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Agriculture and employment in EU rural areas case study: the province of Luxembourg Belgium

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**AGRICULTURE AND EMPLOYMENT IN E.U. RURAL AREAS
CASE STUDY: THE PROVINCE OF LUXEMBOURG,
BELGIUM**

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November 1998

With the financial support of the European Commission
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DOCUMENTATION ÉCONOMIE RURALE RENNES





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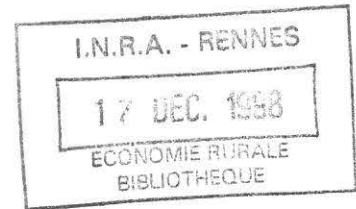
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KEY ISSUES

LOCAL RESOURCES

(1) Do local resources matter in the creation of employment?

Yes, they contribute to employment growth, but actors are needed to exploit them. The main resource is space. Thanks to the economic growth and the growing labour demand in the neighbouring Grand Duché du Luxembourg and the road infrastructure improvement, the province of Luxembourg became a land of immigration. The population increase pulled the employment in the service sector. This phenomenon has been emphasised by the settlement of many enterprises from outside which were also partly attracted by the relative low land price.

(2) Identification of those local resources (including infrastructure) which are important for the creation of employment.

- (2a) Beautiful landscape in the province of Luxembourg: forests, landscape of grassland and hedges, monuments and old houses. These landscape amenities create an atmosphere of quietness and green space, which attracts tourists, labourers and entrepreneurs. The accommodations and services asked by these actors are a source of employment. Moreover, the new coming entrepreneurs also create employment opportunities in their own business. Primary resources from forests, agriculture and quarry provide relatively more employment in the province than in the whole country. Employment in this primary sector is, however, decreasing. The activities of this sector are weakly vertically co-ordinated with the downstream activities.
- (2b) The well-developed motorway E411, the good network of renewed national four ways roads and the industrial zones equipped by the *intercommunale* IDELUX.¹ This infrastructure facilitates trade of goods and services, particularly since many companies are located along these roads.

ECONOMIC ACTIVITIES

(3) In which branches does employment increase? What are the properties of these branches?

About half of employment growth occurred in the public sector. About 70% of new jobs were created in sectors characterised by a limited exposure to global markets, relatively stable prices and a rather labour intensive production (public and private services except transportation and financial services). The other three branches with an important contribution to employment growth are transportation, financial and manufacturing sectors. These sectors are exposed to global markets and fluctuating prices. The production process of these sectors varies: the financial sector is labour intensive and the manufacturing sector labour extensive. It goes without saying that the larger share of employment is created in sectors with a labour intensive way of production, since capital intensive sectors tend to save labour input. Self employment decreased until 1985 as a result of the decline of the agricultural sector and has been increasing since that year thanks to new services provided to persons and enterprises.

¹ IDELUX is a syndicate of the 44 municipalities of the province.

(4) Does the sector mix explain the dynamics in employment growth?

It is difficult to answer. The sector mix in the province of Luxembourg shows a relative over representation of employment in the agricultural and service sectors and an under representation of industry compared to the average in Belgium. The decline of employment in the agricultural sector is faster in the province than in the country. After the late seventies crisis in the iron and steel industry, the employment in the manufacturing sector became more diversified. Note, however, that still nowadays sixty percents of commuters to the Grand Duché du Luxembourg are employed in the iron and steel industry. Growth of employment in the public and private services is partly explained because the province has a relative young and growing population and because services to enterprises in the province are catching up with the average country level. The sector mix characterised by a high share of services has facilitated employment growth. However, employment in public services is fragile due to future public finance restrictions.

(5) Is employment created in small or large enterprises?

Yes, both in very small and large companies. Ninety five percent of the companies have less than 5 employees and only 23 companies (0,1%) have more than 100 employees. Since the end of the iron and steel industry in the late seventies when 1,500 persons lost their jobs, the implantation of ten large plants from multinational companies has directly created about 3,000 jobs. But the period of exogenous development seems to fade away now. The public services grew by about 7,000 employees. About 5,500 jobs were created by very small companies or self employees. Middle size companies are rare and do not play a significant role. This dual structure of the economic activities is a problem because large companies can not contract with very small companies. Structural change is, however, occurring in the transportation and construction sector for this purpose.

(6) Is employment created in new or existing enterprises?

There is a lack of data to answer this question. Eighties percent of existing enterprises in 1995 did not exist in 1980 (89% in Belgium) and 30% were created between 1990 and 1995 (the same in Belgium). In the manufacturing sector, most of the existing employment come from the settlement of new plants thanks to foreign investment after the collapse of the iron and steel industry in the late seventies. As a result, new enterprises are likely to have significantly contributed to employment growth since 1975. Nevertheless, as half of the employment growth occurred in the public sector, it is hard to say whether an actually large share of employment was created in new enterprises.

ACTORS: ANALYSIS OF LABOUR SUPPLY

(7) Does the education level of the labour force matter in the creation of employment?

Yes, according to a sample of managers, there is a relative shortage of high skilled labourers in the province of Luxembourg. As a result of the recent diversification of the economic activities within the province, every skill can not be actually found within the local population. Either, high skill labourers are reluctant to work in the province because of their concerns of living in a rural area with weak cultural and educational facilities. Or, high skill labourers working in the province actually live close to large urban centres and commute daily to their work place. Local skill shortage is partially balanced by commuters and foreign (mostly French) labourers. Initial and professional training within companies seems to be effective and encouraged by the regional authorities in the province. For example, many young French labourers cross the border to benefit from this opportunity. Managers, however, complain and ask for more subsidies to promote training in their own companies.

Many middle and large size companies are managed by foreigners or Flemish persons. Several agencies involved in local development try to improve the management capacities of very small entrepreneurs to enable the enlargement of their business. Their analysis is that most of the very small companies, which are over represented in the province, were created by technicians, not by managers. These entrepreneurs would not have the ability to manage more than few employees. Another explanation could be in the labour market features.

LABOUR MARKET

(8) Is employment hampered by the institutional structure of the labour market?

The cost of labour reveals to be quite high in Belgium due to social security and income taxes. In addition, people from the province of Luxembourg are used to rely on self employment and undeclared jobs, in particular in forestry, trade, hostels and restaurants. This behaviour may explain why very few small entrepreneurs decide to enlarge their business, even when they are very profitable. There is a lack of incentives for small companies to leave their tax avoiding behaviour.

ACTORS: ANALYSIS OF STRATEGIES

(9) Does the regional identity in terms of the capacity of the actors matter in the creation of employment?

The province is characterised by a strong regional identity. This identity was strengthened by the low development level that experienced the province in the past and its small population size. People of the province felt forgotten by national authorities more concerned with urban development. This feeling resulted in the creation of the *Fondation Rurale de Wallonie* (FRW) which has focused its actions on local endogenous development and the defence of rural values. It also resulted in a strong political and social consensus when the crisis of the iron and steel industry occurred. As a result of this strong identity and consensus, political representatives of the province having key ministerial posts in national governments exploited their political connections to get much public funding from national and European sources. In

addition, managers of the provincial agencies involved in local development showed a very innovative and professional attitude.

On one hand, the attitude of labourers to work is recognised to be positive, without "class struggle" tradition. It is often referred as a rural attitude to work, which encourages the creation of employment by settlement of plants from multinational companies and meet expectations of settled enterprises. On the other hand, the very cautious and risk averting attitude of entrepreneurs may hamper employment growth.

(10) Specify the role of internal and external networks in the creation of employment and give an analysis of which actors come to exercise power over others within and through networks.

Because of the limited numbers of interviews with local actors, only a qualitative and rather gross assessment of internal and external networks can be given here.

Internal networks

In this small region, formal professional networks (tourism, agriculture) are organised on a vertical basis while formal political and social networks (entrepreneurs, labourers, etc.) are organised on a social basis like anywhere else in Belgium. The difference between the networks in the province compared to networks outside of the province lays more on the informal nature of the relationships between formal networks. Because of the easy communication between persons that know each other, co-operation between organisations, such as public agencies in charge of professional training, which are supposed to compete against each other, prevails more often in this region than in other regions of Belgium and the département des Ardennes that is considered in our comparative study as the lagging region in terms of employment growth. Relationships between enterprises and administrative agencies are also good regarding the subsidy and manpower provision.

The networks in the province of Luxembourg are characterised by a high degree of solidarity and easy communication. In this province, solidarity is close to unity. Conscious of their small population size, people do not scatter their efforts. Institutional networks of the province are strong and efficient. There is only one *intercommunale* IDELUX gathering all the municipalities of the province. There is only one organisation of enterprises, the *Chambre de Commerce et de l'Industrie du Luxembourg Belge* (CCILB). For agricultural purpose, the provincial authorities created and financed the *Centre d'Economie Rurale* (CER). The province also benefits from the services of Investsud which can support small and medium size companies to invest, and from the services of the *Fondation Rurale de Wallonie* (FRW).

Internal formal and informal networks ensure the compatibility of the different initiatives but also the social peace. Many social conflicts within companies are resolved through the informal mediation of provincial authorities or public agencies. External networks are used to secure public funding or facilities for the province.

Politicians, union leaders, managers of public and private enterprises know each other very well. The province counts some dynamic and motivated national, regional and local leaders at the political, administrative and organisational levels. These levels reveal to be highly complementary in the area of rural development even if some competition arises in the area of professional and management training.

External networks

Compared to the lagging region of our study, external networks in the province of Luxembourg look extraordinarily developed either in the public or the private sphere at the regional, federal and European levels (refer to the report). Local authorities at the municipality and provincial levels within these external networks are able to negotiate with regional or national authorities on the basis of a political consensus reached at the provincial level. They are also able to impose a territorial approach to their problems rather than the Belgian prevailing « political parties » approach. The European Development Pole and the relatively high importance of subsidiary businesses provide the province with economic opportunities outside. Political and economic actors from the province usually work hand in hand in networking externally.

The specificity of the province is also the high number of commuters working in the Grand Duché du Luxembourg. Although recruitment depends on strong informal external networks, it is also supported by a formal co-operation between labour agencies of both the province of Luxembourg and the Grand Duché du Luxembourg.

In sum, the respective contributions of internal and external networks to employment growth are the following. On one hand, external networks provide jobs, mostly in the Grand Duché du Luxembourg, and contribute to attract both private and public investment and some high skilled workers. On the other hand, internal networks define development priorities and practically organise economic activity settlements, worker recruitment and training and social facilities.

(11) Give an identification of the most effective policies and strategies towards maintaining or augmenting employment and indicate their local implementation.

The main strategy of the provincial authorities and agencies in charge of local development is based on two types of speech. In the direction of the regional, national and European authorities, the speech consists in emphasising that the province is a rural less favoured area. In the direction of private investors, the speech consists in emphasising that the province is green, well connected to international networks and characterised by hard workers and social peace.

Most effective strategies towards employment growth are those of local policy makers and labourers. Compared to Belgium and to the lagging region of our study, labourers show ability in accepting part time jobs and « commuting » jobs, which are the two types of jobs explaining most of the employment growth. Policy makers show ability in creating good conditions for attracting private and public investment from outside and structuring them in a territorial approach where a political consensus prevails.

The most effective policies were first the construction of the highway and the improvement of roads, second the reform of the State with the consolidation of municipalities, third the laws of economic expansion of 1970 and 1978 and fourth the implementation of the European Development Pole. More than these national and European policies, their local implementation was crucial, especially the co-ordination of the 44 new municipalities in the development agency IDELUX which was very efficient in designing and equipping industrial and commercial zones along the transportation axes. IDELUX also contributed to tourist infrastructure.

The most spectacular success of the province is the exogenous development in the eighties. The provincial authorities with the *intercommunale* IDELUX succeeded in attracting several large exogenous investments by combining regional, national and European subsidy possibilities up to 30% of the total investment.

The provincial lobbyists were also very active to improve the network of communication. It was the case with roads and motorways in the eighties. It is now the case with telecommunications. The province attracted many public funds largely as a result of a strong political will and the capacity of local leaders.

In this case study, the endogenous versus exogenous development is discussed from the point of view of the local policy makers. For them, endogenous development hangs on local small and medium enterprises, based on local entrepreneurs and local investment with eventually the support of local authorities, while exogenous development is based on the settlement of foreign enterprises or subsidiary businesses with managers, private and public investment coming from outside (multinational enterprises, regional, national and European aids).

>From the point of view of this research project, however, the engine behind employment growth at place of work clearly comes from endogenous forces in the province of Luxembourg. Facing the situation of their under-developed region, the local policy makers are clearly the initiators of the employment growth. They built and used strong external networks in a view to claim for the territorial parity, and even a sort of positive discrimination, in public investment and staff means from upper level authorities and to attract private investment from outside. Thanks to internal networks, they shaped and implemented an ambitious policy of economic and territorial development by ensuring political and social consensus and building a renewed image of the region. This good image is used by the tourism and food industries, even when the activities of these industries are not connected to the local resources. The employment growth at place of residence comes from both these endogenous forces but also from exogenous forces such as the Grand Duché du Luxembourg's economic growth and labour force shortage.

There is, however, one dominant exogenous force. The region is in the middle of highly populated and congested areas in Belgium and Grand Duché du Luxembourg. As a result, the improvement of the telecommunication, road and highway networks open the region to space intensive activities like transportation and some other industrial and service activities such as large plants, military settlements, short stay tourism and « green » recreation activities.

(12) How do farm households adapt to the situation of decreasing employment in the agricultural sector? What are the perspectives for tourism on the farm, landscape conservation and pluriactivity for farm households?

There is a strategy of professionalization in the province of Luxembourg. Farms are enlarging and specialising according to their comparative advantage, in particular in cattle breeding. They are well supported in this strategy by the provincial agency the *Centre d'Economie Rurale* (CER). Successful diversified farm activities such as in large game and Christmas trees remain rather isolated. The attempt in promoting a local label for meat was not a success.

The rate of off-farm pluriactivities that was characteristically high in this province tends to decline as a result of the decline of the secondary sector. The only other activity with some attractiveness is on-farm tourism because of a growing demand. On-farm as well as traditional tourism offer opportunities for on-farm diversification.

I. INTRODUCTION

1.1. Objective and plan of the case study

The aim of this case study is to analyse the development of employment in the province of Luxembourg in Belgium during 1980-1997. In this study demand and supply of labour are approached from the interplay of local resources, actors and economic activities in the region and from the interaction processes of internal and external actors.

This study is carried out in the scope of the FAIR3 CT 96-1766 project "Agriculture and employment in the rural regions of the EU" (RUREMPLO). In this project an analysis is made of the development of employment in the rural regions of the European Union (EU) against the background of a downward trend in the agricultural labour force. For this purpose nine case studies in EU rural regions, which succeeded in maintaining or augmenting employment opportunities during the last decade are carried out. In these case studies the interaction process of the local agricultural actors, other economic actors and policy makers and their policies and strategies for maintaining or increasing employment opportunities are examined. As a next step, nine case studies are carried out in rural regions, in which employment stagnated during the last decade. In those case studies it is analysed to which extent policies and strategies for maintaining employment opportunities in leading rural regions offer a perspective. Based on the findings of all case studies recommendations are given for policies and integrated rural development strategies in order to increase employment opportunities in rural regions of the EU.

The plan of this study is as follows. In this chapter preliminary remarks are made on the reasons behind the selection of this region in the case study, on the history of the region, on the economic and geographical environment and on the institutional setting of this region. In chapter 2 local resources are discussed and in chapter 3 an analysis of economic activities is made. Labour supply is examined in chapter 4 and the functioning of the labour market is described in chapter 5. Strategies of the economic actors are elaborated in chapter 6 and in the last chapter a synthesis of the development of employment is given.

1.2. Reasons behind the selection of the region in the case study

In Belgium, only three Nuts2 regions are intermediate rural or rural according to the OECD classification: the provinces of Liege, Namur and Luxembourg. In addition to be the only rural region in Belgium, the province of Luxembourg is the only Nuts2 region in Belgium where employment growth and population growth exceeded significantly the corresponding Belgian rates between 1981 and 1991. Moreover, the agricultural sector in this province still weights more than 8% in the working population. Unfortunately, this province is far from being a functional labour market because 13.000 Belgian residents (14% of the working population) commute to the Grand Duché du Luxembourg to work. The unemployment rate in 1995 is 8,7% in the province compared to 11,7% in Belgium. What would it be without commuters? Is the province a real leading region considering that the commuters were less than 6.000 in 1981? Actually, it is. In 1981, 66.300 persons were employed or self employed within the province. They were 80.800 in 1994. During this period the rate of net creation of employment within the province was about 20% compared to 5% in Belgium. This exceptionally high employment growth was also a result of an active policy of provincial authorities. Even if the low unemployment rate is partially due to job opportunities in the Grand Duché du Luxembourg, the province of Luxembourg provides an interesting case study.

1.3. Brief historical overview of the region

The province of Luxembourg has traditionally been a rural and low industrialised area. The only industrial roots of the province are located in the extreme South of the province, at the border of France and Grand Duché du Luxembourg, where an iron and steel pool has dominated the regional productive fabric during several decades.

Combined with the continuous decline of agricultural activities, the closure of this iron and steel site in 1977 has been the cause of a serious economic crisis at the end of the seventies. However, despite the economic crisis, the employment growth has not been particularly affected. Indeed, employment losses in the agricultural and industrial sectors have been largely compensated by employment creation in the tertiary sector, particularly in the public sector.

Employment growth has yet been stopped since 1980. Indeed, between 1980 and 1985, the break-down of the building sector, and consequently of its depending activities (wood, stone, hardware, metal productions), has largely increased the tensions on the labour market. Hence, the public sector could not absorb any more the employment surplus. The weak presence of industrial activities was an additional factor of this unbalance of the labour market. Finally, the departure in 1984 of the Levis firm, a large regional employer, has constituted a significant loss in terms of employment.

In order to overcome the economic crisis, the policy of the province rested exclusively on exogenous factors, i.e., the attraction of multinational firms essentially in the chemicals and plastic sectors (Mobil, Champion, Mogolux, Mapacet, l'Oréal, Glaverbel, US Gypsum, etc.). Laws of economic expansion which have been adopted in this period in order to overcome the emerging crisis in Wallonia have largely contributed to support this policy. Employment creation was thus mainly located in these sectors as well as in the services sectors, i.e., public services, business services (accountancy, computing, advertising, marketing, etc.) and social and community services (health care, culture, leisure, tourism, etc.).

This exogenous policy has thus produced some positive effects in terms of employment. However, the departure of Levis in 1984 has started to question the validity of this policy. Indeed, such a policy may be all the more penalising that the provincial production structure mainly comprises small enterprises and is characterised by a serious lack of medium enterprises which are more adapted to absorb the employment surplus caused by the departure of large enterprises.

Accordingly, the exogenous policy has been pursued but it has been accompanied by endogenous factors focusing on the supply of services to small enterprises. The co-ordinated action of enterprise support organisations (investment body Invest, *intercommunale* IDELUX, provincial chamber of commerce and industry CCLIB, etc.) has been rather efficient in this respect.

In addition, the province of Luxembourg has also been very active in attracting European Funds to reconvert the region. In particular, the European Development Pole (EDP) which has been implemented in the former iron and steel site in order to diversify the productive tissue through the setting up of an industrial park, has been one of the first significant project of the EU Structural Funds. Cross-border co-operation between Belgium, France and Grand Duché du Luxembourg has namely been fostered through this action.

Finally, close political links of the provincial authorities with the federal government have certainly helped the success of those development policies, especially as regards the exogenous aspects.

In this respect, the number of multinational company implementations has constantly increased since the beginning of the eighties. Important investment in the tourism sector (Space centre, Sunparks, etc.) has also been realised. These investments (tourism and multinational firms) represent nowadays half of the economic activities of the province. The other half is composed of very small enterprises which face some difficulties in expanding their size.

This policy as well as the improvement of the economic conjuncture have participated in the revival of the regional economy since 1987. The revival movement has quickly produced positive effects on the labour market. The private sector has accordingly just taken over from the public sector in terms of employment creation. Progressively, the service sector has become the predominant sector of the region. Despite those progresses, it must be noted that the province of Luxembourg is still characterised by a low level of export activities as a result of a relatively small manufacturing sector.

In conclusion, despite employment variations, the province of Luxembourg has usually differentiated from the national average in showing a lower employment loss rate and a higher employment growth in periods of economic growth because of the relatively large size of its private and public service sector. Two types of factors are generally advanced as explanatory factors of this difference (IDELUX, 1991):

1. structural factors, which are linked to the sectoral structure of employment in the province, i.e., the relatively large presence of the service sector which has continuously expanded since the seventies,
2. regional factors, which are basically the performance of local development actors, the investment climate, the entrepreneurial dynamism of new comers, the diverse location advantages of this cross-border region, the quality of its natural environment, the good network of physical infrastructure and the strong political consensus of the main actors of the province regarding the development strategy.

1.4. Geographical and economic environment

Map of the region

The province of Luxembourg is made up of 5 districts that are Marche-en-Famenne, Batsogne, Neufchâteau, Virton and Arlon. Arlon is the main town of the province, although it is relatively small compared to other Belgian towns. Globally, urban poles are relatively limited in size in the province.

The economic activity is globally spread on the whole of the province and is not therefore concentrated in one or several poles. However, the province may be roughly divided in two parts, i.e., on one hand, the South, where the majority of the multinational firms have been set up and which comprises more industrial activities and, on the other hand, the North and the Centre which are still more agricultural areas.

As far as its physical environment is concerned, the province of Luxembourg is an homogeneous entity which presents some specific features: a low density and a large dispersal of its population, a forestry massif covering the half of the provincial territory, an accentuated relief and a tough climate.

Albeit those characteristics and the peripheral nature of this region, the province of Luxembourg is well provided in terms of infrastructure. Since 1990, the province has been connected to the European motorway network linking Brussels, Luxembourg city and Strasbourg. In addition of the motorway network, the province comprises high speed roads linking all regional urban poles. The railway network is also well developed compared to the European average (Figures 1.1 and 1.2).

Figure 1.1

70 millions de consommateurs dans un rayon de 300 km.

idolux

Droev de l'Arc-en-Ciel, 98 B-6700 ARLON
Tel +32/63/23 18 11
Fax +32/63/23 18 95

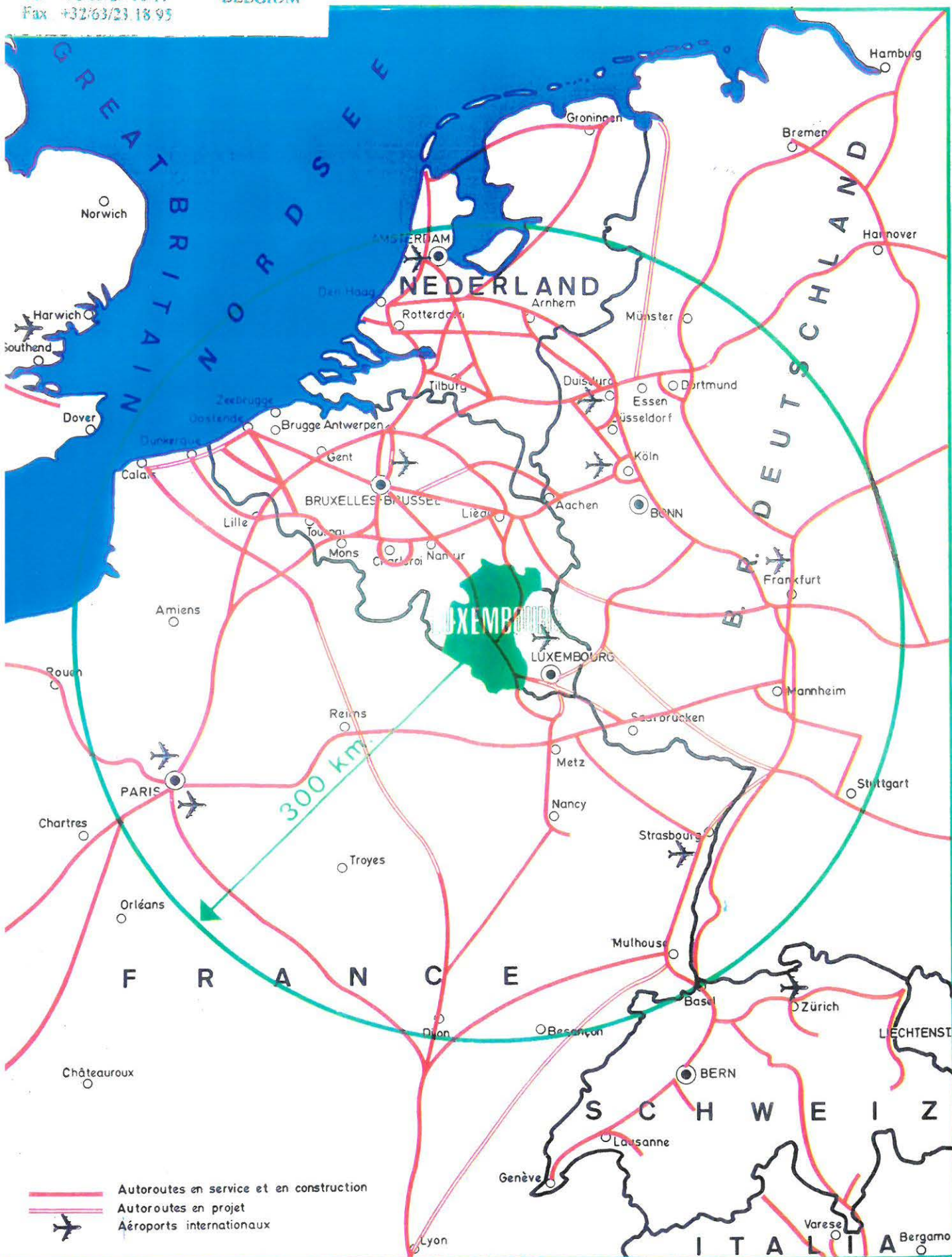


Figure 1.2

La Province de Luxembourg LES GRANDES INFRASTRUCTURES

delux
 Drève de l'Arc-en-ciel, 98 B-6700 ARLON
 Tél.: +32/63/23.18.11 (BELGIQUE)
 Fax : +32/63/23.18.95

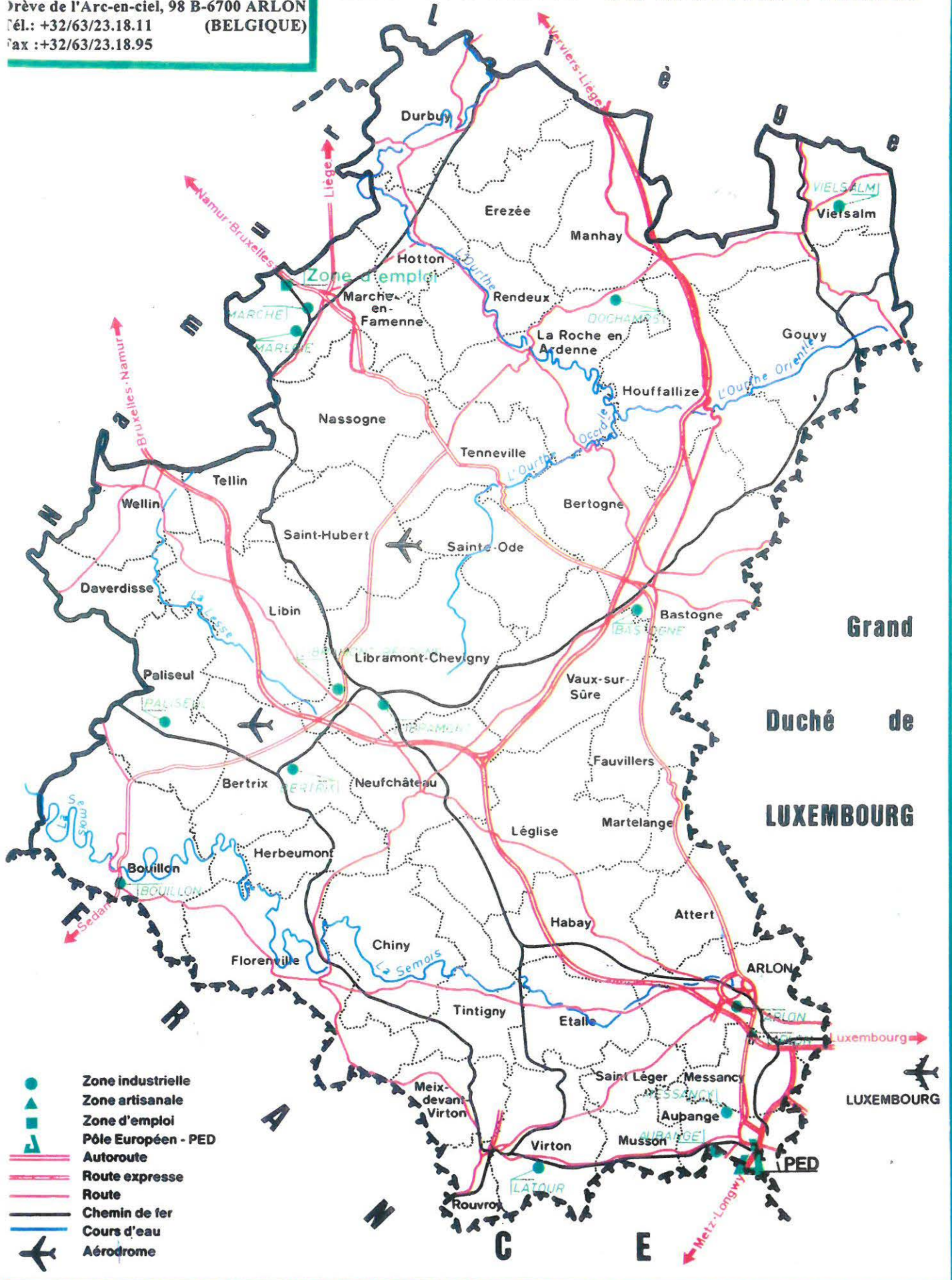


Table 1.1: Economic environment of the province of Luxembourg compared with the Walloon Region and Belgium

Socio-economic indicators	province of Luxembourg	Walloon Region	Belgium
Population (1st Jan. 1996)	241,339	3,314,568	10,143,047
Size (km ²)	4440	16,840	30,530
Density (inhab./km ²)	54,4	196,8	332,3
Population growth between 1981-91 (%)	0,5	0,1	0,1
Employment growth between 1981- 91 (%)	13,1	4,6	5,1
% of population over 60 (1989)	20,5	20,8	20,3
Income per capita:			
1981 (ECU)	3807	4550	4645
1993 (ECU)	7190	8038	8646
1981-93 (%)	89	77	86
Employment by sectors (1994):			
-Agriculture (%)	8,2	3,2	2,7
-Industries (%)	20,4	26,7	26,9
-Services (%)	71,4	70,2	70,4
Rate of unemployment:			
1981 (%)	5,7	n.a.	9,5
1991 (%)	6,1	12,1	8,4
1995 (%)	8,7	16,3	11,7
Main towns (1990):			
- Arlon	23.325		
- Marche-en-Famenne	15.327		
- Aubange	14.238		

Geographical environment

As already mentioned, the province of Luxembourg is a cross-border region which confines France and Grand Duché du Luxembourg. Cross-border movements regards quasi exclusively the districts which are located in the South of the province. In the district of Arlon, cross-border people represent nowadays more than a quarter of the working population.

In the past, the development of the iron and steel industry across the Belgian, French and Grand Duché du Luxembourg borders has given birth since the end of the 19th century to significant workers movements across the three borders. The dismantling of the iron and steel industry during the last decades has deeply modified the destination of Belgian cross-border workers. Accordingly, a massive transfer of cross-border people has occurred for the last 20 years, on one hand, from France to Grand Duché du Luxembourg, and, on the other hand, from the iron and steel industry towards other sectors.

The number of Belgian people working in the Grand Duché du Luxembourg has constantly increased since 1980. Those cross-border people are mainly employed in the Grand Duché du Luxembourg's industries (67% in 1981, among which 59 in the iron and steel industry), in the

banking and insurance sector (around 10%) and the rest in merchant services. Nevertheless, the crisis of the iron and steel industry which start to affect more severely the Grand Duché du Luxembourg as well as the challenges which face the banking sector due to the liberalisation of this sector, will probably affect Belgian employment in the Grand Duché du Luxembourg in a near future.

1.5. Institutional setting

Regional Institutions

Since the State reform carried out in 1993, Belgium has become a federal State. Accordingly, Belgium is made up of three administrative regions (Walloon, Flemish and Brussels Capital) and three linguistic communities (Flemish, French-speaking and German-speaking communities).

There are ten provinces which were previous to the State decentralisation. Those are autonomous institutions but they are submitted to the Federal State, the Communities and, more significantly, the administrative regions. Accordingly, the province of Luxembourg is located in the French-speaking community and the Walloon region.

Provinces are made up of a provincial Council whose members are directly elected, and a Permanent Deputation which is presided by a Governor. The Permanent Deputation is responsible of the daily work.

Competencies of the provinces are relatively wide as those may regard any matter of provincial interest. Those have especially acquired competencies in the following fields: education, social and cultural infrastructures, health care and social policy, environment, economy, transports, public works, housing, etc. In this respect, provinces have some "indirect" competencies in the area of employment, in particular through their activity in the fields of economy and public works.

Although provinces are autonomous, they are, however, under other State bodies supervision (Regions, Communities and Federal Government). In the area of employment, provinces are therefore under supervision of the Regions and the Federal Government which manage main employment matters.

Structural Funds in the province of Luxembourg

The procurement of Structural Funds has traditionally been a central axis of the strategy of development of the province. Through the European Development Pole (EDP), the province of Luxembourg has been for instance one of the first beneficiary of those funds.

Since 1989, the north and the centre of the province of Luxembourg is eligible as an Objective 5b region, i.e. the districts of Neufchâteau, Marche and Bastogne which represent 56,5% of the population of the province (INS, 1996). The community subvention aims at the sectoral reconversion of this area and its economic development. In this respect, exogenous factors are privileged under the form of productive investments.

This area is indeed characterised by the following features:

- low population density,
- importance of agricultural primary processing activities (compared to the national and European average), particularly cattle breeding and forestry (Those agricultural activities are not connected to activities of product transformation),
- weakness of industrial activities and urban poles,
- large representation of the service sector, particularly public service,
- large proportion of self-employed persons who have developed activities in the tourism sector.

In this respect, the development policy is articulated around 4 axes:

- 1• economic revitalisation and diversification,
- 2• development and diversification of agriculture and forestry,
- 3• maximising human resources,
- 4• enhancing the attractiveness of the region.

In terms of employment, actions undertaken in the field of Objective 5b focus on maintaining employment in rural areas and not on creating employment as such. In this respect, the impact of those aids on employment growth on the province of Luxembourg is difficult to determine with accuracy.

The extreme South of the province of Luxembourg is eligible as an Objective 2 region. The Belgian part of this region is very small as it covers only one municipality (Aubange) which, however, includes 6% of the population of the province (INS, 1996). Aubange is actually the border area which has been affected by the collapse of the iron and steel industry in 1977 and which is now part of the EDP. One prominent feature of this municipality is the high rate of cross-border employment towards the Grand Duché du Luxembourg for its major part.

The conversion and development programme is centred on the traditional industries of the region, i.e., the mechanic, electric and electronic sectors. The development process focuses both on:

- exogenous factors, that is attractiveness of multinational group which predominated immediately after the collapse of the iron and steel activity and which is still pursued nowadays,
- endogenous factors which consist in strengthening the links between those multinationals and local SMEs as well as in the promotion of technological innovation through targeted formation programmes.

The province of Luxembourg also benefits from Objective 3 actions which apply in the whole Walloon Region and which focus on employment aspects, especially employment creation.

II. ANALYSIS OF LOCAL RESSOURCES

2.1. Introduction

The basic idea of this research project is that economic development, and particularly one of its components that is employment growth can be understood only at a disaggregated territorial level. Economic fundamentals, agents behaviour and strategies express themselves in a specific geographical context that usually takes the form of a *Local Economy*. In this idea of a local economy, territory is by definition a basic economic resource. In a more realistic and complex sense, we should say that territory can be at the same time a resource and a handicap, an obstacle to economic activities and a resource mobility.

The aim of this second chapter is to represent synthetically but even completely the regional endowments of territorial resources and handicaps to support the explanation of activities and behaviours that will be described and analysed in the following chapters.

2.2. Physical variables

2.2.1 Land use

Forest covers 207.892 hectares which are 46,8% of the 443.980 hectares of the total area of the province. The third of the Belgian forest is situated in the province which total area is about 15% of the area of the country.

The agricultural area diminished from 148.377 ha to 137.267 ha (-7,5%) between 1981 and 1992, while the Belgian agricultural area lost 10% during the same period. In the province, meadows and grasslands are prevalent and growing (Table 2.1). The whole province is classified as a "Less Favoured Area" according to the directive of the European Commission.

Table 2.1: Farm land structure in the province of Luxembourg compared to Belgium, 1981 and 1992

Area	Meadows and grassland	Arable land
Province of Luxembourg:		
1981	77,3%	22,7%
1992	84,5%	15,5%
Belgium:		
1981	49,5%	50,5%
1992	45,9%	54,1%

Less than 1% of the area of the province is devoted to industrial activities.

2.3. Infrastructure resources

>From 1980 to 1995, the road and motorway network was remarkably improved. For instance, the motorway length increased from 7 to 154 km. Less than two hours driving are needed to reach Brussels, Liege or Luxembourg city from anywhere in the province. Several railway lines pass the province, in particular in the south of the province. Except for motorways, the province of Luxembourg is still less equipped in terms of road and railway length per square kilometre than the intermediate rural and urban provinces of the country (Table 2.2). However, the decrease in the length of railways since 1980 has been lower in the province of Luxembourg than in the other Belgian provinces, in particular in the other two intermediate rural provinces (i.e., provinces of Liege and Namur).

Table 2.2: Motorway, road and rail density in the province of Luxembourg compared to intermediate rural provinces, urban provinces and Belgium (km per km²), 1980-1993

Areas	1993	1990	1985	1980
Motorways:				
Province of Luxembourg	0.035	0.030	0.017	0.002
Province of Liege	0.066	0.066	0.065	0.052
Province of Namur	0.028	0.028	0.025	0.022
Urban provinces	0.062	0.062	0.060	0.052
Belgium	0.055	0.053	0.050	0.041
Other roads:				
Province of Luxembourg	3.498	3.242	3.224	3.352
Province of Liege	4.461	4.172	4.175	4.092
Province of Namur	3.922	3.850	3.859	3.193
Urban provinces	5.054	4.716	4.702	4.278
Belgium	4.617	4.329	4.319	3.989
Railway:				
Province of Luxembourg	0.068	0.071	0.075	0.076
Province of Liege	0.100	0.106	0.112	0.133
Province of Namur	0.076	0.076	0.089	0.100
Urban provinces	0.132	0.134	0.141	0.148
Belgium	0.112	0.114	0.122	0.130

Source: EUROSTAT

There are also two small airports within the province and airports of Brussels and Luxembourg city are very close. The telecommunication facilities are good. Everyone can be connected on the telephone net and on internet. Some enterprises near the French border are using the French minitel.

2.4. Urban structure and geographical situation

No town in the province exceeds 30.000 inhabitants and only a quarter of the population lives in the first four towns. But the province is very close to Luxembourg city. Paris, Brussels, Amsterdam, Düsseldorf, Köln, Frankfurt, Saarbrücken, Metz, Nancy and Strasbourg are within 300 km (Map 1). The province is a very rural area in the centre of the richest part of western Europe.

2.5. Tourism and cultural resources

The province is well dotted with natural and cultural amenities. There are historical sites like the Middle Age castles of Bouillon and La Roche en Famenne, the old abbeys of Orval and Chiny, the village of Durbuy which are situated in lovely broken landscapes and are well endowed with tourist infrastructure (hostels, restaurants, walking, riding, hunting and fishing areas). New attractions for tourists were settled in the province during the period under study, such as the Eurospace Centre of Transinne, Houtopia, la Vallée de Rabais in Virton, Golonfa in Vielsalm and many sport facilities like several municipal golf greens.

There are 612 restaurants, 248 hostels, 85 camping and mobile home areas and 86 rural « bed and breakfast » employing more than 2,000 persons. There are also 38 tour and travel agencies.

One small university centre and four tertiary non-university schools are located in the province. The university centre is not well connected with the economic activities of the region, except the economic observatory of the province which provide up-to-date statistics in connection with the *Chambre de Commerce et de l'Industrie du Luxembourg Belge* (CCILB). The four tertiary non-university schools provide well quoted technological qualifications for students from the whole Walloon region. These students look for jobs in the whole country and are not employed in the province in priority.

3. ANALYSIS OF ECONOMIC ACTIVITIES

3.1. General economic performance

GDP per capita in the province of Luxembourg amounted to about 14,300 ECU in 1993, which was about 3,700 ECU below the Belgian average (Table 3.1). Since 1980, GDP per capita in the province has been maintained at around 80% of this Belgian average. Between 1985 and 1992, the GVA per worker in the province of Luxembourg increased from 93% to 97% of the national average. Between 1985 and 1993, the share of agriculture in the provincial income decreased from 8.7% to 6.6% (2.5% to 1.8% in Belgium), the share of industry from 20.5% to 18.1% (31.6% to 27.8% in Belgium), while the share of services increased from 70.8% to 75.3% (65.9% to 70.4% in Belgium). This rural province remained less involved in industrial activities than urban and intermediate rural areas.

Table 3.1: GDP per capita (ECU), GVA per worker (ECU) and shares of sectors in income and employment (%) in the province of Luxembourg compared to intermediate rural provinces, urban provinces and Belgium, 1980-1993

Macroeconomic variables	Province of Luxembourg				Belgium	Province of Liège	Province of Namur	Urban provinces
	1980	1985	1990	1993	1990	1990	1990	1990
GDP per capita	6,762	8,814	12,311	14,288	15,187	13,950	12,005	15,578
GVA per worker		26,510	35,358	41,150	37,765	36,738	33,147	38,130
GVA per worker in agriculture		21,447	31,500	35,302	32,207	34,434	32,310	32,015
GVA per worker in industry		30,611	40,486	41,026	42,420	43,791	36,301	42,498
GVA per worker in services		26,301	34,563	41,739	36,138	34,115	32,333	36,573
Agriculture in regional income		8.7%	7.6%	6.6%	2.2%	2.3%	4.2%	1.9%
Industry in regional income		20.5%	20.4%	18.1%	30.9%	32.2%	22.5%	31.3%
Services in regional income		70.8%	72.0%	73.3%	66.9%	65.5%	73.3%	66.8%
Agriculture in employment	10.9%	10.7%	8.5%	7.8%	2.5%	2.4%	4.3%	2.3%
Industry in employment	21.2%	17.8%	17.8%	18.9%	27.5%	27.0%	20.5%	28.1%
Services in employment	67.9%	71.5%	73.7%	73.3%	70.0%	70.6%	75.2%	69.6%
Unemployment rate		9.5%	5.0%	7.0%	6.3%	9.3%	8.2%	5.9%

Source: EUROSTAT

Total employment, measured at the place of work increased by about 1% per year during the period 1980-1992 (a little more during the period 1980-1995), which was rather weak but well above the national average of 0.12% per year (Table 3.2). On about 82,000 people working within the province in 1995, a quarter of them are self-employed like in 1980. Employment in the place of work, however, becomes uneasy to measure in Belgium. Hired employees are registered by the body in charge with the social security (Office National de la Sécurité Sociale-ONSS) where an employee with two employers eventually is double counted. Self-employees are registered by the body in charge with the social status of independent workers (Institut National de l'Assurance Sociale des Travailleurs Indépendants-INASTI). Some of them may be also registered by the ONSS, like part time farmers who eventually are also blue collars. For the time being, it is impossible to avoid double counted workers. With the development of part time jobs, particularly in trade centres and administrations, double counting may have actually increased. Moreover, after 1987 the registration of part time workers was enlarged to those who work less than two hours a day. After 1991, about 1,500 workers of the national railway company, formally registered at the national level, were included in the provincial statistics. All these biases lead to overestimate the real employment growth between 1980 and 1995.

Table 3.2: Annual GDP and employment growth between 1980 and 1992 in the province of Luxembourg compared to intermediate rural provinces, urban provinces and Belgium (%)

Macroeconomic Variable	Province of Luxembourg	Belgium	Province of Liège	Province of Namur	Urban provinces
Employment growth	+0.89%	+0.12%	-0.53%	+0.17%	+0.17%
Total GDP growth (80-93)	+6.44%	+5.94%	+5.49%	+5.88%	+5.98%
Agriculture GDP growth	-1.87%	-1.83%	-2.81%	-1.28%	-1.76%
Industry GDP growth	-0.05%	-1.52%	-2.81%	-2.38%	-1.36%
Services GDP growth	+1.53%	+0.94%	+0.64%	+1.14%	+0.95%

Source: EUROSTAT

During the period of 1980-1995, there were about 14,000 net creations of job at place of work. According to us, about 2,000 or 3,000 are due to overestimation, including at least workers from the national railway company included in the public services in the province in 1991. The agricultural sector lost 1,000 workers that mainly were self employed. The number of workers in the whole manufacturing sector decreased a little as manufacturing created 1,500 net jobs while construction lost 2,000 workers. Actually, the real employment growth within the province came from services: about 8,000 or 9,000 new jobs in private services and about 5,000 in public services and schools. The workers of the railway company are not taken into account here.

When employment growth is measured at the place of residence, the province of Luxembourg also showed an above average performance. In addition to the employment growth at the place of work, the number of residents working in the Grand Duché du Luxembourg has doubled since the seventies and reached more than 13,000 workers in 1995 (IDELUX, 1997). People commuting daily to the Grand Duché du Luxembourg have a great effect on the relatively low unemployment rate which was 8.7% in 1995 (11.7% in Belgium and 16.3% in the Walloon Region). The province has particularly benefited from the higher economic growth since 1987 in the Grand Duché du Luxembourg and Belgium to a lesser extent thanks

to new motorways completed around 1990. The precise number of French residents commuting daily to work in the province are unknown.

3.2. Demand of labour

The demand of labour in the province derives from several sectors and branches and from different general and specific conditions related to each other. The geographical position of the province in the middle of the opulent and populated north-western Europe, near the Grand Duché of Luxembourg where economic growth is higher and labour shortage significant, plays an important role. Considered as a less favoured area, the province or parts of it could benefit from a number of laws of expansion and EU structural funds programmes. As already mentioned, the province has been recently well connected with large urban centres by new motorways. These particular conditions sustained the population growth in particular with immigration of new residents. Between 1980 and 1996, the population increased by more than 18,000 inhabitants (+8.3% compared to an increase of +2.9% in Belgium).

Large and small enterprises found good conditions to settle in the province thanks to the support of Belgian expansion laws (see chapter 6) and structural funds, in particular with the help from the *intercommunale* IDELUX which provided them subsidised developed land and buildings, and water and energy facilities. Other specific advantages of the province identified by entrepreneurs are the « rural » labour force, hard working and weakly involved in trade unions, the nice environment of the province and the socio-political consensus. Economic growth in the Grand Duché du Luxembourg and the better road network attracted new comers, interested in commuting daily to work in the Grand Duché du Luxembourg, Brussels or Liège. These new comers found in the province low land prices and rents, and nice and secure places where to live with their families. This growth of population and increasing diversified enterprises raised the local demand of private and public services like transportation, trade, schools, etc.

3.2.1 Branches with job creation and branches with job destruction

About half of employment growth within the province occurred in the public sector. About 70% of new jobs were created in sectors characterised by a limited exposure to global markets, relatively stable prices and a rather labour intensive production (public and private services except transportation and financial services). The other three branches with an important contribution to employment growth are transportation, financial and manufacturing sectors. The workers commuting to the Grand Duché du Luxembourg are also employed in manufacturing industries, financial services and trade. These sectors are exposed to global markets and fluctuating prices. The production process of these sectors varies: the financial sector is labour intensive and the manufacturing sector labour extensive. It goes without saying that the larger share of employment is created in sectors with a labour intensive way of production, since capital intensive sectors tend to save labour input. Self employment decreased until 1985 as a result of the decrease of employment in the agricultural sector and has been increasing since that year thanks to new services provided to persons and enterprises.

Table 3.3: Self employment changes across sectors between 1982 and 1994 in the province of Luxembourg

INASTI	Economic activities	1982-1994 increase (growth)	Share of total self employed persons in 1994
500	Lawyers, Doctors and free lance professions	+1024 (+74%)	11%
400	Trade, hostels, restaurants,	+935 (+18%)	29%
600	Services (hairdressers, repairs, etc.)	+721 (+76%)	8%
0	Miscellaneous	-117 (-23%)	2%
300	Industry, quarry and handicraft	-161 (-4%)	19%
100	Agriculture and forestry	-889 (-12%)	31%
Total	All activities	+1513 (+8%) ^a	100%

^a 19,735 in 1982 and 21,248 in 1995.

Source: INASTI

Table 3.4: Hired employees changes across sectors between 1980 and 1995 in the province of Luxembourg

NACE	Economic activities	1980-1995 increase (growth)	Share of total employees in 1995
9	Other services: administration, school, health, entertainment, culture	+7193 (+32%)	50%
6	Trade, hostels, restaurants, repairs	+2617 (+40%)	15%
8	Credit, insurance and other financial services	+2326 (+170%)	6%
2-3-4	Manufacturing	+1645 (+27%)	12%
7	Transports and communications	+1514 (+50%)	8%
5	Construction	-1979 (-30%)	7%
0-1	Agriculture, hunting, fishing and forestry	-138 (-10%)	2%
Total	All economic activities	+13178 (+28%) ^a	100%

^a 48,000 employees in 1980 and 61,000 employees in 1995.

Source: ONSS

Compared to Belgium, the province of Luxembourg showed significant differences in employment growth across sectors (Table 3.3).

Table 3.5: Employment changes across sectors between 1980-1992 in the province of Luxembourg compared to Belgium

Location	Agriculture and forestry	Industry	Services
Belgium	-20%	-17%	+12%
Luxembourg	-20%	-1%	+20%

Source: EUROSTAT

The employment trend in agriculture in the province is similar to the one in the country. But employment in manufacturing has been maintained in the province while it has declined in the country. In addition, services created relatively more jobs in the province than they did in the whole country.

Branches that are over-represented in the province compared with the country include agriculture (NACE 01), forestry (NACE 02), quarry industry (NACE 23), retail trade (NACE 64-65), hostels, restaurants and cafés (NACE 66) and other services (NACE 9). Agriculture, forestry and quarry are based on corresponding natural resources in which the province is well endowed. But these activities have been steadily declining in terms of employment losing more than 1,000 jobs between 1980 and 1995 because of the increase in labour productivity. In contrast, labour intensive activities such as retail trade, other services, restaurants, hostels and cafés have benefited from a rising demand due to population increase and green tourism preferences. For example, 1.7 million nights were sold in 1977 and 2.9 million in 1993. Between 1980 and 1995, 1,500 jobs were created in trade and 1,000 jobs in restaurants, hostels and cafés. In these branches, increasing flexible part time jobs are offered, in particular to women and in large trade centres.

Branches that are under-represented in the province include manufacturing (NACE 2-3-4) and financial services (NACE 8), in particular services to enterprises (NACE 83). After the conversion of the iron and steel industry, the manufacturing sector became increasingly diversified remaining, however, capital intensive and, hence, offering few jobs. The financial sector showed a very high growth rate in terms of employment. This evolution reduced differences between the economy structure of the province and the one of the country. Note that the construction sector sharply declined and concentrated resulting in a high job destruction (-2,500 jobs) until 1987 as a result of a slow economic growth. Since then, its production has grown again and its labour force also but to a lesser extent.

In sum, with respect to the private sector, a shift in specialisation occurred from primary activities to trade and tourism activities while manufacturing diversified and financial services increased but still remained under-represented.

3.2.2 The conversion of the iron and steel industry

In 1977, the remaining 1,665 workers of the iron and steel industry settled in Athus lost their jobs. Facing the iron and steel industry closure, the provincial authorities with the active support of national politicians decided to attract foreign investments in the province. The *intercommunale* IDELUX specialised in gathering national and EU investment subsidies into personalised packages to attract multinational firms. The provincial governor Jacques Planchard with a collaborator of IDELUX personally undertook promotion travels across USA and Japan, year after year, to persuade multinational firms to invest in his province. Before governor Planchard's efforts, two firms had already settled industries in the province: Levi's (fibre and trousers industry: about 400 workers) in 1964 and l'Oreal (cosmetics: about 500 workers) in 1975. The first success of the governor Planchard with the *intercommunale* IDELUX was the arrival of the new Cooper Automotive S.A. plant (Champion Automotive products: 400 workers) in 1977 with total investment amounting of 450 millions of Belgian francs (FB). National aids amounted to FB 178 millions, i.e., 39.6% of the total investment. Several other American and one Italian companies followed this example: Mobil plastic in 1978 (from 450 to 675 workers), Magolux in 1983 (150 workers), B.M.F.Aubange (aluminium for military aeronautics: 180 workers) in 1984, Ampacet Europ in 1986 (industry of mineral products: more than 100 workers), Ferrero-Ardenne in 1988 (confectionery industry: 324 workers and an investment of FB 1,400 millions), US Gypsum (more than one hundred workers) and Glaverbel (glass industry: between 50 and 100 workers) in 1990.

In 1984, the 1,700 jobs destroyed in the iron and steel industry in 1977 were not replaced yet. Moreover, the closure of Levi's in 1984 destroyed 420 jobs. In 1985, the European Development Pole (EDP) started in France, Belgium and Grand Duché du Luxembourg on the site of the former iron and steel industry. New investments on this area could be subsidised up to 30%, half of the aids provided by the States and the complement by the EU. Over the period 1985-1995, the province of Luxembourg received FB 3,000 millions of public aids resulting in the creation of 1,155 jobs in this area: 866 jobs in plants of more than 100 employees and 289 jobs in SMEs. The provincial authorities considered as achieved the conversion of the iron and steel industry in the South of the province.

3.2.3 Job creation in the public sector

Between 1980 and 1995, the public sector and schools gained about 6,500 hired employees among them 3,600 women. Women represented 37.6% of total employees in 1980 and 41.7% in 1995.

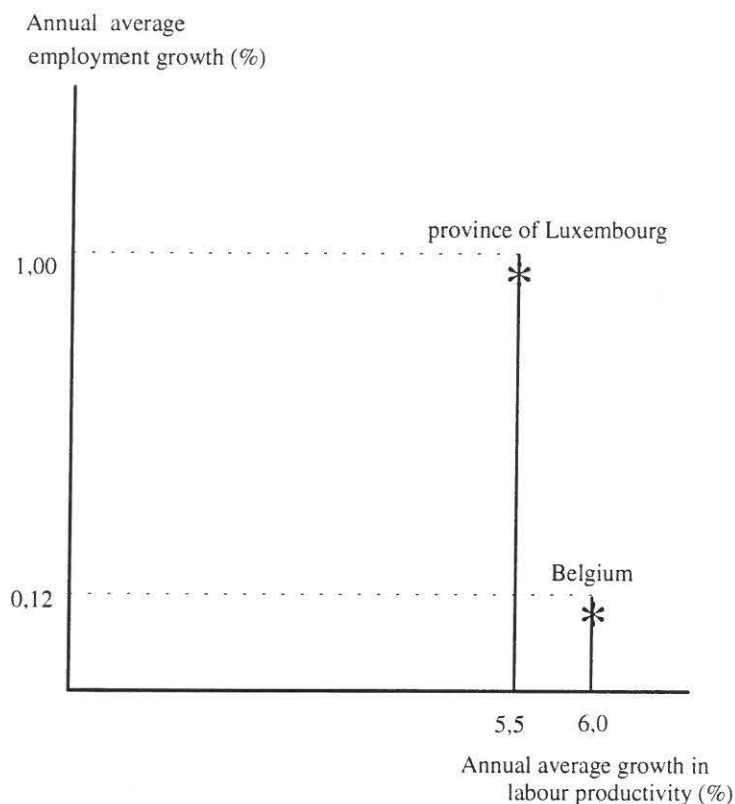
From these new jobs, 2,500 were created in national and regional bodies settled in the province: 1,000 are soldiers of the Belgian army returning from Germany in 1991 and 1,500 are workers of the national railway company that were not registered within the province before 1991. Only the soldiers actually are new comers.

The provincial administration lost 200 jobs, while public bodies depending on municipalities created about 3,000 new jobs. More than 500 jobs were created in administration *stricto sensus*, 120 in public enterprises essentially in the *intercommunale* IDELUX, and 2,240 in social and other services such as the CPAS which provide at the municipality level social help to old persons, unemployed persons, poor people and refugees from eastern European countries as a result of the increase in unemployment and poverty perception. More than three quarters of jobs in social and other services are held by women and almost half of these jobs are part time jobs. About 1,800 jobs were created in schools to face the increase in the number of pupils as a result of population growth.

3.2.4 Relations between employment growth and the increase in labour productivity

Figure 3.1 shows the relations between annual employment and labour productivity growth between 1980 and 1992 in the province of Luxembourg compared to the country. The annual labour productivity growth was similar in the province of Luxembourg than in the country as a whole despite differences in the economic structure. The relative importance of services in the province of Luxembourg where increase in labour productivity is generally weaker, may be balanced by the relative importance of the primary sector, where increase in labour productivity is generally higher, and the relative youth of the enterprises in the manufacturing sector. The annual employment growth was, however, much higher in the province of Luxembourg than in the country. This higher increase in employment growth is, therefore, linked to neither labour productivity growth nor the absolute level of labour productivity since both indicators for the province are similar to those for the country as a whole. Higher employment growth in the province of Luxembourg is likely a result of the relatively higher public and private investment in the province than in other parts of the country.

Figure 3.1: Relations of annual employment and labour productivity growths (at current prices) between 1980 and 1992 in the province of Luxembourg compared to Belgium



3.3. Forestry, agriculture and agribusiness

These branches are characterised by poor integration between upstream and downstream activities. As a result, the added value on wood and agricultural goods produced in the province is quite low. Except large game and Christmas tree supply, primary activities mainly result in non differentiated products that are exported outside the province. First processing sector, like the slaughterhouse of Bastogne or the milk transformation sector, faced and still face many problems due to competition from neighbouring regions (the slaughterhouse of Rochefort and the highly concentrated French milk sector) and some political roving. In addition, processing industries settled in the province are weakly supplied by local products, even when they use the rural image of the province for promotion. For example, a large enterprise (Unilever-Les Nutons) involved in traditional ham production buys its pigs in the northern part of Belgium. Another enterprise involved in carpentry imports its wood from Suede because the higher quality of this supply fits better its requirements.

Forests in the province of Luxembourg cover 47% of the province total area and represent 34% of the Belgian forested area (INS, 1991). The province provides 47% of total hired employees of the Belgian forest primary sector (NACE 02), but less than 2.5% of Belgian employees in downstream sectors (NACE 46-5043-6131) (de Schrevel, 1994). Nevertheless, between 1980 and 1992, the processing sector (NACE 46) lost less jobs in the province (-7%) than in Belgium (-15%).

Trends in land and labour demand for agriculture in the province of Luxembourg are similar to trends in the country. It is, however, characterised by a greater specialisation in extensive cattle breeding and a greater importance of part time workers which represent 40% of total jobs in the provincial agricultural sector in 1992. Diversified productions such as Christmas trees or organic farming represent less than 2% of the agricultural area of the province. Two different labels have been created in the province for cattle but they were integrated in a less specific label for the whole Walloon region, which revealed not being stricter than the new European norms enforced as a result of the BSE crisis. The economic impact of the label initiative is very weak.

In the downstream food industry (NACE 41-42), employment grew remarkably in the province of Luxembourg while it declined in the country. Employment growth occurred in a number of new branches such as mineral water and processed pork and vegetable while traditional dairy and beef processed branches declined despite of public supports provided through the *intercommunale* IDELUX.

Table 3.6: Agriculture and food industry changes in the province of Luxembourg compared to Belgium, 1981-1992

Branch	Province of Luxembourg		Belgium	
	1992	1981-1992 change	1992	1981-1992 change
Agriculture:				
Number of farms	5,348	-25.5%	81,044	-26.5%
Total area (ha)	137,267	-7.5%	1,344,829	-4.6%
Full time workers	4,741	-27.2%	83,295	-19.9%
Part time workers	3,246	-24.9%	48,880	-33.7%
Total workers	7,987	-26.3%	132,175	-25.6%
Permanent meadows (ha)	115,945	+1.1%	617,027	-11.5%
Cereal area (ha)	13,343	-46.9%	310,672	-16.4%
Green forage area (ha)	6,155	-8%	159,265	+56.8%
Total pigs	12,907	-49.6%	6,822,986	+33.5%
Total cattle	392,606	+16%	3,221,568	+6.9%
Food industry:				
Total hired workers	1,764	+53.5%	89,482	-3%
In the meat industry (NACE412)	370	-29.9%		
In the dairy industry (NACE413)	120	-51%		
In bakeries (NACE419)	494	+59.4%		

Source: de Schrevel, 1994

3.4. Employment growth and the size of enterprises

In the province of Luxembourg like in the country, 85% of companies and 99% of personal enterprises have less than 5 employees.

Table 3.7: Relations between the size of enterprises and employment growth in the province of Luxembourg in 1980 and 1995

Enterprise clustering according to size	Part of total employment in 1980	Part of total employment in 1995	Part in total employment growth between 1980 and 1995
Self employment	29%	26%	10% (1,513)
1-9 employees	15%	17%	26% (3,791)
10-99 employees	31%	30%	27% (4,037)
More than 100 employees	25%	27%	36% (5,350)
Total	100% (67,272)	100% (81,963)	100% (14,691)

Sources: INASTI and ONSS

Over the period 1980-1995, almost two thirds of new jobs were created in enterprises of more than 10 employees and more than one third in enterprises of more than 100 employees. The proportions of small enterprises (less than 10 employees) and of large enterprises (more than 100 employees) in total employment slightly increased while the proportion of self employment decreased. Concerned medium size and large enterprises are mainly in the manufacturing and public sectors which directly benefit from the strong socio-economic policy in the province.

3.5. Concluding remarks

In this case study, the endogenous versus exogenous development is discussed from the point of view of the local policy makers. For them, endogenous development hangs on local small and medium enterprises, based on local entrepreneurs and local investment with eventually the support of local authorities, while exogenous development is based on the settlement of foreign enterprises or subsidiary businesses with managers, private and public investment coming from outside (multinational enterprises, regional, national and European aids).

From the point of view of this research project, however, the engine behind employment growth at place of work clearly comes from endogenous forces in the province of Luxembourg. Facing the situation of their under-developed region, the local policy makers are clearly the initiators of the employment growth. They built and used strong external networks in a view to claim for the territorial parity, and even a sort of positive discrimination, in public investment and staff means from upper level authorities and to attract private investment from outside. Thanks to internal networks, they shaped and implemented an ambitious policy of economic and territorial development by ensuring political and social consensus and building a renewed image of the region. This good image is used by the tourism and food industries, even when the activities of these industries are not connected to the local resources. The employment growth at place of residence comes from both these endogenous forces but also from exogenous forces such as the Grand Duché du Luxembourg's economic growth and labour force shortage.

There is, however, one dominant exogenous force. The region is in the middle of highly populated and congested areas in Belgium and Grand Duché du Luxembourg. As a result, the improvement of the telecommunication, road and highway networks open the region to space intensive activities like transportation and some other industrial and service activities such as large plants, military settlements, short stay tourism and « green » recreation activities.

The main reasons of better employment growth in the province of Luxembourg are linked with the improvement of the road network that facilitates immigration and the development of public and private services. In addition, nice environmental and socio-political conditions provided enterprises with key incentives to stay. The extensive use of public aids to invest and the public efforts of local authorities to improve infrastructures surely contributed in the settlement and development of new enterprises in the province. Nevertheless, political and economic leaders are conscious that public funds will diminish and that the period of exogenous development is almost finished. Because of the high economic diversification and the gap between very small and large enterprises, economic activities are not much coordinated within each other. Exogenous development favoured rootless activities. Because of the high labour cost in Belgium, there is a threat that industries employing low skilled workers leave. Moreover, job opportunities in the Grand Duché du Luxembourg may decrease in the future. Some people think that the profits of financial institutions may decline with the forthcoming European single currency (Euro) and that the industrial sector may meet new challenges.

Enhancing endogenous development based on small and medium enterprises is revealing to be more complex than exogenous development because small entrepreneurs usually have no time available for training and not the proper skill to catch investment aids. The administrative cost of the traditional public support is very high. New ways of development need to be designed.

4. ACTORS: ANALYSIS OF LABOUR SUPPLY

4.1. Introduction

Labour supply in the province of Luxembourg has been characterised by deep demographic changes linked with the development of job opportunities in the Grand Duché du Luxembourg and the province. As a rural area, the province continues to be characterised by an high natural growth rate and high gross emigration rate. Nevertheless, since the early seventies, it has become a land of net immigration. The contribution of net immigration in population growth is twice more important than the natural growth rate. The province of Luxembourg is also the place of work or the place of residence of more and more commuters, thanks to the improvement of the road and motorway network.

The rate of university graduated students from the province has been the highest in Belgium for a long time. Many of them still emigrate to large towns at the end of their studies. As a result, the educational level of the working population is not higher in the province than in the country. The diversification movement which have affected the economic activities required highly diversified skills and attracted many immigrants and commuters from France and other Belgian provinces. In several plants of the south of the province, the French represent more than 30% of total employees.

Another important feature of the labour supply in the province is the participation of women to the labour market. This movement occurred later and faster than in the rest of the country. This new female labour force often prefers part time jobs. This fits rather well with many employers requirements, like in public social services and retailed trade where job opportunities have been remarkably growing.

4.2. General population characteristics

Between 1980 and 1996, population increased more than 18,000 inhabitants (+8.3% compared to an increase of +2.9% in Belgium) and reached 241,339 in 1996. The average population density was 54 inhabitants per square kilometre in 1995. The density is higher in the two southern districts of the province, in particular in the district of Arlon close to the Grand Duché du Luxembourg where it reached 160 inhabitants per square kilometre in 1995, than in the two northern districts of the province. Nevertheless, long term population growth affected significantly more these three northern districts than the two southern districts. The average annual growth rate increased from 0.2% in the seventies to 0.9% in the early nineties. The average net immigration rate is much higher than the natural growth rate. Both are significantly higher in the province of Luxembourg than in Belgium (Tables 4.1 and 4.3).

Table 4.1: Net immigration rate in the provinces of Luxembourg, Liège, Namur compared to Belgium from 1979 to 1996 (for 1000 inhabitants)

Year	Luxembourg	Liège	Namur	Belgium
1996	2.79	n.a.	n.a.	2.45
95	4.16	n.a.	n.a.	2.66
94	6.94	0.10	4.50	1.75
93	3.45	3.20	4.98	1.88
92	5.82	4.13	5.21	2.53
91	4.86	4.10	4.50	1.42
90	5.58	1.53	3.85	1.98
89	2.88	0.63	4.02	1.07
88	1.21	0.70	2.37	-0.01
87	1.49	0.57	2.64	-0.07
86	0.40	0.01	2.98	0.03
85	0.63	0.37	2.15	-0.04
84	0.56	1.66	1.78	-0.05
83	3.42	-1.80	3.94	-0.77
82	0.36	-1.14	0.87	-0.45
81	0.70	-0.77	2.84	-0.70
80	3.51	-0.44	3.05	-0.22
79	3.00	n.a.	n.a.	0.20

Source: INS

Table 4.2: Natural growth rate in the provinces of Luxembourg, Liège, Namur compared to Belgium from 1979 to 1996 (for 1000 inhabitants)

Year	Luxembourg	Liège	Namur	Belgium
1996	2.37	n.a.	n.a.	1.09
95	2.26	n.a.	n.a.	0.95
94	2.03	0.37	1.00	1.17
93	2.27	0.45	0.87	1.31
92	3.43	1.19	2.51	2.04
91	3.32	1.36	1.64	2.12
90	2.64	1.11	2.13	1.91
89	2.42	0.37	1.73	1.33
88	3.32	0.68	2.15	1.43
87	2.46	0.42	1.48	1.18
86	2.15	-0.46	0.40	0.57
85	2.10	-1.22	0.31	0.16
84	2.10	-1.34	0.59	0.53
83	1.19	-1.73	-0.25	0.26
82	1.20	-1.29	0.61	0.80
81	1.50	-1.18	0.16	1.17
80	1.34	-1.46	0.62	1.06
79	1.26	n.a.	n.a.	1.17

Source: INS

Table 4.3: Population growth in the provinces of Luxembourg, Liège, Namur compared to Belgium from 1979 to 1996 (for 1000 inhabitants)

Year	Luxembourg	Liège	Namur	Belgium
94	8.97	0.46	5.50	2.91
93	5.71	3.65	5.86	3.19
92	9.26	5.32	7.72	4.57
91	8.19	5.46	6.13	3.54
90	8.22	2.64	5.98	3.89
89	5.30	1.00	5.74	2.40
88	4.54	1.38	4.52	1.43
87	3.94	0.99	4.12	1.11
86	2.56	-0.45	3.37	0.59
85	2.73	-0.85	2.45	0.12
84	2.51	0.32	2.37	0.48
83	4.62	-3.53	3.69	-0.51
82	1.56	-2.43	1.49	0.35
81	2.20	-1.96	3.00	0.46
80	4.85	-1.90	3.67	0.84

Source: INS

The net immigration rate started to increase in 1987 with the revival of the economic growth in the province and reached a maximum in the early nineties as soon as the new motorway between Brussels and Luxembourg city was finally completed. Since 1980, the net immigration rate has been much higher in the provinces of Namur and Luxembourg than in the province of Liège. These two southern rural provinces benefited from immigration from the Belgian more congested urban areas. The natural growth has been higher in the province of Luxembourg than elsewhere, thanks to a younger population, resulting in an higher population growth in this province.

In 1996, the EU provided one third of the net immigration and other countries 20%, taking into account that most migrants are from Belgium. The gross emigration rate reached 4.8% while the gross immigration rate reached 5.5% in the early nineties. The population of the province of Luxembourg is characterised by an high mobility.

The population of the province is also younger than the population of the country with a higher proportion of people of less than 25 years old and a lower proportion of people between 45 and 64 years old. The ageing process looks slower in the province than in the country thanks to the immigration of young workers with their families (Table 4.4).

Table 4.4: Age structure of the population in the province of Luxembourg compared to Belgium in 1980 and 1997

Area	year	0-14 years	15-24 years	25-44 years	45-64 years	above 65 years
Province of Luxembourg	1980	21.5%	16.7%	24.7%	22.2%	14.9%
	1997	20.4%	13.2%	29.7%	20.7%	16.0%
Belgium	1980	20.3%	16.1%	26.7%	22.6%	14.3%
	1997	17.8%	12.5%	30.3%	23.1%	16.3%

Source: INS

In the province of Luxembourg, the dependency index ($\{[0-14]+[\geq 65]\}/[15-64] \times 100$) is much higher than in the country because of the higher part of children in the population (Table 4.5). Since 1980, the vitality index ($\{[25-44]/[\geq 65]\} \times 100$) has been remarkably increasing in the province and is reaching the national level. Actually, the demographic dynamism of the province resulted in the growth of the vitality index. Due to the high proportion of people under 25 years old it may grow beyond the national level.

Table 4.5: Dependency and vitality indexes in the province of Luxembourg compared to Belgium in 1980 and 1997 (%)

Area	Year	Dependency index	Vitality index
Province of Luxembourg	1980	57.2	165.5
	1997	57.2	185.5
Belgium	1980	52.9	186.6
	1997	51.7	186.4

Source: INS

4.3. Labour force characteristics

The labour supply can be measured by the labour force. Like in the country, the labour force of the province of Luxembourg grew much faster than the whole population and the population of people between 15 and 64 years old. As a result, the activity rate increased. In 1980, the activity rate in the province was significantly lower than in the country. Since then, this gap has been filled (Tables 4.6 and 4.7).

Table 4.6: Labour force growth and activity rate in the province of Luxembourg between 1980 and 1995

Province of Luxembourg	1980	1995	80/95 growth rate
Whole population	222,317	240,281	+8.1%
Population of people between 15 and 64 years old (a)	141,424	153,103	+8.3%
Total labour force (b)	79,000	97,300	+23.2%
Activity rate: (b)/(a)x100	55.9%	63.6%	

Source: INS

Table 4.7: Labour force growth and activity rate in Belgium between 1980 and 1995

Belgium	1980	1995	80/95 growth rate
Population	9,855,110	10,130,800	+2.8%
Population of people between 15 and 64 years old (a)	6,446,152	6,676,197	+3,6%
Total labour force (b)	3,863,000	4,184,500	+8.3%
Activity rate: (b)/(a)x100	59.9%	62,7%	

Source: INS

4.3.1 Employed and unemployed persons²

In 1980, the structure of the labour force in the province of Luxembourg showed little differences with the country. The proportion of women was slightly lower in the province (31.6% compared to 34.5% in the country). Among them, the proportion of part time workers was significantly higher (22.7% of employed women compared to 16% in the country), resulting in an higher proportion of total part time workers in the province (6.8% of employed persons compared to 5.7% in the country). The unemployment rates, according to the ILO definition of unemployment, were similar in the province and in the country. Since 1980, the participation of women in the labour market has been remarkably increased. Between 1980 and 1991, the Belgian labour force increased by 244,000 persons (+6.4%) because of an increase of 358,000 new active women (+27%) and a decrease of 113,000 men (-4.5%). In the province of Luxembourg, the labour force increased by 14,000 women (+56%) and 3,000 men (+5,6%). Thus, the total labour force increased by 17,000 persons (+21.5%). To this labour force growth, women contributed for 82.4%. As a result, in the province like in the country, women represented 41% of the labour force in 1991. On the long run, the increase of female participation in the labour market arose in the province with a delay. According to local experts, this delay was due to the rural character of the province with many households in the primary sector where women's work was not well recorded. Actually, this gap now looks completely filled.

The main feature of labour force changes is the great progress of part time jobs which now concern men also but to a lesser extent. In Belgium, there were 243,000 new part time workers (+131%) between 1980 and 1991 for only 177,000 new employed persons (+5%). Thus, 98,000 full time jobs (2.9%) were destroyed in the same period. In the province of Luxembourg, part time workers whose number tripled, provided 58.8% of new employed persons (+23%).

According to the ILO definition of unemployment, the unemployment rate increased from 7% to 8.2% in Belgium between 1980 and 1991, while it decreased from 6.3% to 5.2% in the province of Luxembourg. Thanks to the progress of part time work, which benefited more to women than to men, the gap between male and female unemployment rates diminished, both at the provincial and national levels. In 1980, the female unemployment rate was three times as high as the male one but only twice in 1991 despite the massive arrival of women on the labour market.

² For this section, figures were provided by the labour force surveys realised by the Institut National de la Statistique. No data after 1991 are yet available.

4.3.2 Educational level of the working population

The general education level of the working population in the rural areas is lower than in the urban areas (Table 4.8). In 1991, 40.6% of the working population in the provinces of Luxembourg and Namur had at most the primary or the lower secondary levels of education while this figure raises to 42% in the province of Liège. In the whole country, 35.4% of the working population had at most the primary or the lower secondary levels of education.

Table 4.8: Distribution of the working population according to the educational level in the provinces of Luxembourg, Liège, Namur, in the urban areas and in Belgium in 1991

Population	Area	Primary level	Lower secondary	Upper secondary	Tertiary
Employed	Luxembourg	12.5%	27.3%	34.0%	26.2%
	Liège	13.2%	27.5%	32.7%	26.6%
	Namur	10.7%	28.0%	34.5%	26.7%
	Urban areas	9.8%	22.9%	37.8%	29.5%
	Belgium	10.2%	23.7%	37.1%	29.0%
Unemployed	Luxembourg	15.6%	33.4%	39.8%	11.2%
	Liège	21.4%	34.6%	34.4%	9.6%
	Namur	17.5%	35.8%	37.1%	9.6%
	Urban areas	19.0%	29.6%	39.1%	12.3%
	Belgium	19.2%	30.8%	38.3%	11.7%
Labour force	Luxembourg	12.8%	27.9%	34.5%	24.9%
	Liège	14.4%	28.5%	33.0%	24.1%
	Namur	11.6%	29.0%	34.9%	24.5%
	Urban areas	10.6%	23.5%	37.9%	27.9%
	Belgium	11.1%	24.4%	37.2%	27.3%

Source: INS, 1991.

Note that low educated persons are relatively more favoured to get a job in the province of Luxembourg than in the intermediate rural areas overall and in the whole country also (Table 4.9).

Table 4.9: Unemployment rates according to education level in the provinces of Luxembourg, Liège, Namur, in the urban areas and in Belgium in 1991

Area	Primary level	Lower secondary	Upper secondary	Tertiary	Total
Luxembourg	10.8%	10.6%	10.3%	4.0%	8.9%
Liège	21.6%	17.5%	15.1%	5.8%	14.5%
Namur	19.7%	16.1%	13.9%	5.1%	13.1%
Urban areas	16.3%	11.4%	9.4%	4.0%	9.1%
Belgium	17.0%	12.4%	10.1%	4.2%	9.8%

Source: INS, 1991.

4.3.3 Flexibility of labour supply

Considering the rate of part time work, labour supply looks more flexible in the province of Luxembourg than in the country. As already mentioned, the province had a tradition of part time work with the former peasant-blue collars. Nowadays, part time jobs are mainly held by women in public and private services. People of the province of Luxembourg are also well known for their hard working attitude. They are also flexible to spend more time at work than compulsory if it is needed. Last but probably not least, the black labour market seems to play a role in the balance between labour demand and labour supply.

5. LABOUR MARKET

5.1. Introduction

Labour market in the province of Luxembourg shows several specificities in terms of labour flows and labour market adjustment according to labour force skills request. The geographical position of the province at the borders of France and Grand Duché du Luxembourg and close to Germany allows high exchange of manpower and skill. Worker flows follow wage and income tax differences. The province shows a relatively low unemployment rate for the less educated working population. Several reasons may explain this observation: the importance of activities in the primary sector where the educational level of the working population is lower, the importance of part time jobs usually held by low educated workers and the characteristics of labour demand in the Grand Duché du Luxembourg.

The structure of transaction costs concerning internal and external flexibility in the province is similar to the one in the country because labour market and professional training institutions are the same. But because the province is very small, persons in charge of these institutions, on one hand, and entrepreneurs, in the other hand, know very well each others and, hence, administrative processes are easier and faster in the province of Luxembourg than in the rest of the country. The social climate is also better than in the rest of the country. For instance, entrepreneurs recognise that trade-unions show deep consciousness of the constraints concerning the survival of enterprises while head managers are open minded for women's demand for part time jobs. In addition, specific efforts are paid by private and public organisations to promote professional training within or outside enterprises.

5.2. Wage structure

The labour cost in the province of Luxembourg is similar to the labour cost in the other parts of Belgium. The labour cost in Belgium is the highest in Europe, West Germany apart. But Belgium is also the country where the share of direct labour costs in total labour costs is the lowest, because the average contribution per worker for social security is the highest in Europe (Table 5.1). As a result, Belgian wages in manufacturing expressed in purchasing power parity are higher than in France but lower than in the Grand Duché du Luxembourg (Table 5.2). This is the reason why more than 13,000 Belgian residents daily commute from the province of Luxembourg to the Grand Duché du Luxembourg and why several hundreds of French residents daily commute to the south of the province of Luxembourg. Other distortions, like the level of income taxes much higher in Belgium than in France, have to be considered in particular for the highest wages to explain cross-border labour flows.

Table 5.1: Structure of labour costs in manufacturing in Belgium and neighbouring countries in 1992

Country	Average hourly labour costs (ECU)	Direct cost	Indirect cost	Social security share in indirect cost
Belgium	21.27	67.9%	32.1%	31.5%
West-Germany	23.14	76.5%	23.5%	21.4%
France	19.12	68.6%	31.4%	28.5%
Grand Duché du Luxembourg	17.16	84.1%	15.9%	15.3%

Source: EUROSTAT

Table 5.2: Average hourly wages in manufacturing in Belgium and neighbouring countries in 1993

Country	Average hourly wage (standard purchasing power ECU)
Belgium	9.41
West-Germany	10.54
France	7.25
Grand Duché du Luxembourg	9.94

Source: EUROSTAT

5.3. Institutional functioning of labour markets: transaction costs

External flexibility concerns company's ability to adapt its staff by hiring and firing workers, whereas internal flexibility concerns company's capacity to reorganise its own staff.

External flexibility

The rules for hiring and firing workers and employees in the province of Luxembourg are the same than in the rest of the country. Union membership rate, union's structure and union's claims for employment and wages are also similar. Some differences, however, occur in these claims as a result of the social consensus prevalent in the province. Since the closure of the iron and steel industry, almost every creation and destruction of jobs in the province is a public affair. Thanks to the intervention or mediation of provincial authorities, *intercommunale* IDELUX's managers or provincial chamber of commerce and industry CCILB's board, the trade unions and the management of local enterprises usually agree on priorities: the survival of the enterprises must be first ensured and every possibility to avoid job destruction by internal flexibility (e.g., part time work for white collars, temporary lay-off for blue collars and continuing education for internal mobility) must be second examined. Even in plants depending on foreign companies, the social dialogue between employers and employees always takes place with the eventual help of informal mediators. For example, the transfer of the plant of Champion (US Cooper Automotive) located in Latour to another site located in Aubange where exists an another plant of the same group took some time and many explanations from the managers but succeeded. People of the province are recognised as hardworking people and not involved in social struggles.

In the province of Luxembourg as well as in the rest of the country, the employment and training office called *Formation et Emploi* (FOREM) which combines in one institution the multiple functions of the French ANPE, AFPA, *Direction académique de la formation continue de l'éducation nationale* and job interim agencies) is the public institution in charge with a full range of placement and training services. It is the main intermediary body between job-seekers and employers. It provides professional training to adults out of work on public funds or to employees on private funds. It is also the temporary work agency and serves as a channel to get public aids for specific populations like handicapped persons. These aids and the access to public training programmes are not conditioned by the nationality of beneficiaries as they are in France for instance. Up to now, its services in the field of placement on the request of enterprises are free and considered as efficient even for finding foreign workers like French residents, thanks to the contacts established within the European Development Pole (EDP) and the INTERREG scheme. The temporary work services are, however, charged.

The training institute for SME called *Institut de Formation des Petites et Moyennes Entreprises* (IFPME) is another public institution which provides technical and professional training courses and delivers corresponding education certificates.³ This institute is also in charge of apprenticeship implemented in both enterprises and training school centres. Apprenticeship mainly concerns youngsters but is also open to adults who want to convert to a new profession or skill. In many Belgian provinces, FOREM and IFPME compete in the field of professional training but work hand in hand in the province of Luxembourg trying to develop complementary efforts. In this area like in others, the local actors of the province know each other very well and prefer co-operation rather than competition.

Two other operators are promoting and providing continuing education in foreign languages, marketing and SME management: the Project Development Centre (CDP) which is an office belonging to the *intercommunale* IDELUX, and the provincial chamber of commerce and industry CCILB which is a private association of entrepreneurs. For both of them, their target only is current or future entrepreneurs to enhance the creation and the enlargement of enterprises in the framework of an endogenous development perspective. These new operators can not deliver recognised certificates and tend to compete more with each other than co-operate.

Internal flexibility

There are several internal flexibility tools: temporary lay-off, continuing education and part time work.

Temporary lay-off is called economic unemployment in Belgium but technical unemployment in France. In Belgium, workers temporarily laid off are not fired but are compensated by the unemployment insurance during the period for which their enterprise does not need them. This system is more flexible and more used than in France but administrative costs and controls also occur. In the province of Luxembourg, thanks to the small size of the province these costs are lower and controls and decisions by the administrations in charge are faster. According to some employers, this is considered as a significant advantage of the province. This also reduces the use of temporary work agencies which is costlier and less efficient because of the higher turnover of workers.

³ For many professions and trades in Belgium, a professional certificate is required to create and manage an enterprise.

There is no public incentives for part time work in Belgium. In many plants, the demand arises from the workers themselves for personal purpose and from unions to improve employment. Despite that part time workers are costlier than full time workers, employers of the province usually accept it because part time work may be more efficient or for ethic reasons. Actually, employers increasingly use part time work to avoid firing white collars due to technical progress. Employers do not recognise better efficiency of part time work of blue collars.

5.4. Transportation costs

Transportation costs recently diminished thanks to improvements in the road network. According to employers, the distance between the place of work and the place of residence is at most fifty kilometres for manual workers and low graduated employees. In this rural area without traffic jam, daily commuting never takes more than one hour.

5.5. Adjustment between labour supply and demand

According to employers looking for new employees, the professional qualification of manual workers is less important than their willingness to work. The useful know-how is usually gained by on-the-job training inside the company. As a result, people with a general and high educational level are preferred because they learn faster and are more polyvalent than people with only a secondary level professional qualification.

For hiring high skilled workers and managers, employers face several difficulties. With the diversification and the revival of the manufacturing activities, the demand of high skilled workers and managers also grew and became highly heterogeneous. The four tertiary level technical high colleges and the small university centre of the province can not provide such a diversified manpower. Most of skilled workers and managers are recruited outside the province, often abroad. The first problem is the wage because social and income taxes are very high in Belgium, particularly for high wages. Many managers and even engineers prefer the banking sector of the Grand Duché du Luxembourg where the work conditions are easier and the wages higher. The largest companies of the province of Luxembourg manage this problem thanks to the proximity of the Grand Duché du Luxembourg and France where social and income taxes are lower. Paradoxically, tax distortions often make the recruitment of French or German managers easier than Belgian ones. The second problem is the rural nature of the province: the cultural services and entertainment possibilities are much lower than urban standards. In contrast, the province is welcoming for families. Public services are good, land and housing are cheap and the problems characterising large urban centres like urban violence do not exist.

6. ACTORS: ANALYSIS OF STRATEGIES

6.1. Introduction

The strategies of actors towards maintaining or increasing rural employment are the central part of the case study. For some actors, employment is a side product, as their main objective is profit maximisation for example. Moreover we should take into account that some actors might have objectives but not necessarily strategies defined « as a conscious pattern of actions to meet ends ». The following groups of actors are distinguished : policy makers, entrepreneurs, farmers and labourers.

6.2. Strategies of policy makers

Within the group of policy makers, four levels can be distinguished:

- 1• The EU level is prevalent for agricultural matters with the Common Agricultural Policy (CAP). It also intervenes in the economic development of specific areas and in the field of employment and professional training with the structural funds and the INTERREG initiative.
- 2• The federal level leads the policies for social security and unemployment insurance, for motorway and railway networks.
- 3• The regional level (the Walloon Region, Flemish Region and Brussels) leads the policy towards economic development and employment. The land-use plan, allocating land for the industrial zones are under the regional authority.
- 4• The provincial level lost much power since the reform of the State but provincial authorities in the province of Luxembourg are extraordinary active compared to other provinces in the economic and employment areas with the help of the 44 municipalities unified in the *intercommunale* IDELUX, a sign of strong political consensus. In other provinces, there are usually several politically oriented *intercommunales* much less active and efficient than IDELUX. Reacting against the weaknesses of their province in term of population, economic development, public support and infrastructure, the local policy makers found a particular strength in their political consensus which has been proved efficient for lobbying at upper levels to get more public support and promoting the province outside and abroad to attract Belgian and foreign investment.

6.2.1 Strategies

In this section, the terms «exogenous development» and «endogenous development» refer to the local policy makers' point of view. The «exogenous development» means their strategy to attract outside private investments by combining exogenous public aids and local power of organisation. The «endogenous development» means concerted actions to enhance local entrepreneurship.

Combining exogenous and endogenous forces

In the early seventies, the rural south-eastern part of Belgium, in particular the province of Luxembourg, showed a significant lagging economic and infrastructure development and received less investment and public financial support by inhabitant than the remaining part of the country. The local and national policy makers and professors of university who made this appraisal created the Rural Foundation of the south-east. Their double strategy was first to

obtain at least the parity between rural and urban areas in the allocation of public aids by means of an active lobbying at the national level, and second to enhance an endogenous development path for the rural area by organising and emphasising local initiatives at the level of municipalities or groups of municipalities. This bottom-up approach was expected to provide more benefits with less investment. With the reform of the State, the regional level got more financial power and more competence in economic development. Led by the Socialist Party, the Walloon Region provided funds and a political colour to the Foundation that became the *Foundation Rurale of Wallonie* (FRW).

At the national level, the strategy to reach a more balanced development between less and more favoured areas is based on the development of infrastructure and public aids towards private investments of large firms in less developed areas (law of economic expansion of 1970), like the province of Luxembourg. Another national policy had a great impact on rural areas: the reorganisation of the municipalities in 1977 with the number of municipalities decreasing from 229 to 44 in the province of Luxembourg. The aim of this institutional reform was to give municipalities more efficient instruments to improve sanitation, water, energy and social services. In the province of Luxembourg, this reorganisation was followed by the fusion of the two former *intercommunales* in IDELUX in which the 44 new municipalities have been united.

This obvious sign of the political consensus in the province coincided with the crisis of the iron and steel industry that gave birth to the social consensus about a simple and ambitious idea: "the iron and steel industry has no future, the social and political actors of the province of Luxembourg have to create many new jobs with the help of an internal and external solidarity". In order to go fast, an exogenous path of economic development was chosen. Northern municipalities of the province accepted the creation and the equipment by IDELUX of new industrial development zones in the southern part of the province where most of jobs had been destroyed by the iron and steel crisis. IDELUX and the provincial authorities developed many efforts and competence to build convincing projects, catch the maximum of public aids and attract foreign investors. Later on, further industrial zones were also created in the northern part of the province. With the creation of the European Development Pole (EDP) in 1985 and the INTERREG initiative in 1989, IDELUX has remained more involved in the industrial development of the southern part of the province. With the success of this strategy, the catching of public aids has entered the culture of the provincial policy makers.

The EDP was initiated by Jacques Planchard, the active governor of the province of Luxembourg, Jacques Santer from the Grand Duché du Luxembourg and Jacques Chérèque from France. This project of converting the iron and steel industry took place on the former industrial basin of Longwy, Rodange and Athus overlapping the three borders of the three countries. The announced objective was to create 8,000 new jobs (1,500 in Belgium, 1,000 in the Grand Duché du Luxembourg and 5,500 in France), by means of strong incentives to private investment provided half by ERDF and half by national funds as soon as 1986, urban and housing rehabilitation since 1988, the creation of an international high college of technology in 1990 and the creation of an international social and employment office (Euroguichet or EURES) in 1993.

No longer after the first successes and the euphoria of exogenous development, the closure of the Levi's plant in 1984 showed the weaknesses and the threats of rootless implantation of foreign enterprises, especially in rural areas where the economic integration of companies is low. Progressively, policy makers at the provincial, regional and federal levels paid more and more attention to endogenous development. This attitude is nowadays strengthened by the expected decline of public aids from national or EU funds .

At the national level, a new law of economic expansion towards SME opened the path in 1978. In 1983, the national government promoted the financial institute of risk capital INVESTSUD in the south-eastern part of Belgium (in fact the south-eastern area of Wallonia) with the active collaboration of managers of large enterprises of the province of Luxembourg like Lhoist, Socogetra, L'Oréal and Magotteaux. As a temporary shareholder, Investsud provides financial security and advice to the new or enlarging SME.

At the regional level, the FRW has been providing organisational, technical and financial support to the local initiatives in rural development of the municipalities. The FRW received the recent support of the European LEADER initiative. In 1992, the regional government reshaped the implementation of the laws of economic expansion of 1970 and 1978 in order to focus the investment aids towards large companies in the sole Objective 2 and Objective 5b areas (mostly situated in the province of Luxembourg) and the investment aids towards SME everywhere.

At the provincial level, several public or associated bodies have been trying to provide infrastructure, advice, training and access to new technologies to SME and self-employed persons. The prevalent mission of the *intercommunale* IDELUX is to equip industrial and trade zone with energy and water facilities. It also constructs and holds industrial buildings that are rented to interested enterprises and eventually sold to them at interesting prices if their implantation succeeds. IDELUX also participated at the construction of tourism attractions, like the Euro-space centre in Libin to enhance the development of tourism. Recently, IDELUX made an agreement with Belgacom, the Belgian company of telecommunications, to supply the province with the new technologies in the field of telecommunication and information processing. With the creation of the Project Development Centre (CDP) in the early nineties, already mentioned, IDELUX had diversified its activities by offering adapted advice and training periods to small entrepreneurs on their own projects.

In the agricultural sector, the *Centre d'Economie Rurale* (CER) is an association directly depending on the provincial authorities. Doted with its own biological laboratory, it provides training and technical productive services like artificial insemination and embryo transplantation to farmers involved in cattle production. Since 1985, it has led the agricultural part of one of the first European schemes of Rural Integrated Development (PDI) supported up to 35% by the ERDF. This first PDI was followed by the another ERDF programme for the period 1989-1994 and the Objective 5b programme for 1994-1999 supported by the European Union. The EU is contributing 30.55% of the overall estimated costs, i.e. 41.386 MECU out of 135.430 MECU. These schemes have received financial supports from the structural funds: EAGGF (30%), ERDF (49%) and ESF(21%).

6.2.2 Policies

a. The national support to employment and professional training

The federal government allows a reduction of employers' social contribution, amounting to 5 to 10% of the first two years cost of new workers. For the continuing education of workers, the aids can amount to 30 to 70% of the total labour cost.

b. The laws of economic expansion or the investment aids

In order to promote the socio-economic development of its territory and to diversify in this respect its productive fabric, the Walloon Region has implemented from the beginning of the 1970's specific measures aimed at fostering investments whether foreign or national.

Those measures of investment aids are traditionally called the "laws of economic expansion". The evolution of the legal framework relating to those aids from 1970 may be distinguished in three steps which, as we will observe it below, coincide with the maturation of the economic policy.

It must be noted previously that, as well as for the European aids, the province of Luxembourg has traditionally largely benefited from those regional aids thanks to the dynamism of the development actors (government of the Province, *Intercommunale IDELUX* and provincial chamber of commerce and industry CCILB) and the degree of consensus which predominated within this network.

1) *December 30th, 1970: the law of economic expansion*

The law of economic expansion which dates back from December 1970, applied to any enterprise:

- situated in a "development area" or bordering this kind of area,
- employing more than 250 people,
- presenting a turnover superior to 20M of ECU.

Development areas were defined by royal decrees. The whole province of Luxembourg was comprised in this category.

Aids were thus aimed to **large enterprises, more especially foreign direct investments.**

This measure corresponded accordingly to the period of exogenous development of the province of Luxembourg which has largely benefited from those aids as shows the number of implantation of large foreign enterprises during this period. A sound promotion policy regarding those aids on the international scene, especially in the United States, by the provincial authorities, has certainly contributed to increase the success of those aids in the province.

Several financial instruments, including investment incentives and job creation incentives, were implemented in the framework of this law:

- tax cut by accelerated amortisation (maximum of 3 years) and exemption of the usual deduction on real estate value (maximum of 5 years),
- reduced interest rate for loans provided by public or private institutions, or the corresponding lumpy premium when the investments are self financed or financed by

- ordinary or convertible bonds,
- job creation premium for a maximum period of 5 years.

2) *August 4th, 1978: the law of economic reorientation*

In 1978, a new law has been enacted in order to favour **SME creation or development**. In this context, investments aids applied to enterprises:

- situated in any area of the Walloon Region,
- employing a maximum of 250 people,
- which turnover is inferior than 20M ECU.

This second step concurs rather with the emergence of the endogenous development movement and the consequent favours towards SME that it involves.

Several financial instruments, including investment incentives and job creation incentives, were implemented in the framework of this law:

- tax cut by accelerated amortisation (maximum of 3 years) and exemption of the usual deduction on real estate value (maximum of 5 years),
- exemption of the proportional tax on self investment,
- reduced interest rate for loans provided by public or private institutions, or the corresponding lumpy premium when the investments are self financed or financed by ordinary or convertible bonds. The total subsidy corresponding to the interest rate reduction is at the most 7% of new investments for a maximum period of 5 years (Eligible investments can not be higher than 75% of the total investment value),
- specific supplementary subsidy for enterprise creation: reduced interest rate or the corresponding lumpy premium,
- special premium for the first enterprise creation in favour of entrepreneurs of less than 35 years old,
- job creation premium for a maximum period of 5 years.

3) *June 25th, 1992: the regional decree*

From June 1992, the above two laws have been replaced by a regional decree which applies to the categories of enterprises targeted by the laws of 1970 and 1978 that are schematically:

- any enterprises (large, medium, small) situated in "development areas",
- SME (maximum of 250 people, maximum turnover of 20M ECU) situated in any areas of the region.

In other words, investments aids now focus more especially on development areas as well as on SME.⁴ The investment incentive is at least as high as 5% of total new investment.

However, the types of aids tend to differ according to the enterprises size. Eligible investments concern land, industrial and office buildings, industrial equipment, research and development of new product or new production process, marketing and management operations, training, purchase of licence and patent, patent registration. According the size of the enterprise, maximum eligible investment is:

⁴ Note that those investments aids are completed by fiscal incentives (exemption on the capital duty, exemption of immovable property tax, accelerated depreciation), specific aids targeted on very small enterprises (employment and consulting aids), as well as particular aid regimes focusing on environment, energy and public catastrophe.

- 30,000 ECU for enterprises of less than 20 employees,
- 120,000 ECU between 21 and 50 employees,
- 240,000 ECU between 51 and 100 employees,
- 360,000 ECU between 101 and 150 employees,
- 480,000 ECU for enterprises of more than 151 employees.

Moreover, "development areas" have been modified in this perspective since those ones only cover structural funds areas that are Objective 2 and Objective 5b areas and not the whole province of Luxembourg as it has been the case until then.

The subsidy scheme includes investment incentives and job creation incentives of the former 1970 and 1978 laws with particular systems according to the concerned activities:

- tax cut by accelerated amortisation (maximum of 3 years) and exemption of the usual deduction on real estate value (maximum of 5 years),
- exemption of the proportional tax on self investment,
- investment subsidy of at least 5% of new investments,
- supplementary subsidy for job creating investments of at most 8%, depending on the number of new jobs. For SME of less than 20 employees, it is replaced by a premium per new job of 2,400 ECU,
- purchase of consulting services by enterprises of less than 20 employees can benefit a 50 to 75% subsidy,
- particular systems: the maximum investment subsidy rate is higher for the following activities:
 - energy: 15%,
 - newspapers: 15%,
 - environment: 20%,
 - special circumstances (catastrophe).

In 1995, the average ratio of the total premium on the corresponding investment was comprised between 13.3 and 14.3%. Employment indicators relating to those aids are now considered as being predominant evaluation criteria.

c. Structural funds actions and employment

Structural funds actions which have been implemented in the province of Luxembourg are the following:

- 1) The European Development Pole (EDP) in Aubange (extreme South): an Objective 2 area
- 2) The 3 districts in the North and the Centre: an Objective 5b area
- 3) The employment action covering Wallonia: Objectives 3 and 4
- 4) The cross-border initiative: INTERREG
- 5) The LEADER Initiative: Objective 5b districts
- 6) The SME initiative covering Objective 1, 2 and 5b areas of Wallonia

1) The European Development Pole (EDP) in the extreme South of the province (Aubange): an Objective 2 area

In the EDP, two financial instruments are available:

- Direct aids towards private investments since 1986: the EU doubles national investment subsidies which can be at most as high as 15% of the eligible investment in Belgium, 25% in France and 15% in the Grand Duché du Luxembourg. Consequently, several multinational new plants received a total subsidy of 30% of their investment in Aubange.
- The creation of cross border starting fund (500,000 ECU in 1989) to support the creation of innovative enterprises. Half of this fund was provided by the EU and half by several financial institutions from Belgium, France and the Grand Duché du Luxembourg.

The relatively low rate of unemployment in Aubange (11% in 1988) compared to regional and national averages can be explained, on one hand, by the high rate of employment creations realised in the framework of the EDP programme and, on the other hand, by the weight of cross-border flows of workers, in particular towards the Grand Duché du Luxembourg. Some significant figures may illustrate the contribution of the EDP in increasing employment for this specific area.

For the 1988-1993 period of programming, the main objective of the EDP programme was the creation of a total of 8,000 jobs, from which 1,500 were to be created in Belgium. This objective was supported by developing the attractiveness of the area through the development and transformation of its environment, in particular through the improvement of transport connections. According to the report of activities of this programme, 1,443 new jobs have been actually created in 1995, which means a rate of achievement of 96% of the programme (EDP, 1995).⁵

For the 1994-1996 period of programming, the main objective stated in the plan was the creation of employment by favouring optimal conditions for enterprises, in particular SME, to invest in employment generating activities. In this respect, measures focused mainly on training in the area of technological innovations as well as enterprise creation. Quantitative results of these measures in terms of employment are not available yet. However, it was assumed that the outcome of this programme will result in employment growth due to enterprise creation. Enterprise creation has been namely encouraged by facilities settlement as well as specific aids aiming at reducing installation costs of new enterprises.

2) The 3 districts in the North and the Centre: an Objective 5b area

Like the Objective 2 programme, the aim of the Objective 5b programme have been mainly centred on employment creation and employment keeping. However, the quantitative objectives as well as the results of this programme in terms of employment appear to be relatively modest as a whole.

Accordingly, between 1988-1993, the achievement rate in terms of employment creation amounted to 25% , i.e., 113 jobs creations against 435 jobs to be created. Also, 300 jobs have been distinguished as being "consolidated" in the framework of the "diversification" and "valorisation of animal production" measures. These results have been considered as being relatively modest and limited compared to the priority status of employment aspects among

⁵For the same period, this rate amounts to 39% for France and 168% for Luxembourg.

the objectives of the programme as well as the general significance of this problem in the rural regions.

As a result, employment aspects have been reinforced in the following period of programming, i.e., between 1994-1999. In terms of direct creation, expected quantitative results amount to 215 for 1999 and 450 in 2003. In terms of indirect creations, 100 to 600 jobs are expected. These figures, however, seem to remain relatively modest. Note that these figures are collected for the whole of the Objective 5b area which covers 3 districts in the province of Luxembourg but also 2 districts in the province of Namur. Figures must therefore be interpreted as a global indication for the Objective 5b area.

3) *The employment action covering Wallonia: Objectives 3 and 4*

Objective 3 and 4 programmes are centred on employment aspects. Objective 3 aims at fighting against long term unemployment as well as inserting young and excluded people on the labour market. Objective 4 aims at facilitating the adaptation of workers to industrial mutations and changes of the production systems. Actions of both programmes particularly focus on training and employment creation through tax incentives. Since these actions cover the whole of the Walloon region, it is difficult to obtain any distinctive figures at the sub-regional level, i.e., for the province of Luxembourg only.

4) *The cross-border initiative: INTERREG II*

Two INTERREG II initiatives encouraging cross-border co-operation concern the province of Luxembourg: "Ardennes", "Wallonia / Lorraine / Luxembourg".

The employment aspects of these initiatives are related to the following measures:

- support to enterprise creation and SME development by the creation of a cross border risk capital fund (EUREFI) which will be partially financed by the EU,
- development of human resources, including training and innovative schemes developed in response to the needs of local industry,
- creation of a cross border development board to enhance cross border commercial flows and co-operation by supplying enterprises with information and advice on the different national commercial and administrative rules.

5) *The LEADER Initiative: Objective 5b districts*

In June 1997, the European Commission has approved the operational programme of the LEADER initiative for the Objective 5b districts in Wallonia.

Within this programme, employment aspects transcend approximately all measures, i.e.,:

- "rural innovation" and the "valorisation of local production" aimed at maintaining and increasing employment in the rural areas,
- promoting SME and sustainable employment through the support to small craft enterprises and "proximity" enterprises as well as the acquisition of new competencies targeted on the creation of new activities in the area.

6) The SME initiative covering Objective 1, 2 and 5b areas of Wallonia (1994-1999)

This initiative aims in particular in promoting SME creation and development through the improvement of the quality, the accessibility as well as the service pricing to SME. Therefore, this initiative indirectly aims to employment.

Several reasons can explain the extensive use of European funds in the province of Luxembourg. We already underlined the cultural and geographical proximity of the local leaders, especially the Governor Planchard, with the EU institutions. Another reason is the availability of national financial resources to implement the programmes supported by the EU : the province of Luxembourg being the only deep rural and poor region in Belgium, a relatively large share of the national resources can be devoted to its development. As a comparison, Les Ardennes have similar socio-economic characteristics, but in France, Les Ardennes are far from being the least favoured region. Thus, relatively less national resources are available to complement EU funds.

6.2.3 Conclusions

There are many policies and many incentive instruments towards investment, employment creation, training, urban and industrial conversion for different areas and different types of enterprises. The more frequently used instrument in the province of Luxembourg is the investment subsidies with their attached premium for employment creation. These subsidies were first granted by the federal government but are now granted by the regional government following the reform of the State, with the help of EU structural funds in specific areas. But the key level in term of employment creation and enterprise settling reveals to be the provincial one. At the provincial level, the allocation of new industrial zones is negotiated with the government of the Walloon Region. These zones are thereafter developed by IDELUX which also provides attractive conditions for building renting and purchase. To encourage new enterprise settlements, subsidy packages are individually elaborated and promoted and negotiated case by case by IDELUX and the provincial authorities in connection with the provincial agency FOREM for staff recruitment and training matters.

This strategy reveals to be successful in rising employment associated to large companies, particularly in the Objective 2 area where initial objectives were reached. The impact of this strategy in rising employment associated to SMEs is, however, more difficult to assess. Many SMEs settled in the new industrial zones to benefit from the advantages provided by IDELUX, but some of them were previously settled in the province. The administrative burden of public aid management and control for SMEs is quite heavy and time consuming. In the future, the investment subsidy is expected to decline because of the general trend in cutting public expenditures and the new European priorities linked with the enlargement of EU. As a result, strategies that are adapted towards SMEs with a greater use of risk capital look more promising.

6.3. Strategies of entrepreneurs

In this section, questions are specified per subject: diversification and specialisation, types of companies, newly established firms, firms which left the province, firms with a strong increase/decrease in employment, banking and investment activities, networks and future strategies. Many data and insights have been already provided in chapter 3.

6.3.1 Diversification and specialisation

The public sector created many jobs in the last twenty years and is, therefore, over represented in the province in term of employment. In the private sector, employment shifted from the primary activities to trade and tourism activities, diversified in the manufacturing sector and increased in financial services. Both the primary and the manufacturing sectors remained under-represented in the province in term of employment. As a result, the public sector and the trade and tourism activities apart, the economic structure of the province experienced a diversification process and is converging towards the economic structure of the country.

Among the 24 companies employing more than one hundred workers within the province in 1995, a quarter of them (6) are in the construction branch with only one created after 1985. The other three quarters (i.e., 18 companies) belong to twelve different branches among which the most important are the food industry, the upstream automotive industry, the wood and paper industries, the trade sector, the metal and plastic industries and the tourism. 12 companies out of these 18 companies were created after 1985 in nine different branches among which the most important are the food, automotive and paper industries, the trade sector, the metal industry and the tourism sector. As a result, the large companies experienced a remarkable diversification associated with the diversification process of food and manufacturing industry described in chapter 3 and the creation of two tourism and entertainment complexes.

6.3.2 Types of companies

In 1997, there are about 19,500 enterprises in the province of Luxembourg in which more than 13,000 are one-man or family businesses and nearly 4,500 private companies. The 24 largest enterprises employed more than 100 workers. More than 98% of the enterprises employed less than 10 workers and 95% less than 5. The share in total employment of companies of more than 100 employees was 27% in 1995 but contributed for 36% to the increase in total employment between 1980 and 1995. The share of the enterprises of less than 10 employees, self employment included, in total employment was 43% in 1995 but also contributed for 36% to the increase in total employment between 1980 and 1995. Note that the construction branch which lost about 2,500 jobs, experienced a important concentration process.

As mentioned in chapter 3, almost half of the increase in employment between 1980 and 1995 came from schools, public institutions and public administration, in particular at the regional and municipal levels while the employment depending on the provincial administrative level decreased. This shift is linked with the reform of the State which started in 1970 and transferred power and competence from the national and the provincial levels to the regional and municipal levels. As a result, many jobs were created at the municipal level in relation with social and economic matters (e.g., welfare services administration and *intercommunale* IDELUX employing more than 200 persons). In addition, employment in schools increased because of the growth of the youngest population. The share of the public sector and schools in total employment grew from 32% in 1980 to 34.5% in 1995.

Subsidiary business

More than half of the 24 largest enterprises are owned by foreign multinational companies. Most of them are American companies but some others are Italian or French. Despite the lack of data, we think that the share of the subsidiary businesses in total employment was more than 10% in 1995. As many of them settled after 1980, their contribution to the increase in total employment was undoubtedly higher. These large companies received a customised welcome from *intercommunale* IDELUX and the provincial authorities in every area: investment subsidy package, water and energy facilities, road and even railway connections, staff recruitment and training. In addition, the former provincial governor Planchard used to keep personal relationships with head managers of foreign companies. Nevertheless the importance of subsidiary business is a threat to sustainable employment because it remains rootless and under the competition of low wage countries. This threat has been proved to be real with the departure of the Levi's company in 1984.

Self employment

In 1995, self employment still represented more than a quarter of total employment despite the decrease of employment in agriculture, which now represents less than one third of total self employment (Table 3.1). The liberal professions, the retail trade and the tourism sector provided the major part of new jobs between 1980 and 1995. Creating his/her own job is still culturally recognised in the province of Luxembourg. There are several examples of farmers' children or wives who created their job in green tourism activities. There is, however, a gap between the creation of a one-person business and the management of an enterprise of more than 5 employees. Most of the family businesses never fill this gap. The main reasons of this difficulty include the risk averting attitude towards investment, the high cost of declared labour and the rigidity of the labour market which can be coped by using the informal non declared labour market.

6.3.3 Newly established firms

The motives of firms for settlement in the province of Luxembourg derive from internal and external factors.

Internal factors

- Subsidy measures: regarding the law of economic expansion of 1970, the whole province was considered as a development area. Since 1985, the south of the province has benefited from the creation of the EDP. Afterwards, a large part of the province was eligible for Objective 2 and 5b schemes.
- Road network improvements, in particular with the achievement of the E411 motorway connecting Brussels and Luxembourg city, and the absence of road congestion.
- Political consensus, good attitude of workers and social peace in addition to the strength and efficiency of internal and external social and political networks.
- Space and relative low land price, quietness and good living circumstances and secure environment for families.
- Population growth and population youth which is responsible for many job creation in the service sector.
- Welcoming attitude and management competence of local policy makers towards

entrepreneurs. The efficiency of *intercommunale* IDELUX is famous in the whole country for the creation and development of several industrial zones and multi-services support provided to enterprises.

External factors

- Geographical position.
- European integration.

According to local experts, entrepreneurs of small companies from the province can be characterised as risk averting towards investment and often involved in tax avoiding strategies. Most dynamic companies usually come from outside the province, for example from the Flemish Region and from abroad for the largest ones.

6.3.4 Companies which left the region

In the manufacturing sector two large companies closed during the last two decades: the iron and steel plant in 1977 and the trousers Levi's plant in 1984, both destroying thousands of jobs. In both cases, the reasons of the closure are linked with the growing world competition and the high labour cost in western European countries. Some of the labourers of the iron and steel plant who lost their job found jobs in the remaining steel industry in the Grand Duché du Luxembourg, but many of them stayed out of work. Most of the employees of Levi's were women. They were able to find jobs at the new multinational or retail trade companies that settled in the province at that time after going through training periods usually financed by public funds.

In the quarry and construction branches, many SMEs have closed in the last decades because of a concentration process linked with the realisation of scale economies. Some of the labourers who lost their jobs and former small entrepreneurs as well found jobs in larger companies while the oldest labourers retired and were not replaced.

6.3.5 Companies which had a strong increase in employment

In the public sector, a strong increase in employment is observed in the schools and the social services of the municipalities. In the private sector, a strong increase in employment is first observed in companies of retail trade and tourism, second in subsidiary branches of credit, insurance and financial institutions, and third in manufacturing plants.

Between 1980 and 1995, 26% of the employment increase occurred in companies of less than 10 employees (except self-employment) and 36% in companies of more than 100 employees. The proportions of employment in self employment and middle sized companies in total employment decreased although this self employment and these companies also contributed to employment growth.

The employment growth in the public and private services first derived from population growth and second from economic growth. In the manufacturing sector, most of the companies settled in after 1975 because they could benefit from investment subsidies. The use of these subsidies, however, was partially conditioned on the amount of new jobs. After their settling, most of these companies experienced a natural growth of employment for reaching the minimum efficient size in term of scale economies and keeping the benefit of the investment subsidies that they received. Having reached the minimum efficient size, these

large matured companies are not expected to create much employment anymore. In contrast, there is a threat that some of them might leave to settle in low wage countries.

6.3.6 Banking and investment activities

The financial sector remains very weak inside the province despite its fast increase in the last decade. But because the financial infrastructure in Belgium and the Grand Duché du Luxembourg is in general very well developed, there is no problem for the enterprises to obtain credit and financial services outside the province. In addition, the financial body specialised in risk capital Investsud can provide adapted and efficient support to entrepreneurs of the province who plan to innovate. A project of risk capital corporation is also planned in the framework of the EDP.

6.3.7 Co-operation in networks

Managers and skilled workers of large and middle sized companies and public corporations participate in networks inside and outside the province. Apart from professional networks, formal and informal networks including policy makers and public administration staff are also very dynamic. For these persons, the province is like a village where everyone knows each other. However, as a result of their isolation and lack of time, the managers of small enterprises of less than 5 employees and self employed persons participate in very narrow networks. It is quite difficult for policy makers and public bodies to get in touch with them and supply them with subsidies, information, advice and training. For the purpose of enhancing endogenous development, two meeting points for them were recently created or revived: the Centre of Project Development (CDP) created by the *intercommunale* IDELUX and the provincial chamber of commerce and industry revived in 1994 by a new staff.

In Belgium, the chambers of commerce and industry are private associations. That there is only one chamber in the province is another example of the political consensus. Nearly 90% of the enterprises of more than 10 employees are member of the provincial chamber of commerce and industry (CCILB). Since 1994, the CCILB has been involved in advising and training managers from SMEs. This private association of entrepreneurs is also very dynamic in the promotion of the SME outside the province and abroad.

INVESTSUD also works with the SMEs. Its action benefited from the co-operation of a college of managers from large companies who feel concerned with the economic development of the province.

Informal networks, including policy makers, entrepreneurs and staff of the CCILB, managers of *intercommunale* IDELUX and unions leaders are very efficient in regulating social conflicts, in particular for SMEs.

Facing the lack of cultural events and entertainment inside the province, some managers from large companies also planned the creation of an association in order to collect and make available the information of cultural events and entertainment in the three neighbouring regions, i.e., the province of Luxembourg, the Grand Duché du Luxembourg and the French Lorraine.

6.3.8 Future strategies of entrepreneurs: opportunities and threats

The telecommunication and information new technologies are viewed as an opportunity for the economic development of the province. The three main arguments are the following ones:

- These technologies will decrease the disadvantages of rural areas compared to urban areas because physical distances will not be a problem anymore.
- These technologies need large intellectual inputs and intellectual work is easier in quiet and green environment.
- European aids are available for enhancing the development of these technologies.

The main threats are:

- The decrease in public investment subsidies from the EU and the Belgian central government,
- The competition with low wage countries, in particular for subsidiary business.

6.4. Strategies of farmers

For the last decades, most of the farmers have specialised in cattle breeding, in particular in the lean *Blanc Bleu Belge* breed which needs very specific know-how. As a consequence, milk and cereal production decreased. This trend may stop in the near future because of the current beef crisis and the coming Common Agricultural Policy (CAP) reform which does not seem to favour cattle production.

In the framework of the Integrated Development Scheme (PDI) and in the following Development Scheme of Rural Areas, some farmers tried the fattening of feed lots. This practice has not yet been successful. The province is far from feed suppliers and consumer centres. In addition, the creation of a label for cattle from the Belgian Ardennes failed.

Some farmers have successfully experienced deeper diversification in large game and Christmas trees production. Organic farming in milk production is appearing as a good opportunity because a specific milk transformation plant settled in the region. These activities are expected to be relatively successful because the demand for large game goes in hand with the development of tourism in the province and the demand for organic produces is rising all over the western Europe.

As elsewhere, the agricultural sector experiences a farm concentration process but the province remains characterised by a high level of part time farming. On-farm pluriactivity mainly concerns forestry and green tourism activities. Also, the participation to agri-environmental measures (mainly hedge maintenance and late meadow cutting) is higher in the province of Luxembourg than in the others. This is associated with the fact that the whole province is a less favoured agricultural area where farmers find the environmental contracts more profitable than their colleagues located elsewhere on more fertile areas. Thanks to the on-going reshaping of the agri-environmental measures (e.g., the increase in premium) and the growing demand of green tourism, these on-farm pluriactivities are likely to have a promising future.

Much of off-farm pluriactivities decreased with the decline of the iron and steel industry and the quarries by which most of the peasants-blue collars were formally employed.

6.5. Strategies of labourers, young people and women

The province of Luxembourg is characterised by a high rate of net immigration. Most of these immigrants are economic active persons, but a large part of them are commuters actually working in the Grand Duché du Luxembourg. Some of them are also retirees coming back to their region of origin after having worked in particular in public services in other parts of Belgium.

Most of the emigrants are students who go to tertiary school establishments or universities outside the province. As soon as they complete their education, they usually find a job anywhere in Belgium or abroad because their province of origin does not offer them a large scope of job opportunities.

The professional and continuing training policy and the recruitment policy of the country are implemented in the province of Luxembourg by the local IFPME and FOREM in association with the *intercommunale* IDELUX. The activity of these public bodies became crucial with the settlements of multinational companies and the development of growing branches like tourism and new technologies. The European Development Pole (EDP) and the European initiative INTERREG also provide continuing training opportunities in a cross border framework for people who are looking for work. These training opportunities revealed to be appropriate for most qualifications and even for foreigners, in particular French persons, who are allowed to benefit from these opportunities. The French system of professional and continuing training, in contrast, is only reserved for French nationals, except in the EDP framework.

As mentioned in the chapter 4, the labour female participation observed in the province is progressively catching up the participation observed in the country as a result of the higher increase in part time work in the province than in the country as a whole during the last decades.

There is also a higher proportion of less educated persons in the working population in the province of Luxembourg than in the total national working population. The unemployment rate for these less educated persons people is much lower in the province than in the country. Reasons for this may include the sector structure of the provincial local economy and the hardworking attitude of these persons as well. For instance, young persons from the province still attach more value to apprenticeship than young persons from urban areas.

6.6. Analysis of the interaction of internal actors

The province enjoys a high degree of solidarity which is reflected by the plain structure of the formal networks and the success of the reorganisation of the municipalities. There are only one *intercommunale* and only one chamber of commerce and industry. The political consensus prevails at the provincial level and the relationships between enterprises and public administrations are easy. In addition, compared to other provinces, the public services like the FOREM and IFPME have been used to work with each other for a long time.

In more recent years, some little stress have, however, arose as a result of the hegemonic attitude of the *intercommunale* IDELUX concerning all the economic issues in the province. For example, with respect to providing support to the SMEs, the *intercommunale* IDELUX competes with the provincial chamber of commerce and industry CCILB and the financial body INVESTSUD refuses to settle in the same location as IDELUX despite that these two institutions share the same president which is the governor of the province. For the time being, the local actors do not believe that this new competition is bad. On the contrary, many of them think that such competition can stimulate efficiency.

6.7. Analysis of interaction of internal and external actors

Since the seventies, the province of Luxembourg has benefited from the support of several active policy makers at the national level because the province was the most rural and the less favoured one and because some of these politicians originated from the province. At the regional level, the *Fondation Rurale de Wallonie* (FRW) made many lobbying efforts in favour of this rural area. In addition, the former governor Planchard had particular relationships with the European commission because he had been an administrator of the former European Community of Steel and Coal. Planchard revealed to be highly European minded which partially explains why one of the first integrated development scheme (PDI) and the first international European Development Pole (EDP) were initiated at the southern borders of the province of Luxembourg. The EDP was thought during several informal Saturday breakfasts in the provincial palace with the French *préfet* Chérèque and the president of the government of the Grand Duché du Luxembourg Santer. Since then, many formal and informal relationships between private companies and public institutions from the three countries have been created thanks to the EDP. These relationships revealed to be quite efficient in the area of labour recruitment, professional training, urban rehabilitation and trade. For example, several transportation companies use the French telecommunication network *Minitel* to identify potential customers. As a consequence, several public institutions of the province are deeply involved in the European initiatives INTERREG 1 and 2 in which German regions are also included.

Since 1994, 45 of the 200 hostels of the province have participated in the creation of a quality label in Belgium with the technical support of the French label "*Logis de France*". Thirty percent of the Belgian hostels labelled "*Logis de Belgique*" are situated in the province of Luxembourg. This initiative provided many opportunities for making national and international relationships in the tourism business. Several other initiatives arose: a "beer road" from Germany to Belgium, an initiative called "the most beautiful villages of Wallonia" following another French experience and the creation of labels for other types of tourism accommodations.

The dynamics of this formally less developed province principally have come from efficient local policy makers with their external political networks and from external private investors, attracted by the investment subsidies, the low land price and the "social peace" environment. These new comers usually have appreciated and adopted the strong local cultural identity. Like the provincial authorities, they have used it as a marketing argument for their products, following the provincial Chamber of Commerce and Industry CCILB strategy. Except for the growing tourism sector and the few multinational and large companies and the declining agricultural sector mainly oriented towards international markets, a large proportion of the dynamic SMEs and self employment sector have been depending on local markets and, overall, public services. As a result, there are now many efforts left to build an economic structure with medium sized companies strong enough to pull a dynamic endogenous development.

7. DEVELOPMENT OF EMPLOYMENT: A SYNTHESIS

7.1. Map of the region

Economic activities as well as population are spread on the whole of the province of Luxembourg but tend to be concentrated within and in the neighbourhood of the five largest towns of the province of Luxembourg having more than 10,000 residents (Arlon, Marche-en-Famenne, Aubange, Bastogne and Virton in decreasing order), in particular within and around Arlon which is the administrative capital of the province located in the South and Aubange which, located in the extreme South, was the centre of the iron and steel industry. The northern part of the province (i.e., districts of Marche, Bastogne and Neufchâteau) is more agricultural and the southern part of the province (i.e., districts of Arlon and Virton) is more industrial.

Companies settlements and, hence, job creation during the period 1980-1995 have been concentrated in the southern part of the province to replace the lost resulted from the closure of the iron and steel industry in 1978 located in this area. Nowadays, efforts are made to attract companies and, hence, create jobs in other areas of the province as well, in particular in the northern part of the province next to Marche-en-Famenne.

Three types of geographic labour markets may be distinguished in the province of Luxembourg by order of importance (Figure 7.1.):

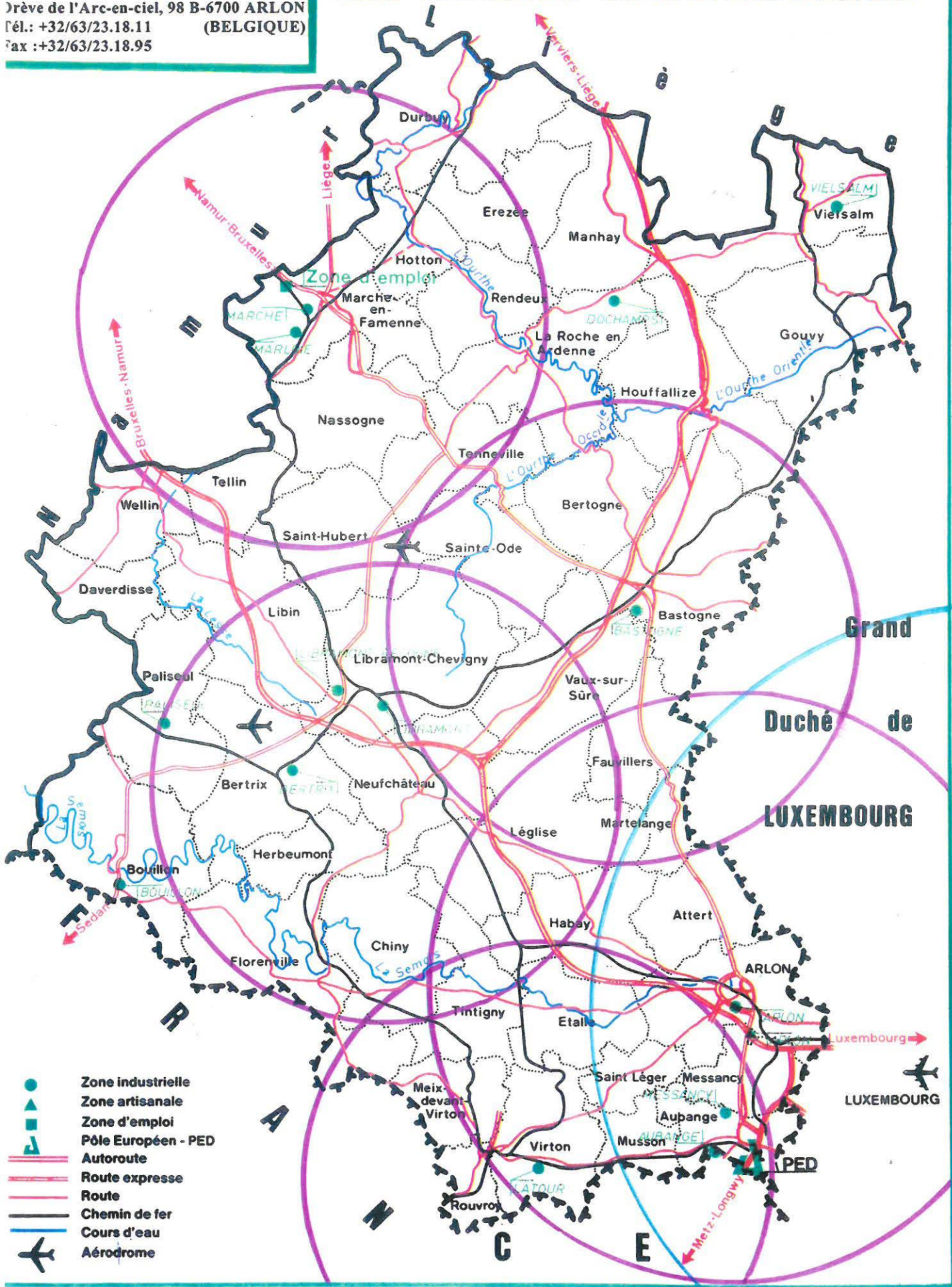
- 1• a local labour market which may grossly corresponds to a district or *arrondissement* (purple circles on figure 7.1.),
- 2• an across-border labour market with 13,000 Belgian residents from the southern part of the province of Luxembourg (i.e., district of Arlon) commuting daily to the Grand Duché du Luxembourg (green circle on figure 7.1) and with several hundreds French residents from the northern part of the French department of Ardennes commuting daily to the southern part of the province (i.e., districts of Arlon and Virton),
- 3• an across-province market with residents from the northern part of the province commuting daily to Liège and its periphery and residents from the north-western part of the province commuting daily to Namur and for a few of them to the region of Brussels.

Although workers movements across the three borders existed since the end of the 19th century with the development of the iron and steel industry in the region, movements from the southern area of the province to the Grand Duché du Luxembourg have amplified in the last twenty years as a result of the dismantling of the iron and steel industry in this area and increasing employment opportunities in the Grand Duché du Luxembourg. The province shows a net annual immigration flow of 1,300 persons on average between 1993 and 1995.

Figure 7.1

La Province de Luxembourg LES GRANDES INFRASTRUCTURES

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7.2. SWOT analysis for 1980 and 1997

The SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis is just a convenient and systematic way to analyse the different aspects reported in the previous chapters to identify the key factors of rural employment development. The 1980 SWOT analysis focuses on explaining what was going on in the region in terms of employment while the 1997 SWOT analysis focuses more on the future development of the region in terms of employment.

Strengths and weaknesses are the key factors within the region that explain employment development in the region. Elements in the previous chapters forming the local resources, labour demand, labour supply and labour market actors' strategies are systematically re-examined to isolate dominant strengths and weaknesses for employment development. So strengths and weaknesses are characteristics of the region.

Opportunities and threats are the key factors within or outside the region that may affect the development of rural employment. They may also be identified through a careful re-examination of elements forming the local resources, labour demand, labour supply and labour market actors' strategies. Since opportunities and threats may include elements external to the region, such as market development or national/European regulations, an effort has to be made here to broaden the analysis to external factors that may be identified as opportunities and threats for the region. So opportunities and threats are the possibilities to use the strengths of the region.

Strengths and opportunities are indicated by a "+" or "++", weaknesses and threats by "-" and "--". The evaluation must be interpreted from the employment point of view, and in comparison to other neighbourhood regions. An item can only be a strength if it could be helpful for the creation of employment, and it is more present or more developed in the province of Luxembourg than in the neighbouring regions. If an item is not relevant or not determinant, it is indicated by a "0".

SWOT analysis

Strengths and weaknesses

	1980	1997
- <i>location of the region (proximity to a large economic centre) in the regional context</i>	++	++

The province of Luxembourg is located next to the Grand Duché du Luxembourg and the city of Luxembourg. Especially the southern part of the province and its main city of Arlon take advantage of this location. The Grand Duché du Luxembourg benefits from an above European average economic growth and low unemployment rate. Both companies and population of the province look for a location close to this important economic, financial and industrial centre. Many workers and employees working in the Grand Duché du Luxembourg live in Arlon or its neighbourhood to take advantage of a lower cost of living in the province but higher net wages in the Grand Duché du Luxembourg.

- *location of the region (proximity to a large economic centre)
in a global context* + ++

The province of Luxembourg has traditionally been a peripheral location relatively to the political and economic centre of the country but has progressively taken advantage of its central location in Europe. As a result, the province and in particular its private employers are building institutional and economic links with its European neighbouring regions to create the inter-regional entity of Saar-Lor-Lux including the German region of Sarre, the French region of Lorraine, the province of Luxembourg and the Grand Duché du Luxembourg. This more recent strategy gives a double plus in 1997.

- *local resources which favour employment* + ++

Since the late seventies, mineral resources are not exploited anymore in the province of Luxembourg. Forest becomes more an environmental asset of the province than an economic one because of the increasing competition from northern and eastern European countries for raw material and because of the poor development of the down-stream processing sector. The province has, however, an attractive landscape and uses it to attract the implementation and development of companies as well as its managers. In the course of time the subjective appraisal for landscape amenities has increased. In combination with a rise in leisure time and, hence, a larger demand for recreation activities, on one hand, and a larger emphasise on the environment of housing and firms, on the other hand, the double plus arises in 1997.

- *education level of the labour force* - -

The education level of the labour force in the province of Luxembourg relatively lags behind the general level in the country. The province has a relatively higher level of persons graduated from universities than the country but faces problem to have and keep them employed there. Companies located in the province need to hire managers, foremen and technicians from neighbouring regions which have a larger and more diversified pool of labour supply.

- *low cost labour* - --

As a result of the collective national labour agreements the same wage levels apply in all regions of the country and labour costs in the province of Luxembourg do not deviate from the other Belgian provinces. However, compared to the foreign neighbouring regions, the employer's labour cost could be lower in the Grand Duché du Luxembourg, for example, than in the province of Luxembourg but the wage net of social security contribution and income tax received by the employee higher in the Grand Duché du Luxembourg than in the province because of the higher social security contribution and income tax in Belgium. According to employers of the province, this competitive disadvantage has been aggravated, hence the double minus in 1997.

- *well-developed physical infrastructure* - 0

>From 1980 to 1995, roads and motorways have been greatly upgraded and expanded in the province of Luxembourg. Two motorways are now crossing the province from North and north-west to South connecting the province to Brussels, Liège, Luxembourg city and Metz. There is also a dense network of railways connecting the province to Brussels, Liège and Luxembourg city. The plan of building a high speed train track from Brussels to Luxembourg city is welcome by the employers even if the high speed train does not stop along the province. The Luxembourg international airport in the South of the province and the Liège airport in the North of the province are also good assets for the province. Compared to the other provinces of the country, this province has now reached a comparable level of physical infrastructure taking into account its low population and industrial density, hence the zero in 1997. Compared to the French neighbouring region, physical infrastructure is probably slightly better.

- *favourable industry structures* -- -

>From the late seventies, industry in the South of the province of Luxembourg has successfully diversified from the declining iron and steel industry to more market-oriented industries and services mainly thanks to the actions taken by the provincial administrative authorities with the help of the *intercommunale* IDELUX. Since 1988 the European Development Pole (EDP) in the extreme South of the province (Aubange) is entitled to Objective 2 structural fund, which reflects a situation of a traditional industry undergoing restructuring, and has contributed to this diversification but more recently. Along this diversification process, a dozen of large foreign companies settled in the province while local companies stayed very small. This type of structural dualism where very small companies (less than 5 employees) and large companies (more than 100 employees) co-exist is not favourable for endogenous development. More recently, some mergers or acquisitions among local companies have progressively increased the size of the local companies which is, however, still under the national average. This structural dualism is a major concern for the provincial administrative authorities, the *intercommunale* IDELUX and the provincial chamber of commerce and industry CCILB which try to deal with this problem. This favourable evolution in the industry structure explains the change from a double minus in 1980 to a single minus in 1997.

- *favourable climate* - -

The climate in the province of Luxembourg is less favourable for agriculture and tourism than in the other Belgian provinces but more favourable for growing some pine species.

- *favourable amenities* 0 +

Amenities in the province of Luxembourg have been upgrading thanks to encouragement of the provincial administrative and political authorities, regional institutions such as the Foundation Rurale de Wallonie (FRW) and support from European programmes such as the LEADER initiative.

- *capacity in knowledge, skills and attitude of local policy makers* + ++

Local leaders have demonstrated during the period their commitment in dealing with the development and employment problems of their province, both at political and administrative levels thanks to a general political and social consensus and a strong provincial identity. They have been successful in attracting foreign companies and replacing jobs lost with the closure of the iron and steel factories by upgrading physical infrastructure, encouraging the institutional development of *intercommunale* IDELUX and the provincial chamber of commerce and industry CCILB and using national and European structural funds. These local leaders are now facing a more complex problem of encouraging endogenous development but are committed to succeed.

- *capacity in knowledge, skills and attitude of local entrepreneurs* - 0

Local entrepreneurs are cautious and risk averting. For many reasons, including the fear of becoming a more visible company for corporate tax collection, they face difficulties in expanding their company from a very small size to a small or medium size. Some of them have successfully restructured their management and activities to respond better to the services needed by the larger companies of the province and compete against companies from neighbouring regions. This capacity seems to improve since 1980 but is, however, not better than in the other Belgian provinces or neighbouring regions, hence the sign changing from a single minus sign in 1980 to zero in 1997.

- *capacity in knowledge, skills and attitude of the local labour force* + +

The attitude of workers and employees towards work is very good partly due to the rural background of the labour force accustomed to work hard and the social peace. However, the education level of the labour force is not always adequate to the labour demand.

- *presence of universities and other major research centres* -- -

There are no large universities or other large research institutes in the province of Luxembourg. The *Fondation Universitaire Luxembourgeoise* (FUL) is a small university research and graduate teaching centre specialised in environmental and development issues. There are also three upper-level technical and professional schools and one applied research centre specialised in agricultural and rural issues (*Centre d'Economie Rurale*) in the province. These centres seem to have been more active in recent years, hence the double minus sign in 1980 becoming a single minus sign in 1997.

- *capacity of local actors to innovate* - -

Due to their risk aversion and fear of paying higher corporate tax, the local entrepreneurs tend to keep their company small which impedes to invest human and financial resources in innovation.⁶ New coming people from other Belgian provinces including Flemish provinces often act as investors and innovators. The investment body INVESTSUD is active in providing risk capital for small and medium companies.

- *entrepreneurial climate* - 0

The structural dualism and the thinness of the economic structure of the province of Luxembourg are both a weak point against this climate. However, there are also positive elements such as low land prices, sufficient space, no congested roads and investment subsidies for small, medium and large companies in the province in addition to the distinctive contribution of institutions such as the *intercommunale* IDELUX, the provincial chamber of commerce and industry CCILB and the investment body INVESTSUD. As a whole, this entrepreneurial climate in the province is probably no better than in the other Belgian provinces, hence a zero in 1997.

- *specialisation of the regional economy* -- -

There is no strong specialisation of production in the province of Luxembourg which can create a critical mass of marketing infrastructure and services, know-how, and other external economies in the province that can sustain the development and, hence, employment in specific sectors. The de-specialisation in the declining iron and steel industry to more market-oriented industries and services and the specialisation of some local companies in servicing large companies explain the positive evolution during the period from a double minus sign in 1980 to a single minus sign in 1997.

- *diversification of the regional economy* - 0

During the period 1980-1997 the economic structure in the province of Luxembourg diversified from the declining iron and steel industry and agriculture to more market-oriented industries and services and converged towards the economic structure of the national economy, hence a zero in 1997. The diversification of the provincial economy can minimise risk and facilitate the endogenous development pursued by the province.

⁶ When the company successfully expands, the owner prefers to register it in the Grand Duché du Luxembourg where corporate tax is lower. This may partly explain the structural dualism described above.

- *vertical co-ordination within sectors* -- -

The relations between the activities of the different parts within a specific production chain (upstream and downstream) are poorly co-ordinated and regulated in the province of Luxembourg, particularly in the agricultural, food and forestry sectors. Several efforts are now deployed to strengthen the co-ordination mechanisms within these sectors but also to link small companies and large companies with contract relationships. Vertical co-ordination within sectors is still not as good as in the rest of the country, hence the change of the double minus sign in 1980 to a single minus sign in 1997.

- *horizontal co-ordination across sectors* -- -

The relations between suppliers of products and services and the different parts of the production chain are poorly co-ordinated and regulated in the province of Luxembourg. As a result, horizontal co-ordination across sectors is still weak compared with the rest of the country but improving thanks partly to the efforts deployed by the provincial chamber of commerce and industry CCILB to facilitate linkages between small and medium companies and large companies and by the *intercommunale* IDELUX to help develop a new industrial area for small and medium companies located in the north of the province in addition to the European Development Pole (EDP) located in the extreme South of the province, hence the change of the double minus sign in 1980 to a single minus sign in 1997.

- *internal networks* + ++

Thanks to the provincial identity and solidarity and active contributions from the part of the provincial administration and other institutions such as the *intercommunale* IDELUX, the provincial chamber of commerce and industry CCILB, the investment body INVESTSUD and the Fondation Rurale de Wallonie (FRW), networks of local actors have been strengthened during the period and are probably thicker than in the other Belgian provinces, hence the change of the single plus sign in 1980 to a double plus sign in 1997. Within these networks there is a high degree of solidarity and easy communication.

- *external networks* + +

Political connections with party leaders and national and regional ministers disproportioned with the population and economic weights of the province have certainly facilitated the development of physical infrastructure and the full use of the economic laws and the regional decree which replaces them. The EDP and the INTERREG cross-border initiatives have helped the province open up to the foreign neighbouring regions and emulated the new Sarr-Lor-Lux initiative. Often coming from outside the province, local dynamic actors bring their external connections and make the province to benefit from them.

-	<i>market "niches"</i>	0	+
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Some market "niches" have been successfully developed for some food specialities (local beer and ham and more recently chickens, rabbits, ostrich and buffalo), Christmas trees and tourism. The province has been more successful than neighbouring regions to create a regional image for a limited range of consumer products.

-	<i>tourism</i>	0	+
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Investment in the creation of entertainment centres related to telecommunication and space and historical war events (e.g., the 1944 battle of the Ardennes), the restoration of several gallo-romain and medieval buildings and the laying-out of natural parks in addition to the improvement of the tourism accommodations has fostered the development of one-day or week-end tourism in the province. As a result, the number of nights spent in the province has doubled during the last 20 years, hence the change of the zero in 1980 to a plus sign in 1997.

-	<i>culture of subsidiary business</i>	0	-
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A dozen of large subsidiary companies have settled in the province of Luxembourg since mid-1980. Although some of them have some autonomy in decision-making, most important decisions such as decisions on expansion, shrinking, reorganising or closure of the subsidiary business are made in the parent company outside the province. A larger share of employment has been increasingly depending on these subsidiary companies during the period and seems to be more at risk than in the neighbouring regions, hence the change of the zero in 1980 to a single minus sign in 1997.

Opportunities and threats

		1980	1997
-	<i>market opportunities</i>	0	+

Market opportunities for the type of regional food products and amenities found in the province of Luxembourg are greater at present than before as a result of an increasing demand for such products and amenities. In addition, the large foreign companies which settled in the province during the eighties produce and market industrial products (plastic, car parts, etc.) and consumer goods (processed meat, confectionery, mineral water, perfumes, etc.) for which there are increasing market opportunities outside the province. Such market opportunities should be a favourable opportunity to maintain or even increase employment. For these reasons, the sign shifts from a zero in 1980 to a single minus in 1997.

- *development of tourism* + ++

People have more leisure and higher incomes, which results in a rising demand for recreation and tourism accommodations. Local actors have developed strategies to improve the provincial supply of tourism attractions and accommodations to face this opportunity. Their strategies include the development of up-market tourism, including with week-end packages offering hunting and regional gastronomy in line with expected demand. Since the province has the potential to meet such expectation and tourism is labour intensive despite being typically seasonal, the single plus in 1980 shifts to a double plus in 1997.

- *public service privatisation* 0 -

A large share of the increase in employment in the province of Luxembourg since 1980 has been in the public sector (local administration, schools, etc.) which is now the largest employer of the province. With the on-going privatisation process of some state companies such as the Belgian telecommunication company, the mail services and the national railway company, analysts expect some restructuring and rationalisation of the labour force within these companies and, hence, job losses. This threat is reflected in a shift from zero in 1980 to a minus sign in 1997.

- *European integration and extension* + +

Located at the core of the European Union and well connected to the largest economic European areas, the province of Luxembourg should continue to benefit from European integration and extension. However, the province share this advantage with its neighbouring regions.

- *improvement in infrastructure* + +

The opportunity to raise the physical infrastructure to a density comparable to the neighbouring regions was particularly important at the beginning of the eighties to overcome some shortcoming of the regional economy. Now that the road and motorway network is good enough, no important physical infrastructure is planned for the province except the development of an information network⁷ and a high speed train track which should link Brussels and Koln to Luxembourg. The new possibilities in telecommunication will reduce the pressure to keep research and typical office work in urban centres and encourage the transfer of some bureautic activities to rural regions with low land prices and high life quality like the province of Luxembourg. Teleworking could not only create new jobs, but also help keep higher qualified people in the province. As a whole, physical infrastructure upgrading as planned in the province may just keep the province at a comparable level of physical infrastructure as its neighbouring regions. However, its potential to maintain or even increase employment in this province is likely to be higher than in the neighbouring regions. Because of this prospect, a single plus sign is kept for 1997.

⁷ IDELUX has an exclusive agreement with the Belgian national company of telecommunication Belgacom to develop such network with the support of the ADAPT programme.

- *reconsideration distribution means EU Structural Funds in 2000* + -

The EU structural funds for less developed and rural areas institutionalised in the eighties were opportunities for economic development and employment in the province of Luxembourg. The current measures of the Objective 2, 3, 4 and 5b programmes are relatively successful in creating or at least maintaining employment in the province of Luxembourg. When the province should not be eligible for support from the Structural Funds after 1999, a further improvement of the employment situation in some less favoured areas of the province might be hampered. This threat is reflected in the shift of the single plus sign in 1980 to a single minus sign in 1997.

- *further reform of the Common Agricultural Policy (CAP)* + -

Agricultural incomes and, hence, farm employment in the province of Luxembourg mainly depend on the European beef market and the different policy measures associated with this market since this province is mainly an area of cattle breeding. In early eighties, cattle breeders of the province benefited to some extent from the 1984 European dairy quota allocation. The allocation was partly based on the number and size of the cowsheds while most of them were not used for dairy but breeding. Breeders were quick to sell their quota allocation and make profit out of it. With the recent application of the 1992 CAP reform which provides compensating payments for young steers and suckling cows limited by a factor of density of 2 cattle units per hectare of forage in 1996 as well as an additional compensating payment if this density is lower than 1.4 cattle units, breeders have been encouraged to enlarge their farm land to avoid to reduce their herds and, hence, their income. As a result, there is now competition for pastures and, hence, on farm concentration and labour. With now the bleak prospect of the beef market for the coming years and the proposal laid down in Agenda 2000 which will accentuate this trend, farm labour in the cattle breeding business in the province does not have a favourable future.⁸ CAP reform in the province of Luxembourg has turned from an opportunity in the eighties to a threat in 1997, hence the single plus sign in 1980 replaced by a single minus sign in 1997.

- *European Monetary Union (EMU)* NA -

With the implementation of the EMU and the harmonisation on investment tax regulations across the EMU, the Grand Duché du Luxembourg will lose its attractiveness as a tax heaven for companies and people from neighbouring countries, in particular Belgium, France and Germany. As a result, there is a threat of job reduction in the Grand Duché du Luxembourg's banking sector that will reduce job opportunities in the Grand Duché du Luxembourg for people living in the province of Luxembourg.

⁸ According to the national Centre of Agricultural Economics (CEA), the compensating payments for cattle breeding as planned in Agenda 2000 may not fully compensate the drop in the intervention beef price in the province of Luxembourg.

- *competitiveness with low wage countries* - -

Labour costs in the province of Luxembourg are high relatively to low wage countries. There is an increasing threat that private companies move from the province to these countries but the effect of this delocalisation on the employment in the province would be rather limited since employment in the province is relatively more concentrated in the private and public services which are less subject to delocalisation. These services are, however, partly supplied because of a demand generated by the agricultural and manufacturing sectors.

- *economic growth* + +

Economic growth should continue to have a higher positive impact on employment in the province of the Luxembourg than in the neighbouring regions for several reasons. First, employment in the province is relatively more concentrated in the services than in the neighbouring regions. Services are relatively more labour intensive than manufacturing industries and, hence, more favourable to an increase of employment in case of economic growth. Second, part-time employment in the province is particularly more developed than in the neighbouring regions. This type of employment is more flexible and responsive to economic growth. In addition, employment in the province is relatively more important in the public services than in the neighbouring regions. This type of employment is more subject to public and economic policy than economic growth.

- *schooling* 0 +

Because the province of Luxembourg is experiencing a higher demographic growth and urban immigration than its neighbouring regions, number of kids in schools will increase, which will rise the demand for labour in elementary and high schools.

- *country decentralisation* + +

In the eighties, the *Fondation Rurale de Wallonie* (FRW) was active and successful in promoting equalisation and even positive discrimination for public investment first in the south-eastern rural area of Belgium and, thereafter, any rural areas of the Walloon region. This institution had close links with national policy makers thanks to its active local political representatives. With the on-going political and administrative decentralisation of the country, this backward province may continue to benefit from public investment.

Changes between 1980 and 1997

The changes in the relative position of the province of Luxembourg have mainly been in the reduction of the various weaknesses or handicaps which characterised the province in the seventies. Weaknesses in physical infrastructure, industry structures, local entrepreneurship, entrepreneurial climate, research capacity, regional specialisation, external economies, vertical and horizontal co-ordination, market "niches" and tourism infrastructure of the province have all been reduced during the period while strengths in rural amenities, policy making and internal networking of the province have been improved in such a way that we may imply that the upgrading of these strengths have likely resulted in downgrading those weaknesses. Favourable location of the province, capacity of labour force and external

networks have continued to serve the province while low education level of the labour force and capacity of innovation have continued to handicap the province. Labour cost and exogenous dependency are two weaknesses of the province that deteriorated during the period.

Most of the opportunities opened to the province in 1980 seemed to have been exploited by the local actors between 1980 and 1997: tourism, infrastructure improvement, European integration, EU structural funds and dairy quota allocation. The province has, however, missed some opportunities to foster some industries such as in the dairy and forestry sub-sectors and strengthen co-ordination mechanisms along sub-sectors and across sub-sectors. In 1997, market "niches", tourism and some public services such as schooling are new opportunities for the province of Luxembourg while public services privatisation, EU structural funds reform, further CAP reform and EMU are new threats in the coming future. Economic growth, country decentralisation and European integration will continue to be opportunities for the province of Luxembourg while competitiveness with low wage countries will continue to be a threat in the coming future.

7.3. Identification of key factors of success

Taking into account the findings in the previous chapters on the local resources, the economic activities (demand of labour), the supply of labour and the strategies of the actors in the region, the results of the SWOT analyses in the previous section, and the field of force of a rural region, we indicate in this section the key factors behind the success of employment growth. A key factor can be seen as the interplay of a specific group of actors who managed to use specific local resources, who are organised in a certain network and who were successful in creating/maintaining employment (in other words, it is more or less a success story of a specific group of actors).

Most employment growth occurred in the public and private services. The demand for these services is linked first to the population growth, in particular from the public services, and second to the economic growth, in particular from the private services. The high population growth rate is overall due to a high net immigration rate. The relatively high economic growth is related to several factors. The first factor is the dynamism of a relatively young working population in which there are many new comers from outside the province, in particular among entrepreneurs and the management staff of private and public companies. The second factor is the extensive use of investment subsidies for which the province was eligible as a less developed area, thanks to the ability of public corporation staff, the high degree of solidarity in this small province resulting in a strong political and social consensus. The third factor is the improvement of the road network and the water, energy and sanitation infrastructure.

According to our survey, the first key factor is the neighbourhood of the Grand Duché du Luxembourg because its large demand of labour due to fast economic growth and structural labour shortage have initiated and maintained most of the immigration flow towards the province of Luxembourg. Belgian commuters prefer to live in the province of Luxembourg where land and housing are cheaper. They induce a second round of employment by their demand for houses and services.

The second key factor is the political will and ability of few local policy makers and public corporation staff (provincial authorities, FRW, IDELUX) to both restore the image of the

province and attract many public aids and private investments by creating and reviving external political and economic networks. Since the first success in the conversion of iron and steel industry, they have created a legend of a winning province and have emphasised its comparative advantages like the quiet and green environment, the good attitude of rural workers and the political and social consensus. They gave hope and confidence to local actors and potential new in-coming entrepreneurs.

The third key factor is the economic structure of the province of Luxembourg where the service sector, which is more labour intensive, is over represented. As a consequence, the economic growth provided more employment in the province than in the remaining part of Belgium, in particular for female part time jobs.

7.4. Assessment of policies and strategies towards maintaining and augmenting employment

It is here important to assess to what extent policies and strategies of policy makers, entrepreneurs, farmers and labourers targeted at maintaining and augmenting employment were effective. The question here is to what extent these policies and strategies have effectively contributed to employment development. The same question should also be extended to policies and strategies that may indirectly have an effect on employment. Of course, the degree of contribution will be difficult to specify as it is difficult to disentangle factor effects but we do it tentatively.

The strategies of the policy makers at the provincial and national levels were very effective to augment employment in the last two decades. The first most important element of this strategy was the improvement of the physical infrastructure: the road network, the industrial zones and the sanitation, water and energy facilities for enterprise settlement, tourism centres and housing. Before such infrastructure improvement, the province was mainly regarded as a place to spend quiet long stay holidays but not as a place to work and trade, well connected to national international markets as it is now the case. The second most important element was to concentrate national and then European public aids on this less developed area. The use of the economic expansion laws of 1970 and 1978 towards enterprise creation and employment creating investment greatly helped local policy makers in their efforts to convert the iron and steel industry and enhance tourism towards luxury and short stay holidays in particular.

In general, the entrepreneurs did not have a specific strategy towards maintaining or augmenting employment. For maintaining the good social climate, they however preferred internal flexibility like part time work or temporary lay-off than firing.

The strategy of farmers towards cattle breeding specialisation did not seem efficient to maintain agricultural employment. Associated with farm concentration, this process of specialisation was employment destructive. The current and next reforms of the Common Agricultural Policy (CAP) are unlikely to maintain employment in cattle breeding. Thanks to part time farming, the agricultural employment in the province has remained relatively high compared with the other Belgian provinces. Diversification was still weak but is looking more promising than cattle breeding to maintain employment associated with the agricultural sector. There are now some opportunities for some farms to diversify towards green tourism and local differentiated products like large game for supplying the raising tourism.

The enduring attitude of labourers to work and stay away from social struggles was sustained by the local union leaders and presented as a comparative advantage by local policy makers to attract new enterprises. In addition, the active population, in particular the female population, was not reluctant to or even in favour of part time work. Part time jobs actually contributed significantly to employment growth and women participation in the labour market. Many young people have left the region to study and have not returned to the province when graduated while local companies are looking for high skilled workers.

7.5. Assessment of the interaction process of actors

There is strong solidarity and easy communication between internal actors in this small province where the political and social consensus prevails and everyone knows each other. This political and social consensus helped receive public aids for upgrading the physical infrastructure of the province and subsidising private investment in the framework of the economic expansion laws. The lobbying activity for attaining parity in the public support between rural and urban areas was initiated by the *Fondation Rurale de Wallonie* (FRW) and supported by the provincial authorities. The solidarity of the northern municipalities with the southern ones expressed in the framework of the *intercommunale* IDELUX was particularly important for the success of the conversion of the iron and steel industry. The European integration of the province was initiated by the former provincial governor thanks to its previous experience and network at the European level. Nowadays, with the European Development Pole (EDP) and the INTERREG initiative, many public and private bodies are involved in cross border networks with France, Germany and Grand Duché du Luxembourg. Experiences are already gaining in the field of professional training, cross border recruitment, urban rehabilitation and economic co-operation.

The formal or informal networks of entrepreneurs are also important because they allow the integration of the new comers, in particular those from subsidiary businesses of multinational companies, in the local economic tissue. Their experience reveals to be very valuable for SMEs to enter foreign markets with the help of the provincial chamber of commerce and industry CCLIB as well as to enlarge with the help of risk capital provided by the banking body INVESTSUD where some managers of large companies are involved as advisors.

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ANNEXE 1: List of interviews

Champagne Jean Pierre, secrétaire général des Unions Professionnelles Agricoles (farmer union), Gembloux

Charlier Eric, SME of international road transport, Libramont

Coppée Benoît, INVESTSUD (risk capital institution), Marche-en-Famenne

Coulon Fabrice, directeur de la Chambre de Commerce et de l'Industrie du Luxembourg Belge (Chamber of Commerce and Industry), Libramont

Courtois, directeur de Sud Charpente LAMCOL (SME of construction), Marche-en-Famenne

Daleur, directeur de Cooper Automotive S.A. et ex-directeur de Champion Spark Plug Belgium S.A. (car equipment multinational company)

Demortier Henri, Intercommunale IDELUX (syndicate of the 44 municipalities of the province of Luxembourg), Arlon

Doumer, directeur du personnel, L'Oreal Belgique (cosmetics multinational company), Libramont

Fidler, Institut de Formation des Petites et Moyennes Entreprises (apprentice institute), Libramont

Fiévet José, directeur de la Fédération du Tourisme du Luxembourg Belge (provincial association for tourism), La Roche-en-Famenne

Gheza, directeur du Centre de Développement de Projet CDP-IDELUX (Project Development Centre for SME), Arlon

Goberon Pierre, Brasserie d'Achouffe (SME of beer production)

Goffin André-Marie, directeur du FOREM (public institute for continuing education, professional training, temporary work and employment), Arlon

Goffinet Christian, administrateur à la Fondation Rurale de Wallonie (rural development foundation), Arlon

Guenot Robert, directeur de L'Oreal Belgique (cosmetics multinational company), Libramont

Marlier Philippe, directeur régional de la CERA (credit and banking institution), Namur

de Paul de Barchifontaine Etienne, secrétaire général de l'Alliance Agricole (farmer union), Bruxelles

Piron Gérard, Groupe S (large enterprise of services to enterprises), Libramont

Piron Louis-Marie, Piron (large enterprise of construction), Palliseul

Planchard Jacques, ancien gouverneur de la province du Luxembourg (former governor of the province of Luxembourg), Chiny

Reginster Jacques, directeur de la direction générale de l'agriculture au Ministère de la Région Wallonne (Agricultural Division of the Walloon Region), Namur

Roger Antoine, président du CPAS (municipal social and welfare service), Marche-en-Famenne

Schreder, directeur du *Centre d'Economie Rurale* (provincial agricultural research centre), Marloie

de Schrevel Michel, économiste à l'Observatoire économique de la Fondation Universitaire du Luxembourg belge (university centre for the Belgian Luxembourg), Arlon

Sottiaud Jean Pierre, gestionnaire à la Fondation Rurale de Wallonie (rural development foundation), Arlon