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The crisis, the monetary union, and migration

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Bruno Dallago

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The crisis, the monetary union, and migration

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Abstract

The paper considers the relation between the crisis in the Eurozone and migration. The international crisis caused a shock that has had asymmetric effects within the Eurozone due to the divergent economic performances and different institutions of the member countries. At the same time, European institutional incompleteness deprived the member countries of effective policy-making and European policy management and support, thus converting the common currency into a problematic asset. Under these conditions the theories of the Optimal Currency Area offer important hints on what is necessary for making the monetary union viable. These include labour mobility and wage flexibility, both insufficient in the Eurozone. The paper then considers the features of immigration to the Eurozone and inquires whether a better management of immigration, and high-skill immigration in particular, can contribute to compensate the missing factors and make the Eurozone more viable.

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1. The crisis and Europe

The global crisis started in the United States (US) at the end of 2007 and caught Europe unprepared. In the US the reliance on unregulated markets greatly expanded the financialisation of the economy. Policies favouring business and finance to the disadvantage of labour fostered excess and risky credit, financial and real bubbles, and financial disequilibria. Once the financial crisis broke out in 2008, the American administration adopted massive government intervention to support financial institutions in trouble. In spite of these attempts the crisis spread soon to the real economy and generated a "great contraction" (Reinhart and Rogoff 2009, Stiglitz 2010).

The European Union (EU) in general, and the Eurozone in particular, were for some time affected by illusions about their strengths and merits. Along with the virtue of the common currency, the European Union was considered safer also thanks to the benefits of integration, prudent financial regulation and the sturdy features of continental European capitalism. The latter include lower financial depth and integration, conservative financial regulation and the prudent attitude of financial institutions. The only exception appeared to be macroeconomically unbalanced small economies (Greece, Hungary and Ireland), where the crisis was evident already in 2008.

Various transatlantic linkages caused and reinforced the spread of the crisis to the Eurozone. These included financial, real, policy, political, and psychological linkages in what is often understood as a contagion process.[1] The money market sudden arrest; the fact that European financial institutions held a large share of US mortgage-based thus sharing in the losses that arose once the US housing bubble burst; and the sequence of falls in the stock market led to a substantial shrinking of bank credit. Export to the US market, which accounted for 23.2 percent of total EU exports in 2006, decreased at an annual average rate of 5.1 percent starting in 2007 and up to 2009. The strong real appreciation of the euro before 2008 significantly hampered export. At the same time, the increasing volatility of other currencies and of the price of commodities has had an adverse impact on the European economy. The economic slowdown activated automatic stabilizers, increasing social spending and decreasing, at the same time, governments' fiscal revenues. The way to growing fiscal deficits and increasing sovereign debts was paved.

Along with the US influence in the unfolding of the crisis in the Eurozone, of critical importance has been the asymmetric presence of domestic imbalances and other forms of structural and policy vulnerability in different countries and the interconnection of these aspects with institutional idiosyncrasies and policy failures both at the national and at the European level. Factors of structural and policy vulnerability included public and private debt, market rigidity, unemployment structure, demography, inequalities, fiscal policies and the diverse domestic effect

[1] *No shared definition has yet been reached in the literature on the controversial notion of contagion, which encounters serious problems across theory and empirical work. It is useful to briefly recall the fundamental distinction, upheld by most of the literature on financial contagion (Reinhart and Calvo 1996, Kaminsky and Reinhart 2000, Eichengreen et al. 1996), between a) the development of synchronized shocks in different countries, which are due to similar structural vulnerabilities rather than to the presence of channel of contagion, and b) the cross-country transmission of shocks. As to the latter, this literature further distinguishes between fundamentals-based contagion, which occurs when the infected country is linked to others via trade or finance, and true contagion which takes place when common shocks and all channels of potential interconnection are absent (Reinhart and Calvo 1996).*

of the common monetary policy. These factors have played an important role in explaining the differential vulnerability and resilience, and hence performance of distinct European countries.

Although some of the problems are common to the entire European Union, it is within the Eurozone that they appear in their full significance. Indeed, the common currency takes monetary policy out of the hands of national governments and the Stability and Growth Pact (SGP) strongly limits their fiscal policies. These constrains to policy making create what was named the "impossible trinity"[2] and exacerbate the effects of shocks to the disadvantage of economies in vulnerable position. With no sovereign monetary policy and strictly constrained fiscal policy, governments cannot counteract external shocks. Given the lack of common support – through a lender of last resort, a common budget and financial transfers, or the mutualisation of debts – a symmetric external shock, such as the US crisis, inevitably causes a set of asymmetric negative consequences for the member countries of the Eurozone, given their different economic and financial situation. Economically and financially unbalanced countries thus become vulnerable to the external shock since they lack policy instruments to withstand or recover from the effects of such shocks. The confidence of financial markets in the solvency of those countries may thus be shaken.

According to the ECB data, the Residential Property Price Index of the Eurozone, which refers to new and existing dwellings, doubled between 1994 and 2008. This growth was the outcome of different national situations. According to the house price indices published by *The Economist*, house prices in Spain, Ireland, Great Britain, Iceland, Estonia and Lithuania had been steadily and sharply growing from the end of the 1990s to 2006. Between 2004 and 2005 the prices of the houses grew at a rate of 9 percent or more in Italy, Belgium, Denmark and Sweden, reaching in Spain and France annual growth rates of over 15 percent. This is a much faster pace than those in the rest of Europe and in the USA. However, in Germany house prices had steadily declined between 1997 and 2010.

Banks in the EZ-core have massively invested in the periphery countries. Large German current account surpluses vis-à-vis current account deficits of the so-called PIGS countries (Portugal, Ireland, Greece and Spain), together with low interest rates in the latter countries thanks to the common currency, led to a strict interconnectedness in the Eurozone (Baldwin and Gros 2010). Interconnectedness, in turn, increased the vulnerability of the Eurozone banking system, as it became evident during the refinancing crisis in Greece: in spite of the modest size of the Greek economy (less than 2 percent of the Eurozone GDP), the way to a systemic crisis of the Eurozone was opened.

Along with being strictly interconnected, European banks were also assertively expanding lending – particularly in the Eastern European markets - and were overleveraged. The Irish, French, Spanish and Italian banks in particular increased their exposition at an unprecedented pace,[3] and German banks were massively exposed towards PIGS markets. It was primarily through the bank channel that the default in the US derivatives market threatened the stability of the Eurozone as well as the credibility and stability of the common currency. This is what actually happened in 2009–2010.

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2 The impossible trinity at the core of the Eurozone vulnerability consists of strict no-monetary financing, bank-sovereign interdependence and no co-responsibility for public debt (Pisani-Ferry 2012).

3 In Ireland total bank assets as a percentage of GDP rose from 360 percent in 2001 to 705 percent in 2007, in France from 229 percent to 373 percent, in Italy from 148 percent to 220 percent and in Spain from 177 percent to 280 percent (Baldwin and Gros 2010).

Noteworthy are also the outstanding leverage ratios (shareholder equity to total assets) of Eurozone banks (Gros and Micossi 2008). The 13 largest European banks average leverage ratio was 35 compared to an average of 20 in the US. However, the European average covers wide national differences: French, German and British banks were more exposed than Italian and Spanish ones, which had been subject to a more prudential domestic regulation. Moreover, different governments responded differently and to a dissimilar extent to the problem of toxic assets, and more in general to the difficulties of the bank sector, thus further highlighting the lack of coordinated banking policy within the Eurozone.[4] This contributed to the financial vulnerability of the largest economies (Baldwin and Gros 2010).

Many Eurozone banks were in fragile state when affording the risk of a sudden financial arrest (Caballero 2010). Financial instability in the Eurozone was thus largely a consequence of the failure of financial and banking regulation which caused the fragility of the financial system. Basel II favoured the undercapitalization of banks and contributed to the financial crisis through low capital coefficients, admission of hybrid capital, lax criteria for risk evaluation, and wide possibilities for circumventing the rules (Spaventa 2010).

Important differences also exist in other indicators. Uneven inflation rates within the Eurozone led to different real interest rates, in spite of the common monetary policy. This outcome had important consequences for borrowing based investments in housing and for financing sovereign debts. In Eastern and Southern European countries this might have encouraged a substantial surge in private and foreign debts experienced before the crisis onset. Germany shows a different trend, with declining private debt.

It is interesting to notice that the European Commission report on the first ten years of the European Monetary Union (EMU) (European Commission 2008) stressed that disregarding non-fiscal dimensions, such as competitiveness, credit booms and current-account deficits, was a mistake. However, financial issues have dominated debates and policy making, and efforts have concentrated on the need to strengthen the financial architecture and practice of the Union and its member countries. Such critical issues as diverging productivity within the Eurozone, the sudden reversal of capital flows between the north and the south of the Eurozone, or the divergence of real exchange rates and their consequences for the integration and sustainability of the Eurozone are mostly confined to academic debate with scant appearance in European governments' concerns[5].

It is by now clear that concentrating on financial issues is a one-sided approach that cannot solve European problems. The present financial risks and difficulties of various EU member countries are a liability on their possibility to grow and create jobs and new dangers may be at the horizon (Sinn 2014). Financial problems have a pre-emptive nature only in view of the present incomplete institutional architecture of the Union, with particular concern for the

4 *Overall, public support (by the government and the central bank) to banks was particularly strong in Germany, Ireland, and the Netherlands – let alone the UK. Public support was mild in France and negligible in Spain and Italy was.*

5 *However, different is the position of international organizations (IMF 2013, OECD 2014) and the American administration: "Within the euro area, countries with large and persistent surpluses need to take action to boost domestic demand growth and shrink their surpluses. Germany has maintained a large current account surplus throughout the euro area financial crisis, and in 2012, Germany's nominal current account surplus was larger than that of China. Germany's anemic pace of domestic demand growth and dependence on exports have hampered rebalancing at a time when many other euro-area countries have been under severe pressure to curb demand and compress imports in order to promote adjustment. The net result has been a deflationary bias for the euro area, as well as for the world economy." USDT 2013, p. 3.*

Eurozone. First, the incompleteness of the financial and monetary architecture reflects the fundamental lack of trust among member countries which they try to overcome by means of financial discipline. If we take a broader, longer and deeper perspective it appears that the present financial and monetary crisis of the Union is rooted in the real economy. Second, concentrating on a fiscal and monetary solution to the crisis by means of restrictive policies is likely to be untenable in the medium-long run because of its depressive effects on the real economy, the negative effect on sovereign debt, heavy social costs and political destabilisation.

This sequence of events in the Eurozone corresponds to what Reinhart and Rogoff (2010) found in more than 70 countries over two centuries: private debt increase, fuelled by the growth of both domestic banking credit and external borrowing, is a recurrent antecedent to domestic banking crises, which, in turn, tend to precede or accompany sovereign debt crisis. What is peculiar in the Eurozone is the difference among member countries. In the Eurozone as a whole household debt increased from 52 percent to 70 percent of GDP from 1999 to 2007, while financial institutions increased their debt from less than 200 percent of GDP to more than 250 percent (De Grauwe 2010). However, and while in the so-called Eurozone-core (EZ-core) (Germany, France, Austria, Belgium and the Netherlands) households have been fiscally rather solid, in the so-called periphery households' debt increased at a much higher pace.

The conclusion is straightforward: the Eurozone crisis came from across the Atlantic only in part, and not in its major extent. The conditions were ripe for an autonomous Eurozone crisis. The American shock gave the initial push, but the crisis would have come anyway, probably somewhat later and perhaps in a slightly milder form.

2. The consequences of the incomplete monetary union and labour

The deep economic and financial asymmetries among different countries in an economic and monetary union may have perverse consequences when common institutions are incomplete or ineffective. In normal times the internal divergence among member countries tends to increase, but in the absence of traumatic events the process can go on for a long period of time. In fact, countries have different devices to accommodate the negative effects of divergence, including the political will to be part of the union. However, things change when external circumstances become adverse, which typically happens when there is an external shock.

Divergence of productivity growth among the member economies of a monetary union represents a particularly serious problem. The negative consequences of productivity differentials can be attenuated in different ways and therefore they do not translate automatically into unsustainable economic situation in weaker countries. An institutionally complete union, similar to a national government, has various instruments to this end, including: a common government of the economy able to transfer common resources to the advantage of the weaker economies (fiscal sharing); a lender of last resort, typically a common central bank; socialisation of debt through common bonds. In all these cases the weaker economy can remain part of the monetary union while enjoying a level of income similar to that of the stronger countries or at least with a growth rate comparable to that of stronger economies. While economic performance in a weaker economy is lagging behind, incomes and investment may remain high. However, these instruments allocate resources from one part of the monetary union (one country or group of countries) to another one, similarly to what happens with regions in a country. Thus, there is a need for a strong agreement among the members of the union, strong commitment and full mutual trust. This comes usually in the form of a common government of the economy.

If, for whatever reason, a monetary union does not have a full institutional architecture, national governments still have other instruments that can serve the purpose of improving the country's competitiveness and reduce external account imbalances to the disadvantage of the weak economies. In order for competitiveness to improve, productivity must increase. This can be done by shedding workers and decreasing labour costs.

There are various ways through which unit labour costs in weaker countries can improve and converge to those of their trade competitors. Unfortunately, some of them require longer time and social consensus and participation. In a monetary union the internal depreciation of the currency is rejected by definition. External depreciation of the common currency against third country currencies would ease the situation of weak union countries but would have mild advantages due to their deep integration. Prolonging the working time for the same wage would be another technically rather simple solution, yet politically and socially difficult. This in itself does not solve the problems if it is not accompanied by other measures that improve the productive capacity of the economy. Indeed, weak Eurozone economies, such as Greece and Portugal, have the longest working times within the OECD (http://stats.oecd.org/index.aspx?DataSetCode=ANHRS).

Sounder ways to decrease the unit labour costs are investments improving and strengthening the production capacity of the country as well as decreasing transaction costs and the relative weight of rents to the disadvantage of profits and wages. Unfortunately, investments require

substantial financial resources and sufficient human capital – which may be scarce in the weak economies – and it takes time before they come to maturity. A decrease in the transaction costs and the relative weight of rents require serious reforms of the economic and administrative organization, which may be cheap, but they inevitably provoke social and political opposition and the action of disadvantaged interests groups, and reaches maturity and effectiveness after a presumably rather lengthy time.

Under the pressure of events and, even more so, of the Eurozone authorities and the strong countries, economically weak countries had to resort to internal devaluation policies. Internal devaluation is usually meant as a set of policies used to regain competitiveness in order to adjust current account disequilibria by directly decreasing prices in a situation that does not allow the use of currency depreciation – i.e. in monetary unions and currency boards. In order to decrease prices production costs must fall, which requires the cutting of wages and other costs (welfare costs and transaction costs, mostly those of an administrative and political nature) and implementing structural reforms in order to increase productivity. In a market economy the government can hardly limit the sovereignty of firms, which largely depends upon the market sector – particularly after the sweeping privatisation policies in the 1980s and 1990s.

Therefore, the easier way to implement internal devaluation is through deflationary policies. Given the weak control that a government has of prices, this is usually pursued through an increase in the value added tax (VAT) and the reduction of payroll taxes and social security benefits paid by the employer in order to decrease the cost of labour. The second important way is through cutting wages and decreasing the government expenditure for welfare and social benefits. Typically, the purpose is to push down those private sector prices that are fundamental for the labour cost in the tradable sector, although these prices are out of the government direct competence. A further influence of deflation implemented in the public sector is to make the state less costly. This in turn should allow a decrease in taxes on economic activities. If the manoeuvre succeeds, resources are freed to be invested in the private tradable sector and, if wages decrease, employment should increase.

These policies unfortunately have serious drawbacks that go well beyond the social and political opposition that they inevitably are confronted with, perhaps also under the effect of monetary illusion, and the lengthy time they require for transmitting the effect of lower wages to prices. Given the tense situation of public finances in weak economies, it is difficult to reform the tax system as would be required. Therefore, internal devaluation policies have been typically implemented through public expenditure cuts and downward pressure on wages. While this may have improved external competitiveness, typically more important has been the depressive effect on the internal market. This happens both directly, when most consumers become poorer and more pessimistic and avoid to spend, and indirectly because, with imperfect competition, wage and tax cuts are passed to consumers with a delay and partially.

A serious negative effect of internal devaluation policies is an increase in internal inequality. This is due to the fact that wage cuts tend to hit some groups of workers – typically in the public sector – more than others. Politically strong groups of workers in both the public and the private sector, employees with scarce competences and self-employed people who can fix their remuneration – including managers in the financial sector - loose less or may even gain. When inequalities increase, fairness as well as social and professional mobility suffer as a consequence. A particularly negative consequence of increasing inequalities is the effect on human capital. Many families have insufficient resources for supporting the education of their children, govern-

ments decrease scholarships and support to educational institutions and perhaps increase taxation, and educational institutions react by increasing the price of education for families in order to recover resources.

When internal devaluation is successful in reducing inflation, there may be dangerous and financially destabilizing consequences for debts, both public and private. Such consequence is particularly serious if the internal devaluation causes deflation. Under these conditions the real value of debt is increased and the ratio of debt over GDP may also increase due to a typically high value of fiscal multipliers in economic recessions (Blanchard and Leigh 2013, Nuti 2013). Refinancing the debt may become difficult and the country may lose the confidence of markets and find difficult to finance investments.

In a monetary union the common monetary policy cannot deal with the effects of asymmetric shocks in individual parts of the monetary union. Equally important is the fact that the larger the internal variety of the monetary union, the greater the probability for the unique monetary policy to have asymmetric effects. First, economic, social, and institutional features of regions or countries within a monetary union may differ substantially. For instance, their labour markets may be structured and work differently, the price elasticity of their export may be different, their import energy intensity may vary, the industrial structure and the size of enterprises could be different, and the role of the state and the size of the public debt may be different. Second, financial structures may differ from one region or country of a monetary union to another, and the nature and size of asymmetric shocks and the transmission mechanism of the monetary policy may differ consequently. For instance, the features and structure of financial markets (financial depth) and the ability of enterprises to get credit may vary.

Since the currency reputation typically depends on stronger regions or countries of the union, the common monetary policy is likely to favour economically and politically strong members of the union and disfavour the weak and vulnerable ones. It is therefore of the utmost importance for the common currency to be accompanied by compensating factors that counteract the asymmetric effects of the common monetary policy. These include independent (regional or national) budget policies and the transfer of resources among regions or countries by means of government actions or through private insurance mechanisms. A bank union and supervision can implement an inter-regional or inter-country transfer of financial resources. A common central bank that acts as a lender of last resort can ease asymmetries and tensions, too.

The theory of the optimum currency area (OCA) offers a technical explanation of the fact that a monetary union works well only if certain conditions are given and suggests what could compensate for their absence (Baldwin and Wyplosz 2012).[6] An optimum currency area is usually defined as a group of countries or regions with such economic and institutional features that make the use of a common currency economically efficient compared to having two or more currencies.

The classical analysis of the OCA (Mundell 1961, Kenen 1969, McKinnon 1963) stresses that member economies must be open, their production profiles should be wide and production diversified, their resources and labour in particular should be mobile, and prices and wages flexible. Under those conditions the common currency assures its benefits without major costs

6 *For a Keynesian criticism to the OCA theory see Goodhart 1998. For an Austrian criticism see Glăvan 2004, Hayek 1990.*

or threats. Yet a common currency is after all a political undertaking and countries may decide to proceed with a currency union for the sake of its political benefits even if the above named criteria are not fully respected. In these conditions, the currency union has additional instruments to be sustainable.

Considering that the external shocks tend to randomly hit activities and countries, it is in the interest of the countries that form a currency union to activate a sort of mutual insurance mechanism by transferring resources to the advantage of the members of the union that are hit by the external shock. Inter-country fiscal transfers have the advantage of alleviating the recession in the country hit by the shock and mitigating the expansion in others. Such a solution can be implemented through the common fiscal capacity (a common budget) that acts as a mechanism of shock absorption and risk-sharing. The question remains open whether such a transfer mechanism should be based in a common institution, such as a common government of the economy, or rely on inter-governmental agreements. A common central bank acting as a lender of last resort could also effectively intervene to alleviate the consequences of the shock.

The role of the common economic government and the central bank is a critical one in an OCA and, to be effective, requires the policy preferences of the member countries to be homogeneous. This is technically and politically important, since policy responses to shocks typically have distributive consequences that may create winners and losers within the currency union. Since this is inevitable, and since policy preferences in different countries are somehow different, the union is viable if losers are compensated or if the advantages of being members of a currency union are perceived to be greater than the cost of policies. Although such a guarantee may be important, a currency union needs to be supported by the member countries' common vision of the future, their international role and their internal support to the wellbeing of the population. These sentiments help the union to foster mutual solidarity that can temper tensions and prolong the time horizon of all involved actors.

Fiscal policies could be used in a monetary union as insurance mechanisms against asymmetric shocks. The mechanism works differently depending on the institutional features of budgets. If there is a centralised common budget under a common government of the economy, this can work as a public insurance system by allowing automatic transfers between countries within the monetary union. This mechanism can offset asymmetric shocks as happens in an independent country with automatic stabilisers. However, this is not the situation of the European Union or the Eurozone, also due to the tiny size of the common budget (around 1 percent of the EU GDP).

An alternative is the existence of flexible national budgets. Centralised budgets with automatic stabilisers and discretionary intervention exist in each individual member country. In this case the disadvantaged country can allow deficit to accumulate in order to support demand. If capital markets are integrated, as typically is the case of a monetary union, capital markets can redistribute income in order to finance the deficit. However, this mechanism causes automatic transfers between generations within the same country and may create problems of debt accumulation and sustainability. Moreover, if national budgets can intervene, either automatically or discretionarily, without any constraint, this can create problems of moral hazard within the monetary union. The European Union has agreed on the Maastricht criteria and the Stability and Growth Pact to avoid such consequences.

Integrated capital markets offer an alternative mechanism that can be compared to a private insurance system. With integrated capital markets, the mobility of capital allows automatic

insurance against shocks if capital flows to where it is more needed, i.e. to deficit countries. However, there are two problems with this private mechanism. First, the insurance works if the deficit country is rich enough to pay higher returns in the form of a positive spread over benchmark return rates in strong economies. Poor countries are usually unable to do so or, if they do, they may be further impoverished. Second, if capital markets perceive the deficit country to be particularly risky as a destination for investment, the capital may abstain from flowing to the country. Even worse, when risk is perceived as high, domestic capital can leave the deficit country. Therefore, differential risk may hamper the working of integrated capital markets as insurance systems.

In the Eurozone, the private insurance mechanism worked rather smoothly before the crisis. The surplus countries' capital, particularly Germany's, financed deficit countries, including Italy and Spain. However, when the crisis hit vulnerable countries, German capital flew out of these countries in spite of higher returns, and the vulnerable countries' domestic capital, too, flew to strong surplus countries.[7]

The working of the labour markets is particularly important for the monetary union approaching an OCA. Price and wage rigidity makes adjustment processes difficult, lengthy, and costly. It is the institutional features of labour markets, often related to undeveloped welfare systems, that establish the degree of rigidity of wages. It is the nature of enterprises and their interaction, and particularly their control over markets and their ability to establish monopoly prices, that define price rigidity.

Eurozone countries have different labour markets and other types of institutions. The type of trade unions existing in a country and the degree of centralisation of wage bargaining are particularly important features. Another important difference lies in legal systems. Different legal systems lead to different transmissions of symmetric shocks, since they define the constraints to economic activity and the incentives for economic actors (North 1990).

To summarise, when external shocks are asymmetric, a monetary union causes costs that would not arise in the situation of monetary independence. The common central bank cannot deal with these asymmetries. In this case it would be wise to leave fiscal policies in the domain of national governments, as the European Union did for years. Independent fiscal policies could thus be used to adapt countries to asymmetric shocks or the asymmetric effects of external symmetric shocks. Unfortunately, unless countries have compatible economic situations (particularly if they have similar economic systems, comparable competitiveness and the same public budget constraint) or engage in reforms to that end, it will sooner or later be necessary to restrict the national use of financial policies in order to safeguard the common currency. This is exactly what happened with the Maastricht criteria and the SGP.

7 *According to the IMF (2012, p. 27), capital outflows from vulnerable to strong countries took place at a pace typically associated with currency crises, and they were considerable. In the 12 months to June 2012 Spain lost €296 billion (27 percent of its 2011 GDP) and Italy €235 billion (15 percent of the GDP). There were structural differences of capital flight in the two countries. In Italy a large share of outflows originated in foreign investors retreating from the country's bond market. In Spain, the outflows were broader-based and corporate bonds accounted for a significant part.*

3. On migration

The OCA theory highlights that a monetary union needs flexible wages and prices or, alternatively, labour mobility to adjust the effects of asymmetric shocks. Under those conditions labour would flow where it is more needed and better remunerated and capital would flow where labour is more abundant and cheaper. This would help re-balance the economy and avoid massive involuntary unemployment, thus easing financial and political tensions within the union.

Unfortunately, labour mobility in the Eurozone is low and wage and price flexibility are also low compared to the United States benchmark. Thus the adjustment that could not go through prices and wages goes primarily through quantities in the form of unemployment, falling production and decreasing market shares in the international market. Internal devaluation policies that put labour under great economic and political pressure gave some results – particularly in Greece, but also in Ireland, Portugal, Spain and Italy (O'Rourke et al. 2013) – to the disadvantage of overall economic performance and social and political stability. With time, wages were reduced, but this did not increase employment that rather declined. Public finances suffered as a consequence, and public debts increased.

Given the difficulties to re-establish a viable economic situation through internal devaluation policies, are there better ways to reach the desired outcome in the labour market? In particular, would a better management of immigration offer any opportunity? Migration is a synonym for open and integrated world. This primarily concerns migration for economic reasons, but may also explain (at least partly) migration for other reasons (to avoid wars, persecution, discrimination or authoritarian regimes).[8] One problem with migration is that it flows in two directions: to the individual country and out of it, yet one flow typically prevails. The "normal" flow is from poorer, less democratic or politically unstable countries to richer, more democratic and politically stable countries. Wage and labour conditions differentials as well as job opportunities play important roles in determining the labour flows between countries. The interesting question for us is to consider whether the inflow of migrants, particularly skilled ones, can guarantee the Eurozone vulnerable countries a labour market effect that is similar to that of an internal devaluation without having the negative economic and social consequences typical of the latter.

Migration has been increasing at an accelerated rate since the mid-1980s in coincidence with globalisation. Other components of globalisation, such as world trade, have increased at a similar pace while others, such as foreign direct investments and financial flows, have grown at a definitely higher pace than migration since the 1990s. When measured over the period since 1960, migration expanded at approximately the rate of the world population. It should also be noted that the growth of migration since the 1990s is overestimated by political events, because it includes the dislocation of people following the disruption of the former Soviet Union and Yugoslavia and the separation of former Czechoslovakia. These observations would lead to conclude that migration plays a secondary role in globalisation, whose main aspects are finance and trade.

[8] *On migration, its explanations and historical and spatial aspects see Fassmann et al. (2014).*

The situation in the South-North flows of migration shows a different picture, which should lead to conclude that migration is a major component of globalization and a strategically important one (Docquier and Rapoport 2012). Two aspects are worth stressing. First, the share of immigrants (foreign-born people) has tripled since 1960 and doubled since 1985 as a share of the population of high-income countries (OECD area) and has grown in line with international trade (Docquier and Rapoport 2012). Second, immigrants to the high-income countries are increasingly skilled and educated (brain-drain).

High-skilled migration to the OECD countries has accounted for a rapidly increasing share of the total migration. While the number of low-skill immigrants living in the OECD countries increased by 30 percent during the 1990s, the number of high-skilled immigrants increased by 70 percent.[9] A part of high-skilled migrants came from other developed countries. However, the number of those who came from developing countries doubled in the decade. About half of total world migration and 85 percent of high-skill migration is directed towards the OECD countries. In 2000, the total number of high-skill immigrants recorded in the OECD was 20.5 million. Most of them were recorded in six countries: the United States, Canada, Australia, Germany, the United Kingdom and France. It should be noted that some OECD member countries, such as Mexico, Poland and Turkey, are countries of out-migration. Considering that approximately 15 percent of the high-skill migrants go to non-OECD countries, the overall estimate of brain drain is approximately 24 million (Docquier and Rapoport 2012).

Brain drain is one of the major problems related to migration. It is at the same time a potential loss for the sending country and a potential gain for the recipient country. In recent decades, the number of high-skill migrants has increased dramatically. In relative terms the situation is variegated. The highest emigration rates are from middle-income countries. This observation apparently supports the interpretation that migrating is a rational decision for which incentives are needed, but also the means. This pattern is particularly evident in high-skill emigrants: incentives to look for a higher remuneration for one's human capital and better jobs are high. Potential emigrants also have the means to afford emigration, and their human capital is of a higher value and more transferable. The Caribbean, the Pacific, Sub-Saharan Africa and Central America are the regions with the highest brain drain rates (Docquier and Rapoport 2012). It is also interesting to note that emigrating as a student appears to be a particularly profitable strategy: getting a degree in the immigration country guarantees on average higher wages and employment rates compared to those of emigrants who received their degrees in their countries of origin (Coulombe and Tremblay 2009).

Immigration in general, and high-skill immigration in particular, appear critically important for the development of rich countries. Employment of high-skill immigrants is an increasingly important feature of US firms, and the role of firms in immigration is bound to become more important in order to match the increasing heterogeneity of production. In the United States, substantial parts of the immigration framework have been designed to allow firms to choose the immigrants that they want to hire. Kerr et al. (2013) have studied the impact of skilled immigrants on the employment structures of U.S. firms and have found both local and immigrant skilled workers. There is consistent evidence linking the hiring of young skilled immigrants to greater employment of skilled workers by the firm; a greater share of the firm's

9 *High-skill immigrants are defined as foreign-born individuals aged 25 or more and holding an academic or professional degree beyond high school (i.e., a "college graduate") at the census or survey date.*

workforce being skilled; a higher share of skilled workers being immigrants; and a lower share of skilled workers being over 40 years of age. In 2008, immigrants represented 16 percent of the US workforce with a bachelor's degree, and they accounted for 29 percent of the growth in this workforce during the 1995-2008 period. In occupations closely linked to innovation and technology commercialisation, the share of immigrants was almost 24 percent.

The United States is the country that perhaps has relied most on immigrants and whose economic development has been the most dependent upon high-skill immigrants. Their experience is therefore an important benchmark for other countries. The processes of workforce aging and fertility slow-down are significant also in the United States and consequently the importance of skilled immigration has the potential to increase significantly. These conclusions offer important hints for the role that immigration could have in helping developed countries exit the crisis and start to grow again.

There are also cases of waste of the high-skill immigrants' potential – waste brain, as defined by Reyneri (2007) – where high-skilled immigrants are offered under-qualified jobs and low opportunities for their professional mobility. Although Italy fares fairly well in international comparison on the conduct of immigration (Huddleston et al. 2011), there are numerous cases of over-qualification of immigrants compared to the jobs available to them, particularly among women (Fullin and Reyneri 2011, Pintaldi and Pontecorvo 2013). Based on the Italian Labour Force Survey, Fullin and Reyneri (2011) found that a great majority of immigrants to Italy do not run a higher risk of unemployment than Italian. However, immigrants are highly disfavoured in the socio-professional status of their jobs. Their disadvantage increases at higher levels of educational attainment.

In 2012, 962 thousand highly educated immigrants, or 41.2 percent of employed immigrants had an excess of education compared to what was requested for their job, a share that was more than twice the comparable share for Italians (Pintaldi and Pontecorvo 2013). The share was particularly high in services to families. Over-qualification of foreigners tends to last for years. High-skill immigrants, and women in particular, suffer from further disadvantages that are evident from both the number of hours worked (9.5 percent of degree-holder immigrants are under-employed, compared to 3.0 percent of Italians) and their wages. Net wage received by immigrants is nearly 26 percent lower than that received by Italians with comparable jobs and education. Wage differentials have been growing since 2008 and they tend to increase with the level of education and age. In 2012 on average, wage differentials amounted to nearly 30 percent for degree holders and to 16.7 percent for immigrants with general school certificate.

In spite of negative developments, high-skill immigration is undergoing important transformations. According to the findings of the workshop on skilled labour, held at Macquarie University in Australia, the surge in international migrants and students from rapidly developing countries has contributed to new forms of international migration, such as brain circulation and international students' flows (Guo et al. 2014).[10] These forms of migration have opened up the way for migration policy of traditionally host countries to affect the economy and skill base of the sending countries as never before. Migration policy is and remains a domestic tool for managing population flows. It is becoming evident, however, that it is also evolving into a tool that can be used to foster economic development and international relations.

[10] *Zanfrini (2013) uses official sources to show that from 1999/2000 to 2011/2012 the number of foreign students in Italy increased 6.3 times, from 1.4 percent of the total student population to 8.4 percent.*

4. Migration to the European Union and migration within the EU

Migration to the European Union shares many of the features of migration to developed rich countries. Immigration within a monetary union is a politically sensitive issue, perhaps more than in a sovereign country. Billiet et al. (2014) used the fifth round of the European Social Survey data for 23 countries to estimate the perceived threat from immigrants. They found that the perceived threat to be higher in countries with a lower GDP growth , particularly when coupled with unemployment.

A further problem is that the member states of the European Union do not have a united approach to migration (Cardwell et al. 2013). The EU strives to achieve coherence in its policies regarding immigration, particularly with its most advanced attempt to integrate the non-member states' interests into its policy agenda. However, in the EU policy the security measures, such as border control and readmission, dominate over "migration and development"- and labour migration measures (Wunderlich 2013).

Two aspects of immigration stand out: first, the features of employment of immigrants and their remuneration compared to local employees, and second, irregular immigration and employment. Venturini and Villosio (2008) use a matched employer-employee panel dataset with data for the years 1990-2003 to study the labour market assimilation of foreign workers in Italy. They found that foreigners receiving higher wages are the least likely to stay. When entering into employment in the private sector, foreigners earn the same wages as natives. However, wages diverge with on-the-job experience. Moreover, foreigners are disadvantaged in job opportunities even upon entrance and the disadvantage increases over time. Differences vary across sectors (wage and employment differentials are the largest in the construction sector) and provenience of immigrants (Africans have the worst career prospects while Eastern Europeans and Asians have the best prospects among immigrants). Venturini and Villosio (2008) have also found that the general pattern for foreign workers appears to be a fragmented career, either being confined to seasonal or temporary jobs or alternating between regular and irregular employment.

Irregular employment is traditionally spread in various countries and so is irregular employment among immigrants. Irregular employment of immigrants is spread in unskilled jobs, while it is definitely contained in high-skilled jobs. Venturini (1999) used official statistics to examine how immigrants working in the irregular economy affected employment in the regular economy in Italy between 1980 and 1995. She founds that an increase in irregular units of labour had produced a reduction in the use of regular labour, but the effect was very limited. Moreover, there was a relevant variance among sectors: the effect was strongest in agriculture, while in non-tradable services there was complementarity between the two types of labour (see also Zanfrini 2013).

Immigrants, especially from outside the European Union, are particularly successful as entrepreneurs, which may result from necessity entrepreneurship following the discrimination of immigrants in the labour market and on the job (OECD 2013). According to the Register of enterprises at the Italian chambers of commerce (Unioncamere 2014), the share of enterprises owned by foreigners reached 8.20 percent of all registered enterprises in 2013 and their growth rate was well above the average for all enterprises. Particularly dynamic were enterprises owned

by non-EU immigrants, which accounted for 77 percent of foreign-owned firms and 6.3 percent of all enterprises. Foreign-owned enterprises are primarily in trade and constructions. These findings for Italy are roughly in line with those of other developed countries.

The OECD (2011) analysed the features of migrant entrepreneurs and their contribution to employment creation in OECD countries in the years 1998-2008. Although there were significant variations between countries and over time, on average the percentage of migrant entrepreneurs was almost the same as that of natives: 12.6 percent versus 12.0 percent were self-employed persons as a share of all employed persons in non-agricultural activities in 2007–2008. However, this near parity is the outcome of a higher propensity to establish a business among immigrants in most OECD countries and a lower survival rate of those businesses. Overall, immigrant entrepreneurs had also been successful in increasing employment during the examined period, although the average number of employees at immigrant entrepreneurs was slightly lower than in the case of native entrepreneurs.

According to a OECD study presenting the updated results of the Database on Immigrants in OECD Countries for the years 2005/06 (Widmaier and Dumont 2011), there are considerable regional and national differences concerning labour market outcomes of immigrants within a significant general improvement since 2000. In many OECD countries, high-educated migrants have lower employment rates and higher unemployment rates than their native-born counterparts. At the same time, low-educated immigrants fare better than their native-born counterparts. The problem of over-qualification is widespread and the study finds that, on average in the OECD, 30 percent of immigrants holding a university degree work in middle- or low-skilled jobs. This is an important aspect of recent immigration, since in 2005/06 the number of high-educated immigrants holding a tertiary diploma accounted for a third of the total number of recent immigrants. Indeed, on average the immigrants to OECD countries are better educated than natives. The presence of high-educated immigrants is particularly high and growing in the United Kingdom, Ireland and Germany, while in Italy it is less than half the OECD average and stagnating as a share of the entire immigrant population.

According to Eurostat (2011), in 2008 the activity rate of foreign-born persons was 5 percent lower than that of native-born persons aged 25-54 years in the EU-27. This difference was due to the significantly lower activity rate of foreign-born women – which was 9 percent lower than for native-born women – and particularly to a much lower activity rate of women who migrated from the non-EU countries. Activity rates of male immigrants aged 25–54 years were similar to those of native-born men. In the same period, the employment rate of immigrants aged 25–54 years was nearly 10 percent lower than that of native-born persons: of this, the difference for non-EU immigrants was 13 percent and only 2 percent for EU-27 immigrants. This difference was due mainly to a lower rate of migrant women and greater labour market integration difficulties faced by non-EU migrants.

According to the findings of Docquier and Rapoport (2012), high-skill migration is becoming a dominant component of international migration and is also a fundamental feature of globalization. High-skill migration is the source of what is often named as brain drain, a phenomenon which is often considered to negatively affect the sending countries. However, there is evidence in the recent empirical literature that high-skill emigration does not necessarily deplete a country's human capital stock. Indeed, brain drain can generate positive network externalities to the advantage of sending countries, including the positive effects created by remittances and learning effects. According to Docquier and Rapoport (2012, p. 704), remittances "may help

overcome liquidity constraints, stimulate education investments, and reduce poverty at origin. The size of the effect depends on the amounts transferred and on their distributional impact." Moreover, "[t]emporary high-skill emigration is beneficial to the source country if enough additional skills are accumulated abroad, if returnees contribute directly or indirectly to the diffusion of new technologies, and/or if the perspective of temporary migration stimulates education investments ex ante. A net positive effect is likely to be obtained if the fraction of time spent abroad is not too large and if the productivity differentials with destination countries are neither too large nor too small." (Docquier and Rapoport 2012, p. 706) Finally, "[b]y reducing international transaction costs and facilitating the diffusion of knowledge and ideas, highly skilled diasporas settled in the developed countries encourage technology diffusion, stimulate trade and FDI, and contribute to improving domestic institutions." (Docquier and Rapoport 2012, p. 709)

As mentioned earlier in this section, a problem with high-skill immigrants is their over-qualification, i.e. the situation where a person has a level of skills or education higher than required for the job. Eurostat (2011) defines the over-qualification rate as the proportion of the population having completed tertiary education and having low- or medium-skilled jobs among employed persons having attained a high educational level. In 2008 in the EU-27 the over-qualification rate of immigrants – particularly significant for recent immigrants - was 34 percent and 36 percent in the case of non-EU immigrants. This share was much higher than the one for native-born persons (19 percent). Although the phenomenon exists in all EU-27 countries, it was particularly marked in Greece, Italy, Spain, Cyprus and Estonia, where the gaps were over 25 percent. With the exception of Estonia, these are all vulnerable Eurozone countries.

Inequalities in the labour market are reflected in incomes: the median annual equivalised[11] disposable income for immigrants in 2008 was considerably lower than that for natives in almost all member countries (Eurostat 2011). As one would expect considering the average per capita income of individual member countries, the lowest annual income of immigrants was observed in Hungary, Slovakia, Estonia, Lithuania, Latvia, Greece and the Czech Republic, while the highest was in the Luxembourg, United Kingdom, Ireland and the Netherlands. However, relative differences in median incomes between migrants and natives were the highest in Belgium, Greece and Austria.

In spite of a certain waste of the immigrants' potential due to their over-qualification and unemployment, the effect of immigration is positive for immigration countries. Huber and Tondl (2012) studied the impact of migration on the EU27's NUTS2 regions in the period 2000–2007 by means of an econometric analysis. According to their findings, migration has no significant impact on regional unemployment and does not support convergence among European regions. In fact, immigration has positive consequences for both GDP per capita and productivity. This is true immediately after the employment of immigrants and the effect increases substantially in the long run: the effect of 1 percent increase in immigration on GDP per capita is respectively 0.02 percent and 0.44 percent; the effect on productivity is respectively 0.03 percent and 0.20 percent. The effect is similar, but reversed in its sign, for emigration regions. Since these regions are generally poorer and the immigration regions richer, migration does not seem to promote convergence.

11 Eurostat defines equivalised income attributed to each household member as the household's total income divided by its 'equivalent size' in order to take account of the size and composition of the household (http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Glossary:Equivalised_disposable_income). Household equivalent size is calculated using the so-called modified OECD equivalence scale (this scale gives a weight of 1.0 to the first adult, 0.5 to any other household member aged 14 and over and 0.3 to each child under 14 years).

An important component of migration is migration within the EU. In recent years, and particularly after the accession of new member countries from Eastern Europe in 2004, 2007 and 2013[12] the dominant flow of migrants within the EU was from new member countries to old member countries in Western and Southern Europe (EU15). Unfortunately, the statistics on these flows is not particularly reliable, but the main migration trends are nevertheless clear.

Considering migration from EU8, Fihel et al. (2006) found that the most distinct characteristic was its temporariness. This pattern is in sharp contrast with pre-1989 migration, when individuals and entire families were migrating permanently. Indeed, most migration is now linked to seasonal work in agriculture and, to a lesser extent, to construction or tourist industry particularly in Germany, Spain, France, Austria, Greece, Norway and the United Kingdom. Another important form of temporary migration, which often takes the form of false tourism and where Italy is a major recipient, is linked to work in the household sector, including care for children and the elderly and housekeeping. Ethnic networks appear to have played a rather important role in many cases in fostering and addressing migration flows whereby older migrants from the same country or ethnic group attracted new migrants.

These features of migration internal to the EU show that the dominant pattern of migration from new to old member countries mainly was of a complementary nature rather than a substitutive one. Although migrants often had a rather high skill level, they usually took jobs that did not require high qualifications and were avoided by the natives. However, one should also notice that unconditional opening of labour markets also in the Northern European countries (notably the United Kingdom, Ireland and Sweden) on 1 May 2004 brought about not only an intensification of labour mobility from EU8, but also favoured the regularisation of employment status of many migrants who had arrived prior to the accession date and who had an irregular status. The social and economic impact of the post-2004 wave of migration from the East is overwhelmingly positive in both host countries and sending countries. Fihel et al. (2006) found that the effects for labour market imbalances were likely to be rather moderate. As for the sending countries, migration was paired with a high inflow of remittances, while fears of brain drain had not been substantiated.

12 *These were respectively EU8 in 2004 (8 new member countries), EU2 in 2007 (2 new member countries) and 1 new member country in 2013.*

5. The effects of migration in a monetary union

Understanding the impact of immigration on the host economy is important for assessing the consequences of migration for the sustainability of the common currency. Kahanec and Zimmermann (2014) studied theoretically and empirically the effect of migration in the OECD countries. They considered that flows of labour and human capital through migration contributed to a more efficient allocation of resources. This explanation is based on the standard economic law of diminishing marginal product of production factors. According to this, as the share of skilled workers in the economy increases, its value decreases and thus also the wage differential between high and low skilled labour decreases. Thus, if immigrant workers have an average skills level that exceeds that of the workers of the receiving country, by changing relative wages the skilled migration alters the distribution of skills and promotes economic equality in advanced economies. The empirical results showed that the share of immigrants in the labour force and the quality of their human capital as measured by the educational attainment are throughout strongly positively associated, which strongly supports the conclusion that immigration is negatively associated with inequality. The opposite holds for low-skilled immigration.

The role of high-skill immigrants is thus important for the host country's domestic situation and for the viability of the common currency. In a detailed study of the EU experience of the mobility of skilled labour migrants, Kahanec (2012) considered the intra-EU migration after the 2004 and 2007 EU enlargements and the migration to the European Union from the European Neighbourhood Policy (ENP) countries.[13] In general, free labour mobility among countries provides for an increased allocative efficiency of human capital and labour in the labour market of immigration countries and is an important aspect of an optimum currency area. However, in spite of significant EU progress in harmonizing legislation in order to facilitate internal mobility, there still remain significant barriers to labour mobility, including barriers of administrative and technical nature. Migration increased following the 2004 enlargement; however, this increase was only temporary since it was followed by a slowdown in the late 2000s and early 2010s.

In line with other sources, Kahanec (2012) founds that immigrants have an educational level comparable to that of EU citizens, although there is significant variation across countries and immigrant groups. In spite of this, and with the exception of EU15 and EFTA immigrants, the occupational status of immigrants from the new member countries and from outside the EU is generally lower than that of natives and is characterised by over-qualification (or down-skilling, according to Kahanec). There is no sign of negative wage or employment effects of migration in receiving countries. In spite of the positive effects of immigration, after the mild liberalization of immigration in the early 2000s, the EU has reversed many of these efforts during the late 2000s and early 2010s. Here lies a serious problem for the EU: restrictive immigration policy measures tend to discourage precisely high-skill immigrants, who are the most needed and easy to integrate, but also the most sensitive to such negative attitudes and policies, also because

13 These countries are divided into two groups: the ENP-East countries (Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine) and the ENP-South countries (Algeria, Egypt, Israel, Jordan, Lebanon, Libya, Morocco, the occupied Palestinian territory, Syria and Tunisia).

they have alternative destinations. The effect is that the EU falls victim of a negative selection that results in attracting fewer high-skill immigrants than the United States and more low-skill immigrants.

Labour mobility and flexible wages are important components of an optimum currency area and important prerequisites of a viable monetary union that has many internal differences and disparities and lacks institutional completeness. When the monetary union is under the effect of asymmetric shocks, the labour market flexibility supports the adaptation of the economy to the new situation by moving labour to where jobs are and through the flexibility of wages. In this way, and by increasing high-skill labour supply, migrants contribute to decrease labour costs and prices in the immigration countries and regions of the monetary union. At the same time they contribute to support incomes and prices in the vulnerable emigration countries through remittances. High-skill migrants thus contribute to the restoration of the conditions for the competitiveness of both strong and vulnerable countries in a monetary union. This is all the more important in the Eurozone where most countries have unfavourable demographic situations.

Increase in labour mobility and flexibility and decrease in wages make part of a mainstream response to the crisis and are important components of internal devaluation policies. These policies have important negative consequences for the economy through their contribution to a decrease in demand in the domestic market and an increase in social conflicts. Immigration, particularly that of high-skill people, offers a better alternative.

Jauer et al. (2014) compare pre- and post-crisis migration at the regional level in Europe and the United States in order to assess the migration response to asymmetric labour market conditions. The authors' finding that prior to the crisis the migration response to the labour market shocks was stronger in the United States confirms the results of other studies. However, during the crisis migration reacted to changes in labour market conditions more intensely in Europe than in the United States, also because the internal mobility in the United States seems to have declined during the crisis. Thus the enlargement strengthened the adjustment capacity of the European labour markets to asymmetric shocks.

The importance of this finding for the European Union is reduced by two considerations. First, labour migration to the Eurozone came mostly from two sources: the new member countries (many of them outside the Eurozone, particularly the largest ones) and countries outside the European Union. Indeed, the increase in labour mobility within Europe was mostly caused by the EU enlargements of 2004 and 2007. This effect may be due to threshold effects in Europe, namely the fact that the membership of countries with much lower wages and worse labour market conditions pushed East-West intra-European mobility vigorously upward. In the EU this effect was more than twice as large as in the United States. However, a significant part of the labour market effect of immigration from the named two sources seems to have stemmed from the regularization of previous illegal immigrants.

Second, intra-Eurozone migration contributed much less to the adjustment processes within the Eurozone. Jauer et al. (2014) estimated that migration would absorb nearly a quarter of the asymmetric labour market shock within a year if all measured population changes in Europe were due to migration for employment purposes – which is certainly an overestimation. However, most migrants within the Eurozone came from non-Eurozone countries, and even in the case of intra-Eurozone migration a significant part of mobility originated from third-country immigrants who obtained the nationality of their Eurozone host countries. Although migration from

outside the Eurozone had important benefits in terms of additional labour supply and skills, it is the intra-Eurozone labour mobility that would contribute in the most effective and direct way to alleviate the effects of asymmetric shocks in the common currency area in terms of reducing the labour market disparities and increasing price flexibility. Indeed, the effect of a prevailing high-skill immigration from outside the Eurozone into the economically strongest Eurozone countries would improve the latter countries' situation while leaving vulnerable countries in even greater difficulties.

While recognising that migration – being an equilibrating force in the labour market – is an important criterion for an optimal currency area, two caveats have to be stressed. First, labour mobility requires institutions and structures. According to Kahanec (2012), the EU is recognising some of the challenges and is taking appropriate, though partial, measures in order to better manage immigration and the adaptation of immigrant workers to the labour market (the European Blue Card, for instance), enabling so the entry of skilled third-country nationals on relatively favourable terms. However, it is undoubtedly the provision of labour market institutions covering the whole single market that can contribute most to the solving of the problem. Also the hosting country facilities, including housing at affordable prices, are important, particularly in countries with tight housing market.

Second, inter-Eurozone labour mobility from vulnerable to strong countries may also have negative effects in terms of economic development, specialization and innovation. While emigration of high-skill citizens of vulnerable countries eases unemployment in those countries, it also has negative effects. While emigration contributes to keeping the remuneration of high-skill workers in vulnerable countries higher – thus keeping them at home and supporting incentives for investment in human capital – the level of remuneration and job opportunities are hardly the same as in strong countries. This probably induces the best qualified and most entrepreneurial among the high-skill people to migrate, thus impoverishing the quality of the high-skill labour force in vulnerable countries. This contributes to weaken international specialisation and innovation in vulnerable countries. If this effect dominates, high-skill migration makes human capital more abundant where it is already abundant and, conversely, scarcer in those countries and regions where it is already scarce. In this way the high-skill migration contributes to an increase in long-term inequalities across regions and countries. Within the Eurozone this effect would weaken the sustainability of the monetary union.

Empirical analyses of the determinants of high-skill emigration show that poor economic performance and correlated factors – including poverty, weak institutions, inequality, discrimination, and political repression - are important determinants of emigration, particularly of high-skill emigration. However, recent literature also shows that high-skill migration has more complex and less deterministic effects, including relative wages, the availability of jobs, living conditions and the existence of more attractive working conditions in destination countries relative to emigration countries (Boeri et al. 2012, Driouchi et al. 2009, Peri 2009). In particular - and depending on such features as governance, technological distance, population size of the sending country and the public policies adopted in the receiving and sending countries - high-skill migration can generate positive network externalities which counteract the drain of the sending country's human capital stock (Docquier and Rapoport 2012).

It generally appears that the bidirectional link between high-skill emigration and economic development can generate both vicious and virtuous circles. An adverse economic shock can endogenously determine the emigration of high-skill workers, and this emigration can in turn have

negative effects on the economy, thus propagating shocks across regions. Or the network effects activated by such emigration can ultimately have positive effects for the sending economy.

In a dynamic perspective, the third aspect is important, too. As already noted, the immigrants – though being a source of entrepreneurship – are discriminated against. Since entrepreneurship is an important source of wellbeing and development, it makes sense to identify institutional and technical ways of supporting immigrant entrepreneurship. According to the OECD (2011), several OECD member countries have implemented specific migration policies. These are of two types: targeted measures to support migrant entrepreneurs already established in the host country, and specific immigration policies that regulate the entry and stay of foreign entrepreneurs and investors. The former type is more important as it is aimed at overcoming the relative disadvantages faced by immigrant would-be entrepreneurs (compared to the native ones), with particular reference to equal access to finance. The latter type – of minor importance, since most would-be migrant entrepreneurs enter the country through other channels - are designed to identify and support the would-be entrepreneurs whose features and projects are likely to be successful and meet the country's economic needs.[14]

[14] *Mahuteau et al. (2014) assessed the impact of a change in the immigration policy on migrants' probability of becoming entrepreneurs in Australia. The new policy was introduced in the mid-1990s consisting of stricter entry requirements and restrictions to welfare entitlements. According to the author's findings, immigrants who entered under more stringent conditions had a higher probability of becoming self-employed, an effect that time spent in Australia positively affected.*

6. Conclusion

The effects of high-skill migration in a monetary union are more complex than in sovereign countries. A member country of a monetary union does not have sovereignty over its monetary policy and is deprived of an exchange rate policy, while its fiscal policy is severely restricted. Under these conditions, vulnerable countries cannot use depreciation to restore the competitiveness of their economy when this decreases, nor can they use expansionary monetary policies and they are constrained over the use of expansionary fiscal policies.

Since high-skill immigrants are attracted to a country of destination by job opportunities and employment and life conditions better than the other countries, chances are that a vulnerable country is unable to attract high-skill immigrants from third countries and from within the Eurozone and is losing its own high-skill citizens to the advantage of stronger Eurozone countries. There is a vicious circle here. High-skill immigration could offer a smooth way to internal devaluation. The ability by a vulnerable country to attract high-skill immigrants at wages lower than the traditional ones would improve the supply of high-skill labour, contribute to a soft decrease in wages and a higher labour flexibility and mobility. However, the economic and financial conditions in a vulnerable country that goes through devaluation policies are not such to attract high-skill immigrants, while at the same time it is losing its own high-skill citizens.

Yet vulnerability is not due to emigration, which is rather a consequence. The outflow of high-skill workers in vulnerable countries is due to both an income effect (the domestic decrease of wages and worsening work conditions and welfare) and a structural effect (decreasing jobs and specialization in weaker economies characterised by lower technical progress – at least relative to the number of high-skill citizens). Thus, and although high-skill immigration could contribute to solve the problems of vulnerable countries in a monetary union, the general conditions of their economy and society do not attract high-skill immigrants and represent a push factor to emigration of their high-skill citizens.

If vulnerability is due, among other things, to the dismal state of the vulnerable countries' labour markets and related institutions, the effect of their loss of high-skill immigrants and citizens could be doubly negative, since it could even diminish the pressure to reform the labour market. It appears that the first step in solving the issue of vulnerability is a political determination to reform the labour market thereby creating better conditions for high-skill workers. Reforms may consist of greater flexibility of the labour market, but also – and in vulnerable countries perhaps primarily - of improvements in the labour market efficiency by means of – among other things – lower transaction costs for the management of employment and technical progress applied to the search of jobs. Yet these reforms are costly and may even jeopardize for some time the smooth progress of production. Chances of success can improve considerably if the European Union would provide common support to the vulnerable countries which start undertaking credible reforms and structural change.

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