a, Tables 11.2R and 11.21R).

income incentive in attracting Italians and Spaniards, France had a generous open door policy for Portuguese nationals and it was particularly welcoming to illegal immigrants in the early 1960s at the time of the Angolan colonial war.[5] During the same period, in Yugoslavia, the Tito government which had been actively discouraging emigration for work purpose until the early 1960s, suddenly changed its approach as unemployment was growing. Starting in 1965, a new policy actively encouraged workers to go abroad primarily as guest workers and, in 1973, there was 1.1 million Yugoslavs living abroad, with 900,000 of them in Western Europe, mostly in Germany and Austria (Curtis, 1992). Nevertheless, 31,578 people were registered as permanent residents in Switzerland that is, held work/residence permits for more than one year and 3,362 held seasonal permits.[6] Moreover, seasonal workers from Yugoslavia clearly were coming to Switzerland before the change in policy in their home country as in 1973, 344 of them obtained the conversion of their seasonal permits (OFE, 2001a, Table 112.2R), implying they had been seasonal workers for at least 10 years without interruption.

From the early 1980s and during the following 20 years, the evolution of the Yugoslav population in Switzerland diverged from that of the other main source-countries for permanent residents mostly because of an unprecedented conjunction of events in Switzerland as well as in
Yugoslavia. From about 44,000 permanent residents in 1980, the population rose to more than 337,000 in 2000 that is from hardly 5% to almost 25% of the foreign population in Switzerland. Open emigration policy by the Yugoslav government, the possibility of

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[5] See Blanc-Chéard (2001), Chapter 6, for more details. According to census data, in 1962, there were about 50,000 Portuguese nationals in France (i.e., 2.3% of foreign population); in 1968, there were more than 296,000, that is 11.3% of foreign population; and in 1975, they represented 22% of foreign French population with almost 759,000 residents (Weil, 1995, Annex VI).

[6] Population numbers are for the end of December (IMES, 2004a, Table S1A.1850R; OFE, Table 182_220_1264R). It is worth noting that the number of seasonal permits is at the lowest in December since seasonal industries tend to have much higher employment in the summer.

conversion from guest-worker status to immigrant status, renewed economic growth in Switzerland, easier family reunion conditions, and, later, wars in Yugoslavia are the likely contributors to that extraordinary growth. Evidently some of these factors are also relevant for other source countries and they seem to influence significantly immigration from Portugal for example. By 2000, Yugoslav nationals had become the largest foreign community, surpassing the historically largest group, the Italians (columns 2 and 5 of Table 2) but, by then the former Yugoslav Republic was divided into five distinct countries whose citizens were registered separately. However, it is interesting to note that immigrants from Serbia-Montenegro represented more than half of the community (i.e., 190,723 people or 56.5%, column 2). Communities from Bosnia-Herzegovina, Croatia and the FYR Macedonia were very similar in sizes (44,296, 43,649, and 55,912 people respectively, or 13.1%, 12.9% and 16.6%); Slovenia was the smallest with 0.8%. The community as a whole kept growing until 2003 but relatively more slowly than others such as the Portuguese, French and German communities, which by then benefited from preferential treatment in hiring and from the early stage of implementation of free mobility for EU-citizens.

Long historical ties between the two countries through guest workers and changes in the immigration policy have also contributed to the expansion of the Yugoslav population in Switzerland between 1980 and 2000, and this is clearly illustrated by major changes in the structure of inflows of new migrants (see Table 3). In the early 1980s, of approximately 10,000 new migrants coming from the region, about 30% were conversions of seasonal permits and 45% came under the family reunion category (columns 2 and 3), both escaping quota restrictions. The remaining 25% was made mostly of new one-year permits allocated under quotas and refugees whose claim had been recognized as valid. A decade later, in the mid-1990s, war had struck most regions of the former republic; concurrently, citizens from

Yugoslavia had lost easy access to work permits and the new deadline set for the end of converting seasonal permits was approaching. In 1994, the number of conversions was almost three times higher than in 1984 (6,464 vs. 2,308) and it represented more than half of all conversions in that year. Each one opens the door to family reunion and consequently has an impact on the overall inflow of permanent residents. Hence, in 1994, the total inflow was four times larger than in 1984 with almost 60% of people coming for family reunion purpose. That year also registered a relatively large number of refugees accepted as permanent residents with their families (1,539 people); however, they represent only 4.8% of the total inflow. From then on with the new policy provisions into place, the inflow of permanent residents from Yugoslavia decreased steadily. Opportunities for economic immigrants from the region are limited to skills not available from the EU and ¾ of the newcomers belong to the family reunification category; while the number of recognized refugees dropped sharply (224 people or 2.3% in 2003), 16.2% of new entries were through special humanitarian permits because of extreme personal hardship.[7]

A few concluding comments can be drawn from this brief description: First, economic immigration from the former Yugoslav Republic to Switzerland is not recent but it increased drastically in the mid-1980s. Most of the new permanent residents came between 1985 and 1998 despite the change in Swiss immigration policy which restricted access by Yugoslav nationals to the quotas of work permits during the last years. The growth in population is mainly due to the combined effect of conversions of seasonal permit into longer-term permits and of family reunion. Even though in 1994, recognized refugees from the region represented

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[7] The law (CH, 2004b, art. 13f) specifies that permits can be given to individuals in personal distress characterized as "personal cases of extreme gravity". The federal office for migrations specifies that it applies neither to economic motives nor to political motives, the latter being covered by the asylum legislation (IMES, 2004b, Section 433.25).

more than 50% of the total, the actual number was small and played a minor role in the growth of permanent resident population (column 4').

A survey of the evolution of the foreign population would be incomplete without considering the two main components of the outflow: Acquisitions of Swiss nationality and returns to the home country. Given the political turmoil in the region in the 1990s, it is easy to understand why the returns of Yugoslav citizens represent a relatively small portion of all returns (i.e., on average less than 10%, in column 6'). However, it is interesting to note that despite the improved political situation in much of the region, the outflow of permanent residents kept decreasing in recent years. In 2001, the number of returning nationals was at its lowest level since the mid 1980s (less than 3,500 people in column 6) and it is falling rapidly. In parallel, the number of acquisitions of Swiss nationality was at its highest ever with almost 12,000 in 2003, which represented 1/3 of all naturalizations, much more than its representation in the foreign population (columns 7 and 7'). This happens despite a cumbersome process and additional difficulties members of the Yugoslav community face in being recognized as worthy future citizens in some regions of Switzerland.[8] Moreover, to apply for citizenship, a person must have been residing in Switzerland for a minimum of 12 years with an establishment permit and considering the rise in the allocation of such permits in the late 1990s (column 5), one can only infer that naturalizations are likely to remain at a relatively high level in the future.

The evidence on the inflow and on the outflow combined, suggests that immigrants from the former Republic of Yugoslavia are more inclined than those from other countries to settle permanently in Switzerland. In fact, in 1995, 81% of foreign-born Yugoslavs had been in

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[8] In 2000 the Swiss citizenship was refused to all applicants from Eastern Europe in a municipality where it is awarded by popular vote (see Gross, 2006, for details). Nevertheless, a similar outcome is unlikely to happen

Switzerland for less than 10 years and 14% for more than 10 years but less than 20 years. In 2003, only 38% had been in the country for less than 10 years and more than ½, for between 10 and 20 years (OFS, 2004a, Table T1117F).

The last aspect to be briefly surveyed is the regional distribution of the population from the former Republic of Yugoslavia. In Switzerland, Yugoslav immigrants are much more concentrated geographically than other communities (see Figure 1). More than 80% are settled in the German-speaking regions against less than 60% for other foreign communities. In fact, migrants from Latin countries (Italy, Spain, Portugal) for obvious cultural reasons have a much higher probability to settle in the French-speaking regions.[9] Furthermore, Yugoslav permanent residents are concentrated in a few cantons (i.e., states in Switzerland). Concentration ratios for 1995 calculated by the Federal Statistical Office show highest values for Central and Eastern Switzerland. Finally, when moving internally, permanent Yugoslav residents have a tendency to converge toward similar regions in larger concentrated numbers than other nationalities such as France, Germany or Austria but in smaller numbers than Italian, Portuguese and Spanish permanent residents (OFS, 2000, Section 4).

With these observations in mind we now turn to the estimation of the determinants of migration flows and the evaluation of the intensity of their impact for ethnic groups and particularly for immigrants from the former Republic of Yugoslavia.

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again since the Federal Court has ruled such system unconstitutional and, that this particular municipality now has a designated a committee to rule on naturalizations (Le Temps, 2005).
[9] About 50%, 60% and 30% of Spaniards, Italians and Portuguese respectively are settled in the German-speaking area in 1990 and the distribution has changed little over time (OFS, 2005, Table T1123F).

4. What drives immigration?

In this section we identify the factors influencing migration of workers from various countries to Switzerland. Because of inconsistencies in data due to the split of Yugoslavia in 5 countries and because of major changes in the immigration policy, the estimations are run for two separate periods: 1981 to 1995 and 1995 to 2003. In particular, the first sample corresponds to the period during which migrants from the former Yugoslavia were not subjected to stringent constraints for work permit and only general quotas for new permits are in place. There are 16 source countries in the sample with only two from outside Europe; together they represent, on average, 83.4% of the world inflow to Switzerland and 97.3%, of European inflow. The second period, 1995-2003, corresponds statistically to the split of the former Yugoslavia and to the implementation of restrictions on new permits for non-EU/EFTA countries. There are 23 countries, which represent on average 72.2% of world inflow to Switzerland and 94.3%, of European inflow.[10]

To better understand the factors that drive migrants to Switzerland we use an inflow framework similar to the one used in Gross and Schmitt (2003) which can be seen as an augmented gravity model for immigrants[11] which corresponds to a reduced form for a supply and demand model of migrations (see, Borjas, 1989). In such framework, migrant flows are determined by the relative size of the source and destination country, relative financial opportunity in the source and destination country and other relevant factors. Our empirical specification, is the following,

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[10] For the sample 1981-1995, the countries are Germany, France, UK, Italy, the Former Yugoslavia, the Netherlands, Austria, Portugal, Spain, Turkey, Greece, Sweden, Belgium, Denmark, Canada and the United States. For the period 1991-2003, the countries are Germany, France, United Kingdom, Italy, Netherlands, Austria, Portugal, Spain, Bosnia-Herzegovina, Croatia, FRY Macedonia, Serbia-Montenegro, Slovenia, Turkey, United States and Canada, Greece, Sweden, Belgium, Denmark, Russia, Ukraine, Poland, Hungary.
[11] Gravity models are commonly used to evaluate the determinants of migration flows regionally or internationally (see for example, Foot and Milne, 1984, Helliwell, 1997, Karemera et. al., 2000).

$$Lnetinfl_{j,t} = \alpha_0 + \alpha_1 Lpopsou_{i,t-1} + \alpha_2 LpopCH_{t-1} + \alpha_3 Lycapsou_{i,t-1}$$
$$+ \alpha_4 LycapCH_{t-1} + \alpha_5 D_k + \alpha_6 Lnetwork_{i,t-1} + \varepsilon. \tag{1}$$

D_k represents alternative dummy variables that are described below and some statistical characteristics of the variables are given in Table 4. The dependent variable, $Lnetinfl_{i,t}$ is the log of migration flows from country i to Switzerland during period t which is a 3-year sub-period (i.e., t=1 to 3).[12] In an attempt to capture the inflow of "new workers", for the first sample, the net inflow is measured as total new permanent entries net of family reunions and conversions of seasonal permits (i.e., column 1 net of columns 2 and 3, in Table 3). Family reunion provisions in immigration legislation act as an automatic multiplier of migration flows with a lag (Jasso and Rosenzweig, 1986) and observations represent decisions made by immigrants who entered the country earlier. Moreover, they include foreign family members of Swiss citizens, who obviously have a different decision process from other foreigners. Seasonal conversions are also taken out of the dependent variable because they are part of a 2-step migration decision and the second step happens after several years of working experience in Switzerland. Unfortunately, detailed statistics on conversions are not available for the second period, 1995 to 2003, and they are included in the measurement of the dependent variable.

All explanatory variables are measured at the beginning of the period for which the flows are computed to avoid simultaneity problems. In the basic gravity model for migration, the population variables ($Lpopsou_{i,t}$, $LpopCH_t$) are scale variables and measure the capacity to supply (absorb) migrants. The per capita income variables ($Lycapsou_{i,t}$, $LycapCH_t$) capture relative financial incentives for individual workers with an expected negative/positive impact for source/destination country income.

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[12] See Appendix for detailed explanation of the measurement of variables.

The literature on international migrations identifies a number of other factors beyond those four, which influence the migration decision (see Massey et al., 1993, for a survey). Among them, the costs of migrating, monetary as well as psychological costs have long been considered important determinants of migrants' decision. Empirical studies using gravity models for overall migration flows strongly support the role of monetary costs (see for example, Helliwell, 1997 and Karemera et. al., 2000). Consequently, we test for the impact of sharing a border with Switzerland using a dummy variable, which takes the value 1 for France, Germany, Italy, and Austria (*Com. border*). It is worth noting that all countries that border Switzerland also share their language with it, another factor seen as decreasing the cost of migrating. There is also a significant role for non-monetary costs such as cultural and psychological costs, which are at the source of the so-called network effects. The search for ways to diminish these costs materializes in agglomeration of migrants, or cultural clustering which have a positive pull-effect on future inflows (see, for example, Dodson, 2001, and Bartel, 1989). Cultural clustering may also offer more appealing employment opportunities and, thus, alleviate transition costs on the labor market (see Gross and Schmitt, 2003).[13] Persistence generated by network effect is taken into account by the size of the resident population from the same source country (*Lnetwork$_{i,t-1}$*) and the effect is expected to be positive.

In their analysis of immigration flows to the United States, Hatton and Williamson (2002) and, Clark et.al. (2002) pay particular attention to institutional and legislative constraints arising from immigration policies by the destination country. We address this issue in several ways. First the two distinct samples match the change in access to new permits for

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[13] Buckley (1996) and Borjas (1999) show that migrants cluster in the United States may be the consequence of some institutional specificity such as availability of State welfare benefits.

non-EU countries, among which, Yugoslavia. Second, there are specific policy variables within each period. During the 1981-1995 period, general quotas on total annual new work permits are taken into account in two different ways: Lagged log of quota ($Lquota_{t-1}$) and lagged unemployment rate in Switzerland as a proxy for quota changes and also for the probability of finding a job for a prospective migrant ($UrateCH_{t-1}$). The introduction of the 3-circle policy with priority to EU citizens and the classification of Balkan countries into the third circle (non-EU countries with no cultural similarities with Switzerland) is captured by a dummy (*3-circle policy*) which is the product of *Pol3c*, dummy variable defined as 1 from 1990 on (0 otherwise) and *Non-EU*, another dummy with value 1 for countries not in the EU (0 otherwise).

Finally, the skill and occupation characteristics of permanent migrants to Switzerland are quite different depending on the country of origin. Statistics on the employed foreign population show a consistent correlation between skill level and region of origin. In particular, in 2003, 57.9% of employed foreigners from Northern and Western Europe had tertiary education. Similarly, 55.5% of new EU-members and 47.9% of non-Europeans had tertiary education. In comparison, only 11.3% of Southern European migrants and 11.6% of citizens from the Western Balkans and EU-candidates (Turkey and Yugoslavia in our sample) were highly educated (OFS, 2004b, Table G4). For decades, Switzerland filled its deficit in unskilled workers through immigration while simultaneously attracting large foreign direct investment (FDI) because of its skilled workforce. The main investing countries are the US, Germany, France, the UK, and the Netherlands (together 80.4% of the stock of foreign direct investments at the end of 2003, BNS, 2003, Table 2.2.). Accordingly, the countries from the sample are divided into two geographical areas, North and South, and we test for the possibility of

different elasticity by interacting the main explanatory variables with a dummy, which takes the value 1 for Southern countries, and zero otherwise (*South*).[14]

4.1. Period of general quota: 1981 to 1995

The results of the estimation for various specifications are given in Table 5 and, for easier comparisons, a summary of the main elasticities is also provided in the lower panel of the table. First some tests for robustness of results to some fixed effects are briefly surveyed. Note that because of a high correlation between Swiss population and Swiss income per capita (see Appendix, Table A.I.), the population variable has been eliminated from the specification.[15] Also, the quota variable itself was not significant while the unemployment rate has a sign consistent with a proxy for quotas as well as with job prospects for immigrants. We therefore use the unemployment rate in all specifications. Comparing columns 1 and 2 of Table 5, there is no major impact from the introduction of the 3-circle policy on elasticities except for source income which takes the unexpected positive coefficient. Not reported here, the 3-circle policy dummy when introduced as a scale effect has no significant impact either. Hence the increased restrictions on countries from the third circle do not appear to have had a marked impact on migration determinants. Clearly a more meaningful distinction is between immigrants for Northern and Southern countries (columns 1 and 3). Also, there is no fixed effect due to membership in the EU or to sharing a border with Switzerland, even though it also means sharing a language (columns 4 and 5). Nevertheless, there is a fixed effect for countries that combine both characteristics, i.e., border with Switzerland and EU membership (France, Germany and Italy; column 6) possibly because, historically, these countries have been steady

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[14] Note that Northern countries include North America and Southern countries, Turkey, FYR in addition to Western Europe.

sources of migrations to Switzerland. This last specification is thus chosen as the basis for further interpretation.

Northern and Southern migrants show distinctly different responses to migration factors, and it is particularly true for financial incentives. In column 6, relative incomes are not significant in the migration decision by Northern migrants while they have the expected sign and are highly significant for Southern migrants. Since the geographical division is strongly correlated with education levels (and/or FDI movements), the results suggest that skilled immigration from Northern countries occurs independently of income differences. There may be two reasons for this; first, highly educated migrants would not be well represented by average income per capita and, second, when generated by FDI, migrants' decision to move is unlikely to be strongly linked to pure monetary benefits. Northern immigrants are also less sensitive to the presence of a network from their own country (i.e., the elasticity is about half as large as for Southern immigrants). This is consistent with evidence at the regional level presented in OFS (2000) where, the maximum value for the distribution of the concentration indexes across cantons in 1995, is much lower for German, or British migrants (1.79, 2.62) than for Italian, Turkish and Spanish migrants (5.33, 4.49, 3.31). Again, in case of link with foreign direct investment, the location decision is unlikely to be made by individual migrants. Finally, the unemployment rate which proxies the quota policy based on labor market needs, has much more impact on immigration from the South than from the North. It is consistent with the fact that Southern immigrants tend to be concentrated in more cyclically sensitive industries and thus, their decision as well as the quota would be strongly affected by the state of the economy.

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[15] We also tried to estimate an equation for the immigration rate but as it is clear from the results that constraining the source-country effect to unity biases the results.

Next, we attempt to derive some conclusions about incentives by immigrants from Yugoslavia (Table 6). The results from the basic specification are reproduced in column 1 and we first test for a possible scale effect of war in the early 1990s. *War* is a dummy that takes the value 1 starting in mid-1991 with the first bombardment in Croatia and ending in 1995, with the signing of the Dayton Agreement. Column 2 shows there is no significant fixed effect from the war when it is introduced in the basic specification. This is not surprising for at least two reasons. First, income per capita in the region drops sharply and may capture part of the effect. Second, in the Swiss context, the war is much more likely to have influenced significantly the rate of conversion of seasonal permits and the ensuing family reunions than the number of new permits which is strictly controlled. In fact, both reached their peak in the early 1990s (see Table 3, column 2) and these series are not included in the dependent variable. So, we can conclude that the labor market could not be used as a channel to get asylum in Switzerland.

The next step is to identify whether migrants from Yugoslavia differ significantly in their decision process to migrate to Switzerland from other source countries' immigrants. In column 3, we exclude the panel of observations representing Yugoslavia from the sample.[16] A comparison of the results with those in Column 1 shows there is no meaningful shift in the estimated parameters. Interestingly, when both Yugoslavia and Turkey are excluded from the sample of Southern countries (column 4), there is a noticeable increase in the push effect of source-country income for the remaining countries, which, incidentally, are all members of the EU. The change however is not statistically significant.[17] Overall the results suggest that migrants from Southern EU countries (Italy, Spain, Portugal and Greece) and from Southern non-EU countries, including Yugoslavia, respond similarly to financial incentives and other

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[16] We favored that option over adding country-specific interactive dummies on explanatory variables because of the small time dimension of the panels.

migration drivers in a context of non-discriminatory quotas. Yet, there is a marked difference in the response by Northern (i.e., mostly skilled) and Southern (i.e., mostly unskilled) migrants. However, these conclusions must be taken with caution as the small time dimension of the panel does not allow for very robust testing of differences in parameters. We now turn to the estimation of the flows for the more recent period, 1995 to 2003.

4.2. Preferential treatment for EU immigrants: 1995 to 2003

From 1995 to 2002, immigration from the former Yugoslavia became increasingly restricted and the Republic had split into 5 countries. We use the same specification as for the previous period except for shift dummies representing period-specific events and evaluate again whether in the new policy context incentives differ across source-countries.

For this period, it is not possible to isolate conversions of seasonal permits into longer term permits and they are included in the dependent variable ($Lsinfl_{i,t}$). However, observations are still for workers only as family reunions are not included. Therefore, remembering that seasonal permits can be converted to annual permits after a minimum of 4 years and up to 10 years, a dummy is introduced to control for the distinction between countries which historically sent large number of seasonal workers and those who did not (*Conversions Seas*). Throughout the period workers from EU countries were given priority in hiring and in June 2002 the implementation of the new agreement on free mobility started and a dummy is added to take that policy change into account (*EU free mobility*). To test for source-country differences in motives to migrate, we follow the same procedure as previously by first estimating the flows from all source countries with and without the distinction between Northern and Southern

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[17] When a dummy for Yugoslavia and Turkey was interacted with the source-country income the coefficient was not significant at 10% level Results are available upon request.

Europe and, by then, excluding countries that make up the former Republic of Yugoslavia. The results are given in Table 7 with a summary in the lower panel.

First in columns 1 and 2 we test for the robustness of the results to the addition of 4 countries with respect to the previous sample.[18] There is no substantial difference in the results except for Swiss income which becomes weakly significant. So we keep them in the sample and move on to introducing the distinction between Northern and Southern countries (column 3). Similarly to the earlier period, immigrants from Southern European countries are more sensitive to income factors than immigrants from Northern countries (including Canada and the US) and the network effect is stronger even though with a weak significance.

When four countries issued from the former Yugoslavia are eliminated from the sample,[19] there are more noticeable changes than for the earlier period (column 4). For example, in the lower panel, the impact of the Swiss income per capita is almost double implying that migrants from the former Yugoslav region have a lower degree of response to Swiss income. Considering the sample is made of people who have actually migrated, one interpretation is that immigrants from Southern EU countries put more emphasis on the monetary benefits of migration because many non-monetary benefits of daily life in their home country have converged to the Swiss level. Immigrants from the former Yugoslavia may be less sensitive to the pure income aspect given the still otherwise precarious situation in their home country. Non-pecuniary benefits may also include the perspective of permanent residency in Switzerland. Another significant difference is in the network parameter, which is also weaker when the four countries are part of the sample suggesting the existence of a

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[18] The countries (Hungary, Poland, Russia and Ukraine) were added because the time dimension of the panel is short, they sent a non-negligible number of workers to Switzerland and they are European countries.
[19] The four countries are Bosnia-Herzegovina, Croatia, FYR Macedonia and Serbia-Montenegro. Slovenia is part of Northern countries in our sample as it is part of the group of new EU-members which has more than 50% of immigrants with tertiary education.

network may play a lesser role for immigrants from the former Yugoslavia.[20] Incidentally, this is consistent with the results from the Statistical Office (OFS, 2000) which find a much lower maximum value of concentration indexes for the distribution across cantons of Yugoslav nationals (1.75) than Italian (5.33), Spanish (3.31) or Turkish (4.49) nationals.

Finally, in columns 5 and 6 we estimate the inflows for the earlier period (i.e., 1981-1995) including conversions of seasonal permits so that the dependent variable is consistent with the one used for the recent years. As earlier, results hardly change when Yugoslavia is excluded from the sample. Hence, this suggests that the shift in parameters in the recent period is unlikely to result from a different way to measure the dependent variable.

To summarize, a tentative conclusion from the overall results is that workers from the former Yugoslavia respond to migration incentives similarly to their counterparts from other Southern countries in an environment of non-discriminatory policy. The recent weakening in the impact of the Swiss standard of living and cultural network may be the results of a change in preferences by immigrants from the former Yugoslavia but it is also likely to reflect a change in the characteristics of the group resulting from to the new immigration policy which allows access to the Swiss labor market only if the skills are not available from EU countries. This hypothesis is supported by the fact that the number of skilled workers from Bosnia-Herzegovina, Croatia, Macedonia, Serbia-Montenegro and Slovenia (i.e., classified as managers, intellectuals, scientists, technicians and administrative employees) who obtained a permanent permit grew from 16.3% of new workers in 2000 to 19.7% in 2003 confirming a move toward more skilled immigrants from the region.[21]

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[20] The difference in elasticities in both cases is in fact significant when a dummy for the four countries is interacted with Swiss income and network (results available upon request).
[21] Information from the *Registre Central des Etrangers* kindly provided by the Office Fédéral des Migrations, Berne.

5. Conclusion

Immigration from the former Yugoslavia to Switzerland is not recent however its magnitude started to change drastically in the early 1980s already. Throughout the 1980s and 1990s most of the surge in immigration occurred through new long-term residence permits for workers and their family and not through the asylum process. In effect, the nature and composition of immigration flows suggest that regional crises and wars had a quantitative but no major structural impact on the flows. While the magnitude of the family category in total inflow has grown proportionately larger than for other source countries like Italy and Spain, our estimations show that the impact of economic drivers on the decision to migrate by new workers from all Southern countries is very similar. It is only recently that a divergence seems to have arisen and it concerns the attractiveness of the high standard of living in Switzerland and network effects. The financial pull effect appears to be weaker for immigrants from four of the countries issued from the former Yugoslavia (Bosnia-Herzegovina, Croatia, FRY Macedonia and Serbia-Montenegro) than for migrants from other Southern countries. But at the same time migrants from the former Yugoslavia tend to be more likely to choose Switzerland as a permanent home and not just as a temporary option for better financial return. Hence, these immigrants may put more weight on some unmeasured non-monetary factors than comparable migrants from other countries. In 1995 immigrants from the former Yugoslavia also lost wide access to work permits and under the new policy had to have skills in demand to qualify for permits. Hence, the weakening of the Swiss income effect and of the network effect may also reflect a move toward more skilled migration which, as the results from Northern countries show, does not respond strongly to financial and cultural incentives.

It must be stressed that even though some of these results are shown to be rather robust, caution must apply with their interpretation as the sample, especially for recent years, is rather small, the approach is highly aggregated and unfortunately, there is almost no study on these issues for comparison. Hence, these results need to be compared with others obtained from future studies using different methodologies and particularly microeconomic methodologies.

References

BNS, Banque Nationale Suisse, 2003. *L'Evolution des Investissements directs en 2003*. Zurich.

Bartel, Ann P., 1989. "Where Do the New U.S. Immigrants Live?" *Journal of Labor Economics*, 7. 371-91.

Blanc-Chaléard, Marie-Claude, 2001. *Histoire de l'Immigration*. Editions La Découverte. Paris.

Borjas, George J., 1999. "Immigration and Welfare Magnets." *Journal of Labor Economics*, 17. 607-37.

_____, 1989, "Economic Theory and International Migration." *International Migration Review*. 23.

Buckley, Francis H., 1996, "The Political Economy of Immigration Policies." *International Review of Law and Economics*, 16, 81-99.

CH, Confoederatio Helvetica, 2004a. *Loi fédérale sur le Séjour et l'Etablissement des Etrangers. LSEE*. Nr 142.20. March 26, 1931. As of April 6. Bern.

_____, 2004b. *Ordonnance limitant le Nombre des Etrangers*. Nr 823.21. October 6, 1986. As of October 26. Bern.

Clark, X., Hatton, T.J., and, J.G. Williamson, 2002, "Where do U.S. Immigrants Come from, and Why?" NBER Working Paper #8998. June.

Curtis, Glenn Eldon, 1992. *Yugoslavia, a Country Study.* Area Handbook Series. Federal Research Division. Washington, DC: Library of Congress.

Dodson III, Marvin E., 2001. "Welfare Generosity and Location Choices among New United States Immigrants." *International Review of Law and Economics*. 21. 47-67.

Foot, David K., and, William J. Milne, 1984. "Net Migration Estimation in an Extended, Multi-regional Gravity Model." *Journal of Regional Science*, 24. 199-33.

Gross, Dominique M., 2006. "Immigration Policy and Foreign Population in Switzerland." Policy Research Working Papers. No 3853. The World Bank. Washington, D.C.. February.

Gross, Dominique M., and, Nicolas Schmitt, 2003. "The Role of Cultural Clustering in Attracting New Immigrants." *Journal of Regional Science*. 43, 2. 295-318.

Hatton, T.J., and J.G. Williamson, 2002, "What Fundamentals Drive World Migration?" NBER Paper #9159.

Helliwell, John F., 1997, "National Borders, Trade and Migration." *Pacific Economic Review,* October, 165-85.

Heston, Alan, Robert Summers and Bettina Aten, 2002. *Penn World Table. Versions 5.6 and 6.1.* Center for International Comparisons at the University of Pennsylvania (CICUP). October.

Hirter, Hans, Marianne Benteli, Magdalena Bernath, and Elisabeth Ehrensperger, 2002. "Schweizerische Politik 1990 bis 2001. Ein Überblick über die wichtigsten Ereignisse und Entscheidungen." Synthese au Basis des Jahrbuchs 'Schweizerische Politik-Année politique Suiss' im Auftrag der Schweizerischen Bundeskanzlei. Universität Bern. Institut für Politikwissenschaft. March.

ILO, International Labour Office, 2003. *Key Indicators of the Labour Market.* 2001-2002. Geneva.

IMES, Office Fédéral de l'Immigration, de l'Intégration et de l'Emigration, 2004a. *Statistique des Etrangers 2003. Volume 2 : Résultats rétrospectifs.* Berne.

_____, 2004b. "Directives et Commentaires. Entrée, Séjour et Marché du Travail (Directives LSEE)". 2e version remaniée et adaptée. Janvier. Berne

Jasso, Guillermina, and, Mark. R. Rosenzweig, 1986. "Family Reunification and the Immigration Multiplier: U.S. Immigration Law, Origin-Country Conditions, and the Reproduction of Immigrants." *Demography*. 23,3. 291-311.

Karemera, D., Oguledo, V.I., and B. Davis, 2000, "A Gravity Model Analysis of International Migration to North America." *Applied Economics.* 32, 13, 1745-55.

Le Temps, 2005. "Emmen bannit les Naturalisations par les Urnes." 26 Février. Genève.

Massey, D.S., J. Arango, G. Hugo, A. Kouaouci, A. Pellegrino, and J.E. Taylor, 1993, "Theories of International Migrations: A Review and Appraisal." *Population and Development Review*. 19, 3. 431-66.

OFE, Office Fédéral des Etrangers, 2002a. "Comparaison des Principaux Eléments : Réglementation en vigueur (LSEE /OLE), Projet de loi sur les étrangers (LEtr), Accord sur la libre circulation EU/AELE (avec délais transitoires)". Document d'information. 8 mars. Berne.

_____, 2002b. "Réglementation relative au Séjour et Procédures. Aperçu." Département Fédéral de Justice et Police. Septembre. Berne.

_____, 2001a. *Les Etrangers en Suisse. Mouvement de la Population : Résultats rétrospectifs.* Bulletin d'information statistique 2B. Berne.

OFR, Office Fédéral des Réfugiés, 2004. "Réglements de Séjour selon le Pays d 'Origine." Etat AUPER2 du 8 mars. Service de la Statistique, juillet. Berne.

OFS, Office Fédéral de Statistique, 2005. *Encyclopédie statistique de la Suisse*. Electronic Database. Neuchâtel.

_____, 2004a. *La Population étrangère en Suisse.* Neuchâtel.

_____, 2004b. "Les Personnes de Nationalité étrangère sur le Marché du Travail suisse." Vie active et Rémunération du Travail. Communiqué de Presse. No 0351-0401-00. Février. Neuchâtel.

_____, 2000. Analyse des Mouvements migratoires internes des Etrangers en Suisse 1981-1995. *DEMOS*. Bulletin d'Information démographique. No 3. Neuchâtel.

Piguet, Etienne, and, Hans Mahnig, 2000, "Quotas d'Immigration: l'Expérience suisse." Cahiers de Migrations internationales No 37. Service des Migrations internationales. Bureau international du Travail. Genève.

UN, United Nation, 2005. *UN Common Database*. Department of Economic and Social Affairs. New-York.

Weil, Patrick, 1995. *La France et les Etrangers.* Folio actuel. Paris : Gallimard.

World Bank, 2005. *World Development Indicators.* Electronic database. Washington DC.

Appendix: Description of variables

Com. border : dummy equal to 1 if the country share a border with Switzerland (Austria, France, Germany, Italy).

***Conversions Seas.*:** dummy equal to 1 for countries who had a significant number of conversions and 0 otherwise. Countries are Germany Italy, Portugal, Spain and the countries born out of the former Yugoslavia for 1995-1996.

EU free mobility: dummy equal to 1 from mid-2002 and zero otherwise for EU member countries to capture the implementation of free mobility.

Lnetinfl$_{i,t}$: log of total net inflow of migrants to Switzerland (i.e., Total inflow of permanent residents-family reunions-conversions of seasonal workers) from country i during period t., i=Germany, France, United Kingdom, Italy, Netherlands, Austria, Portugal, Spain, former Yugoslavia, Turkey, United States, Canada, Greece, Sweden, Belgium, Denmark. Annual flows are summed over 3-year period from 1981 until 1995 (t=1 to 5, i.e., 81-83, 84-86, 87-89, 90-92, 93-95). OFS (2005) Table T22103AF, OFE (2001a) Tables 111.3R, 112.2R.

Lnetwork$_{i,t-1}$: log of foreign permanent population from the same source country i in Switzerland at the beginning of the period (i.e. end of previous year). IMES (2004a), OFS (2004a).

Lpop$_{i,t-1}$(LpCH$_{t-1}$): log of population aged 15 to 64 in Switzerland and source countries i, at the beginning of the period (i.e. end of previous year). WB (2005).

Lquota$_t$: average quota during period t, t=1 to 5 (CH, 2004b).

Lsinfl$_{i,t}$: log of net inflow of migrants to Switzerland including conversions of seasonal workers from country i during period t. Sample 1983-1995, see list of countries under *Lnetinfl$_{i,t}$*. Sample 1995-2003, i=Germany, France, United Kingdom, Italy, Netherlands, Austria, Portugal, Spain, Bosnia-Herzegovina, Croatia, FRY Macedonia, Serbia-Montenegro, Slovenia, Turkey, United States and Canada, Greece, Sweden, Belgium, Denmark, Russia, Ukraine, Poland, Hungary. Annual flows are summed over 3-year period from 1995 until 2003 (t=1 to 3, i.e., 95-97, 98-2000, 2001-2003). OFS (2005) Table T22103AF, OFE (2001a) Table 111.3R.

Lycap$_{i,t-1}$ (LyCH$_{,t-1}$): Sample 1983-1995: Log of real GDP per capita, 1985 international prices in country i, at the beginning of the period (i.e. end of previous year). The values for the former Yugoslavia for 1991 and 1992 are extrapolated using growth rate of real GDP at constant dollars (Heston et.al., 2002, UN, 2005). Sample 1995-2003: Income per capita PPP in constant 1995 Dollars (WB, 2005). For Serbia-Montenegro, the values are computed from the same proportions with Macedonia as in UN (2005).

Non-EU : dummy equal to 1 if the country is not part of EU, zero otherwise. Spain and Portugal entered the EU in 1986 and Austria in 1995.

Pol3c : dummy equal to 1 from 1990 on for non-EU countries, as the new immigration policy discriminates between EU and non-EU countries for access to work permits.

South : Sample 1983-1995: dummy equal to 1 for Southern European countries (Italy, Spain, Portugal, Greece) and, EU-candidates and Balkans (Turkey, the former Yugoslavia) whose migrants are in majority unskilled. Sample 1995-2003: dummy equal to 1 for Southern European countries (Italy, Spain, Portugal) and, EU-candidates and Balkans (Turkey, Bosnia-Herzegovina, Croatia, FYR Macedonia, Serbia-Montenegro) whose migrants are in majority unskilled.

UrateCH$_{t-1}$: unemployment rate in Switzerland, at the beginning of the period, i.e. end of previous year. (ILO, 2003).

War : dummy variable equal to 1 from June 1991 to end of 1995 and 0 otherwise. It corresponds to the beginning of the Croatia war with the attack on Vukovar and the end of the Bosnia war with the Dayton agreement.

Table A.I.: Correlation matrix 1983-1995 (16 countries [a])

	$Lnetinfl_{i,t}$	$Lpop_{i,t-1}$	$LpCH_{t-1}$	$Lycap_{i,t-1}$	$LyCH_{,t-1}$	$UrateCH_{t-1}$
$Lnetinfl_{i,t}$	1					
$Lpop_{i,t-1}$	.059	1				
$LpCH_{t-1}$	.634	.033	1			
$Lycap_{i,t-1}$	-.104	.150	.150	1		
$LyCH_{,t-1}$	.102	.030	.905	.153	1	
$UrateCH_{t-1}$	-.013	.024	-.583	.096	.442	1
$Network_{i,t-1}$	.845	.439	.095	-.334	.083	.080

[a] The sample countries are: Germany, France, UK, Italy, the Netherlands, Austria, Portugal Spain, the former Yugoslavia, Turkey, US, Canada, Greece, Sweden, Belgium, Denmark.

Table A.II.: Correlation matrix 1995-2003 (23 countries [b])

	$Lnetinfl_{i,t}$	$Lpop_{i,t-1}$	$Lycap_{i,t-1}$	$LyCH_{,t-1}$	$UrateCH_{t-1}$
$Lnetinfl_{i,t}$	1				
$Lpop_{i,t-1}$	.546	1			
$Lycap_{i,t-1}$	.265	.198	1		
$LyCH_{,t-1}$	.002	.003	.023	1	
$UrateCH_{t-1}$	.003	-.008	-.084	-.814	1
$Network_{i,t-1}$	.709	.051	.057	.017	-.026

[b] The sample countries are: Germany, France, United Kingdom, Italy, Netherlands, Austria, Portugal, Spain, Bosnia-Herzegovina, Croatia, FRY Macedonia, Serbia-Montenegro, Slovenia, Turkey, United States and Canada, Greece, Sweden, Belgium, Denmark, Russia, Ukraine, Poland, Hungary.

Table 1: Permits for foreign residents in Switzerland

Type of permit	Conditions	Duration	Characteristics
A. Short-term work/residence permits			
1. Seasonal permit (Permit A). Eliminated in 2002.	Work contract for 9 months or less.	9 months, renewable.	- Return to the country of origin for remaining of year. - No family reunion allowed. - Not available to non-EU citizens between 1995 and 2002.
2. Short-term permit (Permit L) Since 2002	Work contract for less than 12 months. - Student, trainees, retirees, others.	Less than 12 months, renewable up to max. 24 months.	- For non EU/EFTA skilled foreigners. - No family reunion allowed.
B. Long-term work/residence permits			
3. One-year permit (Permit B)	- Work contract for more than 12 months. - Accepted refugee. - Completed 10 year of uninterrupted seasonal permits and an unlimited job contract.	1 year, renewable.	- Authorization must be sought to change employers or cantons. - Family reunion allowed under conditions (spouse and children under 18).
4. Establishment permit (Permit C)	- Completed 10 years of 1-year work contract. - Completed 5 years of 1-year contract as accepted refugee.	Unlimited	- Free geographical and professional mobility. - Family reunion allowed (spouse and children under 18).
5. Cross-border permit (Permit G)	- Work contract.	1 year renewable	- No professional mobility. - Limited to bordering regions within Switzerland. - Daily return to home in foreign bordering region. - Non-citizens of the bordering country are eligible if they are permanent residents.
C. Permits for asylum seekers			
6. Asylum seekers permit (Permit N)	- Claim for refugee status	During procedure	- Can work under some conditions
7. Temporary admission permit (Permit F)	- Rejected claim for refugee status	12-month renewable	- Return to origin country not desirable for various specified reasons.

Sources: Adapted from OFE (2002a, 2002b), CH (2004a), IMES (2004a) pp. 8-14.

Table 2: Permanent residents in Switzerland

	Total	Yugosl. [a]	Turkey	Portugal	Italy	Spain	Germany	France	Others
	1.	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**
	Number of persons								
1930	355,522	1,081	736	114	127,093	1,316	134,561	37,303	53,318
1950	285,446	892	590	173	140,280	1,212	55,437	27,470	59,392
1960	584,739	1,169	645	386	346,223	13,524	93,406	31,328	98,058
1970	982,887	22,972	12,137	3,167	526,579	102,341	115,564	51,396	148,731
1975	1,012,710	34,347	26,093	5,913	520,657	112,996	109,452	51,885	151,367
1980	892,807	43,898	38,073	10,687	420,700	97,232	86,402	46,177	149,638
1985	939,671	69,527	50,923	30,851	392,481	108,352	81,142	47,096	159,299
1990	1,100,262	140,739	64,192	85,649	378,749	116,138	83,401	49,980	181,414
1995	1,330,574	294,217	78,615	134,827	358,933	101,412	90,903	53,612	218,055
2000	1,384,382	337,335	79,476	134,675	319,641	83,405	108,815	59,813	261,222
Bosnia-Herzeg.		*44,296*							
Croatia		*43,649*							
FYR Macedon.		*55,912*							
Serb.-Monten.		*190,731*							
Slovenia		*2,747*							
2003	1,471,033	350,829	77,671	149,839	303,770	76,773	133,636	65,006	313,509
		Yugosl.	**Turkey**	**Portugal**	**Italy**	**Spain**	**Germany**	**France**	**Others**
	Shares in total (%)								
1930	-	0.3	0.2	0.03	35.7	0.4	37.8	10.5	15.0
1950	-	0.3	0.2	0.1	49.1	0.4	19.4	9.6	20.8
1960	-	0.2	0.1	0.1	59.2	2.3	16.0	5.4	16.8
1970	-	2.3	1.2	0.3	53.6	10.4	11.8	5.2	15.1
1975	-	3.4	2.6	0.6	51.4	11.2	10.8	5.1	14.9
1980	-	4.9	4.3	1.2	47.1	10.9	9.7	5.2	16.8
1985	-	7.4	5.4	3.3	41.8	11.5	8.6	5.0	17.0
1990	-	12.8	5.8	7.8	34.4	10.6	7.6	4.5	16.5
1995	-	22.1	5.9	10.1	27.0	7.6	6.8	4.0	16.4
2000	-	24.4	5.7	9.7	23.1	6.0	7.9	4.3	18.9
Bosnia-Heregz.		*3.2*							
Croatia		*3.2*							
FYR Macedon.		*4.0*							
Serb.-Monten.		*13.8*							
Slovenia		*0.2*							
2003	-	23.8	5.3	10.2	20.7	5.2	9.1	4.4	21.3

Sources: Computed from IMES (2004a), Table S1A.1850R, OFS (2004a), Table P02F. [a] From 1995 on, sum of immigrants from Bosnia Herzegovina (Bosnia-Herzeg.), Croatia, the FYR of Macedonia (FYR Macedon.), Serbia-Montenegro (Serb.-Monten.), and Slovenia.

Table 3: Flows of migrants from the former Republic of Yugoslavia

	Inflow of permanent residents					New establish. permits (C)	Outflow of permanent residents	Acquisition of Swiss nationality
	Total	Family reunion	Conversions of seasonal permits	Recognized refugees (incl. family reunion)	Humanitar. permits			
	1.	2.	3.	4.		5.	6.	7.
1984	7,684	3,387	2,308			4,397	3,609	n.a.
1985	9,112	4,239	2,727			3,698	3,804	n.a.
1986	11,024	5,767	2,663			4,044	3,999	n.a.
1987	13,522	7,390	2,775			5,732	4,327	n.a.
1988	16,666	9,652	3,146			8,340	4,737	n.a.
1989	19,899	11,420	4,041			10,579	5,263	n.a.
1990	27,650	15,631	5,763			14,521	5,868	n.a.
1991	34,170	20,276	7,146			17,715	6,443	607
1992	40,978	26,589	7,383			17,775	7,483	936
1993	40,612	20,643	6,410			14,795	7,031	1,454
1994	31,792	16,657	6,464	1,539	71	13,250	8,001	1,821
1995	24,478	16,366	2,226	1,374	127	15,823	8,572	2,445
1996	16,301	9,144	2,244	1,033	157	18,955	8,841	2,681
1997	12,884	8,196	104	1,029	138	23,536	7,067	2,885
1998	11,498	8,294	2	678	134	26,393	6,051	3,232
1999	12,633	9,632	2	499	131	17,258	4,160	3,855
2000	10,842	7,543	2	379	326	15,549	4,427	6,111
2001	12,626	7,790	3	434	1,834	17,383	3,448	6,881
2002	11,995	8,761	-	330	1,874	n.a.	2,553	10,945
2003	9,672	7,224	-	224	1,567	n.a	2,094	11,967

	Share of Yugoslavia in total from all countries (%)							
	Inflow of permanent residents					New establish. permits (C)	Outflow of permanent residents	Acquisition of Swiss nationality
	Total	Family reunion	Conversions of seasonal permits	Recognized refugees (incl. fam. reunion)	Human. permits			
	1'.	2'.	3'.	4'.		5'.	6'.	7'.
1984	11.5	15.7	27.7	-	-	8.0	6.5	n.a.
1990	23.5	36.0	35.3	-	-	15.6	9.8	n.a.
1994	30.7	45.9	54.2	52.1	7.5	23.0	12.5	13.2
2000	12.4	28.2	0.1	18.2	15.2	22.0	7.9	21.3
2003	10.3	18.0	-	13.7	41.7	n.a	4.5	33.8

Sources: IMES (2004a), OFE (2001a), OFR (2004).

Table 4: Statistical characteristics of the main variables in levels

	Mean	Maximum	Minimum
	1981-1995 (n=80)		
$Netinfl_{i,t}$	7,261	26,108	864
$Sinfl_{i,t-1}$	9,317	40,222	875
$Network_{i,t-1}$	57,787	420,700	1,593
$Pop_{i,t-1}$ *(,000)*	28,528	167,462	3.32
$Ycap_{i,t-1}$	10,853	18,095	2,872
$YcapCH_{t-1}$	15,193	16,299	14,205
$Uratech_{t-1}$	1.06	2.8	0.2
	1995-2003 (n=69)		
$Sinfl_{i,t-1}$	5,258	36,089	98
$Network_{i,t-1}$	52,977	364,011	260
$Pop_{i,t-1}$	28,973	207,426	1,302
$Ycap_{i,t-1}$	14,904	30,742	1,560
$YcapCH_{t-1}$	25,480	25,803	25,060
$Uratech_{t-1}$	3.57	4.1	2.7

Table 5: Estimation net inflow of workers: 1981-1995 (excluding conversions of seasonal permits)

	New worker permits	*New worker permits*	*New worker permits*	*New worker permits*	*New worker permits*	*New worker permits*
		New 3-circle policy	*South vs North*	*EU vs Non-EU*	*Border with CH*	*Border with CH and EU*
	1.	**2.**	**3.**	**4.**	**5.**	**6.**
$c^{a/}$	-12.4 (.154)	-8.51 (.439)	-5.20 (.375)	-4.90 (.374)	-5.49 (.346)	-5.79 (.307)
$Lpop_{i,t-1}$	.248 (.000)**	.257 (.000)**	.213 (.000)**	.207 (.000)**	.231 (.000)**	.235 (.000)**
$LycapCH_{t-1}$	1.09 (.233)	.538 (.645)	-.092 (.905)	-.210 (.788)	-.055 (.945)	.325 (.672)
$Lycap_{i,t-1}$	.209 (.144)	.360 (.022)**	.606 (.118)	.703 (.227)	.484 (.303)	.282 (.493)
$UrateCH_{-1}$	-.120 (.061)*	-.155 (.053)*	-.081 (.035)**	-.084 (.041)**	-.076 (.056)*	-.072 (.045)**
$Network_{i,t-1}$	.455 (.000)**	.442 (.000)**	.566 (.000)**	.569 (.000)**	.536 (.000)**	.482 (.000)**
Non-EU	-	-	-	-.023 (.831)	-	-
Com. border	-	-	-	-	.057 (.641)	-
EU* Com. border	-	-	-	-	-	.257 (.006)**
$Lpop_{i,t-1}*south$	-	-	-.749 (.000)**	-.739 (.000)**	-.773 (.000)**	-.802 (.000)**
$LycapCH_{t-1}*south$	-	-	1.98 (.000)**	2.08 (.000)**	1.90 (.000)**	1.81 (.000)**
$Lycap_{i,t-1}*south$	-	-	-1.30 (.002)**	-1.42 (.045)**	-1.20 (.012)**	-1.09 (.012)**
$UrateCH_{t-1}*south$	-	-	-.178 (.016)**	-.176 (.023)**	-.182 (.015)**	-.183 (.010)**
$Network_{i,t-1}*south$	-	-	.432 (.000)**	.430 (.000)**	.457 (.000)**	.496 (.000)**
$Lpop_{i,t-1}*3-circle policy$	-	-.099 (.168)	-	-	-	-
$LycapCH_{t-1}*3-circle policy$	-	.174 (.567)	-	-	-	-
$Lycap_{i,t-1}*3-circle policy$	-	-.099 (.168)	-	-	-	-
$UrateCH_{t-1}*3-circle policy$	-	.075 (.531)	-	-	-	-
$Network_{i,t-1}*3-circle policy$	-	.151 (.162)	-	-	-	-
R^2 (adj.)	.807	.817	.921	.920	.920	.925
t	5	5	5	5	5	5
i	16	16	16	16	16	16
n	80	80	80	80	80	80
Schwarz Bayes IC	-1.599	-1.446	-2.294	-2.240	-2.241	-2.305

[a/] p-values in parentheses; *, **, 5%, 10% significance respectively. Heteroskedastic-consistent standard errors.

Table 6: Estimation net inflow of workers: regional effects 1981-1995
(excluding conversions of seasonal permits)

	New worker permits	*New worker permits*	*New worker permits*	*New worker permits*
	Border with CH and EU	*War in former Yugoslavia.*	*Excluding former Yugoslavia*	*Southern EU countries only (Italy, Spain, Portugal, Greece)*
	1.	**2.**	**3.**	**4.**
c[a/]	-5.79 (.307)	-5.78 (.308)	-5.77 (.344)	-6.69 (.206)
Lpop$_{i,t-1}$	.235 (.000)**	.235 (.006)**	.236 (.000)**	.250 (.000)**
LycapCH$_{t-1}$	.325 (.672)	.324 (.674)	.332 (.685)	.646 (.380)
Lycap$_{i,t-1}$	.282 (.493)	.282 (.492)	.274 (.507)	.073 (.863)
UrateCH$_{-1}$	-.072 (.045)**	-.072 (.046)**	-.072 (.049)**	-.068 (.060)**
Lnetwork$_{i,t-1}$	.482 (.000)**	.482 (.000)**	.480 (.000)**	.429 (.000)**
*EU*com. border*	.257 (.006)**	.256 (.006)**	.263 (.004)**	.415 (.000)**
War	-	.014 (.966)	-	-
*Lpop$_{i,t-1}$*south*	-.802 (.000)**	-.799 (.000)**	-.789 (.000)**	-.393 (.028)**
*LycapCH$_{t-1}$*south*	1.81 (.000)**	1.80 (.000)**	1.77 (.001)**	2.10 (.000)**
*Lycap$_{i,t-1}$*south*	-1.09 (.012)**	-1.09 (.018)**	-1.07 (.023)**	-2.26 (.001)**
*UrateCH$_{t-1}$*south*	-.183 (.010)**	-.184 (.019)**	-.178 (.036)**	-.119 (.126)
*Lnetwork$_{i,t-1}$*south*	.496 (.000)**	.494 (.019)**	.486 (.000)**	.570 (.000)**
R^2 (adj.)	.925	.925	.918	.937
t	5	5	5	5
i	16	16	15	14
n	80 (69)	80	75	70
Schwarz Bayes IC	-2.305	-2.250	-2.240	-2.406

[a/] p-values in parentheses; *, **, 5%, 10% significance respectively. Heteroskedastic-consistent standard errors.

Summary of elasticities

	Source country income	**Switzerland income**	**Network**	**Scale source country**
Northern countries	0	0	.482	.235
Southern countries	-1.09	1.81	.978	-.567
Northern countries	0	0	.429	.250
Southern without the former Yugoslavia	-2.26	2.10	.999	-.143

Table 7: Estimation net inflow of workers: 1995-2003 (including conversions of seasonal permits)

	New worker permits	New worker permits	New worker permits	New worker permits		New worker permits	New worker permits
		Same sample countries as earlier period[a]	South vs North	Excluding Bos.-H., Croatia, Macedonia, Serbia-Mont.		1983-1995 South vs North	1983-1995 Excluding former Yugoslavia
	1.	**2.**	**3.**	**4.**		**5.**	**6.**
c[b]	-140 (.176)	-220 (.080)*	-66.0 (.422)	-29.8 (.718)	c[a]	-1.18 (.871)	-2.74 (.715)
$Lpop_{i,t-1}$	.461 (.000)**	.459 (.000)**	.533 (.000)**	.533 (.000)**	$Lpop_{i,t-1}$	.199 (.000)**	.205 (.000)**
$LycapCH_{t-1}$	13.1 (.200)	20.7 (.091)*	5.41 (.500)	1.86 (.817)	$LycapCH_{t-1}$	-.526 (.589)	-.273 (.783)
$Lycap_{i,t-1}$	.131 (.333)	.130 (.649)	.428 (.039)**	.373 (.087)*	$Lycap_{i,t-1}$	.199 (.000)**	.556 (.200)
$UrateCH_{-1}$	.586 (.015)**	.852 (.006)**	.483 (.034)**	.411 (.078)*	$UrateCH_{-1}$	-.067 (.082)*	-.068 (.072)*
$Lnetwork_{i,t-1}$	.503 (.000)**	.532 (.000)**	.447 (.000)**	.506 (.000)**	$Lnetwork_{i,t-1}$	.570 (.000)**	.551 (.000)**
Conversions Seas.	.093 (.726)	-.018 (.960)	.689 (.001)**	.298 (.073)*	*EU*com. border*	.050 (.669)	.100 (.370)
EU free mobility	1.32 (.018)**	1.68 (.012)**	1.34 (.006)**	1.26 (.010)**			
$Lpop_{i,t-1}$*south	-	-	-.225 (.087)*	-.860 (.000)**	$Lpop_{i,t-1}$*south	-1.27 (.000)**	-1.32 (.000)**
$LycapCH_{t-1}$*south	-	-	1.09 (.000)**	1.94 (.000)**	$LycapCH_{t-1}$*south	2.76 (.000)**	2.77 (.000)**
$Lycap_{i,t-1}$*south	-	-	-.984 (.000)**	-1.05 (.000)**	$Lycap_{i,t-1}$*south	-1.52 (.002)**	-1.51 (.003)**
$UrateCH_{t-1}$*south	-	-	-.091 (.659)	-.058 (.679)	$UrateCH_{t-1}$*south	-.272 (.001)**	-.224 (.018)**
$Lnetwork_{i,t-1}$*south	-	-	.137 (.244)	.378 (.001)**	$Lnetwork_{i,t-1}$*south	.757 (.000)**	.800 (.000)**
R^2 **(adj.)**	.787	.765	.874	.805	R^2 **(adj.)**	.912	.906
t	3	3	3	3	**t**	5	5
i	23	19	23	19	**i**	16	15
n	69	57	69	57	**n**	80	75
Schwarz Bayes IC	-.725	-.538	-1.028	-1.122	**Schwarz Bayes IC**	-1.875	-1.870

[a] Same 15 countries as in Tables 5 and 6 plus 4 new countries out of Yugoslavia (Bosnia-Herzegovina, Croatia, Macedonia, Serbia-Montenegro) [b] p-values in parentheses; *, **, 5%, 10% significance respectively. Heteroskedastic-consistent standard errors.

Summary of elasticities

	Source country income	Switzerland income	Network	Scale source country
Northern countries	.428	0	.447	.533
Southern countries	-.456	1.09	.584	.308
Northern countries	.373	0	.506	.533
Southern without BH, Cro, Mac, SM	-.677	1.94	.884	-.327

Figure 1: Geographical distribution of immigrants

Legend: French-speaking region □ German-speaking region □ Italien-speaking region