

## 2 Theoretical Framework

For a better understanding of the paper in the following chapter, the basic terms and main principles shall be explained briefly. First of all, labour markets shall be defined and their way of functioning will be explained. The indicators and reasons for labour market malfunctions shall be explained according to the most important theories. Subsequently, labour migration as an economic and social concept shall be explained and its characteristics in a globalizing world shall be highlighted. Recent tendencies will be displayed and an outlook to the future concerning labour migration shall be generated.

### 2.1. Labour Markets

All the time people get in touch with labour markets and the dynamic of the labour markets is apparent as continually people find or lose jobs, labour agreements are concluded – to put it briefly: employment and therefore labour market is a present topic for almost every segment of the population.

Labour markets are highly complex and when we investigate in this sector, we should consider that conditions will be extremely simplified in order to enable investigations (Huber, 2003).

#### 2.1.1 Term definition

All human actions that are conducted within a society independently of the level of education or technical preparation with the intention to acquire resources essential to the satisfaction of elementary needs such as alimentation but also to finance recreation and access to culture can be denominated *labour*. This term embraces all activities that would be included under the previous definition, but also can be used when making reference to the labor force. Labour in this sense is one of the basic factors in our economy and at the same time substantial part of human's lives (Mendizabal Bermúdez, 2006).

*Labour markets* are those markets that bring together offer and demand for labour as a production factor. They can be divided into sub segments for example according to working patterns or in regard to technical qualifications for specific professions or professional groups. A distinction is furthermore made between formal and informal work. (Bundeszentrale für politische Bildung, (2008a). On the demand side the main parties are private companies and public institutions, the offer side is mainly represented by private households (Bundeszentrale für politische Bildung, 2008b).

*Labour offer* is influenced by factors such as population development, labour participation, remuneration and working preferences of applicants. The labour force offer is aggregated and expressed as economically active population. By multiplication of the economically active population by the average working hours, labour volume can be calculated (Cahuc; Zylberberg, 2004).

*Labour demand* relies basically on macroeconomic demand for products and services, remuneration, production conditions, future expectations and underlying circumstances. By multiplication of the existing jobs by the effectively realized working time by the economically active population, the aggregated demand for labour can be determined (Cahuc; Zylberberg, 2004).

The equilibrating factor that brings together offer and demand is *remuneration* which can be defined as price for labour. In theory, labour offer will rise when remuneration increases. At the same time labour demand declines with increasing labour prices. According to this, labour offer and demand determine remuneration. (Huber, 2003).

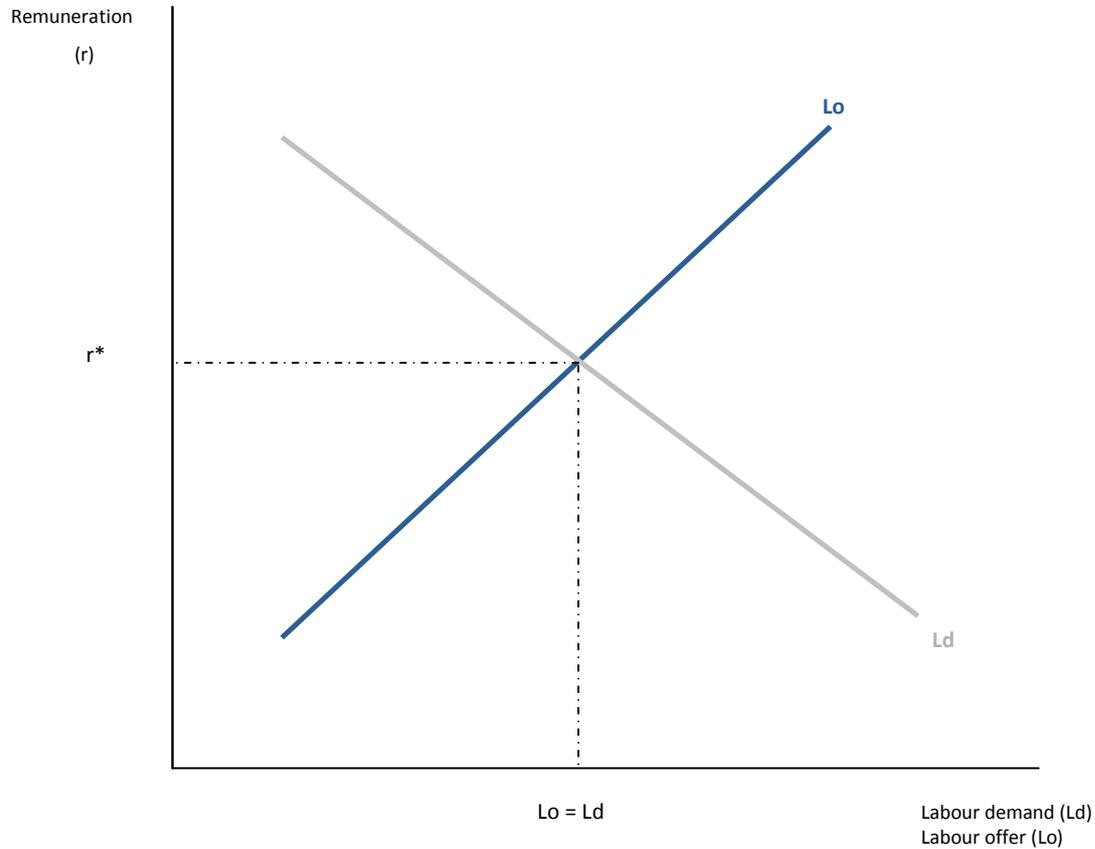
The *functionality of labour markets is limited* due to the fact that the equilibrium of offer and demand is agitated by several conditions: the existence of labour unions, collective labour agreements and the extensive legal regularisation of labour disturb the correlation of offer and demand for labour. Workers are inextricably linked with labour which results in deficient flexibility (disposition to change jobs/industries) and mobility (willingness to move geographically) (Bundeszentrale für politische Bildung, 2008c).

## 2.1.2 Principal labour market theories

Labour market theories are scientific contributions trying to explain the functioning, the main characteristics and differences to other markets as well as the causes for unemployment (Bundeszentrale für politische Bildung, 2008). In the following an easy model of the labour market based on the neoclassical approach shall be developed and explained.

According to the neoclassical economic view, labour markets perform in the same way than every other market for goods. Remuneration is the dynamic market mechanism that equilibrates labour offer and demand: at the remuneration  $r^*$  labour offer ( $L_o$ ) and demand for labour ( $L_d$ ) are in balance. At the resulting market price for labour  $r^*$  every worker disposed to work at the promised remuneration is able to find a job. The situation of labour market equilibrium is demonstrated in graphic 2.1.

Graphic 2.1: Labour market equilibrium

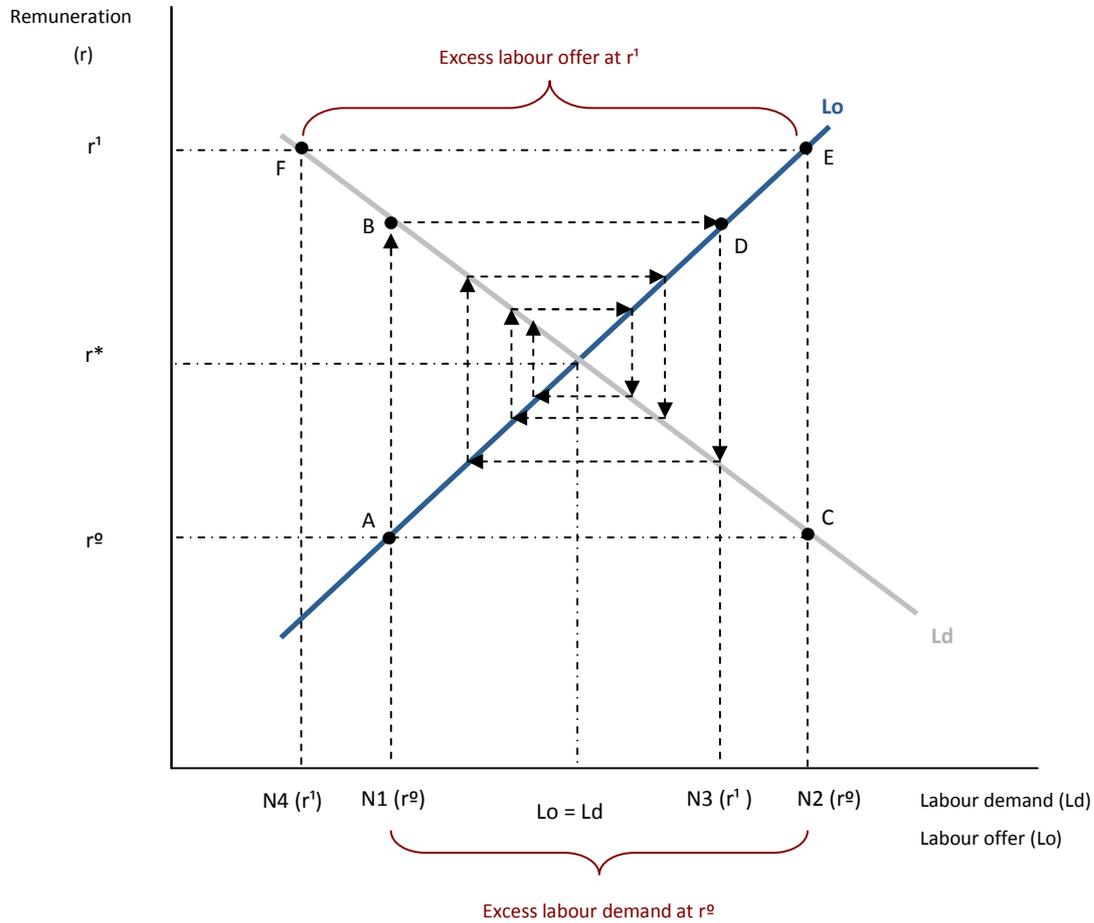


Source: Own elaboration based on Huber, 2003

Graphic 2.2 shows the adjustment mechanism that occurs when there is a labour disequilibrium.

At remuneration  $r^0$  there is excess demand for labour - as labour at this price is considered relatively cheap by both, employers and applicants, and only the applicants in point N1 are disposed to work at the respective remuneration while companies would employ N2 applicants at this labour price. An increase of remuneration to a price corresponding to point E on the straight line Lo would eliminate the demand excess for labour but lead to an excess of labour offer as at remuneration  $r^1$  the price for labour is considered relatively high. In consequence, more applicants (N3) are willing to work for the offered remuneration than companies are disposed to employ (N1). This excess of labour offer in turn will be responded to by a reduction above the initial remuneration  $r^0$ . Following the same pattern, an adjustment process of labour price rise and reduction will take place until the stable labour market equilibrium  $r^*$  is reached.

Graphic 2.2: Adjustment of labour market disequilibrium



Source: Own elaboration based on Zimmermann, 2002

According to this model, labour market disequilibrium will not exist persistently due to the self-adjusting market mechanism. Unemployment is always voluntary. Nevertheless, in reality high unemployment rates persist which leads to the assumption that exogenous conditions disturb this process and lead to market imperfections. Possible reasons for labour shortages shall be explained in the following.

### 2.1.3 Reasons for labour shortage

Although usually the same basic assumptions are made to facilitate the analysis of labour markets, those distinguish themselves considerably from other markets such as the capital market. In difference to other markets

numerous rigidities and information deficits bother the equilibration of offer and demand in a timely matter.

Zimmermann (2002) suggests two main reasons for market failure:

Rigidity of remuneration (price for labour is not increased in case of excess labour demand) or situations in which even a rise of remuneration does not result in the rise of labour offer.

The failure or slowing of the process of remuneration adjustment can be due to remuneration rigidities that are on institutional grounds or delays in the decision-making procedure of businesses. In some cases, it is economically not recommendable for businesses to elevate labour prices in order to increase labour offer for the following reasons:

- § The employment of new workers at higher remuneration could result in claims for an increase of wages for employees with major seniority (Zimmermann et al., 2002).
- § Labour productivity could decline when variety of wages within the firm increases: an employee's productivity will decrease when remuneration is lower than the level considered fair; there is a maximum remuneration that can be offered in job groups with labour shortage in comparison to occupations that do not present labour shortage.<sup>2</sup>
- § Excess labour demand is due to cyclical or seasonal variations (Zimmermann et al., 2002).

Remuneration unaffected reasons for labour shortage – situations in which in spite of increasing labour prices the labour offer does not rise – can be a result of the following causes:

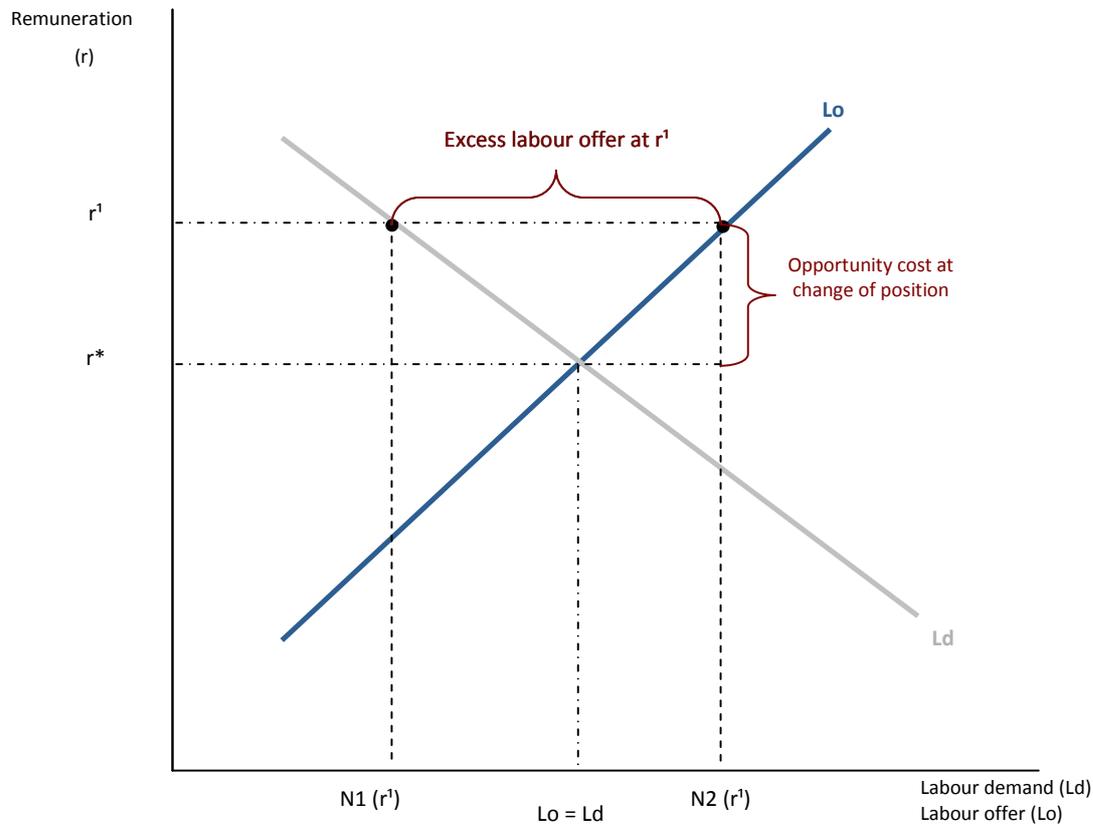
- § Heterogeneity of labour; acquisition of necessary formation for the exercise of a specific position takes up a lot of time.
- § Reluctance of population to apply for certain jobs; for example due to negative image or relatively bad working conditions.
- § Lacking flexibility (disposition to change jobs/industries); the change from one company to another or even between industries is accompanied by the cost of losing company- or industry-specific human capital.
- § Lacking mobility (willingness to move geographically); relocation usually goes along with monetary moving expenses and implies in most cases the psychological cost of leaving the usual environment as well as friends and family in some cases.

Graphic 2.3 shows how considering the mentioned points, the existence of a persistent disequilibrium can be explained. Applicants consider the opportunity costs of a job/industry or geographical change. Equilibrium at higher but efficient wages is reached at the continuity involuntarily unemployment.

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<sup>2</sup> An overview on Efficiency Wage Models is provided by Akerlof/Yellon (1986)

Graphic 2.3: Stable labour market disequilibrium



Source: Own elaboration based on Huber, 2003

## 2.2. Labour Migration in a globalizing world

Migration has become a central topic of the 20th century. Millions of people leave their homes and move across borders in quest of better living conditions (ILO, International Labour Office, 2004).

The discussions about globalisation are usually centred on economic issues and migration hardly has been discussed in this context even though migration is highly linked to the globalisation process. The process of globalisation is usually principally economically defined by merging of national markets, the opening of boards for goods, capital and services and by the intensification of transnational interaction (Butterwege C., 2006).

Globalisation helps itself with the same developments that intensify migration tendencies: aspects that motivate migration are accompanied in the present by technological changes that have facilitated information and communication and increases mobility of people through revolutionized transportation. Migration results the natural response" to the widening gap between rich and poor countries perceived in a globalizing world (ILO, International Labour Office, 2004). The globalisation process increases the quantitative extent of migration and diversifies the causes, forms and consequences of international migration (Butterwege C., 2006).

## 2.2.1 Term definition

*Migration* has been defined and explained by numerous scientists corresponding to their respective field of expertise. Those definitions vary in terms of distance covered and diverge in terms of permanence and in terms of reasons for migration central for all those approaches are the aspects of (extraordinary) change and movement (Treibel, 2003).

Migration can be categorized according to four aspects to concretise general definitions and to differentiate the used terms of migration:

- (1) Space (destination and distance travelled): we distinguish between *internal* and *external migration*.
- (2) Time : we distinguish between *temporary (timely-bound)* and *permanent migration*
- (3) Decision/Reasons: we distinguish between *voluntary* and *involuntary migration*<sup>3</sup>
- (4) Extent: we distinguish between *individual collective* and *mass migration*

In the following paper the broad definition of *labour migration* as a “predominantly voluntarily temporary or permanent relocation from one society into another one” shall be applied. The three following entrance channels for migrant workers of into a country shall be considered and migrant workers shall be categorized accordingly into:

- § *Permanent migration*: primarily for high-skilled migrant workers
- § *Temporary migration*: for all types of employment (guest-work)
- § *Temporary migration*: for time-bound employment (seasonal work)

## 2.2.2 Driving forces of migration

According to Han (2000) “migration is a complex process, which - beginning with its existence to its course – is throughout causally determined by multiple causes and factors. Therefore, it is enormously difficult to distinguish exactly between voluntarily and involuntarily migration. Triggering causes for migration usually consists of a “complex mix of objectively forcing exogenous factors and subjectively evaluated decisions” (Han, 2000, page 13 ). According to the International Labour Office (2004) besides poverty, famine and repression, individuals cite “population pressures on scarce natural resources, wage or income inequality between the poor and rich countries, growing urbanization, reduction in the cost of transport and communication and increasing interactions among

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<sup>3</sup> Treibel states that the distinction between classic voluntary labour migration and escape migration (refugees) is getting more difficult as compulsion and voluntariness get more and more mixed up.

societies, civil conflict and absence of human rights, and establishment of migration networks by earlier migrants” (ILO, International Labour Office, 2004, page 8) as reasons for migration processes.

Despite this variety of movement reasons, migration can be considered micro economically as investment decision on the one hand occasions costs on the other hand promises profit in the future. According to this assumption, the migration decision is made upon an estimation of monetary costs (moving costs, higher living costs) and non-monetary costs that consist of opportunity cost (missed income during the relocation process, lose of culture/region/job specific human capital) and psychological cost (separation of friends and family, lose of habitual environment) (Sjaastad, 1962). Monetary costs of migration can be quantified quite easily whereas non-monetary costs and particularly psychological costs are more difficult to estimate.

A classical approach to explain the multiple causes for migration is the splitting of moving reasons into two groups:

- § *Push-factors* are those factors of the place of origin, which motivate emigration processes, for example: political, economical or social instability, environmental disasters etc.
- § *Pull-factors* are those factors that encourage immigration for example through economic prosperity, guarantee of human rights, favourable immigration laws, existing migrant networks or family in the receiving country etc.

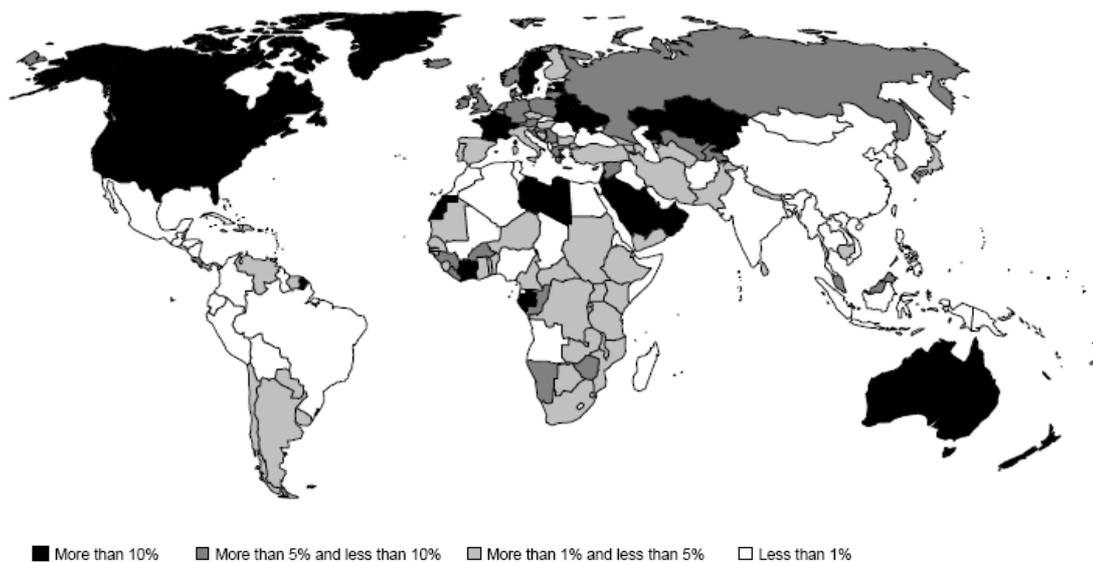
According to Treibel (2002), central pull- and push-factor at the same time is the situation of the labour market, which is less attractive at the departure country than in the receiving country. Differences exist with regard to the employment situation (job-vacancy-hypothesis) and concerning income possibilities (income-differentials hypothesis).

Two principal models investigate the migration decision of individuals based on those two hypotheses: the labour force adjustment model defines migration as prompt response to income-differentials and employment chances. Regional differences are considered due to variations in offer and demand as well as different economic development. In this model, migration serves as an equilibrating mechanism. In contrast, the human capital model includes future expectations on economic benefit of migrants. Migration will take place whenever the sum of benefits is estimated to be higher on the long run than in the place of origin. If remuneration will be lower than in the country of origin at the beginning, this is considered as a long-term investment in human capital (Han, 2000). Theoretics suggest that at increasing wages in the sending country and falling remuneration in the receiving country, migration between the respective countries decreases and finally stops “naturally” (International Organization of Migration, 2005).

### 2.2.3 Growth of migration

During the last decades migration flows of workers coming from developing countries to industrialized countries have increased. Nevertheless, in 1998 still only 4.2 per cent of the industrialized countries' total workforce consisted of migrant workers. The great majority of the new migrant workers from developing countries concentrates in the United States (more than 81 per cent), followed by Canada and Australia (accounting for 11 per cent). Migration in the European Union is particularly concentrated in countries such as France, Germany, Italy and the UK. Contradicting theoretical suppositions, considerable labour migration takes place between countries with small income differentials (ILO, International Labour Office, 2004).

Graphic 2.4: Migrants as percentage of total population by country, 2000



Source: UN Population Division: International Migration 2002 (New York, 2002)

As not every country monitors and reports on labour migration flows and as statistics compiling systems vary, comparison amongst countries is very difficult. We must not forget that migrants who crossed borders illegally are also very likely to be economically active. Still, the number of migrant workers estimated of over 86 million economically active migrants (though probably underestimated) is impressive. The phenomenon of labour migration is undeniably considerable and growing (ILO, International Labour Office, 2004).

According to the OECD, migration from Latin America has grown significantly during the last ten years, with Spain being the main country of destination for migrants from Latin America. Since 2000 every year about 150'000 to

250'000 people from Latin America migrate to Europe (mainly to Spain, Italy and Portugal) (OECD, Organisation for Economic Co-Operation and Development, 2006).

Table 2.1: ILO estimates of migrant workers by region, 2002 (provisional)

Region*	Migrants**		Migrant workers			
	Including refugees		Excluding refugees		Including refugees	
	Millions	% dist	Millions	% dist.	Millions	%dist.
Africa	16.3	9	5.4	7	7.1	8
Asia	49.9	29	22.1	27	25.0	29
Europe	56.1	32	27.5	34	28.2	33
Latin America and the Caribbean	5.9	3	2.5	3	2.5	3
North America	40.8	23	20.5	25	20.5	24
Oceania	5.8	3	2.9	4	2.9	3
<b>Total</b>	<b>174.9</b>	<b>100</b>	<b>80.9</b>	<b>100</b>	<b>86.3</b>	<b>100</b>

\*Regions as defined by the US Statistics Division. \*\*United Nations Population Division estimates of stocks of migrants. UNDP 2002, *International Migration 2002*, New York, United Nations.

Source: ILO, 2004

In the future, we can expect a further globalisation of migration, characterized by the joining of more and more countries as departure and receiving countries. As differences between countries are growing constantly in the face of globalization, push-factors increase and migration pressures rise in consequence. New technologies will further facilitate communication and information on the one hand and increase mobility of people around the world. Alike, economic, political and demographic factors suggest more migration in the future (ILO, International Labour Office, 2004).

## 2.3. Consequences of migration

According to the International Labour Office (2004) migration has been for the most part beneficial to all parties included: as well migrants as countries of origin and destination have profited form migration historically. The potential advantages and disadvantages of migration in general are enlisted in the following table. The economic impact of labour migration shall be explained in a more detailed way in the subsequent chapter.

Table 2.2: Potential advantages and disadvantages of emigration and immigration

	Emigration		Immigration	
	Potential advantages	Potential disadvantages	Potential advantages	Potential disadvantages
<b>For migrants or for individuals</b>	Employment	Discontinuity, loss of seniority	Migrants offer services that free women to enter labour force	Competition for jobs; marginalization of skills
	Greater income	Bad working/living conditions	Cheaper goods and services	Lower local wages
	Training or education	Lower status of work, loss of skills		Crowded schools
	New cultural experiences	Racism or discrimination	Richer cultural life	Strange language and customs
	Meeting new people	Separation from family	Learning about other countries	
<b>For enterprises</b>	Skills of returning migrants	Losing skilled workforce	Cheaper, more flexible labour	Less stable workforce
	Lucrative business for the recruitment industry	Labour shortages that drive up wages	Workforce diversity	Dependence on foreign labour for certain jobs
	Extra business for comm.. and travel firms		Larger markets and economies of scale	
<b>For the country as a whole</b>	Reduced population pressure	Losing younger people	Rejuvenation population	Social friction
	Lower unemployment	Coping with sudden returnees	Larger workforce, lower inflation	Delay technology upgrading
	Foreign currency remittances	Loss of potential output and tax revenues	Higher GDP; capital	Increased income quality
	Knowledge and skills of returnees	Brain drain and loss of better workers; reduced R&D	Brain gain	Cost of integration programmes
	Building transnational communities	Social disruption and a culture of emigration	More diverse and energetic population	More social stratification; immigrant ghettos
	Increasing inequality	Tax income from younger workers	Cost of social services, welfare benefits	

Source: ILO, 2004, page 18

### 2.3.1 The economic costs and benefits of international labour migration

According to Han (2000), when the economic development of an economy leads to additional requirement of labour, from the economic point of view an opening of borders in order to allow foreign labour is principally necessary. The immigration of labour force though requires on the one hand disposition of foreigners to immigrate and on the other hand the opening of labour markets and stimulation through concrete political-administrative actions. This approach is derived from the classical and neo-classical approach, according to which migration has an overall beneficial impact on economy and all-round positive effects on almost all directly involved. Under the assumption that the receiving country is characterized by labour shortage, immigration leads to the following benefits for the receiving country (International Organization of Migration, 2005):

- § Helps to eliminate labour scarceness making more labour available.
- § Facilitates labour mobility amongst occupations.
- § Eases inflationary pressures resulting from raising salaries.
- § Maximizes the productive use of production factors.
- § Incentives economic growth as migrants increment consumption.
- § Frees additional national labour through new services (such as childcare) offered.

These economic gains could in some cases be accompanied by costs such as the inhibition of technical progress. As it is some cases easier and less costly for companies to maintain competitiveness through the intensification of the use of relatively cheap international labour, probably investments in new technologies and machinery will not be made (Comisión Interamericana de Derechos Humanos, 2005). Furthermore, there are costs related to the integration of immigrants and to the management of greater cultural diversity. Possibly negative effects on wages and employment shall be discussed further on in the subsequent chapter.

For sending countries the economic impacts of migration have been similarly controversially discussed. Under the positive effects, the following benefits of migration for sending countries are highlighted:

- § Reduces unemployment as (possibly) unemployed workers leave the country.
- § Incentives economic growth through transfer of skills and knowledge of returning migrants and via monetary flows coming from nationals working abroad (remittances).

Numerous scientists have argued that progress could be slowed instead of accelerated through the monetary flows from abroad. Durand and Massey (1992) criticize that in the case of migration from Mexico to the United States remittances create economic dependence instead of progress as they are usually invested in consumer goods rather than into production factors. Another negative impact of migration for sending countries is the so-called

brain-drain that has been investigated and described by many experts. Especially in Central and South America the emigration of skilled workforce is influencing the local economy in a negative way.

Even though experts disagree in the evaluation of migrations as a phenomenon with principally positive/negative impacts, they agree that the economic effects of international labour migration on an aggregated economical level are rather marginal. Most economic gains from migration inure to the benefit of migrants as their incomes usually rise significantly after crossing borders (International Organization of Migration, 2005).

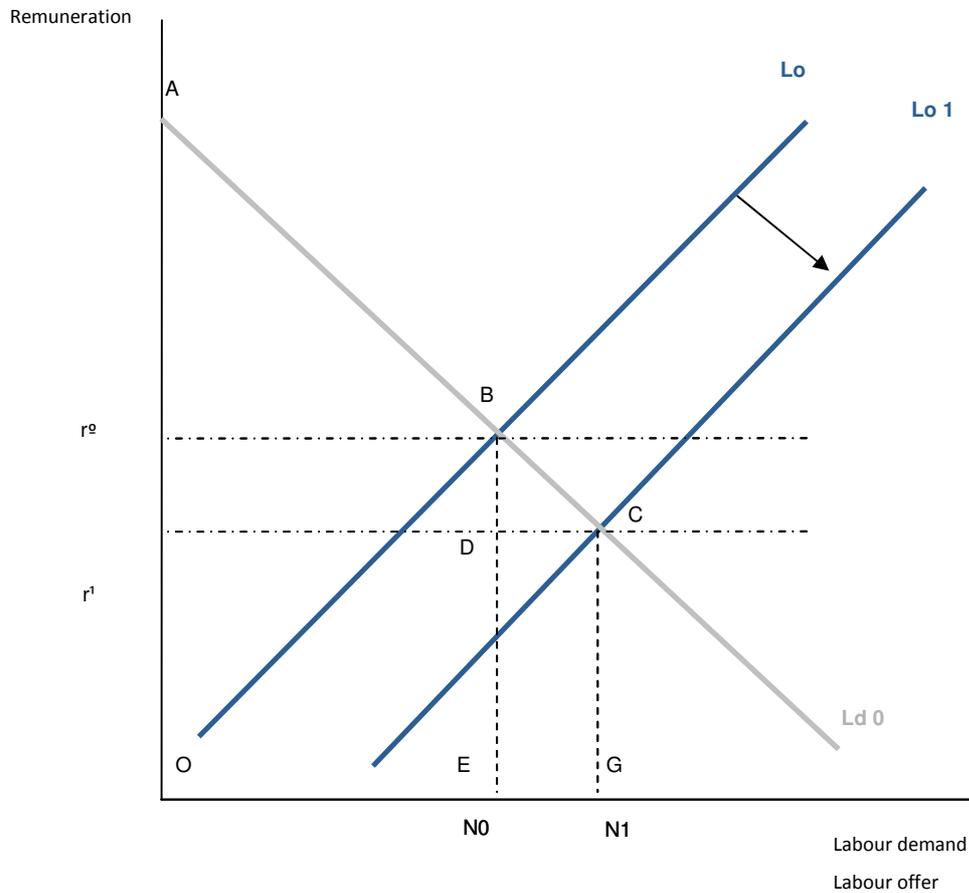
### **2.3.2 Impact of international migration on labour markets**

When investigating the effects of migration on labour markets, usually the effects of migration on wages are the subject of examination. Typically the following basic assumptions are made in order to make use of the basic model of labour demand:

- § Perfectly competitive markets.
- § Labour supply (including migrant work) is identical with the labour demand.
- § Labour as a homogeneous factor.

In the elementary model of labour demand, immigration causes wage-reducing pressures as an increase of the labour offer unavoidably leads to a decrease of marginal labour productivity. Graphic 2.5 shows the adjustment in the basic economic model when labour migration occurs.

Graphic 2.5: Consequences of immigration in the elementary model.



Source: Own elaboration based on Cahuc; Zylberberg, 2004

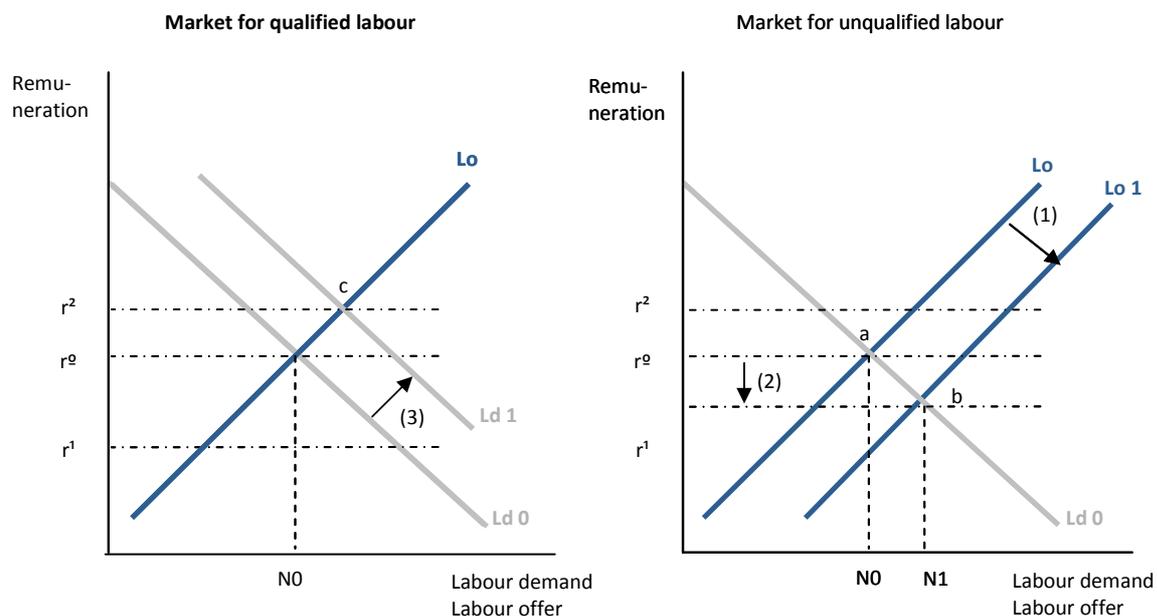
Therefore it is considered that labour migration has a negative effect on national workers even though for the great majority (the owners of capital) immigration entails overall benefits. The GDP which is represented by the bottom part of the quadrilateral  $OABE$  in the graphic for situation in which labour force only consists of natives will change when labour force also entails migrant labour force to the new quadrilateral  $OACG$  with the surface  $OG$  representing the "new" GDP. A profit surplus expressed by the triangle  $BCD$  is provided through labour migration (Cahuc; Zylberberg, 2004).

Zimmermann (2002) gives an overview over the effects migration has on labour and concludes with a recommendation of the situations in which migration can be advantageous in order to solve labour shortages. Parting from the assumption of homogeneous labour, he suggests the division of the labour market into a market

for unqualified and a market for qualified labour and supposes that those two segments are complementary<sup>4</sup>. The graphics 2.5 and 2.6 shows the effects of labour migration on labour markets.

When unqualified labour immigrates, employment in this segment rises from  $N_0$  to  $N_1$  and wages drop from  $r^e$  to  $r^1$ . An increase of employment for unqualified labour implies an increase of demand for qualified labour which is represented by the shift of the straight line  $Ld_0$  to the higher level  $Ld_1$ . In consequence, remuneration for qualified labour rises - both segments take advantage of immigration of unqualified labour.

Graphic 2.6: Effects of immigration of unqualified labour

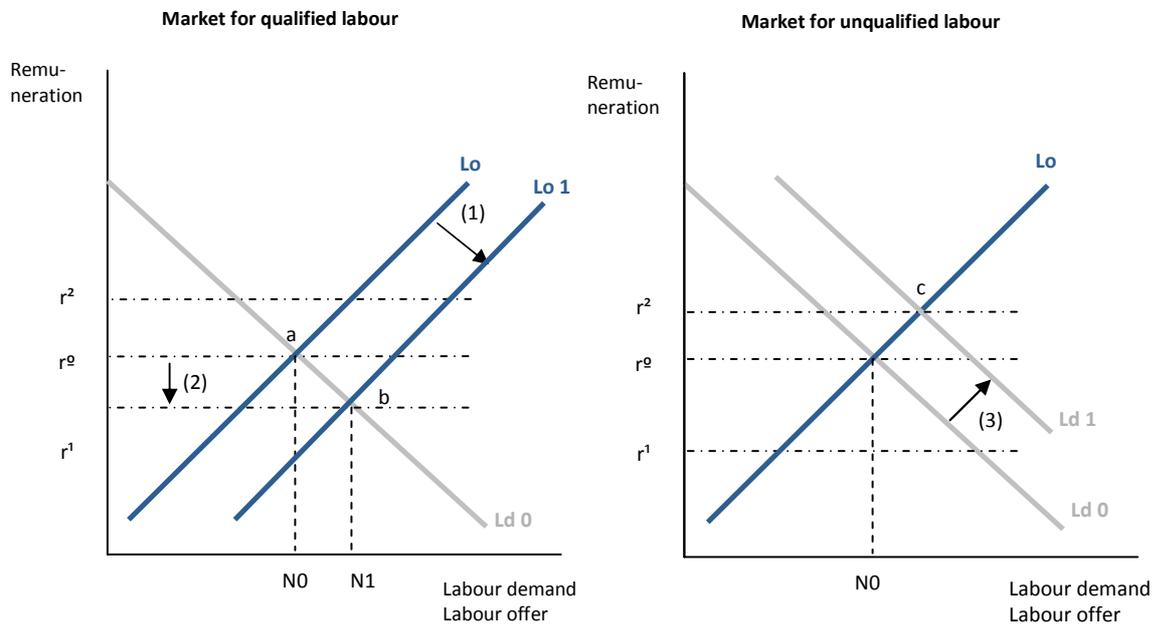


Source: Own elaboration based on Zimmermann, 2002, page 19

When qualified labour immigrates, the same process takes place: employment of qualified labour rises from  $N_0$  to  $N_1$  and remuneration declines from  $r^e$  to  $r^1$ . In consequence, there is a rise of demand for unqualified labour as we assume in this simple model that the two segments react complementarily. This is showed by the move of the straight line  $Ld_0$  to  $Ld_1$ . Wage equilibrates this new situation and establishes the level for unqualified labour at same employment volume at point  $c$ .

<sup>4</sup> This assumption is also promoted by the International Organization of Labour that states the tendency of investigators to emphasize that usually most positions assumed by migrant workers can not be staffed with national employees as a result of lacking disposition or deficient skills of the national labour force.

Graphic 2.7: Effects of immigration of qualified labour



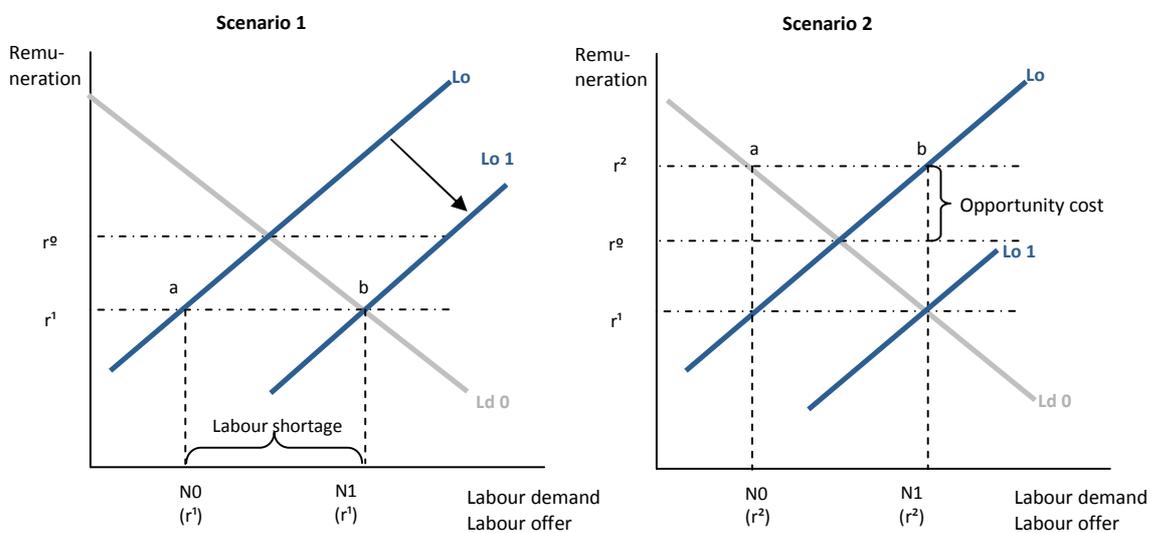
Source: Own elaboration based on Zimmermann, 2002, page 19

In standard economic theory, the general economic gain is the net income increases inured to the benefit of the migrants supplemented by a small surplus for capital owners in the receiving country; those domestic workers with most similarities to the migrant workers profile, are most likely to lose as their wages could decrease or increase more slowly and as unemployment for this specific group could rise. (International Organization of Migration, 2005) To conclude, immigration of labour force has direct negative effects on the economically active local workforce in the respective sub segment that present similarities. If workers in other sectors take advantage or disadvantage of labour immigration depends on the respective interrelation between production sectors. Particularly when foreign labour is complementary to both qualified and unqualified work, effects for all local parties are beneficial: the demand for qualified and unqualified labour will increase (Zimmermann, 2002).

The previous analysis has been centred on long-term labour market effects of labour migration. The following reflections plotted in Graphic 2.7 take into account short term labour market disequilibrium situations. Scenario 1 shows the situation in case of an existing labour shortage at low wages. At remuneration  $r^1$  only  $N0$  ( $r^1$ ) workers are disposed to work whereas companies show a demand of  $N1$  ( $r^1$ ) employees. There is involuntary labour shortage represented in the graph by the section from  $N1$  to  $N0$ . Labour immigration implies a growth of the labour force in the sector which is graphically displayed by the displacement of the straight line  $Lo$  to  $Lo 1$ . Labour offer and demand come into equilibrium at  $r^1$ , wages persist on this level and employment will take place in the extent of  $N1$ .

Scenario 2 shows a situation in which companies require employment to the extent of  $N_1$ . The corresponding wage for full employment is higher than the remuneration companies are willing to pay. The theoretical equilibrium at  $r^*$  does not result because of the opportunity costs related to a job/industry/region change for the employees. Companies would have to pay  $r^2$  in order to fill their vacancies. When immigration takes place, labour offer grows and the labour offer line displaces to the bottom of the graph. Labour offer and demand come into equilibrium at a lower wage level and employment grows.

Graphic 2.8: Labour migration effects at existing labour shortage



Source: Own elaboration based on Zimmermann, 2002, page 19

As we can see, labour migration can thus be an option to solve labour shortages which result of remuneration rigidities, lacking mobility of locals etc. without inducing wage rises. The suitability of labour migration as a solution for labour shortages must be analysed corresponding to underlying reasons for those independently. In case of upward remuneration rigidity, immigration of likewise qualified and unqualified labour can be appreciated as a viable option in order to solve labour shortages. In this case, production in innovative and efficient sectors will benefit of the reduction of rigidities. In contrast, when information deficits and lacking mobility are the underlying causes for labour shortage, immigration of labour is a risky strategy as it might probably worsen market rigidities, decelerate necessary structural changes and because it could lead to unemployment (Zimmermann et al., 2002). According to Cahuc and Zylberberg (2004) the immigration of low-skilled workers deepens existing inequalities between skilled and unskilled labour as wages for skilled labour are affected to a minor degree by the immigration of low-skilled workers than wages for low-skilled tasks. Borjas (1999) conducted a simulation on the effects of immigration in the United States in 1995 with three elements of a production function: (1) capital, (2) skilled work and (3) unskilled work. He assumed that the distribution of knowledge amongst natives/migrants would stay the

same during the next years and calculated the effects of an augmentation of the labour force by 10% consequent to immigration. The following table shows the simulation results for intermediate labour demand and capital demand elasticity values.

Table 2.3: Effects of an immigrant inflow equal to 10% of the labour force. Fixed capital.

Variation( %)	Capital	Price of capital
Capital earnings	6.49	-
Skilled worker's earnings	-2.29	0.46
Unskilled worker's earnings	-3.27	-4.27
GDP gain to natives	0.27	0.14

Source: Borjas 1999, table 1. Differentiation between skilled and unskilled labour is made by defining a high school diploma as boundary.

On the whole, considering empirical results through obtained from natural experiments<sup>5</sup>, we find that the impact of immigration (even in large scales) has been little or even insignificant considering unemployment and wages (Cahuc; Zylberberg, 2004).

## 2.4. Preliminary Conclusions

Labour markets are complex markets that distinguish themselves from other ones because they are characterized by significant rigidities. Its functioning is very complex and therefore effects on labour markets are difficult to predict. Nevertheless, making some basic assumptions, the main tendencies can be explained on the basis of simple economic models in which remuneration takes on the role of the market equilibrating mechanism that balances labour offer and demand.

Still, in reality, we can observe labour shortages – sometimes in the face of high unemployment rates. These labour market disequilibrium can be explained by remuneration rigidities that are on institutional grounds or delays in the decision-making procedure of businesses but there are also remuneration unaffected reasons for labour shortage – situations in which in spite of increasing labour prices the labour offer does not rise.

Migration of qualified and unqualified labour is a conceivable possibility to solve labour market shortages in a relatively short time. We distinguish the forms of labour migration according to the two dimensions: length and purpose of stay and conclude in the division of foreign labour into three categories: (1) permanent migration primarily for high-skilled migrant workers, (2) temporary migration: for all types of employment (guest-work) and

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<sup>5</sup> Compare the following studies: Card (1990) on Cuban immigration in Miami, Hunt (1992) on Algerian immigration to France in 1962.

(3) temporary migration for time-bound employment (seasonal work). Labour migration has been growing significantly in the past and we can expect that in the future the phenomenon will grow considerably as we face a globalisation of migration – new technologies and better information facilitate migration. Economic and social differences between countries will increase and induce further migration as in consequence push- and pull-factors upon which migration decisions are made gain weight.

The economic impacts have been controversially discussed but there are as well positive as negative effects on both – receiving and sending countries. The most important points are the intensification of economic growth (through additional consumption/through the sending of remittances), the equilibration of labour market maladjustments (elimination of labour scarceness/reduction of unemployment pressures) and the maximization of the productive and effective use of production factors.

Immigration of labour usually is accompanied by wage-reducing pressure and therefore directly affects locals active in the sub segment in which labour migration occurs negatively, even though those impacts are considered to be marginal. The effects on other segments must be investigated independently and in accordance with the interrelation of the production sector. Migration of qualified labour and such foreign labour which is complementary to the other sub segments of the labour market is mainly beneficial and leads to an increase of employment in general.

If encouraging labour migration is a suitable strategy to solve labour shortages must further be analyzed depending on the underlying causes for the respective labour market disequilibrium. It can be considered a viable option when wage rigidities are accountable for labour shortage. The opposite is the case when excess labour demand is due to information deficits and lacking local mobility on the labour supply side, existing rigidities could be worsened and necessary structural changes might be decelerated leading to unemployment. Therefore, an industry-specific analysis of the conditions must be done before giving any recommendations for the Spanish hotel and tourism sector in regard to the issue of solving labour shortage through immigration.