LABOUR MOBILITY AS AN ADJUSTMENT MECHANISM IN THE EURO AREA[1]

Cristina Puiu
„Alexandru Ioan Cuza" University of Iași
puiu.cristina@yahoo.com

Abstract: *The aim of this paper is to assess the capacity of labour mobility in the euro area to act as an adjustment mechanism in the event of an asymmetric shock. According to the optimum currency area theory, labour mobility has been emphasized as one of the main adjustment mechanism. Given the present situation, where there are major concerns about the future of the euro area, it is necessary to study if the mechanism for stability works and if it can be improved. Considering the difficulty of quantifying the labour mobility, we have analyzed the net migration and the regulations regarding labour market. The empirical evidence shows that labour mobility does not act as a sufficient adjustment mechanism.*

Keywords: geographical mobility, optimality, asymmetric shock, endogenous effect.

JEL Classification: E42, F33, J61

INTRODUCTION

The theoretical fundament for all the studies regarding currency areas is represented by the optimum currency area theory, introduced by Mundell in 1961. He describes the concept of an optimum currency area as the space where production factors, especially labour, are mobile.

Thus, according to the theory, in order to achieve optimality in the functioning of a currency area, labour mobility has been advanced as fundamental criterion. Mundell argued the fact that, if the exchange rate regime within a region causes unemployment in one part of the region or forces another part of the same region to accept inflation as the cure for unemployment, then the regime cannot be considered optimal. Essentially, what Mundell wanted to say is that optimality for a currency area is reached when people within the area can move easily.

Before the introduction of the European currency, there were many concerns about the lack of homogeneity between the economies willing to adopt the single currency. Sceptical opinions were based on the risk posed by forming a currency area without adjustment mechanisms against asymmetric shocks. Largely, these debates created by American economists, worried about the capacity of the newly created currency area to withstand asymmetric shocks.

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Despite all these concerns, the euro was introduced and, at its tenth anniversary, it was considered a success. Still, it remained an open question if national economies will prove to be flexible enough in order to allow the smooth adjustment in the event of a significant asymmetric shock or a financial crisis.

In 2007, the financial crises came and exposed the euro area to a number of asymmetric shocks. The economic diversity and the small level of labour mobility made it difficult to benefit from a proper adjustment, some countries being hit harder than the others. The concerns raised before introducing the single currency seem mild comparing to the present ones, which talk about the break-up of the euro area.

This paper analysis the degree of labour mobility in the member states of the European monetary union. Taking into consideration that labour mobility has been emphasized as an important adjustment mechanism to asymmetric shocks, it is important to study if its level is high enough in order to counteract the negative effects.

The paper is structured as follows: Section 2 summarizes the theoretical aspects of labour mobility as an adjustment mechanism. Section 3 analyses the methods used to quantify labour mobility and Section 4 investigates the degree of labour mobility through net migration rate and the restriction faced by labour mobility.

1. THEORETICAL FOUNDATION OF LABOUR MOBILITY AS AN OPTIMALITY CRITERION

The optimum currency areas theory outlined the role of labour mobility as an adjustment mechanism. This theory considers that labour mobility can re-establish the balance in the absence of the independent monetary policy. In a currency area, where regional monetary and exchange rate policies are no longer available options, it is important that market adjustment mechanism functions properly.

Migration plays an important role in increasing the efficiency of the labour markets. Under flexible exchange rate regimes, the economic imbalances between countries are reduced through the appreciation and depreciation of currency. This mechanism is no longer available in a monetary union. Thus, there have to be found other adjustment mechanisms that can reduce the negative effects of short term and structural imbalances between countries. Considering that prices and wages are inflexible, labour mobility has to facilitate the adjustments.

For a better understanding of this adjustment mechanism, let us take the example of two countries hit by adverse shocks, with unemployment increasing in one other and decreasing in the other one (De Lucia, 2010). A demand decrease in a country or region would not determinate a high unemployment if the labour is geographically mobile and it can move in other areas where the demand is higher. Labour mobility could help the rapid re-establishing of the balance in both countries. This is one of the means through which the United States of America have been capable to face structural and cyclical demand changes.

Migration does not represent the only adjustment mechanism. Wage flexibility is another factor that can quickly re-establish the balance in both countries. Labour flexibility has two main sides: wage adjustment and geographical mobility (Goodhart, 2006). At the same time, labour mobility has two dimensions: geographical (spatial) and non-spatial, through the job exchange and occupational mobility, which does not imply necessary location exchange. Thus, recent studies investigate labour market integration in terms of geographical and occupational mobility.

This view is also shared by many other economists, who consider that labour mobility should in fact be interpreted as "labour market flexibility", encompassing not only geographical labour mobility, but plenty of other elements.

The need to rely on labour mobility as an adjustment mechanism depends on the degree of wage flexibility. A negative demand labour shock in one country has to be transformed in a decrease of its relative price level. Even though is increasing, the wage flexibility among euro area members is in general reduced. Thus, labour mobility should adjust the imbalances. Unfortunately, this mechanism is also extremely low, especially when comparing to the level registered in the United States of America (Siedschlag, 2008).

The ability to achieve a sufficient labour mobility degree depends on many characteristics. The variety of languages clearly inhibits labour mobility in euro area (Feldstein, 2008). The main debate considers the extreme low level of mobility in the euro area as a result of exogenous factors or exogenous factors.

The exogenous factors deal with linguistic and cultural barriers, while the endogenous refer to the lack of harmonization of pension and taxation systems and of professional qualification recognition (Monastiriotis and Zartaloudis, 2010). Without any doubt, low labour mobility makes it difficult to operate the quantitative adjustments. Thus, if an economy is hit by an extern shock, labour flows to and from euro area countries are expected to be insufficient to re-establish the balance. The quantitative adjustment has to come from the inside of the discussed country. As a

consequence, the labour mobility criterion does not refer only to external mobility (migration), but also to a complete range of intern mobility factors.

The euro area is a subject of numerous shocks that can have divergent consequences for member states taken individually in terms of economic growth or inflation. In 1999, Coppel and DeSerre stated that labour mobility is important when the shocks are permanent and structural, since the adjustment requires inevitably a relocation of product factors. The nature of shocks that are affecting the European currency area is influenced also by the structure of the economies in the area. The similar economic structure can reduce the probability of asymmetric shocks since the existent shocks will affect all the areas in a similar way; thus the negative effects can be addressed through the monetary policy strategy of the European Central Bank (Copaciu, 2004).

Another important feature of the role of labour mobility as an adjustment mechanism is offered by the study of the National Bank of Netherlands (Cavelaars and Hessel, 2007). This study addresses the question if regional migration is an adjustment mechanism or a source of disturbances. The results are the following: the importance of migration as an adjustment mechanism is reduced, thus suggesting that migration in Europe is more an imbalances mechanism than an adjustment one. Another important conclusion is that the establishment of internal European market and euro's introduction did not have a significant positive impact on labour mobility as an adjustment mechanism in the European Union. The conclusion is that the contribution of labour mobility between regions at the economic adjustment in the Europe is almost negligible. As long as this fact does not modify, a greater burden will fall on the other adjustment channels.

The recent financial crisis exacerbated the imbalances in the labour markets within the euro area. Since the beginning of the crisis, labour markets registered downside trends. Many EU countries faced record unemployment levels. Though, labour mobility can represent a modality to reduce unemployment rate in some regions and to smoothen the reduction in others. The problem is that, in the last decades, this mechanism had just a small impact and was very slow to be functional for the internal European market.

2. EMPIRICAL EVIDENCE OF QUANTIFYING LABOUR MOBILITY

Considering the importance of labour mobility in addressing negative effects of the asymmetric shocks in a currency area, many economists tried to find a suitable measure for it.

First, empirical studies demonstrated the fact that wage and unemployment differences are important determinants of migration flows. The studies conducted by Eichengreen (1993) and Barro

(1995) used statistical tools in order to point out the relationship between migration and its determinant factors. The first study found that immigration is positively related to high wages, the relationship being reversed when it comes to unemployment rates. The second one found that the effect of income on migration is lower in the Europe than in the US.

Two major contribution from 1990 showed that labour mobility was lower in Europe as an answer to asymmetric shocks than in the United States. Blanchard and Katz (1992) for United States and Decressin and Fatas (1995) for EU15 obtained results in this direction. The latter study investigated a panel data set for several states in the USA and European regions between 1975 and 1990. They found that unemployment shocks are absorbed in a different manner. In the EU a negligible proportion of the demand shock of the labour is absorbed during one year after the shock appeared, while in the United States the proportion is significantly higher, being quantified at 52% after one year.

The first important study that focused only on euro area countries was the one of Puhani in 1999. The author estimated the elasticity of migration with respect to unemployment rate and income changes on panel data set for three countries: Germany, France and Italy. Labour mobility is higher in Germany, but even here it will take at least four years until more than half of the shock created by unemployment to be annihilated by migration. This fact leads to the conclusion the labour mobility has small chances in becoming a sufficient adjustment mechanism in the event of asymmetric shocks in the euro area.

The previously mentioned studies have been conducted before any solid experience of the euro area as a currency union. Since the introduction of the single currency, many studies tried to determinate the level of labour mobility and, more specific, its capacity to address asymmetric shocks.

In 2007, a French study conducted by L'Angevin showed that labour mobility as a response to asymmetric shocks is lower in the euro area than in the United Stated. Another important and surprising conclusion of the study is that the responsiveness of labour mobility to asymmetric shocks has been improved since the introduction of the single currency.

Most recent studies, appeared as a result of the strong imbalances faced by the euro area, show that, despite the significant progress, the geographical mobility of labour is still extremely low. Thus, this level of labour mobility constitutes an obstacle to euro-zone cohesion.

An important feature of the empirical research in this field is the fact that states measuring labour mobility as being a difficult task.

There are many different barriers that cause this difficulty. Geographical mobility in the euro area is low and this makes it hard to observe it. Another barrier is created by the fact that the international migration cannot be measured through surveys which capture only the population before and after migration. Also, transnational surveys are missing; migrants are not followed over countries and the definition of migrants is not clear (Zaiceva and Zimmermann, 2008).

More recent research of Zimmerman emphasizes the difficulty of measuring labour mobility in Europe by introducing other factors. The problems that stay in the way of quantifying the degree of labour mobility are: macro data regarding migration are incomplete and contradictory; international migration process can be observed only in micro segments and those who migrated are registered in the statistics of the receiving country. Many statistics treat foreigners as migrants, neglecting nationality. Studies regarding microeconomic migration are facing problems with data compiling and, thus, can overestimate the actual level of migration.

Another important feature of the empirical studies regarding labour mobility is that they provide a comparison with the situation registered in the United States. Many studies showed that geographical mobility is three times higher in the USA than in Europe.

Migration between countries has small chances to respond to economic shocks in the euro area and this is motivated by permanent factors. Those factors within the euro area that made labour mobility low are: high overall levels of unemployment; income convergence linked also to economic catching-up and reduced wage differentials across countries. Differences in relative unemployment rates between regions are more persistent in the Europe than in the US.

3. THE DEGREE OF LABOUR MOBILITY IN THE EURO AREA

The current euro area situation is very unstable. The second major currency area after the USA is the subject of numerous shocks that can have different consequences on the individual member states in terms of growth and inflation. In this context, losing direct control on monetary policy and exchange rate policy can be considered a loss in terms of flexibility. For euro area to be considered an optimum currency area, as it is mentioned in the literature, the flexibility should increase in other fields in order to compensate the loss.

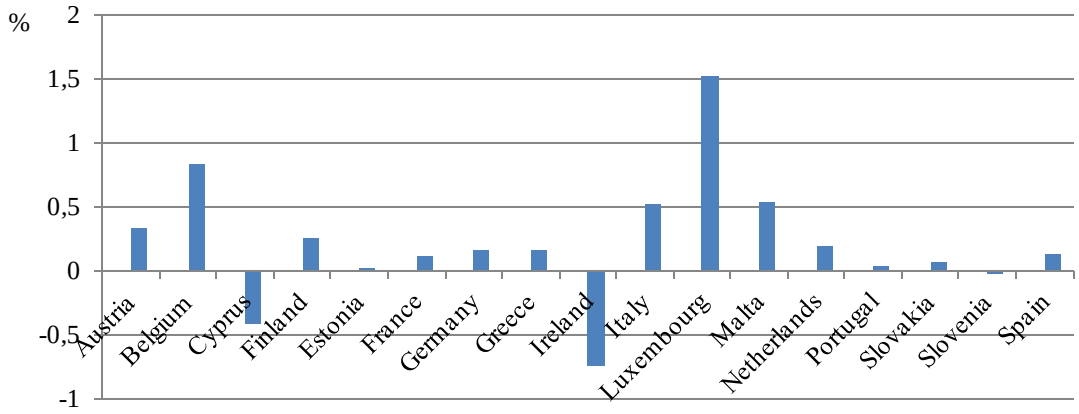
Internal labour mobility deals with movements of working age population between euro area regions. As we stated in the previous section, measuring labour mobility is not an easy task. Another shortcoming of the empirical findings is the lack of clarity regarding the appropriate rate of labour mobility. In addition, there are no EU data sources to indicate the arrivals and departures and

a data from the census conducted in 2011 are not compiled, leaving us with few alternative indicators for labour mobility.

One of the most important indicators for quantifying the degree of labour mobility is the net migration rate (Gakova and Dijkstra 2010). This indicator shows the difference between the number of people who arrived and left during one year as a percentage of the total annual population. More specifically, we used the crude ratio of the net migration during 2010 as a proportion in the average population from that year. This rate of net migration is equal to the difference between the crude rate of change and the crude rate of natural change.

The limits of this indicator are: it covers the entire population, rather than just those of working age and it includes movements in and out of the euro area instead of just movements within the EU. Despite all these limits, net migration rate is a good source for identifying regions losing and gaining working age population from within the EU.

Figure 1 - Net migration rate, 2010



Source: Author (based on data from http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home/, accessed on November 2011)

Latest available data on net migration rate, presented in Figure 1, shows that the highest level of the net migration rate is registered in Luxembourg, while the lowest, showing a negative value, is registered in Ireland. Overall, these values indicate a low level of labour mobility.

Table 1 - Net migration in the euro area countries

(Average annual net migration as a share of population in per cent)

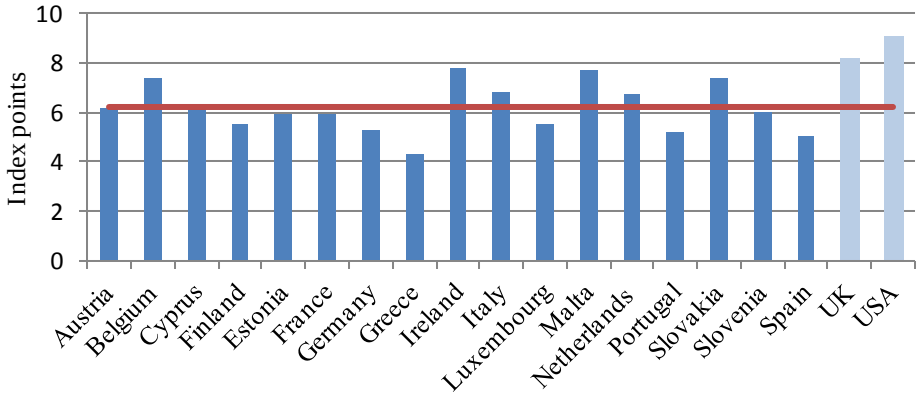
Country	1991-00	2001-10	Country	1991-00	2001-10
Austria	0.30	0.45	Portugal	0.19	0.34
Belgium	0.14	0.49	Spain	0.33	1.12
Finland	0.12	0.19	Greece	0.68	0.33
France	0.05	0.22	Cyprus	1.01	0.98
Germany	0.41	0.11	Malta	0.18	0.43
Ireland	0.30	0.68	Slovakia	-0.09	0.06
Italy	0.06	0.65	Slovenia	-0.05	0.34
Luxembourg	0.95	1.17	Estonia	-0.98	0.01
Netherlands	0.24	0.08			

Source: Author (based on data from http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home/ accessed on November 2011)

Also, data considering net migration in the euro area can be analysed by comparing the available data on longer periods of time, which comprise the situation before and after adopting the euro. As Table 1 shows, the higher net migration average is registered in Luxembourg and the lowest in Estonia.

Another indicator that can be used in analysing labour mobility refers to labour market regulation. The sub-indices provided by the Economic Freedom of the World Index on labour market freedom comprise an evaluation of minimum wages, hiring and firing regulation and centralised wage bargaining. The values of this index can range between 1 and 10; higher levels indicating a higher level of freedom (Zemanek, 2011).

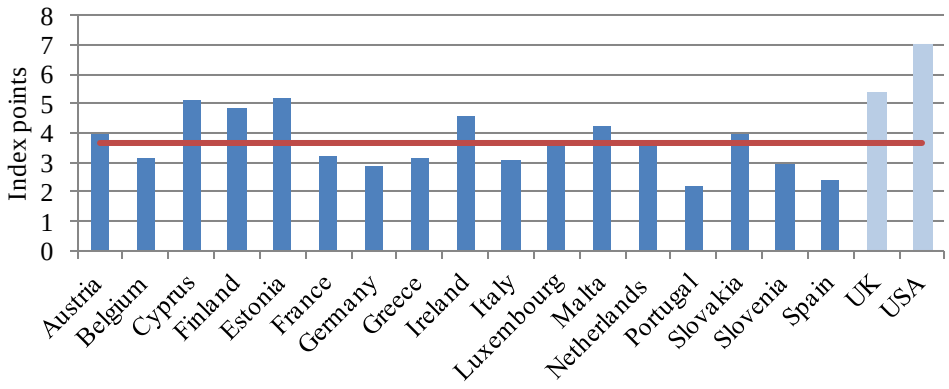
Figure 2 - Overall labour market regulations in the euro area, 2009



Source: Author (based on Fraser Institute (2011) *Economic Freedom of the World 2011*, Annual Report, accessed on November 2011 at http://www.freetheworld.com/2011/reports/world/EFW2011_complete.pdf)

As Figure 2 shows, the euro area countries registered in 2009 lower levels of the overall index for labour market regulation, indicating this way that the labour market freedom is higher in the United States and the United Kingdom.

Figure 3 - Hiring and firing regulations in the euro area



Source: Author (based on Fraser Institute (2011) *Economic Freedom of the World 2011*, Annual Report, accessed on November 2011 at http://www.freetheworld.com/2011/reports/world/EFW2011_complete.pdf)

The second indicator represents the sub index for firing and hiring regulation. Figure 3 also confirms the fact that labour market freedom is higher in the United States and the United Kingdom.

The figures previously presented are in accordance to many other studies that analysed labour mobility, showing a low level, especially when comparing to the situation from the USA.

This is not surprising taking into consideration the fact that there has been registered low geographical mobility of workers within the member countries themselves (Broyer, Caffet and Martin, 2011). The internal mobility in one country can be measured by the dispersion of intra-regional unemployment rates which is far greater in the major member countries of the European Monetary Union comparing to the United States. Thus, taking into consideration that the citizens of the euro area are relatively reluctant to change regions within a given country, it is not hard to understand why they are not willing to change countries.

Even though there have been registered unfavourable results in previous studies, it is possible that dynamic adjustment mechanisms to improve in the euro area. It is common to argument the fact that a monetary union will encourage changes endogenously in the economies of the member countries in order to become compatible with optimum currency areas theory ex post even though this could not be realised ex ante (Goodhart, 2006).

Given these endogenous prospects, many thought that it is interesting to test if, after so many years since euro's introduction, the results are still relevant and if the dynamics of labour adjustments have been modified comparative with those observed in the United States. Thus, there are few evidences about ex post improvements regarding euro area's experience. More pessimistic opinions show that there is no indication that labour mobility has increased in Europe.

Even though every citizen of the European Union has the right to work or live in another member state, few people choose to do so. Free movement of citizens is one of the fundamental rights guaranteed to the European Union citizens. Low labour mobility levels prove the fact that there are other barriers that determine people not to move from a country to another.

The most important barrier, which is almost always mentioned by the surveyed populations, is the distance from the family. In 2011, a study of Natixis, gathered the most suggestive eight types of obstacles to the geographical mobility of workers (Broyer, Caffet and Martin, 2011, p.9):

- The language and, in general, cultural barriers;
- The lack of available information;
- Legal and administrative barriers;
- Recognition of diplomas;
- The heterogeneity of tax and social systems;
- Accommodation;
- The lack of transport infrastructure;
- Employment for the partner/spouse.

These barriers do not only prevent mobility but also lead to potentially negative effects. As a consequence of these restrictions, people can be affected by the employment beneath the real level of their qualification.

The geographical mobility of labour is therefore still extremely low in the euro area. In order to address economic divergences, the solution is to create a coherent framework to eliminate the impediments faced by the European citizens who are willing to move to another country in the area.

CONCLUSIONS

The economic divergences in euro area have raised the question if the European Economic and Monetary Union is really an optimum currency area. According to the theory, in order to increase the resilience to asymmetric shocks of the countries in a monetary union, real adjustment mechanisms are crucial. Labour mobility was emphasized as an important factor that tends to facilitate faster adjustments to economic shocks.

Our study showed that labour mobility is still low even though there are more than ten years since the introduction of the euro. This situation was caused by several obstacles, especially the language barrier. Though, one of the most important factors is, in my opinion, the weak inclination for mobility of the citizens in the euro area. This is already visible at the national level. Also, there is small evidence that endogenous forces have improved labour mobility in euro area after the introduction of the single currency.

Thus, the lesson that should be learned from the experience of the euro area is that a monetary union should not be formed without sufficient labour market flexibility which will allow the adjustment in the face of contradictory evolutions of competition through labour mobility or wage restrictions. The lack of sufficient labour mobility will make the adjustment process longer and more painful.

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