COMMISSION OF THE EUROPEAN COMMUNITIES

The dynamics
of unemployment
and employment

Belgium, 1947-1973

The study of Professor Robert LEROY extends beyond the limits normally assigned to this type of work where one stops at an analysis of cyclical phenomena taking into consideration 3 or 4 large variables which roughly characterizes it. The application of an extremely rigorous method of research based on a rich and homogeneous statistical basis for which the interpretation of each series demands a compact evaluation of its intrinsic value, is indeed a model both in terms of result and of originality.

With the experience of 25 years, the author has reviewed all the identifiable aspects of unemployment in Belgium. The study has been undertaken with the aid of the most modern statistical methods, multiple variable correlations, introduction of fictive variable and so on. By means of a series of graphs the different hypotheses are successively illustrated. At the same time, the usual concepts — unemployment by sex and age, underemployment, camouflaged employment — are each carefully adapted to the Belgian situation under categorial and regional profiles.

The work is limited to 1973, but this does not mean that its value is lessened at the present time, when conceptual revision and research for a method more adapted is a pressing need.

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by Robert Leroy,
Institute of Economic Sciences,
Catholic University of Louvain

with the assistance of
J. Thomas

INTRODUCTION

It is not obvious 'a priori' what the interest is in studying unemployment in Belgium over a period of a quarter of a century. Only the results of the analysis are able to establish it. By way of introduction, let us mention some of the conclusions drawn from the research.

1. Whether politician, economist or man in the street, everyone knows what unemployment is: it is the opposite of employment. To dismiss 100 workers is to create 100 unemployed; to create 100 new jobs is to reduce unemployment by the same amount. The experience gained in Belgium over the last 25 years invalidates this truism: the reactivation of unemployment (or elasticity, in the broadest sense of the term) into employment is, firstly, not at all constant but presents recognisable systematic variations and, secondly, it is by far inferior to a unit, generally speaking. For instance, over the long term, 100 additional jobs (for male workers), reduced male unemployment by 58 units when the unemployment rate was 10% and only by 17 units when this rate was 3%.

2. The example concerns reactivation over the long term. Indeed, unemployment, like the whole of the labour market, seems to reflect as much the dynamics of the economic situation of the moment as more long-term dynamics. It is essential to make a distinction between these two forms of "logic", because what is true at one level is not necessarily true at another. Thus, the reactivity-employment of unemployment is much higher over the short term, even though it remains generally lower than the unit. To take quite another example: the relationship between unemployment and wages. In the short term, annual variations in regional wage levels are not dependent on the specifically regional level of unemployment — there are no really regional "Phillips curves" as such. On the other hand, in the long term, the reduction of Flemish unemployment went hand-in-hand with a rise in Flemish relative wages, in the same way as the deterioration of the situation in Wallonia was accompanied by a regular fall — minimal in each year, but finally becoming acute — in Walloon relative wages, which dropped from an index of 105 to 96.

3. The outcome of the analysis of unemployment in Belgium is the existence of long-term dynamics in the labour market, over and above fluctuations in the current economic situation. These alone offer an explanation of the paradoxes such as that of Wallonia, a region where employment (of wage-earning males) fell by 1.3% per year as from 1948 and where unemployment has shown an upward trend only since 1965 - a trend, moreover, whose origin and form appear to have depended partially on far more distant developments.

4. These long-term structures combine at regional level. Even in a country as small as Belgium, the labour market has its "logics" proper to the various regions: the national aggregates do not enable the labour market to be understood in the long term. It is important from a political point of view, especially at a time when no-one dares to propose inter-regional mobility as "the" solution to the problems of the major regions.

5. The structure of the (male) labour market according to age groups is here coupled with regional structure. Without ignoring the unemployment of young workers, one is nevertheless more struck by the rise in unemployment rates of the over 40's, but especially those between 50 and 64. To know that as from 50 years of age, one worker in ten is unemployed and that in Wallonia 23% of workers between 60 and 64 were unemployed during the last minimum unemployment point (in 1971), may awaken the social conscience to this aspect that is so "out of touch" with reality. Of even greater importance is to discover that, to a large extent, elderly unemployment depends on economic conditions - both current and regional - and not on the 'nature of things' as such. But economic factors have their effect through mechanisms of discrimination which affects the elderly here, the young there, women and foreigners.

6. At this point, the analysis may run into some scepticism: reference will be made to "greatly reduced aptitude" of elderly workers, abuses, the generosity of Belgian social legislation, etc. It cannot be denied that Belgian statistics include as unemployed, persons whom the statistics of other countries would exclude. This peculiarity simply requires an adapted methodology. By going beyond the purely statistical distinction between visible and hidden unemployment, an inspired method of analysis by A TELLA on the rates of activity and hidden unemployment, enables those among unemployed elderly workers who would be inactive persons rather than unemployed or "potentially active persons" to be isolated.

The narrow concept of full employment must be expanded to a concept of "satisfactory employment" which covers the whole of the iceberg, of which statistics allow only the tip to emerge. Is it not too often forgotten that, for instance,

statistics do not reflect the "loss of employment", whereas there is information – though fragmentary – that during the course of a year of low economic activity, one worker in two is affected by unemployment, either partial or total (thus suffering either a loss of employment or, at the least, a loss of income) ?

7. If the relation between unemployment and employment is complex, it is the result of the internal mechanisms of unemployment; it is also the result of the mechanisms of the supply of labour. Here we can obviously think of the decline in population in Wallonia, which was able to absorb part of the expected unemployment by reason of the fall in employment, in the same way as the pressure of population in the Flemish region could account for the persistent high rate of unemployment, despite the rise in employment.

In reality, regional employment is far from being developed 'pro rata' the natural movement of the active population (the R^2 is only 0.30); it has been dictated by a cumulative conjunction of potentialities included in the industrial structure. In Wallonia for instance, the fall in employment has exceeded by far the fall expected in the active population as a result of the balance between births and deaths; the gap must have been filled, if not by visible unemployment, then at least by the reduction in rates of activity and by permanent or alternating emigration.

8. In particular, the policy of calling on foreign workers, as determined by the requirements of the current economic situation, accounts for at least 26% of the reasons for the low rates of unemployment in Wallonia. The low levels of employment determined by current economic situations have been partially offset by the effects of immigration, thus applying the brake to the development of unemployment which could have made itself felt over the more long term.

In order to separate these conclusion, the study starts by presenting the facts in the form of a series of graphs; the first chapter shows the development of unemployment along a few major axes and gives the reason for concentrating the analysis on two of them: unemployment according to age and unemployment in its regional distribution, by dealing only with total male unemployment.

The second chapter tries to separate the internal structures of unemployment, after having expanded the concept of under-employment and having proposed a method of analysis. The third chapter deals with unemployment in the labour market, from the aspect of demand (employment) and from that of supply, by outlining certain inter-

dependencies and certain relationships to wages.

At the end of the analysis, there is a reflexion on three problems which have characterised the Belgian economy, but which could also concern other countries.

1. Wallonia provides an example of 25 years of "zero growth" of the population. It is a situation which, in the future, could become common. Wallonia has survived this situation badly: perhaps it offers an example that should not be followed and, negatively speaking, an example of what should be done to survive well a period of nil or negative growth of population.

2. The peculiarities of Belgian statistics makes one attentive to the fate of elderly workers. It is a problem that appears to me to be strangely little known, at a time when slow population growth and the rhythm of technological developments are likely to accentuate it.

3. When one is attentive to the different sections of the working population — to both strong categories and those who are discriminated against — one notes that the objective of full employment is too often conceived within a limited framework, dependent on economic conditions of the moment, and centred on national male adult workers. A policy cannot be based on an analysis that ignores the structures of the labour market and the structural mutations that a real full employment level for all would demand.

Chapter I

MAIN DEVELOPMENTS AND BREAKDOWNS

This study is essentially an analysis : it is, therefore, subjective, even if it pretends to be motivated; moreover, it employs econometric methods and 'ipso facto' departs from the immediate realities of the situation in order to draw general con-clusions. The reader must have access to the whole study and be in a position to continue his own investigation, according to his interests and degree of subjectivity. This chapter is intended to give him the means to do this by presenting facts "in bulk" — relatively speaking, that is — since their quantification always follows through one methodological process or another — and still others could be included (# 3.); moreover, the facts are selected ones. We shall concentrate on the rate of entirely unemployed male workers, according to age and region; the second paragraph gives the reasons for this selection.

In the form of a macro-economic graph, the last paragraph outlines the economic framework in which unemployment has developed since 1947: this framework is character-ised by strong fluctuations in the whole series of current economic situations, against a background of relatively modest expansion.

The reader will note that most of the series used by us originate from a re-working of greater or lesser degree of figures published by very different organisations. Many of these modified series of which we are presenting the graphs are available in the form of parts of a series, at the Labour Department (now merged with the new "Economy and Society" unit) of the Institute of Economic Sciences, University of Louvain (Parkstraat 121, 3000 Leuven; tel: 016-22.66.04).

1. GRAPHS AND COMMENTS THEREON

1. Development over a very long period : 1921-1972

Comments

1. Since the second World War, male salary and wage earners (workers and employees) have been faced with a relatively high rate of complete unemployment : rarely under 3%. Nevertheless, this rate is insignificant compared with unemployment during the depression of the 'thirties'.

2. The beginning of the period was notable for very high rates, around 8% from 1949 to 1954, but since then unemployment has been decreasing.

3. It is also notable for the boom period and by the recessions of 1949-50, of 1953-54, of 1958-60 and of 1967-68.

Sources

— from 1921 to 1939 : The Measurement and Behaviour of Unemployment, National Bureau of Economic Research, Princeton Univ. Press 1957, p. 490.

— since 1945, basic data has been obtained from the Social Security body which is now known as the ONEM (National Employment Office); the rates are calculated in per cent of workers having unemployment insurance (A-SS, see paragraph 3). Unemployment figures are annual averages.

Graph I,1. — Rate of total unemployment for males, from 1921 to 1973
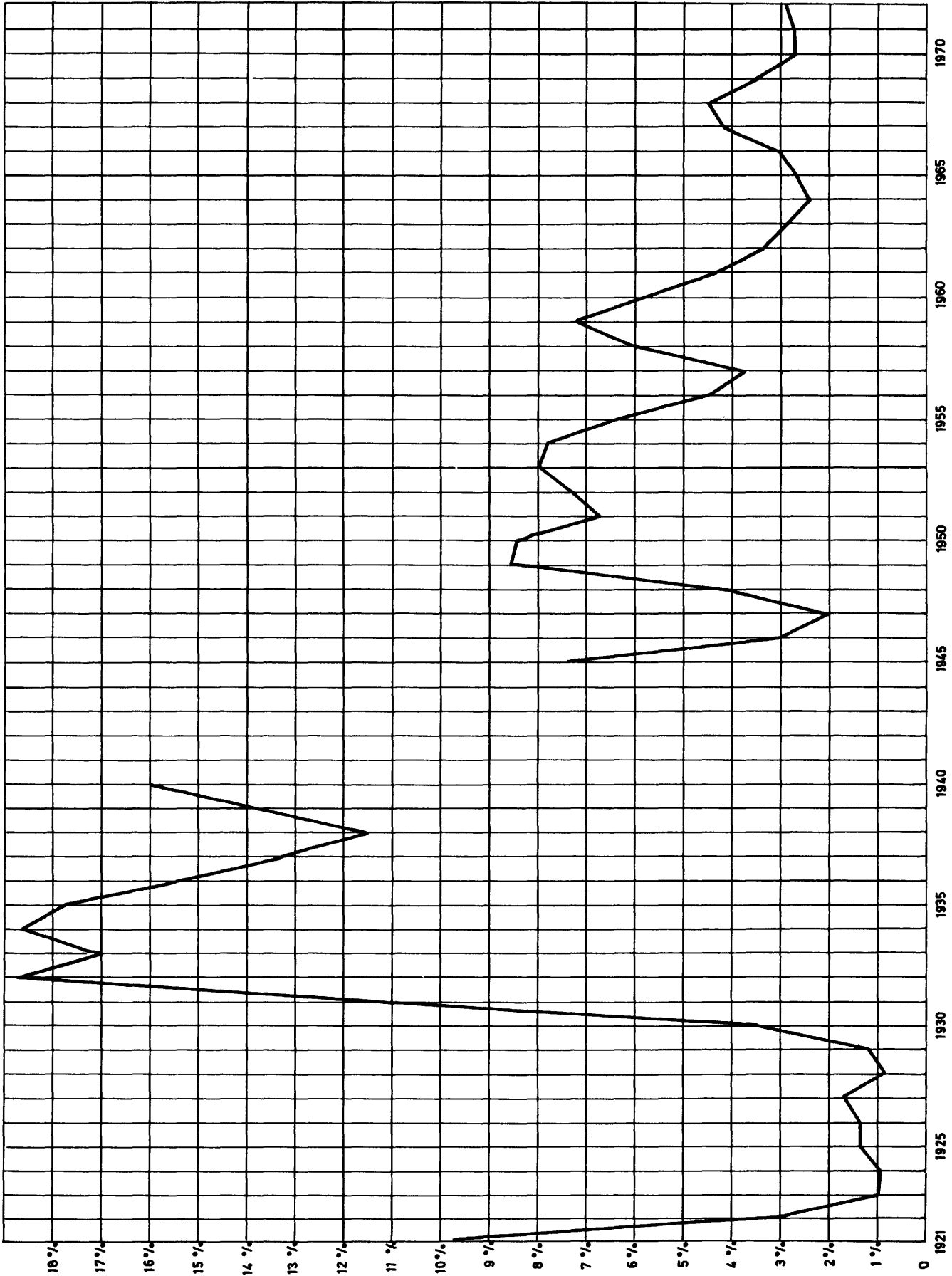
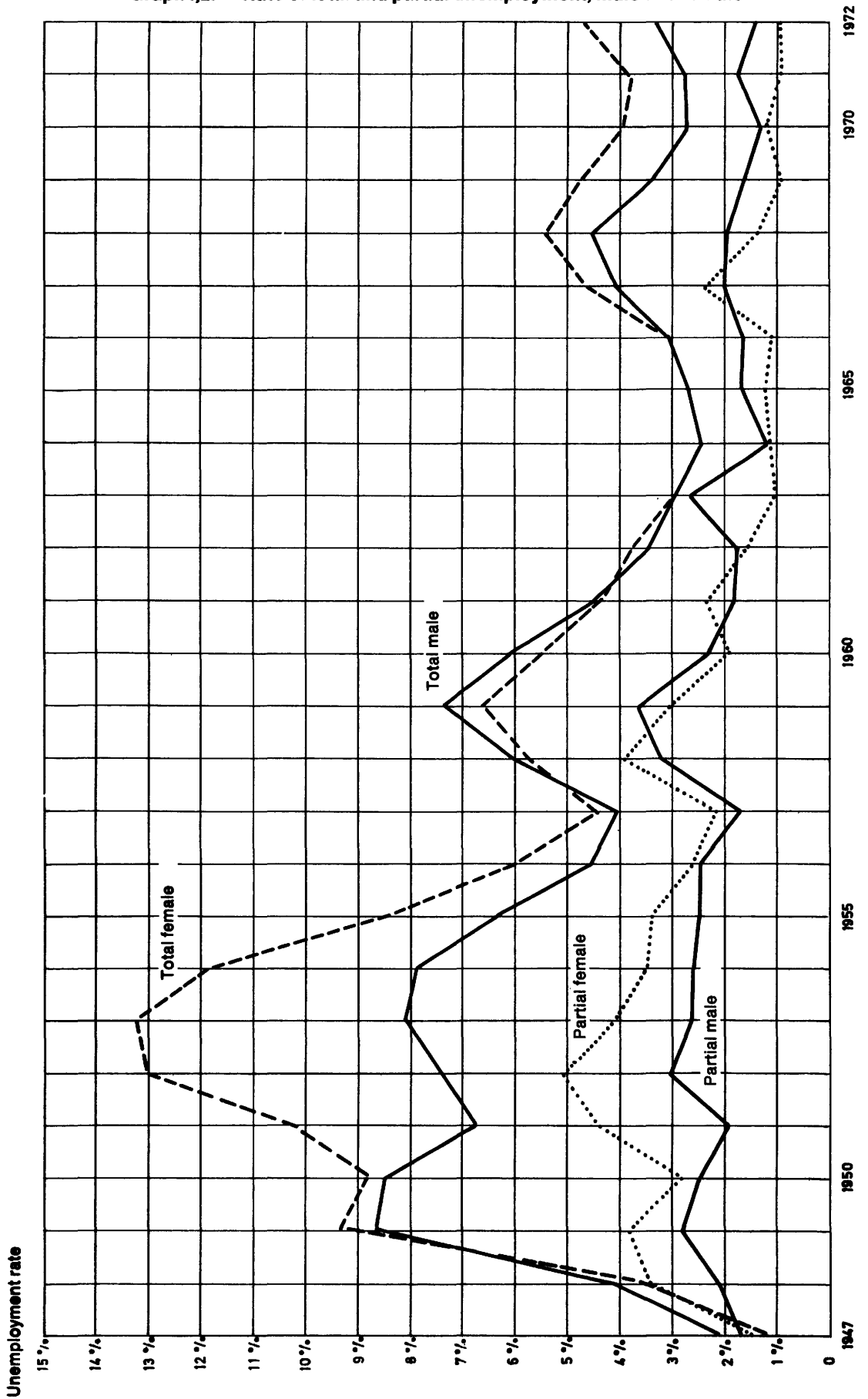## 2. Total and partial : males and females

Comments

1. Partial unemployment is at a lower level than total unemployment. Before 1960, it was about 2.5% for men and 3.5% for women; since then, it has been even lower, especially for women. Combined with total unemployment of females, it reveals that overall unemployment has not fallen below 4%, except in 1964.

2. Total unemployment of females was at very high rates between 1949 and 1955; it subsequently dropped to the level of male unemployment; but since 1968, it has remained above the latter.

Source

Calculated on the basis of ONEM figures, in % of A-SS.

Graph I,2. — Rate of total and partial unemployment, male and female

Unemployment rate

Total female

Total male

Partial female

Partial male

15 % · 14 % · 13 % · 12 % · 11 % · 10 % · 9 % · 8 % · 7 % · 6 % · 5 % · 4 % · 3 % · 2 % · 1 % · 0

1947   1950   1955   1960   1965   1970   1972

3. Regional breakdown

Comments

1. The subdivision of the country into three main regions reveals a wide difference in the levels and trends of rates of total unemployment for male workers : the region would seem to be a significant yardstick.

2. It was the Flemish region - and, to a lesser extent, the Brussels area - that determined the high levels of unemployment at the beginning of the period and the subsequent reduction of same.

3. Wallonia's unemployment rates were essentially determined by the prevailing economic conditions of the moment, at least up to 1965.

4. Since 1966, the Walloon rate has been higher than the other two; however, it has not risen to anywhere near the level reached in the Flemish region during the preceding period. The analysis should show whether this is a significant trend or not.
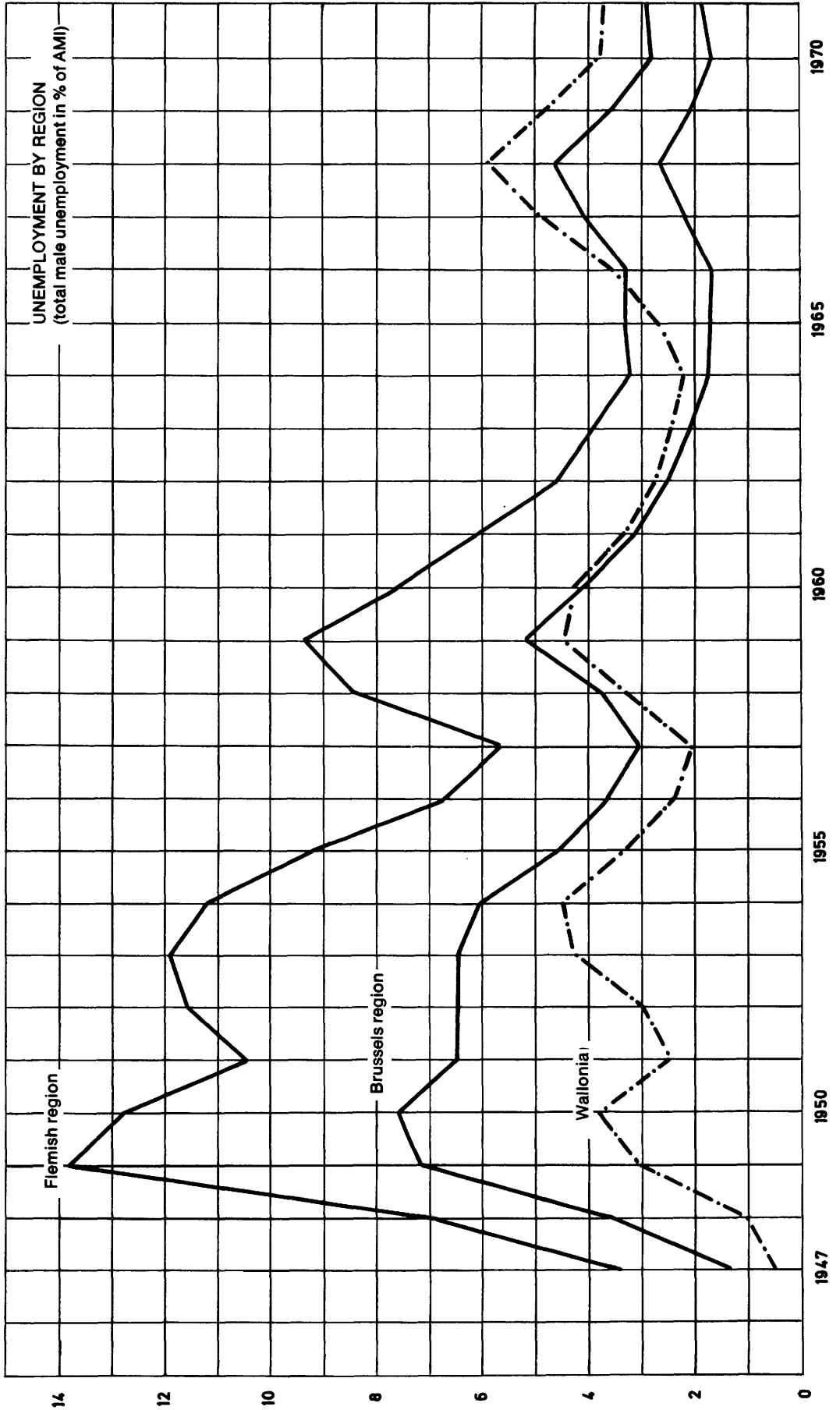
Sources

The basic figures were supplied by ONEM, but the rates have been calculated by the Labour Department of Louvain, on the bases of A-MI (Insured persons, chiefly on the basis of information from the National Institute for Sickness and Invalidity Insurance (I.N.A.M.I.), whose volume is slightly less than that supplied by the Social Security Office, hence the slightly higher unemployment rates).

Territorial limits

As with all other data, we have tried to maintain constant territorial limits, despite the alterations introduced in 1963. The Brussels region corresponds to the former Brussels "arrondissement", which comprised not only the 19 Communes but also the new "arrondissements" of neighbouring Communes and Hal-Vilvorde. Similarly, the Walloon region comprises the 4 Walloon provinces (Hainaut, Liege, Namur and Luxemburg) and the "arrondissement" of Nivelles; the Flemish region comprises the 4 Flemish provinces (Antwerp, East and West Flanders and Limburg) as well as the "arrondissement" of Louvain.

Graph I,3

UNEMPLOYMENT BY REGION
(total male unemployment in % of AMI)

Flemish region

Brussels region

Wallonia

1947   1950   1955   1960   1965   1970

0   2   4   6   8   10   12   14

4. Disaggregation by province

Comments

1. The object of this graph is to see whether disaggregation into three main regions — which will be the basis of the whole analysis — is significant. In the field of unemployment, as with many other aspects of the labour market, it would seem to us to be so; naturally, not all the provinces (and "arrondissements") in a main region have an identical situation, but the internal similarities and external differences prevail.
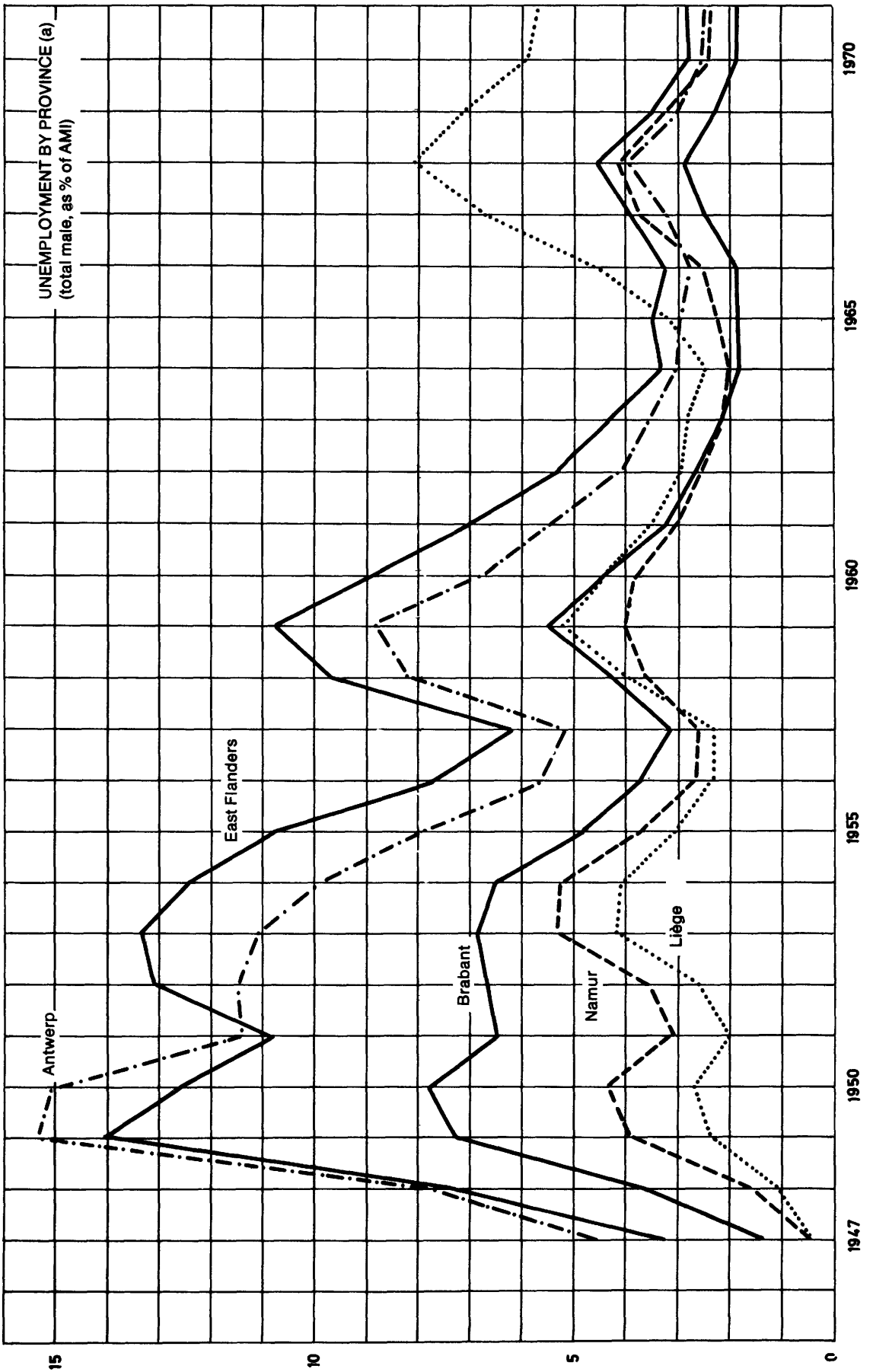
2. The greatest reservation applies to the curve for Limburg, whose situation — being determined by current economic trends — identifies it more with Wallonia, although its unemployment rate is higher.

3. In Wallonia, the recent rise has been particularly acute in the province of Liege, followed by Hainaut.

Sources

The same as for the preceding graph.

Graph I,4 (a)

UNEMPLOYMENT BY PROVINCE (a)
(total male, as % of AMI)

East Flanders

Antwerp

Brabant

Namur

Liège

Graph I,4 (b)

UNEMPLOYMENT BY PROVINCE (b)
(total male, as % of AMI)

West Flanders

Limburg

Hainaut

Luxembourg

1947   1950   1955   1960   1965   1970

15   10   5   0
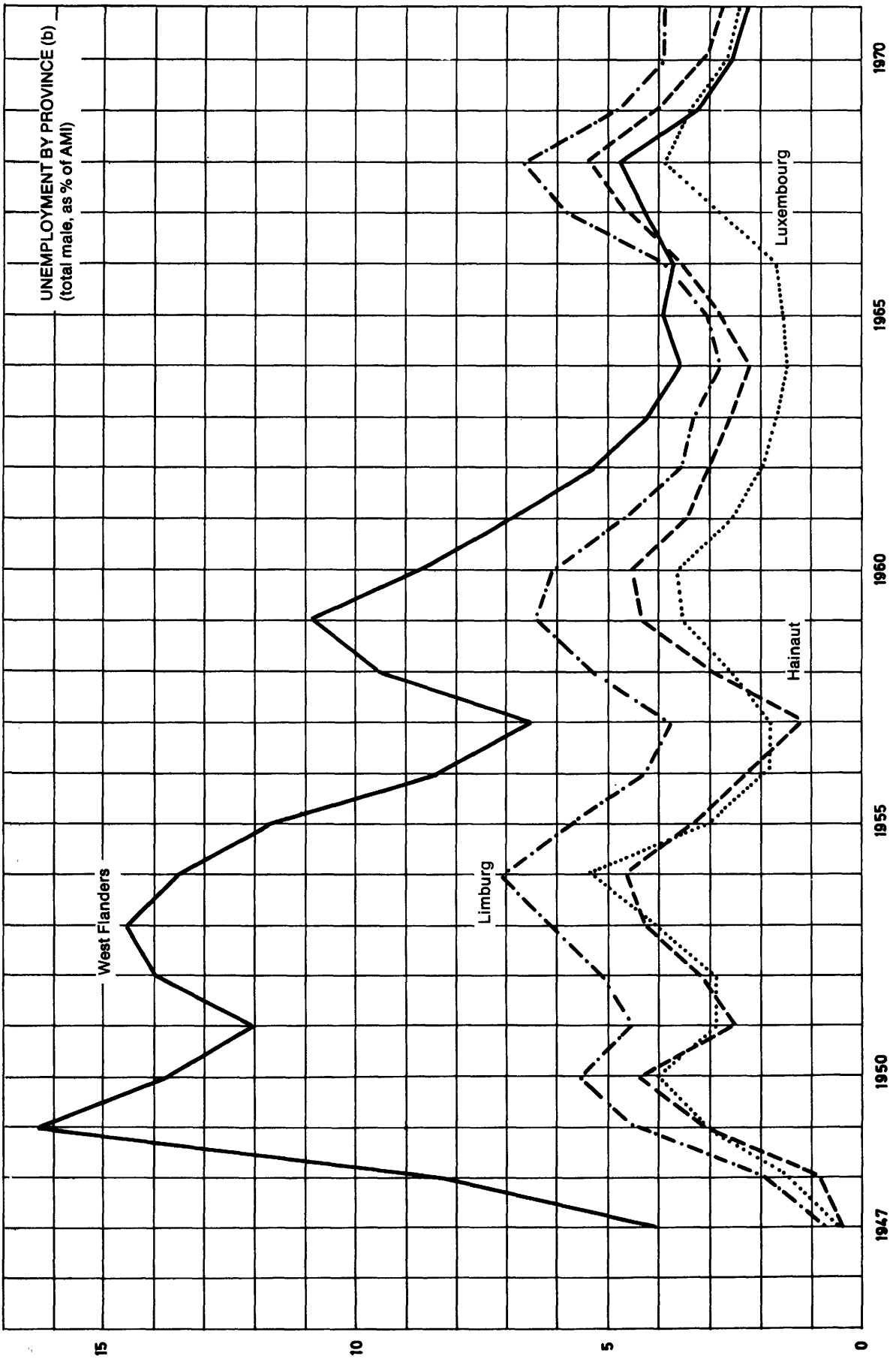
5. Breakdown by age

Comments

1. The risk of unemployment for male workers, measured by the unemployment rate, varies considerably according to age. It increases very sharply with age, with the exception of trends peculiar to very young workers (under 25); age would seem to be a very significant feature of the labour market.

2. From 50 to 64 years of age, the rate of unemployment is very high : since 1949, it has always been above 7% and has often exceeded 10%. Economic trends influence this rate, but it is more difficult to pin down long-term trends; one may ask if it has not had a tendency to rise during the last few years.

3. During periods of recession, the curve for young workers (under 25 years of age) has exceeded that for "adults" (25-39). One may also ask if there has not been some modification at the end of the period; the econometric analysis will try to demonstrate this by taking account of legislative modifications.

Sources

The basic data were supplied by ONEM. Nevertheless, they are, firstly, not always published in their entirety and, secondly, ONEM does not regularly calculate the rates of unemployment according to age; these calculations are made by the Labour Department.

It is unemployment at a specific date in the year which is taken into consideration (since 1961, on 30 June); moreover, the scope is smaller than with that for annual data.

Prior to 1957, fragmentary information was obtained on the basis of certain estimates which were fairly difficult to arrive at. The real situation is probably to be found somewhere between the two curves shown.

Graph I,5. — Rate of total male unemployment, by age
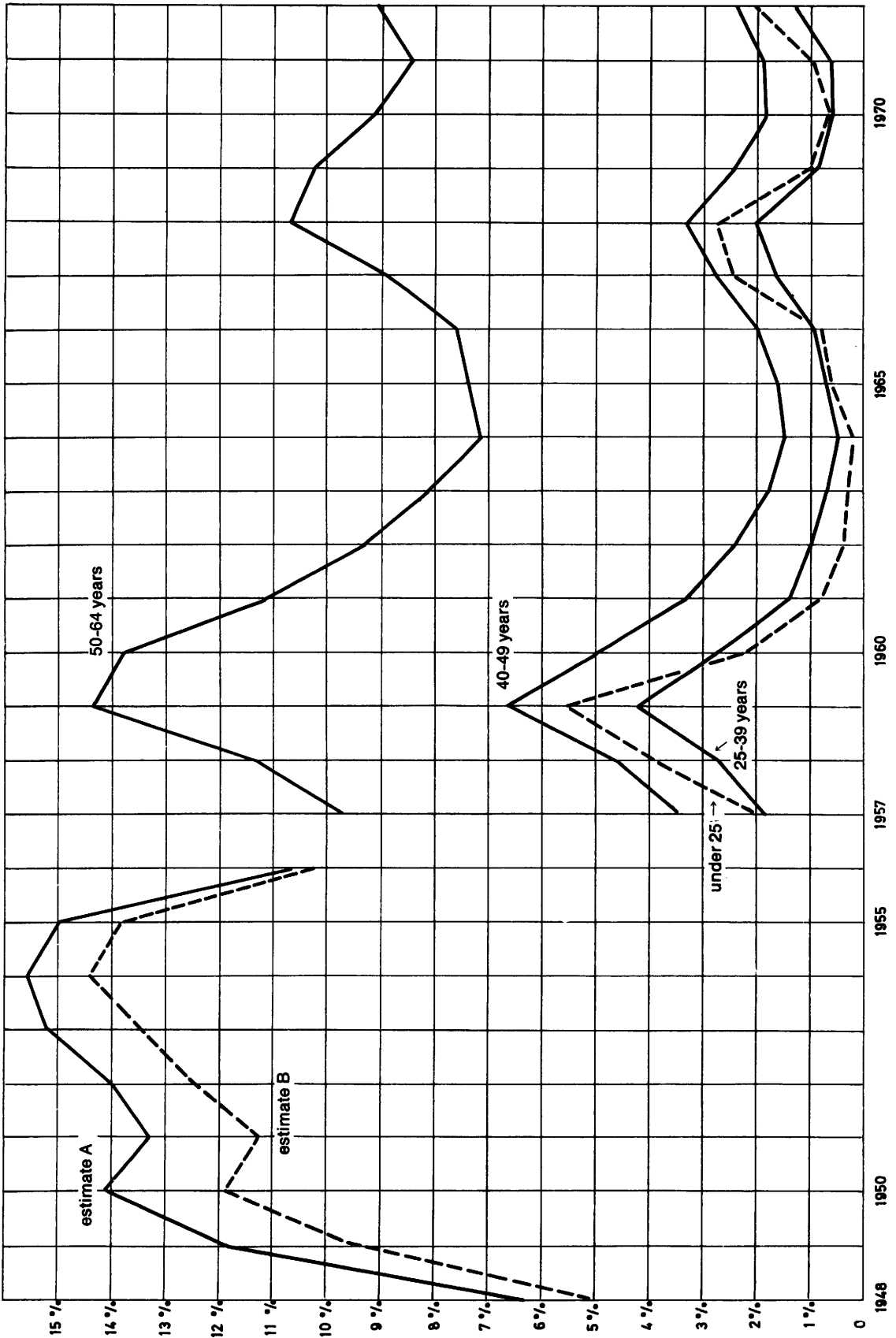
## 6. Proportion of elderly unemployed persons

Comments

1. Since there is a lack of unemployment rates based on age, the proportion of elderly workers among the unemployed is often shown. But this does not give a correct picture of the risk of unemployment : unemployment expressed as a percentage of workers of a specific age group who are likely to become unemployed. It does, however, give an indication of the composition of the volume of the unemployed.

2. Belgian unemployment is very largely one of the "elderly" (50-64), since their proportion has exceeded 50% since 1955.

3. The proportion of elderly unemployed workers reduces as total unemployment increases; but this only reveals the differential trend of the risk of unemployment according to age (measured by the rate of unemployment).

Note

The rate of unemployment for workers of all ages, given by way of reference, was the rate for the year until 1957 (in % of A-SS) since 1957, it has been the rate as at the date on which the number of unemployed have been recorded (in % of A-MI).

Graph I,6. — Proportion of elderly workers (50 years and over) in total male unemployment
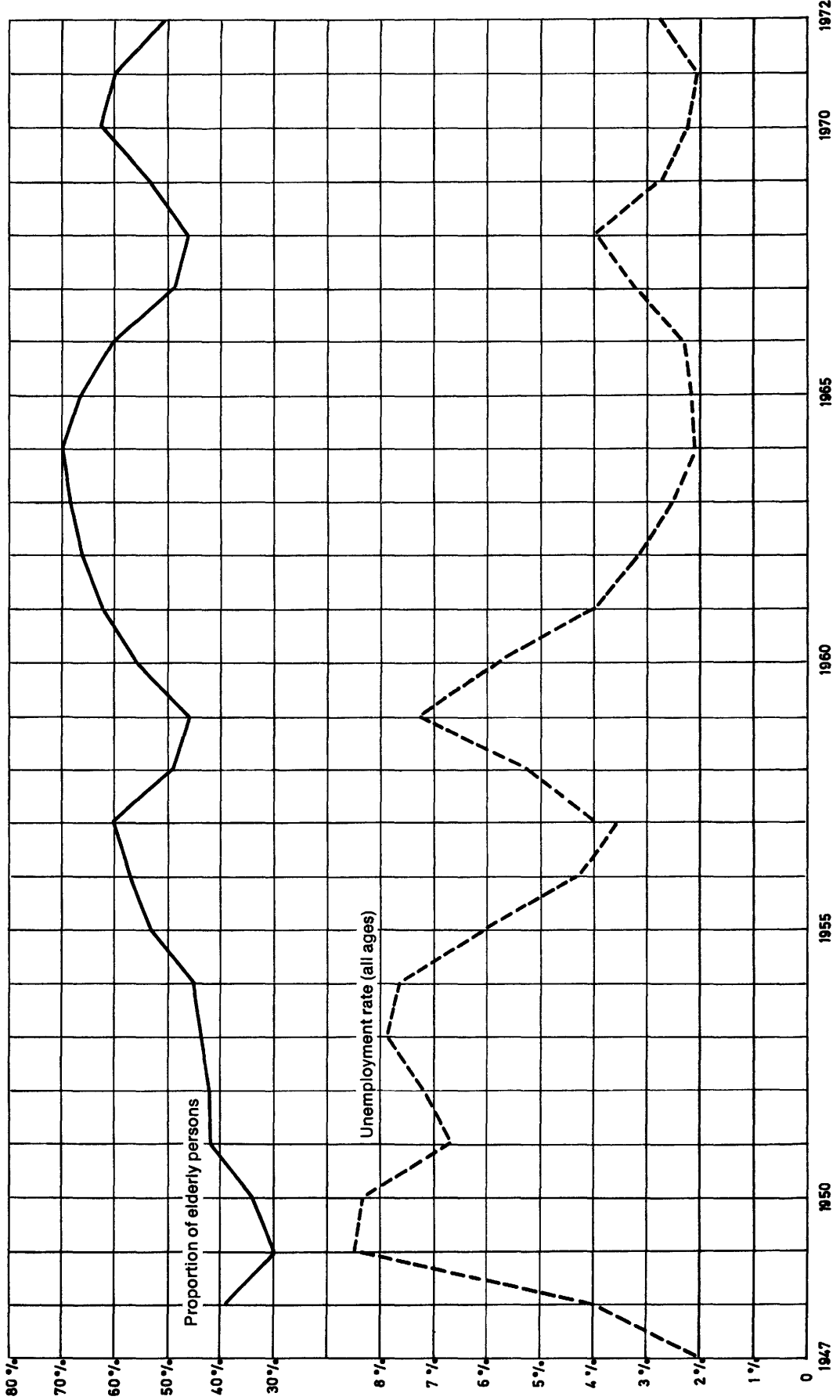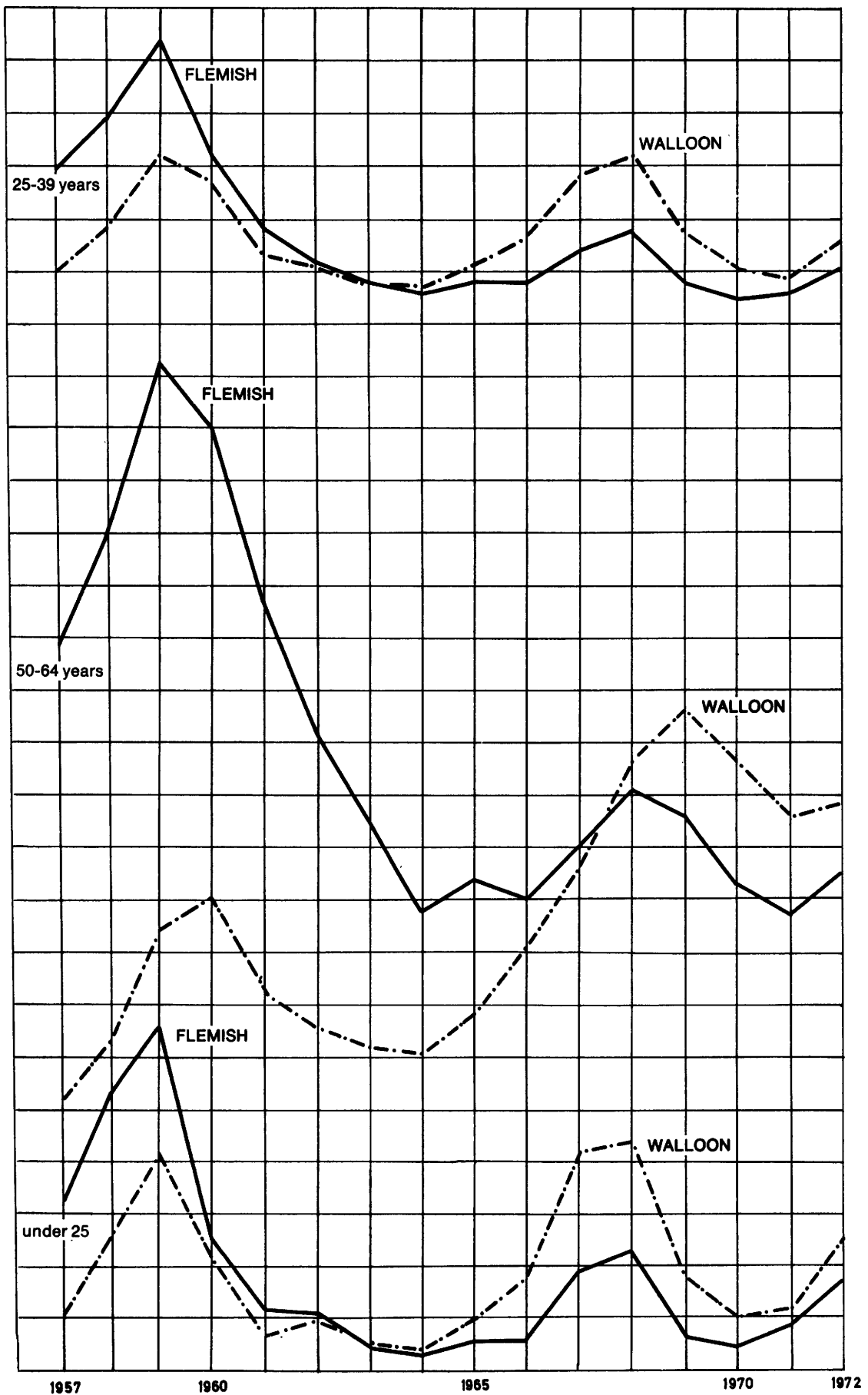
7. Age and region simultaneously

<u>Comments</u>

1. If the risk of unemployment varies according to age, this variation itself alters considerably in terms of space : the influence of age is geared to the regional context; the analysis should determine whether the regional context reflects conditions on the labour market.

2. In both regions, elderly workers are subject to a high rate of unemployment; in 1959, however, this rate was more than 19% in the Flemish region, whereas it reached only 9% in Wallonia (in 1960).

3. For both elderly and young workers, the Flemish curves have dropped considerably, whereas the Walloon curves have increased.

4. Among the 25-39 age group, the Flemish rate has dropped, as with the other age groups; in Wallonia on the other hand, the unemployment rate appears to be stationary over the long period (the last high point in 1968 was no higher than the preceding one, in 1960).

Graph I,7. — Rate of total male unemployment by age and region simultaneously

25-39 years

FLEMISH

WALLOON

FLEMISH

50-64 years

WALLOON

FLEMISH

WALLOON

under 25

1957   1960   1965   1970   1972

1. What about partial unemployment ....?

There is no sound reason for ignoring "partialand accidental" unemployment : workers
who have not lost their jobs, but whom the employer lays off when an accident or a
strike by other workers interrupts production, or when economic conditions compel him
to reduce the working week, possibly by organising a work programme with partial
unemployment (2 days per week, or one week in two....). This has **three** causes :

1   accidental phenomena

2   seasonal fluctuations

3   slowing-up of production due to economic trends.

It constitutes a significant aspect of "unsatisfactory employment", of which we shall
speak in the next chapter; this aspect is added to total unemployment of workers who
have lost their jobs; it is also easier to interpret.

2. .... and unemployment of female workers ?

The question is quite different in this case. After a great deal of research, it
seems obvious to me that the labour market for female workers is at a much lower
level than that for men. Underemployment, however, assumes much more the form of
"hidden" unemployment, which is distinguished by rates of activity and increase;
recorded unemployment has virtually no chance of constituting a trustworthy
indication of the degree of real unemployment.

As a general rule, a worker may not draw unemployment benefit unless he has worked
for six months. The possibility of unemployment of female workers would, therefore,
be greater where there are more jobs open to women. Frequently, an example is given
of an increase in recorded unemployment of female workers some months after the
opening of firms employing women. In such circumstances, statistics on female
unemployment do not permit the level and trend of real unemployment of females to be
accurately determined.

In addition, the incidence of administrative measures taken with regard to female
unemployed cannot be ignored. An old-style calculation (1) has revealed that
measures of exclusion tended to reduce by half the annual figure of female
unemployed and that, moreover, this rate varied enormously from one Bureau to another
because, it appeared, of changes in the attitudes of the competent authorities.

Without wishing to deny that registered female unemployed.represent a part of feminine
underemployment, it seems to me that unemployment figures do not constitute an
adequate means of tackling the real problem affecting the female labour market.

3. .... and the other features of the unemployed ?

a. Inaptitude and duration of unemployment

The inaptitude of the unemployed is - if I may be allowed to say so - the most
"popular" characteristic after that of abuses. Statistics regularly distinguish

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(1)   R LEROY, "Signification du chômage belge" O.B.A.P., 1962, p. 121; the
       calculation is based on the year 1957.

between unemployed whose aptitude is "normal", "partial" or "very reduced". The following chapter will directly tackle the question, but through the calculation of the unemployment rate according to age.

In fact, inaptitude, like long-term unemployment, is closely linked to age. In order to study these aspects correctly, the age variable must be neutralised; by taking into account the unemployment rate of elderly workers (50-64 years of age and even 40-49), the majority of inapt workers are found and, conversely, a category composed mostly of inapt and long-term unemployed workers is thus isolated.

Furthermore, it is inevitable that the definition of inaptitude is subject to reservations and it is not by chance that ONEM has modified the criteria therefor. At present, the prevailing characteristic would seem to be that, essentially, it is more or less difficult to find employment for such a worker. Even if this classification were shown to be of an operational kind, it would not alter the cause of this difficulty. The analysis of unemployment by age refrains from stating 'a priori' the causes thereof; on the contrary it enables the question of whether the risk of unemployment of elderly workers and the inaptitude and long-term characteristic which accompany it, is a constant or, on the contrary, varies according to the state of the labour market, to be determined empirically.

b._ Trade and qualifications

It would be most interesting to consider the level of qualifications and trade of the unemployed. ONEM publishes statistics on these subjects; they are probably of practical use in finding employment for the unemployed, but they are hardly suitable for systematic analysis. One comes up against the eternal problem of classification and the absence of statistics on workers according to the same criteria, which alone would permit the risk of unemployment to be assessed.

We can, however, mention two characteristics: firstly, the rate of recorded unemployment is much higher among manual workers than among white-collar workers; among the latter, however, the length of the period of notice to be given does tend to conceal some of the reality of the situation; secondly, unemployed manual workers appear to be largely composed of unqualified persons; but the two objections quoted reduce the reliability of this conclusion to a great extent.

c._ Sector of activity

There is, first of all, a statistical reason why the analysis of unemployment by sector is difficult. Totally unemployed workers are classified more by their trade (with the reservations that we have just mentioned) and only indirectly according to sector of activity, rather than directly by sector from which they were dismissed.

In addition, however, there is a reason linked to the labour market. If the dismissal depends heavily on the sector involved, re-employment, on the other hand, depends largely on the availability of alternative employment - in any sector, but within the same region. The longer unemployment continues, the less the original sector is decisive; the region, the age, the trade and the qualifications of the worker become the significant variables. What would be interesting, would be a study of dismissals with a reliable sectorial classification.

Whether one subscribes to these reasons or not, it can be seen that their nature is very different and that they often require the availability of better statistics. Things being what they are, our analysis will concentrate on the rate of total unemployment of male workers, broken down according to age.

#3. METHODOLOGICAL CONSIDERATIONS

Belgian statistics on unemployment are involved to a point that would delight a mad-man – but we cannot ignore them .... We have had to try to find a path through this tangle and we can, nevertheless, restrict ourselves to describing the essential features thereof.

1. Categories of unemployed

At the present time, ONEM statistics distinguish seven categories of "registered job seekers", not to mention further breakdowns according to age, sex, etc., and exclud-ing partial and accidental unemployed:

1 – 3	Total unemployed receiving benefit, with normal, partial or very reduced aptitude
4	Unemployed engaged by public authorities (o.p.p.)
5	Other unemployed compulsorily registered
6 – 7	Independent job seekers : – unoccupied
	– occupied

The last category cannot be included in the quantification of unemployment, since it concerns workers who still have employment, even if they seek other employment. Categories 5 and 6, on the other hand, could be included; we have not included these– developed more recently – so as not to make a break in the series.

Conversely, we have included category 4 everywhere, sometimes by using unpublished tables; their exclusion would heavily bias the series of elderly unemployed.

2. The date of quantifications

a. With regard to the figures by age, we have taken the information from "Census of total unemployed" (ONEM), established at a specific date in the year. Since 1961, this has been 30 June. Previously, they were established in mid-May and mid-November; the mid-May figure has been used here, except for 1957, where the question of the O.P.P. made it necessary to use the mid-November figure.

b. With respect to the other series, the figures cover the whole year: at present, averages of 12 figures of unemployed at the end of the month; in the past, daily averages for the year.

3. Calculation of rates of unemployment

Unemployment registered by ONEM only covers workers insured against unemployment, with a few exceptions, and unemployment rates are calculated as a percentage of those insured : workers employed in Belgium, "frontaliers" and unemployed. In 1961, male insured workers (A–SS) represented 85% of wage earners within the meaning of the Population Census (which also comprises civil servants, among others) and 63% of the active male population.

In order to calculate employment – the main category for insured workers – two sources were tapped:

1   the National Office of Social Security (O.N.S.S.), giving figures for the "A–SS", or those insured against unemployment, the main source of which is the ONSS.

These rates, published by ONEM, are used for figures on national unemployment without any breakdown by age or region;

2   the National Institute for Sickness and Invalidity Insurance (I.N.A.M.I.), which gives the "A-MI". We shall use this source for the rates according to age and/or according to region, since INAMI statistics are prepared on the basis of age at the place of residence, whereas ONSS statistics are established at the place of work, without a breakdown according to age.

INAMI statistics give an employment volume that is slightly lower (less than 5% for men) than that provided by ONSS; thus, A-MI unemployment rates are slightly higher (eg, 4.2% instead of 4%, if the difference reaches 5%). This practice favours ONSS : in certain respects, of course, INAMI statistics undervalue employment (mainly because of workers who neglect to pay their contributions); but in other respects, ONSS statistics overvalue the number of workers (mainly because some workers are counted twice).

We should point out that between 1965 and 1968, roughly speaking, INAMI regional statistics provided misleading figures for some "arrondissements"; following a detailed examination thereof (1), we have redressed the situation, at the cost of making a few estimates.

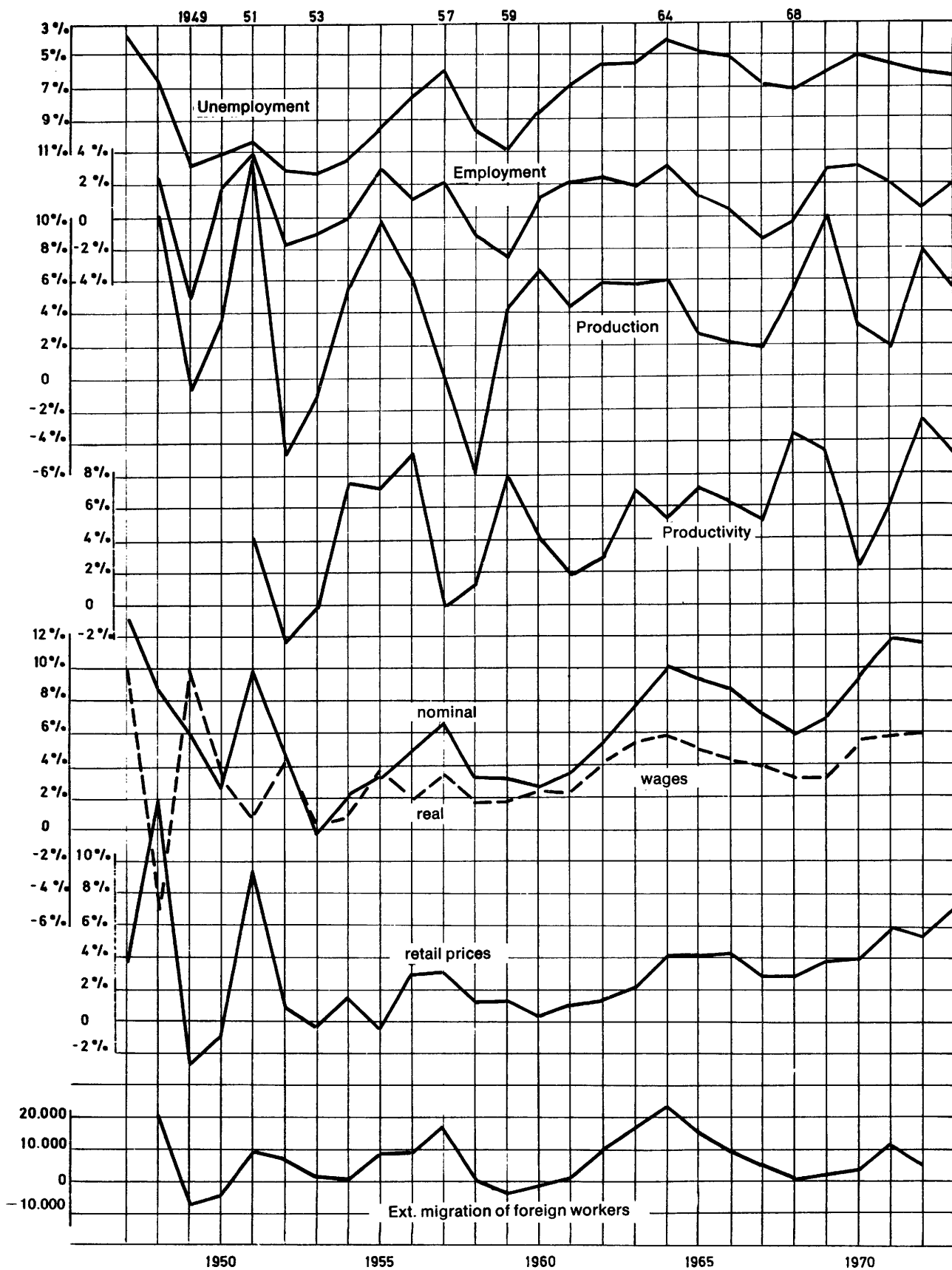# # 4.   THE ECONOMIC FRAMEWORK 1947 - 73

Graph I, 8, first of all summarizes the development of the employment rate (total and partial, male and female: the curve is reversed). The other curves (except the last one) indicate annual percentages of variations, so as to bring out the sensitivity of the current economic situation.

Production presents accentuated fluctuations. Employment has variations of less magnitude, often with gaps of a year. Nevertheless, during the four periods of recession, employment diminished in absolute values, whereas in the countries with a stronger rate of growth, recessions are characterised more by a simple slowing down of rises in employment.

Wages, both nominal and real, also have a nature governed by current economic conditions. Finally, the immigration of foreign workers is subject to the economic situation of the moment.

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(1)   R LEROY, "Examens de statistiques concernant le marché du travail". Report on research financed by the O.B.A.P., Labour Department : Louvain 1972.

Graph I,8. — The economic framework of the period

Unemployment

Employment

Production

Productivity

nominal

wages

real

retail prices

Ext. migration of foreign workers

1949 51 53 57 59 64 68

1950 1955 1960 1965 1970

Chapter II

INTERNAL DYNAMICS OF UNEMPLOYMENT

Faced with these figures, which follow a few main trends in the distribution of unemployment in Belgium and show their development, the first question to be put is that of what these numbers of unemployed signify. It is well known, of course, that their scope is continually being doubted. In reply, reference is made to social legislation which, in Belgium, is highly developed and does not impose any limit on the duration of entitlement to unemployment benefit; reference is also made to the very large proportion of elderly unemployed and, finally, reference is made to abuses. The same rejection of a diagnosis based on unemployment statistics is to be found in different "milieux" and in various forms, whether it be a portion of the national press that wishes to deny the seriousness of socio-economic problems, or among the workers themselves, where unemployment still carries a certain stigma and where unemployment benefit drawn by a woman is not always looked on as a right.

The problem has a dual origin : a statistical and a conceptual one. Statistics, "a fortiori" when they are supplied directly by legislation always lead to definitions and these, in turn, presuppose concepts and ideas. Where a social phenomenon as complex and important as unemployment is concerned, it is not surprising that concepts are not always clear or unanimous. The conceptual difficulties, made more or less explicit, obviously have their effect on statistics and influence their interpretation. It is therefore indispensable that some clarification be given to concepts (#1), which will guide the analysis and the interpretation of recorded unemployment based on age (#2).

#1. THE VARIOUS FACETS OF UNDER-EMPLOYMENT

When speaking of unemployment, under-employment, problems of employment and disparity, as compared to full employment, the most general idea seems to me to be a negative judgement, from the workers' point of view, of the labour market in terms of quantity. The labour market is a means through which the economic circuit of labour and income functions and through which the population offers its services, against remuneration, to undertakings that require them; it is also by this means that the quantity of work (employment) and the price (wages) are determined. The negative judgement referred to concerns employment (not wages, directly) and it is held by the workers.

Such appears to me to be the most general tendency in a phenomenon with multiple ramifications. As far as I am concerned, I would describe it by the term "unsatisfactory employment". But although the phenomenon may be regarded as a genuine unit, it can nevertheless be interpreted in many different ways. It is here that distinctions become necessary, since statistics reflect the different aspects of unsatisfactory employment in a very differing manner. I shall thus give an outline of the distinctions which will lead to four aspects of the phenomenon being discerned, at least as an initial analysis, as follows:

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                        ┌─ + situation of persons :
                        │
                        │  ┌─ – unemployed   ┌─ • recorded : "visible unemployment" I
"unsatisfactory         │  │                 │
   employment"        ──┤  ┤                 └─ • unrecorded : "hidden unemployment" II
                        │  │
                        │  └─ – underemployed :"underemployed persons" III
                        │
                        └─ + occurrence of loss of employment : "dismissals" IV
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1. Loss of employment

We can start from a basis of elementary arithmetic which is often neglected: in
normal unemployment figures, the case of a person having remained unemployed for a
whole year (+ – 300 working days) has the same impact on statistics as a situation
where 300 persons have each been unemployed for one day. This fact was immediately
obvious at the time when Belgian statistics gave average daily unemployment figures
per month or per year; but it is still true, now that annual statistics (for total
unemployment) are quoted for 12 categories of unemployed at the end of the month,
and it is also still true, if one takes as a guide for one year the number of
unemployed recorded on a single date – 30 June, for instance.

In many respects, moreover, this practice is a satisfactory one : it can correctly
assess the volume of work days lost, or the cost of benefit to be paid out (bearing
in mind the different rates according to category of worker). On the other hand, it
completely ignores another aspect of unsatisfactory employment: the number of differ-
ent workers who have lost their jobs over the course of a year, even where they have
quickly found other employment.

Psychologically and sociologically speaking, this aspect of the reality of the situ-
ation is crucial. As a general rule, sociological investigations reveal that workers
are very concerned indeed about employment: unstable employment, dismissals and
unemployment appear to them like giant spectres, even at periods or in regions where
figures on unemployment do not indicate any major problems. Such figures, of course,
do not give any information on fears of possible unemployment and, in addition, they
give only a slight indication of the volume of workers unemployed for a time. Finally,
they obviously give no indication at all on the quality of the work that the dismissed
worker has found subsequently, nor on the possibility of underemployment (aspect no
III of the question).

Since Belgium has no statistics on the turnover in manpower – that is, on voluntary
or involuntary cessation of work, one is compelled to turn to unemployment figures.
Published in the way they are, however, they do not give the number of different
workers affected by unemployment during the course of a year. We have been able,
nevertheless, to obtain – and even a long time ago – some indications on the subject.
They are far from ideal and, in fact, they refer to the years 1959, 1960 and 1961.
They concern only manual workers (excluding salaried employees and coal miners) and
comprise total and partial employment without distinction.

Table I,1.

Number of manual workers affected by unemployment
(total or partial) during the course of a year

	Overall Unemployment	Unemployment of workers		
		Daily average (in thousands)	Different workers	
			No. (in thousands)	in %
	(1)	(2)	(3)	(4)
1959	10.6	170.0	776.7	52.1
1960	8.2	136.9	666.9	44.4
1961	6.4	115.3	627.1	41.2

- Field : total and partial unemployment, men and women
- (1) and (4) : in % of insured persons (A-SS) totals (1) or workers (4)
- (3) and (4) : source : National Office for Workers' Pensions

It can be seen from the table that in a year of low economic activity where the rate of overall unemployment is 10.6%, half the workers have been unemployed at some stage, either because they have lost their jobs, or they have suffered a loss of earnings by reason of having been put on part-time work, and even in 1961, when unemployment dropped considerably, the proportion was still 40%.

The need to have regular statistics — and better prepared ones at that — can be easily seen. As to the rest, it must be borne in mind that the usual statistics give a poor picture of loss of employment. Unsatisfactory employment appears as an iceberg; the proportion revealed by statistics is only a tiny part of socio-economic reality.

2. Under-employed persons

If the overall movement of employment and unemployment remains very badly known, it has to be seen how figures inform on the situation of persons who have difficulty in finding work, by distinguishing between those who do not work and those who, while having a job, may nevertheless be considered as under-employed (aspect III).

Among these latter, two very different categories may be defined. There are, first of all, workers whose job is below their qualifications as, for example, with dismissed workers who have accepted, albeit temporarily, a new job despite the fact that it requires lower qualifications and is less well paid. Everyone realises what harm such a situation can do to a worker, as well as to the economy, but there are no statistics which permit the extent of this phenomenon to be assessed. Moreover, such an eventuality cannot be simply set aside; but we must limit ourselves to pointing out that unemployment figures do not reflect this aspect of unsatisfactory employment.

A second category of under-employed persons is, however, somewhat better known: this is one of workers who, because of economic conditions or production techniques, work a certain number of hours or days that is below the normal working period. In some countries, this aspect of under-employment is revealed by statistics on the working period; in Belgium, by virtue of legislative provisions, it takes the form of partial and accidental unemployemnt, a brief assessment of which was given in the preceding chapter.

3. Visible and "hidden" unemployment

The term unemployment (or total unemployment, in Belgian official terminology) is reserved for persons without employment. Among these, an easy distinction consists of referring to visible unemployment for the unemployed included in statistics and qualifying – and very rightly so! – others as invisible or hidden unemployed. What does this quite superficial distinction conceal?

a. Quantification of hidden unemployment

Let us start by saying that if, by definition, there are no statistics on hidden unemployment, it does not mean that we cannot estimate it quantitatively. The simplest studies are based on the current economic situation, using a regression with a chronological series such as:

$$RA = a + bRU + cT$$

where RA denotes the rate of activity of a category of the population (based on age and sex). This rate of activity is related to an indicator of the economic situation, like the rate of overall unemployment (RU) or the rate of a category of reference. The variable time (T) is introduced to isolate a possible tendency towards long periods in the development of the rate of activity. If the coefficient b is negative and significant, the regression implies that, systematically, the rate of activity is lower when visible unemployment is higher. Hidden unemployment, thus established, is measured by the difference between the effective rate of activity and the rate (RA) that one would have had if visible unemployment had been at a normal level of high economic activity (EA).

$$RA = a + b\ EA + cT$$

Hidden unemployment = RA – RA = x% of the
population of a particular age group

Intensive research, especially in America, based on chronological series or inter-regional cross-sections carried out at a given moment, has revealed the existence of a large proportion of hidden unemployment among the female population and among elderly and young workers; the phenomenon is practically non-existent among male adults [1]. Thus, even in a country where unemployment statistics are not governed by institutional provisions, but are established on the basis of surveys, a certain number of persons give up their jobs and declare themselves in search of work when economic conditions are unfavourable.

b. The real content of statistical estimates

It is probable that behind the purely statistical distinction between registered and non-registered unemployed persons, there is a real distinction among the population. Between the two well-determined categories of the employed population and the population which, without doubt, have no wish to carry on any activity, there would appear to be an intermediate zone, comprising a range of situations which

[1] See R LEROY, "Essai sur la population active. Théories économiques récentes et analyse régional de l'emploi féminin." Vander, Louvain 1968.

are not easy to isolate and whose extent varies according to age and sex. With regard to that end of the range concerning employed persons, there are to be found unemployed persons, in a limited sense. These are persons whose inclination to exercise an activity under normal market conditions is certain and who therefore constitute an immediate manpower reserve. The more one turns towards that extremity of the range concerning voluntarily inactive persons, the more the inclination to work becomes conditional. It would seem - because the field of motivation is unknown to a large extent - that the portion of the population characterised by a conditional inclination to work mainly embraces two types of situation, which can be specified as follows:

a. The first is symbolised by the married woman. It comprises those persons who appear prepared not to work if the opportunity is lacking, but who would work if conditions were different.

b. the second is symbolised by elderly workers who are more or less handicapped. It is characterised by the same variability of inclination to work, but in a different psycho-sociological context, and by a rejection of the economic circuit, by the difficulty of obtaining employment, by the obligation to have to find an adapted job and by the relative proximity of the normal retirement age.

In order that this part of the intermediary range of the population can be legitimately related to unsatisfactory employment, a most important point must be made here. It is enough that the inclination to work exists in a more or less conditional sense, it must be conditional on the state of the labour market and on the relative intensity of demand for labour. In other words, such persons are only potentially active employees in so far as the variability of their inclination to work is in systematic relation to the volume - great or small - of demand for labour, which can be assessed by the level of unemployment in the strict sense of the term, for example.

c. Statistical definitions and theoretical concepts

If this analysis is taken into account, the real situation - independently of its statistical import - is as follows:

EMPLOYMENT	U	U'_a U'_b	UNCONDITIONAL INACTIVE PERSONS

U = Unemployed in the strict sense

U' = Potentially active persons, e.g. married women (U'_a) elderly workers (U'_b)

But, in point of fact, how can this outline be quantified by statistics ?

The easiest solution is to be found where recorded unemployment, according to statistics, corresponds exactly to unemployment in the strict sense (U). The statistic in question comprises all persons without employment who certainly wish to work when normal conditions obtain and it comprises only these. Even if no statistics are perfect, one can only assume that the American statistics, prepared on the basis of a proved method of opinion polls, are the best evidence of this solution. Under these conditions, potentially active persons (U'_a and U'_b) may be assessed by hidden unemployment: this being assessed by the relation between the rate of activity (E+U)

and visible unemployment (U) (1).

It seems obvious to me that Belgian statistics, and probably those of other countries too, dependent on social legislation, do not provide such an easy solution. Firstly, it is unlikely that all unemployed persons in the strict sense are included in the figures for recorded unemployment; to demonstrate this, it is sufficient to mention the case of women who, not having worked before, cannot be registered as insured unemployed, or the case of dismissed employees who have received a long period of notice. Moreover, statistics give some indication of this, since they comprise a category of "independent and unoccupied seekers of jobs". Secondly, one cannot deny that the inclination of some unemployed to work is somewhat conditional, particularly in the case of long-term unemployed workers suffering from certain handicaps.

Statistical concepts :

	Employment	Unemployment (recorded)	Inactive
EMPLOYMENT		U U'	I

Theoretical concepts : Employment   U = Unemployment in the strict sense   I = Unconditionally active persons

U' = Potentially active persons

Recorded unemployment comprises, first of all, some unemployed, in the strict sense, but not all of them. The remainder is composed of potentially active persons or indisputably inactive persons. Thus, a proportion of recorded unemployed correspond to a proportion of potentially active persons, which American statistics can quantify by an estimate of unrecorded or "hidden" unemployment.

In the following paragraph, we shall attempt to assess this proportion of hidden unemployment, by means of a method adapted to this different statistical mechanism.

4. The unit of the phenomenon of "unsatisfactory employment"

Underneath the general terms of unemployment and under-employment, a distinction has been made between four aspects of the phenomenon and it has been stated to what extent statistics can throw them into relief, by showing that statistical distinctions do not necessarily correspond to distinctions between the different aspects of the real situation. On the other hand, it is still to be determined how far these differentiated aspects may be considered as being facets of a unique phenomenon.

From the point of view of the population and the availability of employment, the uniqueness of the phenomenon is to be found in the harm that it suffers with respect to employment opportunities and, indirectly, income. The four aspects bear witness to a common problem that the labour market can set before workers. From the point of view of undertakings and demand for labour, the central phenomenon is more that of reserves of manpower which are more or less mobilisable and its field of application

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(1) Let us remember that this point of view remains debatable; it presupposes that hidden unemployment really differs from visible unemployment, through a more conditional inclination towards activity.

does not coincide exactly with that of unsatisfactory employment. It is, in fact, much narrower since under-employment or loss of employment do not have the same degree of importance in this field; in another sense, however, it is wider, because it also concerns manpower reserves constituted by immigration, for instance.

The phenomenon of unsatisfactory employment also has its conceptual unity in its causes which, generally speaking, are to be found in demand for labour that is unsatisfactory as compared to supply. This inadequacy of demand shows itself at very different intervals. There is, of course, the economic boom period with its global and macroeconomic character. Moreover, there are all the reductions in employment that occur, even during boom periods, and which influence the aspect of the loss of employment. Apart from economic cycles, however, there is the question of the level of employment over a long period in a country or region. The analysis of regional development (chap. III) will reveal how important this question is — a question that is often overshadowed by aspects of economic conditions.

#2. MALE UNEMPLOYMENT ACCORDING TO AGE (1957-72)

The preceding paragraph showed on what aspects of unsatisfactory unemployment, unemployment statistics, examined in Chapter one, could not give information and on what aspects they could give an indication, subject to certain conditions. All in all, total unemployment statistics ought to cover :

- some unemployment in the strict sense
- some of the potentially active persons
- a certain proportion of inactive persons

The vital question is that of being able to make a distinction between these three categories or, at least, being able to estimate that proportion of registered unemployed who are more inactive than unemployed persons in the strict sense or potentially active persons, the distinction between these two latter categories being mainly a question of degree.

1. The method

The method proposed is related to the method used to assess the volume and existence of hidden unemployment in countries where the quality of statistics enables visible unemployment and unemployment in the strict sense to be assimilated and thus also hidden unemployment and potentially active persons.

The general idea is that the proportion of the population whose inactivity (non-participation in the active population : neither in employment nor declaring themselves as being in search of work) is in systematic relationship to the low demand for labour, can be considered as potentially active persons.

So as to make the idea operational, a regression must be proposed whereby the behaviour of the population (dependent variable) is expressed in terms of an explanatory variable which reflects the state of tension in the labour market.

As in the analyses of hidden unemployment, the explanatory variable is "reference" rate of unemployment. In Belgium, unemployed males between 25 and 39 are given as a percentage of insured persons of this age group. In fact, this is a category of workers where handicaps hardly play any role at all and the inclination to work is most marked; moreover, it is that section of the population where research undertaken by the Americans has not revealed a phenomenon of hidden unemployment.

As dependent variables, there is the unemployment rate for elderly workers (50—64 years of age) or "mature" workers (40—49) and then that of young workers (under 25). It is obviously very different to research on hidden unemployment which operates on the basis of the rate of activity. It is, in fact, a difference between fields of analysis. Studies of hidden unemployment where the dependent variable is a rate of activity, can analyse variability in the behaviour of the total population of one particular age group. In the present case, on the contrary, where the dependent variable is a recorded rate of unemployment, only a fraction of the population of one age group is dealt with: that fraction referred to in the statistics on unemployment (not the total number of persons without employment) and which only refers to the wage—earning population (excluding independent workers).

Thus dictated by statistical requirements, our method deals only with a much more limited field. The analysed phenomenon is of less scope but this would not appear to imply that the analysis is otherwise biased.

From a chronological point of view, we shall retain series running from 1957 to 1972, the data not being available prior to this period (1). In view of the regional structure of unemployment, the series are analysed for the three big regions.

2. Unemployment of elderly workers

In order to grasp the method fully, we can start directly with its application to one category of workers, those between 50 and 64 years of age, giving the various stages of the analysis in detail.

a._ An_initial_regression

The most elementary formula by which the method can be expressed consists of calculating a regression thus :

$$R_{50} = a + b \ RR$$

The rate of unemployment of elderly workers (R_{50+}) is related to the rate of unemployment of "adults" (25—39), considered as the reference rate (RR). An empirical estimate for the period 1957—72 gives (2) :

$$R_{50+} = 7.05@ + 1.80@ \ RR \qquad R^2 = 0.78 \qquad D.W. = 0.76$$
$$\quad\;\;(0.47) \quad (0.26)$$

From one year to the next, the rate of unemployment at national level of elderly workers is in systematic relation to the level of unemployment of "adults"; the relation is also a close one, since the regression accounts for 78% of variability in unemployment of elderly workers ($R^2 = 0.78$), from year to year.

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(1) The <u>rates</u> of unemployment have not been regularly established by ONEM; they have been calculated by the Labour Department (Louvain).

(2) Presentation of regressions

— Below estimated co—efficients and between parentheses appear the standard deviations

— Degrees of significance : @ refers to level 0.1 or to 99%
+ refers to level 0.5 or to 95%
no symbol means no significance at level .05

— R^2 : co—efficient of determination of the regression

— D.W. : Durbin—Watson test; if it is lower than a certain value, it indicates the relevant presence of a positive auto—correlation of residues.

The relation is composed of two elements. Firstly, leaving aside the constant for a moment, the rate of elderly workers unemployed is a multiple of the reference rate; when the rate among workers of the 25-39 age group is, for instance, 3%, the rate for 50-64 year olds equals 1.8 times this rate of 3%, or 5.4%; during the 16 years under consideration, the rate for elderly workers has thus fluctuated commensurate with the reference rate, although it was almost double the latter. Moreover, the relation is all the more significant from a statistical point of view, since the estimated co-efficient (1.80) is more than 6 times its standard deviation (0.26).

Secondly, the regression comprises a constant (7.05), which is also highly significant: whatever was the level of the reference rate, unemployment of elderly workers was systematically 7.05 points above. When unemployment of the 25-39 age group was 3%, the rate for elderly workers was :

$$7.05 + 1.80 \ (3.00) = 12.45\%$$

In other words, elderly unemployment in this case accounted for four-tenths, by its relationship with unemployment for adults (5.4% = 1.80 x 3%); but, for the remaining six-tenths, it appeared as independent of the chosen economic indicator.

Without forgetting the purely exemplary nature of these figures, we must stress the idea that they represent. Since elderly unemployed are often unemployed for long periods and they include a very high proportion of persons considered to be of "partial" or "very reduced" aptitude, it may be asked if they are still unemployed or, at least, potentially active persons. As with inactive persons, considered in the analyses of hidden unemployment, one criterion to determine this is that of seeing whether and to what extent their non-employment depends on the state of the labour market, shown by the reference rate. In the example proposed, the reply is that, to an extent of 43%, their unemployment depends on economic conditions or that their inactivity is governed by the demand for labour; nevertheless, unemployment of elderly workers appears, to a large extent, to be a constant of the period in the country in question, at the same time.

We must stress, however, that the quantification of the diagnosis is a quite provi-sional one. First of all, it is made for an exemplary value of the reference rate of 3%. Arithmetically speaking, the proportion (43%) rises for a higher rate and falls for a lower one. In the second place, the regression has a rudimentary and unsatis-factory form; the weak value of the Durbin-Watson test indicates that the adjustment comprises a bias and should thus be improved. Finally, by descending to the regional level, the state of the labour market can be assessed more precisely, and this is likely to modify the diagnosis.

Improvement of the adjustment is made through an analysis of the residue and by a series of tests that it would be boring to enumerate. Finally, the modifications have affected two particularly important aspects of the time relationship: the annual trends and possible long-term tendencies.

b._ More_complex_relationship

There is no evidence whatsoever that unemployment of elderly workers develops exactly commensurate with unemployment of "adults", as the elementary regression presupposes. In order to take account of any possible time-lags, various test have been undertaken, the most satisfactory of which can be set out in the following formula :

$$R_{50+} = 6.51^@ + 2.16^@ \ RR - 1.09^@ \ VRR \qquad R^2 = 0.94 \quad D.W. = 0.62$$
$$(.29) \quad (.16) \qquad (.20)$$

with the addition of a variable situating the rates in an upward or downward trend in the unemployment of adults; this is the annual variation (VRR) in the rate for 25-39 year-olds; that is, the difference between the rate for the current year and that for the preceding year. Its co-efficient is highly significative and the explanatory

scope of the regression increases considerably (R^2 increases from 0.76 to 0.94).

The significative relationship between unemployment of elderly workers and the reference rate of unemployment (adult workers) is, therefore, more complex: two variables are required to specify correctly this relationship in time. Nevertheless, the real nature of the relationship cannot easily be seen by examining the co-efficients; the best way is to take a hypothetical example (graph no. II,1).
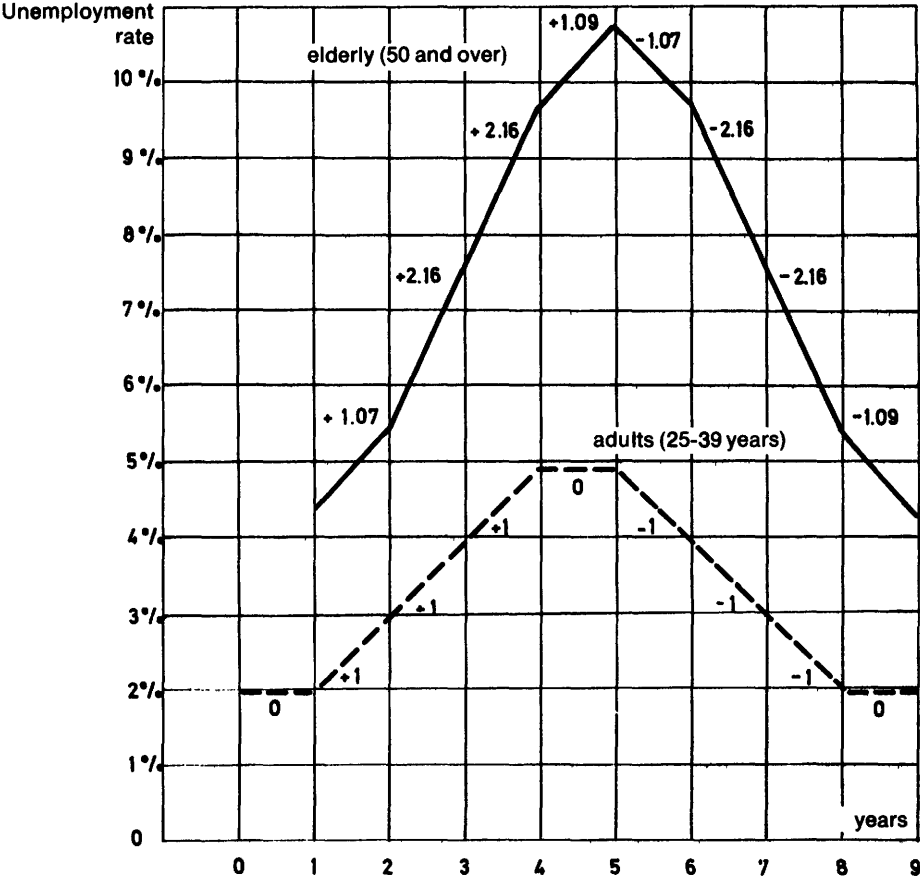
To make things simpler, we shall ignore the constant term: we shall restrict ourselves to unemployment of elderly workers in its relationship with the reference rate of unemployment. We shall start with a year in which the latter rate (RR) is 2%, the same as for the preceding year (thus, VRR = zero); in this year, the relationship implies that elderly unemployment is 4.32% since the co-efficient of RR equals + 2.16; the risk of elderly unemployment is more than double that for adults.

The following year, the RR rises by 1%. The liaison with the RR means that elderly unemployment is 2.16 points higher, but since the variation in the RR (VRR) is negative, it reduces this rise to 1.07 points (= 2.16 - 1.09); thus, at the beginning of the rise in unemployment (a recession, for instance), the risk of unemployment hardly <u>increases</u> any more among elderly workers: + 1.07% as against + 1% for adults.

The result changes, however, if the rise in unemployment continues. If, during the second year, the RR increases by another point, the increase for that year for the rate of elderly unemployed is 2.16%. When the recession is prolonged, the risk of unemployment is 2.16 times higher among the elderly, and in the year when adult unemployment stabilises, elderly unemployment continues to increase (by 1.09 points).

After the recession, elderly unemployment starts to diminish slowly (- 1.07), then reabsorption accelerates (- 2.16 points each year) and the year when the reference rate stabilises at a low level, the elderly rate again drops by 1.09 points.

Graph II,1. — Simulated development of elderly unemployment

Unemployment rate (%) plotted against years (0–9).

- elderly (50 and over): solid curve with annotations +1.07, +2.16, +2.16, +1.09, −1.07, −2.16, −2.16, −1.09
- adults (25–39 years): dashed curve with annotations 0, +1, +1, +1, 0, −1, −1, −1, 0

This is, of course, an example. The precise value of co-efficients must be looked at again in relation to additional improvements in estimates and be differentiated according to the region. Moreover, the example of a very simple variation in the reference rate dictated by the economic situation (+1, +1, +1, 0, -1, ...), has been chosen, whereas the regression is just as valid for development with accelerations and where long-term trends interfere with the economic situation. Nevertheless, a few conclusions can be drawn, in general terms, which will not be contradicted by the rest of the analysis :

1. The <u>level</u> of elderly unemployment is in systematic relationship with that of the 25-39 age group; independently of the constant, the rate is more than double that of the RR at national level. To this extent, the risk of elderly unemployment appears to be conditioned by the level of unemployment whose economic nature is not in doubt.

2. Overall, <u>variations</u> in the elderly rate, tied to that for adults, as it is, are of wider scope. In a recession, the risk of unemployment (1) increases twice as quickly after 50 years of age and, when the recession is over, reabsorption will also increase at twice the rate.

3. However, these variations occur with a certain <u>delay</u>, as opposed to those in the RR, which brings about some attenuation of points of inflexion, revealed in many different ways :

   - the year when the RR starts to increase, the elderly rate hardly increases further than this; elderly workers will not be dismissed more frequently than adults.

   - the year when it ceases to increase, the elderly rate continues to rise; in a depressed market, the current turnover is unfavourable to the elderly.

   - the year when it ceases to diminish, the tense market will still permit reabsorption of elderly workers, but at a reduced rate.

c._ Long-term trends

The addition of the VRR variable (annual variation in the reference rate), considerably improves the R^2, but not the Durbin-Watson rate. In other words, the differences between the estimated and observed rates ("residue") are not distributed in a purely haphazard way, but constitute a systematic distribution. Which one ? Examination of the data suggests some modification in the relationship towards the end of the period. In order to test this, a dummy variable was first introduced, equal to 1 for every year since 1965 and 0 for the eight preceding years (Dd); taking this result, another form of test was tried where the Dd was equal to 1 in 1965, 1 in 1966 ..... and 8 in 1972 (Dt). The results are as follows:

$$R_{50+} = 6.11^@ + 2.27^@RR - 1.19^@VRR + 0.41\ Dd \qquad R^2 = 0.946\ DW = 0.76$$
$$\quad\ \ (.44)\quad (.18)\quad\ \ (.21)\quad\ \ \ \ (.34)$$

$$R_{50+} = 5.83^@ + 2.36^@RR - 1.24^@VRR + 0.15^@Dt \qquad R^2 = 0.974\ DW = 1.51$$
$$\quad\ \ (.26)\quad (.12)\quad\ \ (.14)\quad\ \ \ (.04)$$

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(1) Measured by the <u>rate</u> of unemployment. It should be recalled that if only the tendency in absolute numbers of unemployed is studied, there is the risk of arriving at a different conclusion. Indeed, because elderly unemployment is always higher than adult unemployment, an increase of one point in the elderly rate represents an increase of only 20% of the mass of elderly unemployed where the rate is 5%, whereas an increase of one point in the rate of adult unemployed constitutes a rise of 50% where the rate is 2%. This method of calculation, however, - and which is only too frequent, unfortunately - does not cover the development of the <u>risk</u> of unemployment as compared to workers; it brings with it unemployment when assessing the trend of the mass of unemployment.

The second form was closer to reality since, in this way, the dummy variable was statistically significative, the R^2 was higher and, above all, the bias of auto-correlation of residue diminished greatly. The scope of this result is considerable. It means, in effect, that since 1965, the elderly unemployment rate has tended to rise as compared with the adult rate and notwithstanding variations in economic conditions. Thus, there is a trend towards the relative deterioration of the employment situation with respect to workers of over 50 years of age.

Although this _relative_ deterioration cannot be contested statistically, it does not mean that unemployment of the elderly as such is tending to increase. It has to be seen whether or not there is a trend in the reference rate (RR). Indeed, at a national level, the RR shows a slight tendency to drop – which is rather significative :

$$RR = 2.50^{@} - 0.125 +\ t \qquad R^2 = 0.34$$
$$(.41) \quad (.046)$$

This trend implies that the RR fell by 1% over the 8-year period $(8 \times -0.125 = -1.0\%)$; thus, the elderly rate would have had a downward trend of 2.36% (the co-efficient of RR x –1.0%). This component part of long-term development is counter-balanced by the specific trend of elderly workers (Dt), which entails an increase of 1.20% (8×0.15) in the elderly rate. On the whole, the absolute level of the elderly rate has, therefore, had a tendency to fall; over the period as a whole (1957–72), the regression shows :

$$R_{50+} = 11.39^{@} - 0.203^{+}t \qquad R^2 = 0.22 \qquad D.W.\ 0.65$$
$$(.90) \quad (.102)$$

But it is of very slight significance; it is the disaggregation by region that will enable these weaknesses to be overcome and conclusions on the situation of employment of elderly workers that are better defined, to be arrived at.

Before that, however, it would be interesting to return to the value of the constant: from the first to the fourth regression it has fallen from 7.05 to 5.83. In other words, the proportion of elderly unemployment that one is tempted to consider as indisputable has dropped, in favour of a better grasp of the relationship to the RR and the taking into consideration of a tendency towards the relative deterioration in the situation of elderly workers.

d._ Unemployment_of the 40–49 age group

Here is a summary of the main result for the 40–49 age group:

$$R_{40-49} = 0.70^{@} + 1.46^{@}\ RR - 0.23^{@}\ VRR - 0.00\ Dt \qquad R^2 = 0.99 \qquad DW = 1.25$$
$$(.13) \quad (.06) \qquad (.07) \qquad (.02)$$

This category of unemployed is obviously an intermediate one between the 25–39 and the elderly (50 + years) age groups. Its tendency is similar to that of the RR, but it already shows – although only slightly – the characteristics proper to the 50+ group, except with regard to the tendency to deterioration. It was thus advisable to isolate them both with regard to the RR and the 50+ category.

3. Age and region

Since the main question is that of knowing to what extent recorded unemployment of elderly workers is governed by the labour market, the analysis at regional level must be intensified, since these conditions appear to differ considerably according to the region.

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a._ Elderly_unemployment_in_the_three_regions

The following table shows a regression with three variables for the three main regions, choosing the form which offers the best adjustment, depending on whether Dd is used (equal to 1 for every year since 1965) or Dt (equal to 1, 2 ....8) for each successive year.

Table II, 2.

Regressions in the rate of unemployment of elderly workers (50 +) 1957-72

Region	Constant	RR	VRR	Dd	Dt	R^2	D.W.
Flemish	7.81* (.33)	+ 2.46* (.11)	− 1.32* (.14)	− 0.39 (.28)		0.99	2.27
Walloon	4.76* (.33)	+ 1.51* (.17)	− 1.01* (.17)		+ 0.65* (.05)	0.96	1.40
Brussels	3.78* (.47)	+ 3.05* (.31)	− 1.20* (.31)	− 0.81+ (.39)		0.94	2.32
NATIONAL	5.83* (.26)	+ 2.36* (.12)	− 1.24* (.14)		+ 0.15* (.04)	0.97	1.51

The first impression is one of great similarity: the regression shows this in the three regions (R^2 and D.W.). The link with the RR is close, even if it includes some variability in the size of co-efficients; the phenomenon of time-lags is also very significative.

On the other hand, differences appear with respect to the recent long-term trend as well as to the constant. The tendency towards relative deterioration since 1965 at national level exists in the Walloon region alone, but with an intensity that is four times greater: the co-efficient of 0.65 (one of the most significative) means that the level of elderly unemployment has risen by 5.20 points in 8 years. Moreover, the constant, higher than average in the Flemish region, is lower in Wallonia and lower still in the Brussels region (3.78) where even this figure would appear to have fallen during the second half of the period (Dd being equal to 0.81, the constant since 1965 has been 3.78 − 0.81 = 2.97).

So as to grasp the real scope of this relationship between elderly unemployment and the RR, we shall look at the long-term trends for each class of unemployment. Thus, we shall see if the relative deterioration of the situation of elderly workers corresponds to an absolute deterioration.

Table II, 3.

Trends in RR and elderly unemployment (1957-72)

Regions	RR (25-39) Constant	t	R 50 + Constant	t	R^2	D.W.
Flemish	3.32* (.48)	- 0.213* (.055)			0.52	0.84
			16.01* (1.09)	- 0.544* (.124)	0.58	0.64
Walloon	1.71* (.43)	- 0.009 (.048)			0.00	0.94
			5.70* (.74)	+ 0.385* (.084)	0.60	0.59
Brussels	1.45 (.30)	- 0.066+ (.034)			0.21	1.14
			8.52* (.83)	- 0.293* (.095)	0.41	1.03
NATIONAL	2.50* (.41)	- 0.125+ (.046)			0.34	0.94
			11.39* (.90)	+ 0.203+ (.102)	0.22	0.65

Over a long period, adult unemployment has developed very differently in the three regions. It is certainly falling in the Flemish region; it is falling less sharply in the Brussels region, but its initial level was the lowest of all (constant = 1.45). Conversely, it is practically stationary in Wallonia; it does not show an upward trend, as is the case with elderly unemployment.

Thus one can see two component parts in the long-term development of the elderly rate: firstly, its liaison with the RR trend and, secondly, the possible presence of a specific trend revealed by the Dt variable. These two component parts relate to one another very diversely from region to region.

a. In the Flemish region, the downward trend of the RR provokes a similar trend among elderly workers. The same applies to Brussels, together with a slight downward tendency in the RR and R_{50+} relationship over the last few years (the Dd variable is moderately significative). In these two regions, the rate of elderly unemployment has fallen sharply: - 8.7% in Flanders, - 4.7% in Brussels, in 16 years. This reabsorption is in significative relation to a negative trend among that age group for whom the economic character of unemployment is beyond any doubt.

b. In Wallonia, on the other hand, unemployment is rising among the elderly, whereas it is stationary among the 25-39 year-olds. Deterioration - both relative and absolute - thus arise from the specific trend for the elderly (Dt), meaning a rise of 5.2 points in the unemployment rate over the last 8 years.

There is, therefore, some dissymetry in the upward and downward trends in elderly unemployment over the long term. The elderly rate only falls where undoubtedly economic unemployment tends to fall; elderly unemployment is, therefore, likely to fall when economic development is favourable. Nevertheless, the same cannot be said in the case of upward trends since, in Wallonia, the rise in the elderly rate is not related to a rise in the RR. This does not change the fact that the elderly rate shows a variation — to this extent it is not indisputable — and that its worsening trend is perhaps related to conditions on the labour market and particularly with the fall in employment. We shall look at the question in the next chapter; if such is the case, it bears witness to a phenomenon where unemployment is shifted towards the elderly; over the long term, unemployment falls heavily on elderly workers who, if they are not dismissed more frequently than the other groups, still find it more difficult to obtain employment. The duration of their unemployment also increases their marginal situation on the labour market and makes the participation in the active population more conditional.

b._ Levels_and_trends_in_the_provinces

The extent of regional differentiation at the basic level and in the long-term trend of elderly unemployment, warrants a look at the more disaggregated level of the nine provinces (Table II, 4).

Table II, 4.

Partial results for elderly unemployment rate by province (1957-72)

Provinces and regions	of the regression with three variables				of the trend
	Constant		Dd	Dt	$(Dt)x8$	t
Antwerp	7.24* (.37)	(with Dd)	− 0.30 (.34)	− 0.02 (.06)		− 0.47*
West Flanders	7.06* (.45)	(with Dd)	− 0.32 (.40)	− 0.07 (.06)		− 0.75*
East Flanders	9.22* (.53)	(with Dd)	− 1.38+ (.50)	− 0.17 (.09)		− 0.72*
Limburg	9.61* (.55)	(with Dt)	+ 3.46* (.79)	+ 0.70* (.08)	+ 5.61	+ 0.24+ (.12)
FLEMISH REGION	7.81* (.33)	(with Dt)	− 0.39 (.28)	− 0.03 (.05)		− 0.54*
Hainaut	4.77* (.34)	(with Dt)	+ 1.48* (.43)	+ 0.34* (.04)	+ 2.75	+ 0.20*
Liege	4.93*	(with Dt)	+ 6.22* (1.16)	+ 1.26* (.08)	+10.10	+ 0.78*
Luxemburg	2.41*	(with Dt)	+ 2.45* (.67)	+ 0.50* (.08)	+ 3.98	+ 0.19+ (.09)
Namur	4.89* (.20)	(with Dt)	− 0.04 (.16)	+ 0.03 (.03)		− 0.03
WALLOON REGION	4.76* (.33)	(with Dt)	− 3.11* (.63)	+ 0.65* (.05)	+ 5.21	+ 0.39
Brabant	4.14* (.31)	(with Dt)	− 0.23 (.25)	+ 0.00 (.04)		− 0.25* (.08)
NATIONAL	5.83* (.26)	(with Dt)	+ 0.41 (.34)	+ 0.15* (.04)	+ 1.22	− 0.20+ (.10)

- Partial results : − regressions : $R_{50+} = b_0 + b_1 RR + b_2 VRR + b_3 (Dd/Dt)$
  − calculation of trend : $R_{50+} = a + b (time)$
- Dummy variables : Dd = 1 from 1965 to 1972 and zero from 1957 to 1964
  Dt = 1 in 1965, 2 in 1966 ..... 8 in 1972 and zero previously.

From the point of view of regional trends, it can be seen that the specific deterioration in the rate of elderly unemployment is very marked in three out of the four Walloon provinces and especially in the province of Liege (+ 10% in 8 years). In the Flemish region, only Limburg has had such a trend and is exceptional in that there is no specific trend for the elderly.

As regards the general interpretation of elderly unemployment, the two features noted at regional level are accentuated at the most disaggregated level: the basic level, specific to the rate of elderly unemployment, varies considerably throughout the regions (between 2.41 and 9.61%) and the trends since 1965, apart from the economic situation and the development of the RR, have also differed considerably, involving very severe deterioration in certain provinces.

4. Unemployment of young workers

It is of some interest to compare these results with the development of unemployment among young workers (under 25). This category of unemployment does not raise the same problem of interpretation; neither the duration of unemployment, nor the question of partial or reduced degrees of aptitude are reasons to ask whether they still constitute real unemployed persons, likely to be employable. However, like elderly workers and women, young workers are more marginally situated with regard to the labour market: their inclination to work is not necessarily as unconditional as that of male adults and, indeed, research on hidden unemployment has shown that they were affected by this phenomenon.

a._ Development from 1957 to 1962

The following table compares estimated regressions for elderly workers (50+) and for the intermediate category (40-49), with a similar regression calculated for young workers.

Table II, 5.

Unemployment for the different age groups, as compared to the 25-39 year-olds (RR)

	Constant	RR	VRR	Dt	R^2	D.W.
Young workers (under 25 years)	− 0.43* (.15)	+ 1.28* (.07)	+ 0.48* (.08)	+ 0.08* (.02)	0.98	1.94
Intermediate (40-49)	+ 0.70* (.13)	+ 1.46* (.06)	− 0.23* (.07)	− 0.00 (.02)	0.99	1.25
Elderly (50 +)	+ 5.83* (.26)	+ 2.36* (.12)	− 1.24* (.14)	+ 0.15* (.04)	0.97	1.51

The risk of unemployment among young people contrasts with that for older groups. Of course, it is also dependent upon the RR (even without the Dt variable, the R^2 is already 0.96). But the liaison shows up differently: the VRR co-efficient is positive and that of the RR is lower; we shall return to this point in the conclusion. In addition, the constant is negative: independently of its relationship with the RR, unemployment of young workers is below that of adults. Nevertheless, interpretation of the constant is affected by the addition of the dummy variable Dt, whose

co-efficient is highly significative and positive; at the end of the period, the autonomous level (as compared to unemployment among the 25-39 age group) of the rate for young workers rises higher than that for adults (-0.43 + 8 x 0.08 = + 0.21). In other words, the relative situation of young persons has deteriorated and a worsening of 0.64 points in the unemployment rate is proportionately serious because this rate has often been below 1.0%.

Before coming to the conlcusion, however, a difficulty arising from an amendment to the law must be looked at. A Royal Decree issued in December 1963 permits young people leaving school to register with ONEM and draw unemployment benefit if they have not found employment within 75 days of registering. During these three months they appear among the statistics under the heading "Other unemployed compulsorily registered", but beyond this period - if they remain unemployed - they become "unemployed in receipt of benefit".

What is the incidence of this legislative amendment on the worsening unemployment situation, as shown by the regression ? It is not so simple to answer this question. First of all, let us set aside its direct incidence. The statistics used in this study (taken from the Annual Unemployment Figures as at 30 June) do not include "Other unemployed compulsorily registered"; the fresh fact that these young people are registered during the first three months does not, therefore, affect our statistical series. There remains, however, the possibility of an indirect incidence since, as from 1963 and after the three months registration period, they become unemployed in receipt of benefit, whereas they could not have been previously. Nevertheless, this eventuality is limited by the question of dates: since most school years end in June or July, the young person in question would have to be registered with ONEM and remain without work for about one year before he could modify the statistics issued on 30 June. Among this age group the proportion of long-term unemployed is small. To the extent that such an eventuality occurs, however, it means that the legislative amendment has made to appear unemployment that previously remained invisible, or "hidden".

b._ Regional_trends

Regional disaggregation reveals the following results (it concerns the co-efficient and model time-lag for the Dt variable in similar regressions) :

Antwerp	+ 0.067+	(.027)	Hainaut	+ 0.130*	(.043)
West Flanders	+ 0.105*	(.031)	Liege	+ 0.094+	(.037)
East Flanders	+ 0.065*	(.017)	Luxemburg	+ 0.121*	(.036)
Limburg	+ 0.076	(.060)	Namur	+ 0.051+	(.024)
FLEMISH REGION	+ 0.086*	(.020)	WALLOON REGION	+ 0.110*	(.030)
BRUSSELS REGION	+ 0.026+	(.009)	NATIONAL	+ 0.080*	(.023)

The specific rise in the unemployment rate for young persons is significative almost everywhere, whereas the relative worsening of elderly unemployment is marked only in Wallonia. This leaves open the possibility that it is directly related to the amendment to the law already referred to. Nevertheless, apart from the reasons already put forward, it must be noted that the intensity of the rise is highly variable:it is 5 times stronger in Hainaut than in Brussels. This high variability gives grounds for thinking that, to a large extent, the figures reflect a real situation and not merely a transfer of hidden unemployment to registered unemployment.

3. CONCLUSION

The econometric analysis has the advantages of confirming the significative character of the observations made, of revealing systematic relations and of quantifying conclusions with precision. Being abstract and complex, however, it tends to obscure the reality of the situation. We shall start by drawing up a table of the main facts revealed: their internal clarity will appear, even if the significance of the internal dynamics of unemployment cannot be established with certainty until unemployment in its complex relationship with the labour market has been situated; as it will be in the next chapter.

1. Long-term trends

It has been clearly shown that beyond a certain synchronisation with the economic situation, the total male unemployment rate from 1957 to 1972 showed more long-term trends, varying according to age and, simultaneously, according to age and region. Table II, 6 synthesises these trends by bringing out two aspect which are distinctive in several respects :

A. The overall trend of the rate for each age group over the 16-year period (1957-72): the time co-efficient in the simple regression (as given in table II, 3, for example); it shows whether the unemployment rate has revealed a significative tendency to increase or diminish.

B. The specific trend for young and elderly workers since 1965, going beyond the liaison with the RR: the Dt co-efficient in the multiple regression (e.g. table II,2); when this co-efficient is significatively positive, it indicates that over the last few years, the rate for this age group has progressively deteriorated as compared to adult unemployment.

The first aspect thus reveals the absolute highs and lows over a 16-year period, whereas the second one shows the _relative_ improvements or declines for the two extreme age groups over the last 8 years.

Table II, 6.

Overall trends (A) and specific trends (B) in unemployment rates

	Trend	NATIONAL	Flem Reg.	Brus. Reg.	Wall.Reg.
All age groups	overall	− 0.19*	− 0.35*	− 0.17*	+ 0.00^{ns}
Reference rate (25-39)	overall	− 0.13^{+}	− 0.21*	− 0.07^{+}	− 0.01^{ns}
Elderly (50-64)	overall	− 0.20^{+}	− 0.54*	− 0.29*	+ 0.39*
	specific	+ 0.15*	− 0.03^{ns}	− 0.08^{ns}	+ 0.65*
Mature (40-49)	overall	− 0.19*	− 0.36*	− 0.13*	+ 0.04^{ns}
	specific	− 0.00^{ns}	− 0.04^{ns}	− 0.03^{+}	− 0.09*
Young workers (under 25)	overall	− 0.12^{ns}	− 0.22^{+}	− 0.04^{ns}	+ 0.02^{ns}
	specific	+ 0.08*	+ 0.09*	+ 0.03^{+}	+ 0.11*

N.B. ns = non-significative at level .05.

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For the country as a whole, the period is notable for a downward trend, quite apart from the two recessions in 1958-59 and 1967-68 (see graphs I, 2 and I, 5 in Chapter I); this trend is approximately 0.2 points of the unemployment rate per year, or nearly 3 points in 16 years; total male unemployment for all age groups dropped from an average level of about 6.5% to about 3.5%.

This overall favourable development, however, conceals four negative points.

1. <u>Among young workers</u>   In all regions, there was a relative deterioration in the situation of young workers as from 1965, even if it did not entail an absolute deterioration over the whole of the period from 1957-72. It would seem to reveal three things:

- an indirect influence by the modification to legislation: this is possible, but does not appear to be the sole nor even the main factor;

- a real trend, common to all regions (Dt is significative in 8 of the 9 provinces);

- a much more accentuated trend in certain provinces, such as Hainaut, Luxemburg and Liege.

2. <u>Among elderly workers</u>   In Wallonia, there was a relative deterioration, and even an absolute one, in the situation of elderly workers — which can even be seen among the 40-49 age group; this contrasts with the steady improvement in Flanders and Brussels.

3. These favourable developments in half of the country do not, however, permit the unemployment rate for elderly workers to be forgotten, which remains high everywhere.

4. In a general sense, <u>Wallonia</u> is distinguished by the positive nature of nearly all its co-efficients which, even if they are often so non-significatively, contrasting with co-efficients that are more often negative, but often significative as well, in the other two regions. For the period as a whole, nevertheless, there is no evidence of a worsening trend either in the RR (25-39 year-olds), nor in the total (all age groups); the deterioration affects only the two extreme age groups.

2. Internal logic

In interpreting unemployment, the analysis by age distinguishes two groups of factors: firstly, a liaison with unemployment of 25-39 year-olds, chosen as a reference rate; secondly, a level (the constant) and a possible specific trend (variable Dt), which constitute autonomous unemployment factors for each age group. Let us first draw our conclusions with respect to the internal liaison between the different categories of unemployment but without forgetting this provisional putting into limbo of the autonomous factors.

The starting point is a double observation. In the course of the years, unemployment for the various age groups has developed with a close inter-relationship: the RR is sufficient to account for at least 94% of the annual differences in the levels of unemployment for young and elderly workers. But this liaison is a complex one. Its time element changes in form according to the age group concerned, by reason of time-lags and differences in the scope of the liaison. This complexity grasped thanks to the separation of the RR into two variables: its annual level (RR) and its annual variation ($VRR = RR_1 - RR_0$). In order to seize hold of the real scope of this formal logic, we are presenting two simulated chronological developments of unemployment for the various age groups: the first describes development based solely on fluctuating economic conditions and the second adds to this a long-term trend. Both of them apply the estimates contained in the regressions in table II, 5, temporarily leaving out the constant and the specific trends since 1965 (Dt).

Graph II,2. — Simulated unemployment of elderly and young workers, without trend
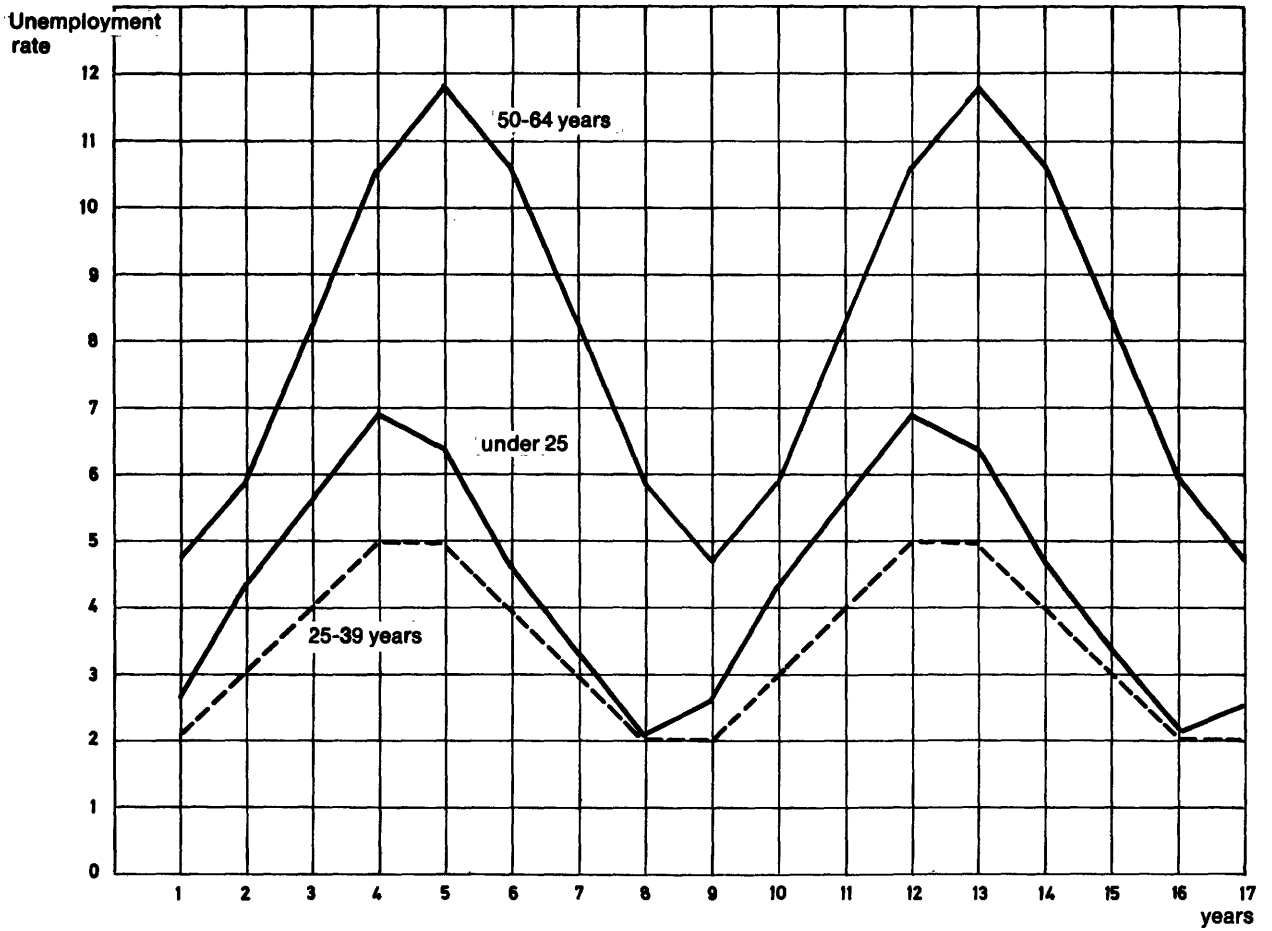
a._ Dynamics_of_the_current economic_situation

The simulated development starts from a choice of values of the independent variable
(RR and thus VRR); we shall choose a very simple development in unemployment for the
25-39 age group, based on the economic situation (2, 2, 3, 4, 5, 5, 4, 3, 2, 2,
3, ...%), which supposes perfect long-term stability. Using this hypothetical data-
though reasonable - the simulation tells us how unemployment for the other age groups
tends to behave on the basis of the effective experience gained during the period
1957-62, which has been well synthesised by the regression in which the R^2 were high.

First observation: a recession increases the risk of unemployment among young and
elderly workers still further; in the middle of a recession, where adult unemployment
is supposed to have increased by 3%, the rate for young persons has risen by 4.8%
(from year 8 to year 12) and that of elderly workers (1) by 7.08% (from year 9 to
year 13).

Second observation: unemployment among the young occurs before that of the adult
group, whereas economic upsets have a delayed effect of one year on the elderly. In
other words, the rate for young workers is already rising in the year when the rate
for adults is still stationary and when the rate for the elderly is still falling,
but more slowly; the same time-lag appears when the economic situation becomes more
stable.

Finally, when the reference rate has no long-term trend and it follows the development
supposed, all unemployment based on economic conditions finishes by reabsorbing itself;
elderly unemployment will have been very high for a long time, but it will end by
finding its initial level again. Elderly workers suffer from a recession much worse
and much longer, but when the market becomes tense again, they can at last be
re-employed.

b._ Long-term_dynamics

Although it is accurate, this last observation must be received with caution. In fact,
it concerns a stationary development over a long period. But there can be upward and
downward trends over and above fluctuations in the economic situation. The regress-
ions have, in fact, been estimated in a context where the RR fell by 0.13% per year
at national level and by 0.21% in the Flemish region over a period of 16 years. We
have also simulated the same development, but in a context where the RR increase by
0.25% per year or diminished by this percentage over a fifteen year period.

If the two observations really based on economic conditions remain, the third is
obviously affected by the existence of a trend. But what is not so obvious is that
when the RR has a trend, that of the elderly rate is much more accentuated; a trend
of + 0.25% for adults corresponds to a trend of 0.59% for the elderly, the latter
being 2.36 times higher than the former; when the RR increases by 4% in 16 years, that
for elderly workers rises from 9.44%.

It will be noted that the value of 2.36 is that of the co-efficient of the RR in the
regression. When economic fluctuations are prefectly symmetrical (rising instead of
falling) and the trend is perfectly linear, it is the RR co-efficient that is alone
important (the incidences of the VRR in rises and falls cancel each other). Thus, the
long-term relationship between unemployment rates for the different age groups can be
summarised by the following 4 figures :

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(1) To make the development simpler, we shall not refer to the 40-49 age group;
    their development is similar to that of the 50-64 year-olds, but with less
    fluctuation; thus, in the example in question, the rise is 4.38% between years
    9 and 13.

Young (under 25)	1.28%
Adults (25–39)	1.00%
Mature (40–49)	1.46%
Elderly (50–64)	2.36%

These are respective levels insofar as they are directly interdependent, but there are factors as well which determine the levels for young persons and elderly workers independently of their direct liaison with the reference rate. If the constant raises the elderly rate further (+ 5.83 and + 0.70 for the 40–49 year-olds), it reduces, on the other hand, the rate for young persons (– 0.43%). As regards the recent specific trend (Dt, since 1965), it counter-balances the result among young workers (+ 0.08% per year), whereas it aggravates the situation for the elderly (+ 0.15% per year).

Graph II,3. — Simulated development of unemployment of elderly workers, with trends

50-64 years

25-39 years with upward trend

with downward trend
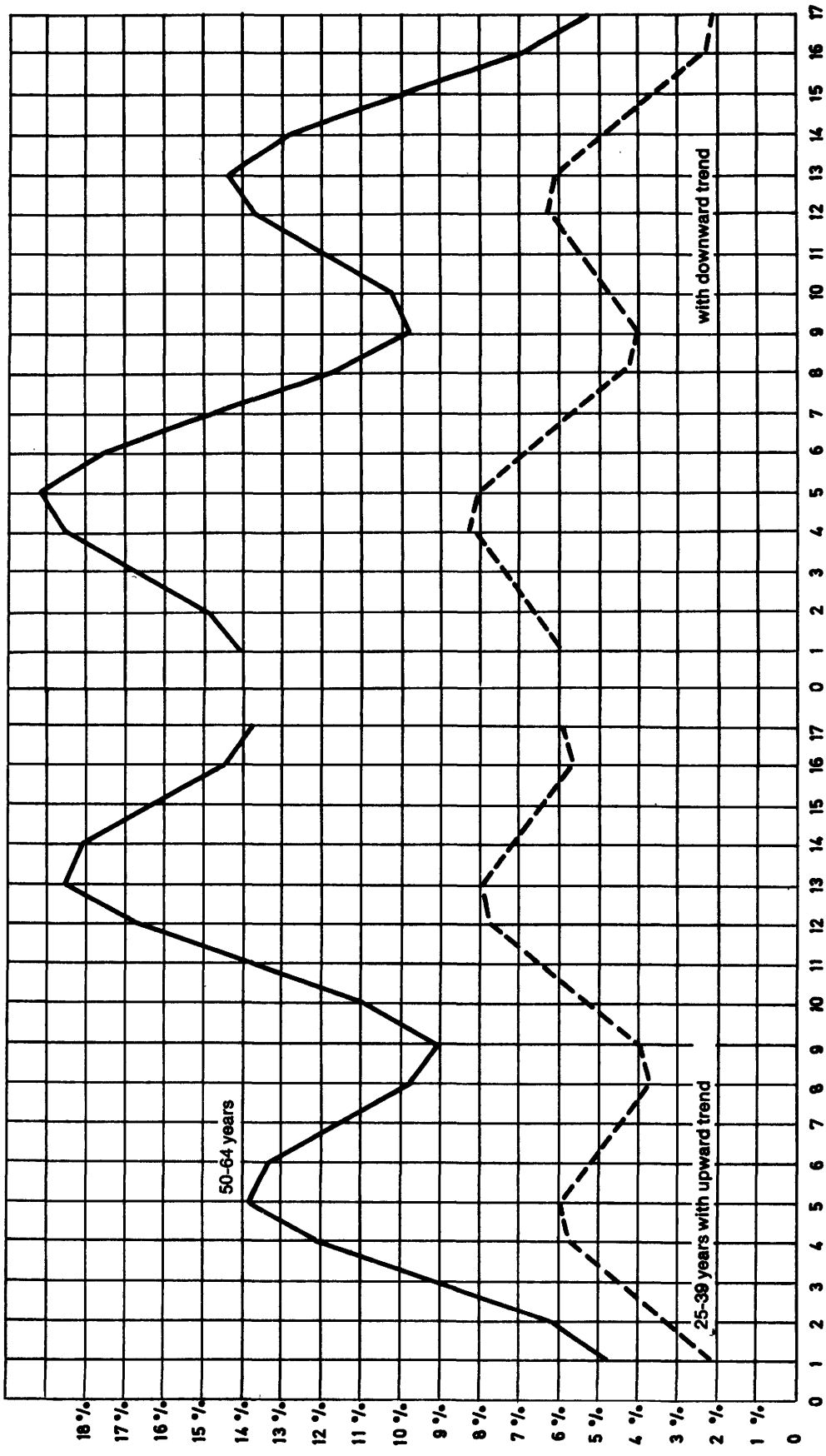
c._ Comments

The figures quoted are those of regressions at national level. The co-efficients of regional and provincial regressions fully confirm the overall picture, but show some variability within the range. Thus, the co-efficient for elderly workers is included between 1.33 and 3.27 and that for young workers between 0.94 (the only one to be less than one unit) and 1.51. It may be that the co-efficient for elderly workers is related to the regional level of unemployment and that the co-efficient for young workers is in inverse relationship.

3. Interpretation of unemployment of elderly workers

The method adopted to determine to what extent registered unemployment in Belgium was significative despite its large proportion of elderly and "unsuitable" workers, consisted of deciding whether elderly unemployment was determined by economic conditions or, on the contrary, whether it appeared to be simply inescapable.

a._ Determining factors

1. The elderly unemployment rate is closely related to the rate for 25-39 year-olds, the economic character of which is uncontestable. The relationship is multiplicative: a rise of 4% in the RR is matched by an increase of more than 9% in the elderly rate. But not only all elderly unemployment directly caused by economic conditions can be classified as "economic" unemployment, but also a proportion of its long-term level.

2. The volume of elderly unemployment is influenced by a rise in Wallonia that is not related to the rate for the 25-39 age group; the co-efficient of the Dt variable indicates an increase of more than 5% over the last eight years. At the very least, this proportion of unemployment is not a "constant of nature" since it is the result of an evolution; it remains, nevertheless, to establish the economic character of this evolution. In the next chapter, we shall see that the trend of employment, taking account of the evolution of the demand for labour, has been such as to support this interpretation.

3. There is still the constant term in regressions, which can be high (see table II, 4). When there is a trend, it covers the situation at the beginning of the period of observation, which depends on the former development and <u>can</u>, therefore, perhaps be explained by the dynamics of the RR during preceding years. In one respect, however, the constant indicates a minimum volume of unemployment which appeared even under the most favourable economic conditions in the country, during the period under consideration.

b._ Quantification_of_the_inescapable_minimum

The quantification of this rate of minimum unemployment of elderly workers thus depends on three factors to be selected :

- a constant

- a level of reference rate unemployment (RR)

- a liaison co-efficient between the RR and the elderly rate.

As to the RR level, we can take a rate of 0.5%, which was the Flemish rate for 1970. We have selected, for the other two factors, the four lowest figures from the 9 provinces and the three regions :

Constant	Co-efficient of RR
2.41 Luxemburg	1.33 Liege
3.33 Brussels	1.51 Wallonia
4.14 Brabant	1.67 Hainaut
4.76 Wallonia	1.88 Limburg

In combining these elements, the minimum quantification gives about 3% (2.41 + 1.33 x 0.5 = 3.07) and the second positions produce about 4%; the experience of Wallonia as a whole shows 5.5%, but there is no inclination to take it as a minimum, since the extent of the region conceals more favourable situations.

In these circumstances, the inescapable proportion of elderly unemployment can be evaluated at different specific dates, as follows :

Year	Characteristic of rate of elderly unemployment	Rate of elderly unemployment	Proportion of minimum, estimated	
			at 3%	at 4%
1957	minimum for the period 1957-72	7.3	41%	55%
1971	final minimum (economic conditions)	8.6	35%	47%
1968	final maximum (economic conditions)	1C.8	28%	37%
1959	penultimate max.(" ")	14.4	21%	28%
1954	maximum for entire period (estimate)	15.6	19%	26%
1968-72	average for last 5 years	9.6	31%	42%

c. Dynamics of rejection

To a large extent — but variable according to the times and estimates — elderly un-employment appears to us to be determined by economic conditions of the labour mar-ket. To this extent, it seems to be one of the forms of "unsatisfactory unemployment".

It is very possible that in other countries these persons who do not work would not appear in the statistics on unemployment; they could only be revealed by an analysis of hidden unemployment, based on the systematic liaison between the proportion of inactive persons and economic conditions. In Belgium, a part of such unemployment is not hidden.

Like hidden unemployment, it is probably different from unemployment in the strict sense because the inclination to work of these unemployed is not so unconditional. In the case of elderly workers, the performance of a job is impeded by the difficulty they face in being re-employed. This difficulty is not inescapable, since it is over-come when economic conditions are favourable and when manpower becomes really scarce. In adverse situations, however, elderly workers are affected more than others by unemployment. Moreover, if it is prolonged, unemployment can put these workers out of circulation. The internal dynamics of unemployment are dynamics of differential rejection of workers who are the least in demand, the least qualified.

Chapter III

UNEMPLOYMENT AND THE LABOUR MARKET

1. DATA CONCERNING THE PROBLEM

Depsite the peculiarities of statistics, registered male unemployment appears as a
significative economic indication, even if its significance embraces only partially
unemployment which would remain hidden. How can we take account of full unemploy-
ment ? First of all, let us examine the regional development of two key variables:
salaried employment and the rate of unemployment; they will enable the problem to be
presented in its full complexity.

1. Regional development of employment

In order to facilitate comparison between regions, the series of male salaried
employment (source: O.N.S.S.) has been expressed as an index; a central year has been
chosen (1960) as a basis, so as to minimise the obstacle that, during the course of
the years, if there were a pronounced trend, the variation of an index point would
represent a percentage variation that would be continuously stronger (if the trend
were a downward one) or continuously weaker (if the trend were an upward one). The
series concerns the period 1948-70 (1).

(1)   The various and considerable modifications made to the statistics of the O.N.S.S.
       since 1968 constitute a break in the series. Thanks to unpublished data and at
       the cost of many manipulations, we have been able to continue the series up to
       1970; but it is difficult to attempt any reliable continuity beyond this date,
       unfortunately! The question has been discussed fully in "Examen de statis-
       tiques du marché du travail", by R LEROY, Louvain: Labour Department, 1972
       (stenciled).

Graph III,1. — Regional development of salaried employment for males
(1960 = 100)

Employment index

Flemish region
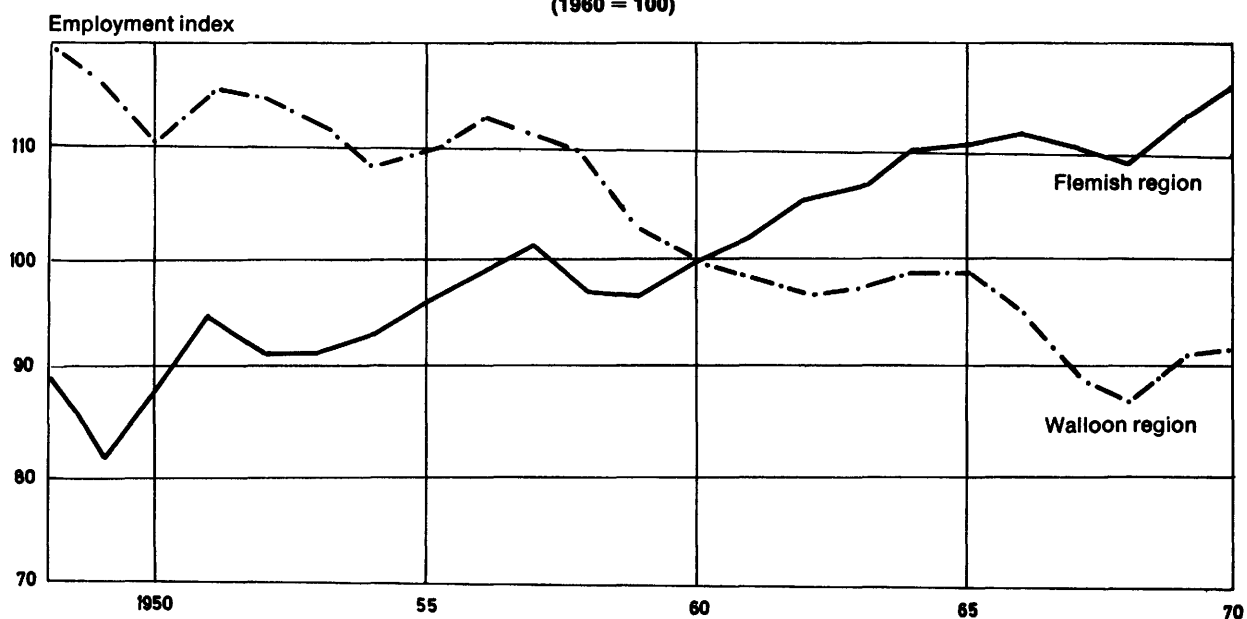
Walloon region

Table III, 1.

Regional trends of salaried employment for males 1948-70

Region	Constant	Time	R^2	D.W.
Flemish	86.10* (.98)	+ 1.32* (.07)	0.93	1.61
Walloon	118.88* (1.16)	- 1.34* (.09)	0.91	0.97
Brussels	91.44* (1.92)	+ 0.98* (.15)	0.67	0.61
NATIONAL	98.61* (.96)	+ 0.32* (.08)	0.46	0.61

N.B. Employment in each region is expressed on the basis 1960 = 100.

The graph and the calculation of trends speak for themselves. Over a period of more than 20 years, the Walloon and Flemish regions have known extremely sharp trends ($R^2 = 0.91$ and 0.93) and very similar volume (1.32 and 1.34 points per year), but in the opposite direction, over and above the sychronism of economic fluctuations; in Brussels, the trend has been less pronounced and of less volume, but it resembles that of the Flemish region.

The fact that male salaried employment grows by about 1.3% per year does not constitute an exceptional regional situation: all that is required is a moderate growth of population, combined with some reduction of self-employed persons in agriculture and the retail trade. On the other hand, a region where salaried employment tends to fall by more than 25% in 22 years would seem to be somewhat phenomenal, especially since it is not a small region that is concerned (Wallonia has about 3 million inhabitants).

In order to interpret this figure accurately, we must specify that employment is counted at the place of work and not at the place of residence: thus, we are speaking about localised employment in a region, whereas persons living in the region could have their work elsewhere, particularly in Brussels. Let us remember too, that territorial limits have been maintained as they were prior to 1963.

2. Regional development of unemployment

Below there is a table showing the development of the rate of total male unemployment; graph I, 3 (in Chapter I) and the regressions showing trends:

Table III, 2.

Regional trends in rates of male unemployment 1948-70

Region	Constant	Time	R^2	D.W.
Flemish	13.06* (.63)	- 0.50* (.05)	0.85	1.71
Walloon	2.95* (.44)	+ 0.05 (.03)	0.10	0.86
Brussels	7.17*	- .28* (.03)	0.83	0.71
NATIONAL	8.66* (.42)	- 0.28* (.04)	0.73	0.80

If the pronounced trend in the regression of unemployment in the Flemish region is not surprising in view of the growth in employment, the Walloon result is, since there is no significative tendency towards a rise in unemployment (R^2 equal 0.10 and the time co-efficient is not significative at .05) and the constant is low.

3. Position of the problem

The paradoxal nature of the situation can be immediately seen and this will guide the development of the chapter.

a. The paradox concerns, first of all, the relationship between employment and unemployment. All macro-economy, in both econometric models and plans of political economy, is geared to regarding the development of unemployment as a direct resultant of the development of employment, when it does not merely describe a rise in employment by so many units. The very least we can say is that the development in Wallonia over the long term is quite exceptional: an exceptional reduction in unemployment has not brought about a rise in unemployment. Of course, the two regressions essentially cover long-term developments, whereas econometric models are more geared to shorter term relationships. Thus, the relationship between the two variables must be analysed more minutely by distinguishing in their respective developments the component parts determined by the economic conditions of the moment and the more long-term ones. The paradox may dwindle to some extent, but it may be doubted 'a priori' that it will disappear.

In order to increase the paradox still further, we can point out that national figures appear to confirm macro-economic practice: the trend in employment (+ 0.32, or about + 0.3%) is of an extent that is fully comparable to the trend in unemployment (- 0.28, or also about 0.3% of employment). But regional disaggregation gives grounds for thinking that this is more or less coincidence, since it is difficult to believe in regional interdependence to a degree that the rise in employment in the Flemish or Brussels regions has made a significative contribution to the non-development of unemployment in Wallonia.

b. A second equally surprising aspect of the situation is the heterogenousness of the labour market, in the sense of space. In a country as small as Belgium - both in population and area - the labour market is divided into at least two zones, whose respective developments are diametrically opposed. This reveals how space can constitute a significative dimension in the labour market; in our present example, to ignore the aspect of space would be to be prevented from understanding the labour market.

c. But in point of fact, how does the labour market function ? That is the question which arises behind the paradoxes. We can list a few points:

1. Unemployment does not depend solely on demand for employment, but also on its supply. Over the long term, it must be determined what role demographic regression has played in Wallonia: could it explain the non-development of recorded unemployment there ? But supply of employment could have had a more short-term incidence, by reason of migration - especially the migration of foreign workers.

2. The internal dynamics of unemployment could be important. We have seen, for instance, that the elderly unemployment rate showed an upward trend in Wallonia, at least since 1957 and especially since 1965. The reduction in employment may be explained by hidden unemployment for which elderly unemployment is an indication.

3. An attempt will also be made to quantify the relative importance of various processes through which the population is likely to adapt itself to a development in employment and then to see to what extent employment itself is dependant on the development of the population.

4. It will also be necessary to return to the interpretation of recorded unemployment as compared to the theoretical concept of full or satisfactory employment. If the close relationship between employment and unemployment in the Flemish and Brussels regions appears to be a confirmation of the significa-

tive character of recorded unemployment, one may still ask if the absence of recorded unemployment is enough to guarantee satisfactory unemployment. Is the evolution of recorded unemployment an adequate indication ? Does it accord with other indications, such as wages, migration and rate of activity ?

#2. THE EMPLOYMENT-UNEMPLOYMENT RELATIONSHIP

In this problem, which appears to contradict 'a priori' all the theories, we have to start with the facts: the rate of total male unemployment and the index of salaried male employment from 1948 to 1970. Graph III, 2 opposes the evolution of two variables in the Flemish and Walloon regions. It suggests three component parts in the relationship between the two variables :

- a long-term component : in the Flemish region, the trends of the two variables make the expected negative relationship appear. We can already take note of its volume: the rise of more than 25% in employment corresponds to a reduction of ten points in the rate of unemployment; more concretely, for every 10 unemployed less, 25 more employed were required;

- the possible alternation of the relationship, over the long term, in Wallonia, where latter years are differentiated perhaps by the absence of the long-term relationship which characterised the rest of the period;

- the component of economic conditions, which "throws a spanner in the works", so to speak. In periods of low economic activity, unemployment stands at a higher level than that expected by virtue of the long-term relationship, the reverse occuring in years of boom conditions. In other words, the effect of variations in employment on unemployment is of greater volume in the short term than in the long term.

Econometry must serve to verify whether or not these superficial observations correspond significatively to reality. Moreover, it must permit the different component parts of the relationship between employment and unemployment to be quantified more accurately; the task has been an arduous one. After undertaking many unsatisfactory tests, we have arrived at a dual solution :

1. An identical regression for the three regions;

2. An improved regression, specific to the Flemish region and another better suited to the evolution in Wallonia.

Graph III,2

Total unemployment compared with employment

Flemish region (upper graph)

Walloon region (lower graph)
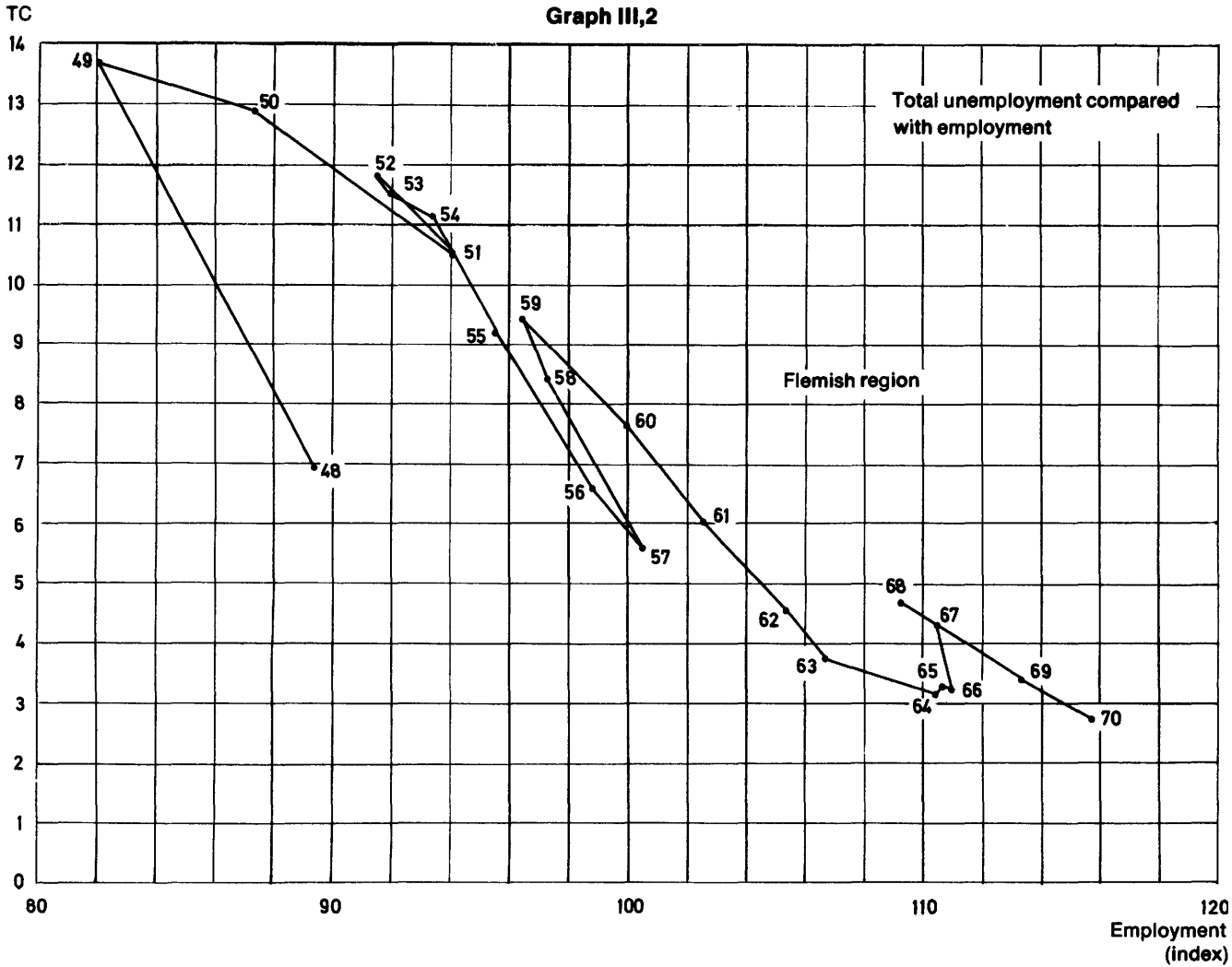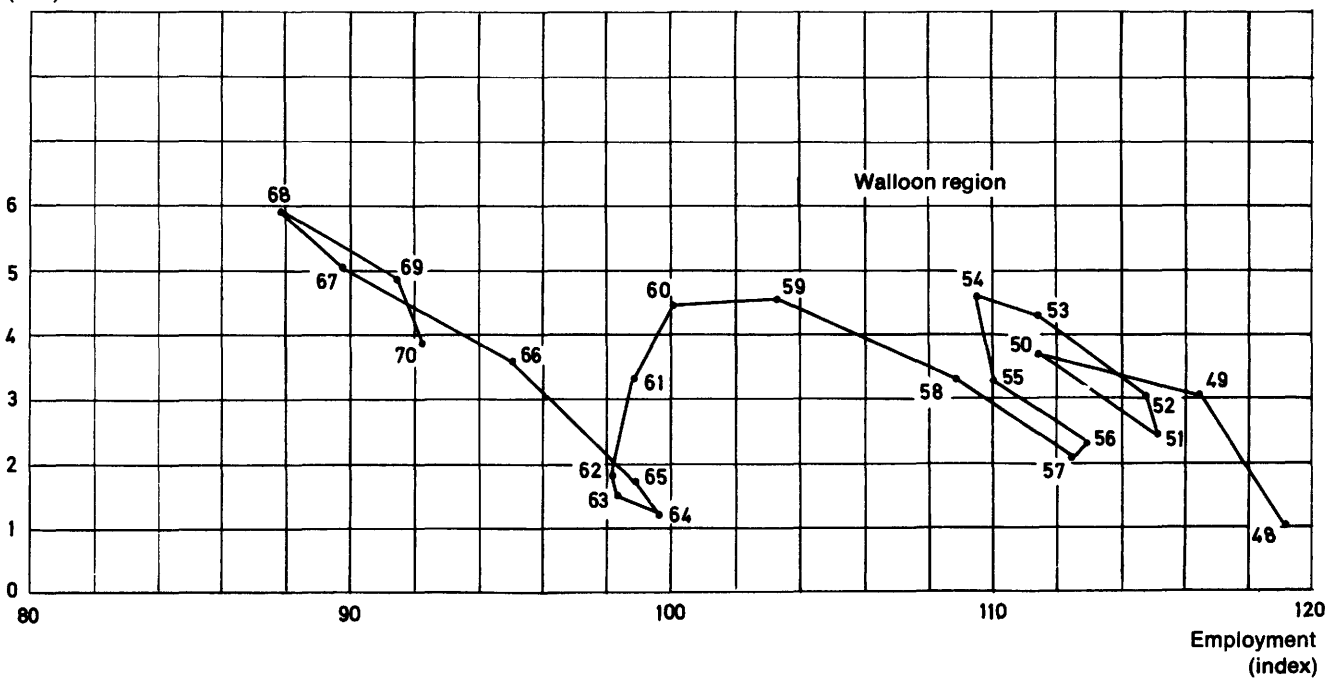
1. A regression common to the three regions

The graph suggests that if the long-term component is absent in Wallonia, the component of current economic conditions is present in all regions; the first question is, therefore, to isolate correctly these two components of the employment-unemployment relationship.

The methods consists of reducing the employment index (EI) to two distinct variables. Its annual value according to long-term trends (TEI) and its annual deviation as compared to the trend or its economic residue (REI). This reduction is based on the regressions of trends (table III, 1): the long-term value is obtained by estimating the trend TEI ≅ EI) and the residue is the difference between the value thus estimated, and the value actually observed each year.

$$REI_t = EI_t - \overline{EI}_t$$

thus, by definition: $EI_t = \overline{EI}_t + REI_t \cong TEI + REI$

Table III, 3 shows the results of the regression where the rate of male unemployment is dependent on this double variable of employment.

Table III, 3.

The rate of unemployment, dependent on two component parts of employment

Regions	Constant	TEI trend	REI residue	R^2	D.W.
Flemish	46.22* (2.23)	− 0.384* (.023)	− 0.565* (.091)	0.94	0.58
Walloon	7.27* (2.17)	− 0.036 (.021)	− 0.225* (.060)	0.49	0.50
Brussels	32.92* (1.79)	− 0.282* (.017)	− 0.137* (.023)	0.94	1.13
NATIONAL	92.80* (5.60)	− 0.855* (.055)	− 0.424* (.047)	0.95	0.65

The long-term trend having been isolated from the variations in employment determined by economic conditions, it is confirmed that in the Flemish and Brussesl regions, the reabsorption of unemployed is related to the long-term growth of employment and the TEI co-efficients have values that forecast the value of trends in unemployment very well (1). It is also confirmed that the long-term downward trend in Walloon employment, on the contrary, has not been accompanied by a long-term upward trend in unemployment (the co-efficient is not significative at .05 and if it is negative, it is extremely slight), at least if one takes the entire period from 1948 to 1970, because the possibility of a modification to the relationship at the end of the period must be kept in mind.

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(1) For the Flemish region, for instance, where the trend of employment is equal to + 1.32, one obtains − 0.384 (+1.32) = − 0.507, whereas the trend of unemployment is − 0.50.

On the other hand, the relationship considered on the basis of current economic conditions is highly significative in the three regions. Nevertheless, its extent differs considerably. Caution, however, requires that, if the full scope of this last result is to be grasped since, in reality, any annual variation in employment consists of an economic fluctuation and the realisation of a long-term trend; the REI co-efficient alone is not enough to quantify the effect of employment on unemployment.

In order to examine this quantification in detail, however, the adjustments to regressions must be sound. If the co-efficients are significative and if the R^2s are high in two or three regions, the R^2 in Wallonia, on the other hand, is somewhat low (0.49) and the Durbin-Watson rate especially indicates a sharp bias in Wallonia, as in the Flemish region and again at national level. Thus, we must first improve the quality of estimates.

The reader is entitled to ask if these refinements — or complications — of an econometric nature are really worth while. Our reply is to be found in the stake constituted by the employment-unemployment relationship. We can see in this, important political stakes, to which the Belgian case can contribute a dual experience. The Flemish region is a good example of a European region characterised by a high rate of unemployment. Of course, in order to reabsorb it, there had to be growth of employment; but, in order to reabsorb 5% unemployment, was it necessary and sufficient to increase employment by 5% (1), or does the relationship have a quite different dimension ? Further does the solution found for this situation also apply to the reverse situation, exemplified by Wallonia ? If employment falls by 5%, what degree of unemployment is to be feared ? Moreover, if — apparently, unemployment has not increased, can one conclude that a situation of "satisfactory employment" obtains ?

2. The process of reabsorption of unemployment in the Flemish region

The examination of residue in the preceding regression concerning the Flemish region shows that the bias revealed by the D.W. test comprises two features:

1. the regression does not adequately reflect variations in unemployment rates based on economic conditions; the residues have such a basis of trend;

2. the regression reflects the trend badly: the positive residues are concentrated at the beginning and the end of the period, the negative ones being found in the middle.

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(1) Let us bear in mind — because it is vital for understanding the development of the analysis — that however they are measured, the two variables are expressed in terms of a unit of measurement that is very similar: in one specific region, one unit in the unemployment rate and one point in the employment index represent similar numbers of workers. Indeed, one point in the employment index represents one per cent of O.N.S.S. employment in 1960; one point in the unemployment rate represents one per cent of those entitled to unemployment benefit for the current year; insured persons account for a greater volume since they comprise the unemployed, but also a lower volume because employment is measured by the I.N.A. M.I. The fact remains, however, that one rate is measured at the place of work and the other at the place of residence.

The only adjustment that has been successful in confronting these difficulties is the semi—logarithmic regression, where the logarithm of the unemployment rate is related to the two variables in their unchanged form :

$$\ln UR = 7.79^@ - 0.058^@TEI - 0.093^@REI \qquad R^2 = 0.97 \quad D.W. = 1.64$$
$$\quad\ (.26) \quad (.003) \qquad (.009)$$

The D.W. has risen from 0.58 to 1.64 (the auto—correlation of residues is reduced); the R^2 has risen again (from 0.94 to 0.97) and the co—efficients remain the most significative.

a. In a regression such as this, the concrete scope of the value of the co—efficients is more difficult to grasp, but the reason for this is precisly because the relationship is much more complex. Arithmetically speaking, the co—efficient of — 0.058 of the employment trend (TEI) indicates that in the long term, a rise of 10 points in the employment index entails a reduction of 58% in the "unemployment phenomenon"; for example, if the rate of unemployment were 10%, it would fall to 4.2%, but if it were 5% it would fall to 2.1%; in the first example, it would have fallen by 5.8 points, but in the second it would only have dropped by 2.9 points.

The long—term relationship between employment and unemployment is not, therefore, a linear one. The effectiveness of growth of employment as a remedy for the reabsorption of unemployed workers is reduced as the volume of unemployment falls: initially, the creation of 100 new jobs gives work to 58 unemployed, but later, 100 new jobs are only filled by 29 unemployed re—engaged.

The factor that is concealed by these figures, in the internal dynamics of unemployment, analysed in Chapter II. When there is a rise in unemployment, the phenomenon affects all age groups; but, conversely, re—employment is all the slower, the older the unemployed worker. Moreover, when the growth of employment starts a trend towards reabsorption of unemployment, this process is first of all favourable to young workers and those who remain unemployed consist more and more of elderly workers; the rise in employment is of less and less benefit to the unemployed, who appear as rejects from the system or abandoned workers.

Correlatively, these figures also mean that, in order to ensure the long—term growth of employment, the Flemish economy has had less and less recourse to registered unemployed and more and more either to reserves of population or to all types of migrant workers, or again to rises in the rate of activity which could indicate hidden unemployment. We shall try, in the succeeding paragraphs, to make an assessment of these various possibilities.

b. The semi—logarithmic form of the regression means that the relationship based on economic conditions is not a linear one either. In less favourable economic conditions, where the employment index is situated at a point below its long—term value, unemployment increases by 0.93 points if the index is 10% but only by 0.465 points where its initial level is 5% In other words, the variation of employment due to economic conditions, duly isolated, has an effect on unemployment which differs according to the long—term situation.

Here, we are in contact with another complex mechanism on the labour market. The effect of the economic situation depends on the "structure", if we can use this term to describe a more long—term context; we must stress that the liaison has two sides to it. Recession has a lesser impact on workers if the context of trend on the labour market is sound: 100 jobs less only means 465 more unemployed, because all the other adaptation mechanisms can play their part. When economic activity increases, this unemployment — of less volume — is reabsorbed more slowly because it is composed to a greater extent of workers which have been rejected by the labour market on grounds of age and/or inaptitude.

Furthermore, reaction to unemployment is greater when variations caused by economic conditions are concerned rather than variations in employment in the long term (the co-efficient of REI equals - 0.093, whereas that of TEI is only - 0.058); moreover, that is the origin of the unevenness revealed by graph III, 2.

c. All in all, what answer can we give to the question of the "reactivity-employment" of unemployment (1) ? The experience undergone by the Flemish region between 1948 and 1970 shows that the answer is complex: an increase of one point if the index of employment does not have a constant and unique effect on the reduction of points in unemployment rates. On the contrary, the effect ("reactivity-employment") varies in two senses:

1. according to whether the rise (or fall) of employment is based on trends or economic conditions;

2. according to whether the initial level of unemployment is high or low. The answer is thus complex but precise. Nevertheless, before making a quantification, it is of interest to consider the other aspect of historical experience: the Walloon and Brussels regions — with a view to attempting to make a more general reply to this question whose theoretical and political stakes are obvious.

3. The relationship in Wallonia

With regard to Wallonia (2), where the preceding regression also suffered from auto-correlation of residues, but still had a low R^2, the first improvement consisted of adding a dummy variable (Dt) equal to zero prior to 1965, 1 in 1965, 2 in 1966 .... and 6 in 1970 (table III, 4). It showed itself to be highly significative over the last few years, over and above variations based on economic conditions and the very negative trend in employment. The rise was considerable; the level of unemployment increased by 2.16 points in 6 years. We can point out that the co-efficient of the trend (TEI) remained non-significative (it even became positive!). The rise in unemployment is therefore not directly related to the trend in employment which characterised the entire period; but at the end of the period, something changed; this could be the indirect effect of the fall in the trend of employment.

Nevertheless, the D.W. bias remained significative and an attempt at a semi-logarithmic form improved nothing. Anticipating the content of the following paragraph, we may say that the sole remedy we found consisted of simultaneously considering permanent migrations (Belgian and foreigners, internal and external).

Indeed, these have a marked relationship to current economic conditions; a drop in employment brought about by such conditions has a different effect on unemployment if, at this moment, some workers leave the region. The taking into account of this phenomenon improves, both with respect to the R^2 (which reaches 0.90) and the Durbin-Watson level (1.09).

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(1) The use of this rather crude term is meant to convey the same idea as that of the "flexibility-employment" of unemployment, but measured otherwise, since the context imposes the need to work on specific measures for the two variables and, thus, to adopt a specific measure for their relationship.

(2) For Brussels, the preceding regression was sufficiently satisfying to be retained as it was.

Table III, 4.

Various regressions in the unemployment rate (UR) in Wallonia

Characteristics of the RG — Dep. var.	Added	Constant	TEI trend	REI residues	Dt	Migrations	R2	D.W.
UR		7.27* (2.17)	− 0.036 (.021)	− 0.225* (.060)			0.49	0.50
UR	Dt	0.66 (2.82)	+ 0.250 (.260)	− 0.215* (.049)	+ 0.36* (.12)		0.67	0.75
ln UR		0.27 (.80)	+ 0.008 (.007)	− 0.061* (.017)	+ 0.10* (.03)		0.66	0.79
UR	Migrat.	2.07 (1.68)	+ 0.012 (.015)	− 0.282* (.043)	+ 0.26* (.07)	(1)	0.90	1.09

(1) See details in following paragraph (Table III, 9).

4. The reactivity-employment of unemployment

In order to understand the relationship between employment and unemployment, it has been necessary to have recourse to different forms of regression for the three regions: is it possible to draw general conclusions from such diversified Belgian experience ? Table III, 5 attempts to oppose quantifications of reactivity and the employment of the unemployed, by distinguishing – for the three regions and nationally – the relationships based respectively on current economic conditions and trends and by including estimates which take account, more or less broadly, of other variables. Each figure indicates by how many points the rate of total male unemployment drops, when the index of salaried male employment "increases" by one point: when the long-term trend rises by one point per year, or when the employment situation based on current economic conditions is one point above the trend. For example, a figure of − 0.56 means that this "increase" of one point in the employment index is linked to a drop of 0.56 points in the unemployment rate, or more simply, that 100 more jobs means 56 less unemployed.

Table III, 5.

The reactivity-employment of the unemployed (1948-70)

Relationship	Region		Average	When initial unemployment is:		
				10%	5%	3%
Specifically based on economic conditions	Flemish		- 0.565	- 0.930	- 0.465	- 0.279
	Walloon	without migr.	- 0.215			
		with migr.	- 0.282			
	Brussels		- 0.137			
	NATIONAL		- 0.424			
Specifically based on trends	Flemish		- 0.384	- 0.580	- 0.290	- 0.174
	Walloon		0.			
	Brussels		- 0.282			
	NATIONAL		- 0.855			

Source: regressions of Tables III, 3 and III, 4.

a._ In_current_economic_conditions

At a level specifically geared to current economic conditions, the Flemish semi-logarithmic relationship appears to be such as to reconcile the inter-regional differences revealed by the non-logarithmic relationship. In fact, the Walloon regression which takes account of migrations, gives a co-efficient of - 0.282, similar to the Flemish co-efficient (- 0.279) for an initial unemployment rate of 3% - a rate frequently occuring in Wallonia; similarly, the national co-efficient (- 0.424) is close to that obtained in Flanders for a corresponding level of unemployment (about 5%).

There is one reservation, however. In Brussels, where unemployment was higher than in Wallonia, on the average, reactivity is very feeble (- 0.137). A reduction of 100 jobs, brought about by current economic conditions, resulted in only 14 unemployed. One thinks immediately of the influence of alternating migration: the variation in employment recorded at the place of work can cause unemployment for persons who work in Brussels but reside in the Flemish or Walloon regions (unemployment statistics are established at the place of residence). The deficiency of statistics on this subject prevents the Brussels region from being better analysed, since it is there that alternating migration has the greatest influence.

If this interpretation is accepted, several conclusions become very evident:

1. The development of employment caused by current economic conditions has less influence on unemployment, when and where the long-term level of unemployment is low. When economic activity is low, employment provokes less unemployment (93 unemployed for 100 fewer jobs if the rate of unemployment is 10%, but only 28 if the rate is around 3%); when the labour market is structurally favourable, the other processes of adaptation come into play before unemployment, whether it be unfilled jobs, migration – permanent or alternating – or the various forms of hidden unemployment (based on inactivity or independent workers). Similarly, when economoi activity revives, the growth of employment reabsorbs fewer unemployed when and where it is structurally weak. On one hand, this weaker unemployment, but including a higher proportion of elderly workers and/or less suitable persons, takes longer to be reintegrated in the system. The other side of this phenomenon is that the growth of employment is assured to a greater degree by other reserves of manpower.

2. Current economic reactivity of unemployment towards employment is conditioned not only by the initial rate of unemployment, but also by the evolution of the various processes of the supply of employment: for Brussels, there is probably the effect of variations caused by alternating migration; for Wallonia, that of permanent migration has been revealed (1). Even on the purely economic level, it is not possible to ignore the labour market as a whole.

3. More generally, current economic reactivity, even when it is greater than long-term reactivity, is far from being worth a unit: for an unemployment level of 5% or thereabouts, a current economic variation of 100 jobs is commensurate with a variation of less than 50 unemployed (the co-efficient then equals – 0.465 and only reaches – 0.93 with an unemployment rate of 10%). Both for reasons of warning, as well as reabsorbing, the unemployed, it should not be taken from granted, in general, that employment is the exact reverse of unemployment.

b._ The long_term

With respect to the more long-term specific relationship, it may be said that the Brussels co-efficient, bearing in mind the general level of unemployment in this region, can be inserted perfectly well in the range of co-efficients produced by the Flemish semi-logarithmic relationship (– 0.282 and – 0.290 with an unemployment rate of 5%). For these two regions, characterised by accentuated trends in employment and unemployment, two conclusions may be put forward :

1. Constant growth of employment absorbs a decreasing number of unemployed as it develops : the remaining unemployed are reabsorbed more and more slowly and new jobs are filled by other workers.

2. Reactivity caused by trends is much lower than that brought about by current economic conditions – a little more than half. The equilibrium of the market, in the long term, depends primarily on other processes in the supply of labour.

There remains, however, the major exception of Wallonia, where unemployment only increases at the end of the period, whereas employment had a downward trend for a long time previously. The reactivity-employment of unemployment cannot be quantified in this region, perhaps because the period is too short for that to be determined. This is also probably because the near-zero level of the co-efficient

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(1) The consideration of migration as a factor raises the reactivity co-efficient (from – 0.215 to – 0.282). In itself, one could expect that, on the contrary, the possibility of adaptation by migration would attenuate the effect of employment on unemployment. Nevertheless, the multi-co-linearity between the phenomena could distort the estimate of reactivity if this co-variation were ignored; in introducing it, a distorted estimate is corrected and a rise in the co-efficient is noted; this rise does not mean in itself that reactivity grows if there is migratory adaptation, but that its estimate was distorted – under-valued in fact – in ignoring it.

can only be understood by the simultaneous consideration of other processes in the evolution of long-term supply of labour. Such was the meaning of the third conclusion drawn from the level of the current economic cycle.

Let us refer, finally, to the co-efficient for the whole of the country: - 0.855. It appears to be surprisingly high; but is it not because it is merely the consequence of an average calculated on the basis of situations that are too much in contrast for the figure to have any real meaning ?

#3. UNEMPLOYMENT AND SUPPLY OF LABOUR

It would appear 'a priori' appropriate to look for the explanation in terms of the demand for employment, first of all. Indeed, regressions based on the dual component part of the development of employment gives R^2s of 0.94 in the two regions and 0.95 at national level. But the Walloon R^2 is much less satisfactory: 0.49; although the addition of a partial trend (Dt) raises it to 0.67, it has already been pointed out that the inclusion of migration in the consideration raises it to 0.90. In a general sense, since unemployment constitutes a disparity between supply and demand, its explanation requires that supply of labour be analysed as well; by ignoring it, there is a risk of distorting the estimate of the influence of demand.

There is, however, a second reason for considering supply: it concerns the interpretation of recorded unemployment as an indicator of "unsatisfacotry employment". On one hand, the probability that recorded unemployment constitutes such an indicator would be reinforced if a high rate of unemployment were correlated to other indications of a low demand for labour, furnished by processes of supply such as emigration or low rates of activity (or even the evolution of wages). On the other hand, the case of Wallonia, where unemployment remained low for a long time, despite the drop in employment raises the question of whether low recorded unemployment constitutes an adequate indication of satisfactory employment. Analysis of the other processes of supply is necessary to reply to this and, more generally, to understand how the population adapted themselves to the development of employment.

Apart from the fact that adaptations in supply can be effected by means of several very different processes, two difficulties arise simultaneously: deficiencies in statistics and the fact that adaptations may be effected very differently according to whether a long-term or short-term period is concerned. In order to be able to grasp the mechanisms of current economic conditions continuous chronological series must be available and variables of supply must be introduced into the regression on unemployment at the same time as those of demand, their short-term components having been isolated. Regionalised statistics permit this to be done for permanent migration, but not, for instance, for rates of activity. The same method is not necessarily vital for long-term phenomena. If two regions are constantly characterised by a different context, this would not be a good variable for a regression with a chronological series; it would be better to make a comparison on the basis of an inter-regional cross-section, which would relate chronological regression to co-efficients to long-term phenomena. These, however, could only be determined at specific dates; nevertheless, since the results of the 1970 Census are barely available, we shall have to restrict ourselves to the period 1947-61.

1. The relative importance of various processes of supply

We shall consider total male employment (wage-earning and self-employed persons), or the active population without unemployed), at the place of work in 1961, as opposed to 1947 (Table III, 6). From a distance of 14 years, we can see 36,350 additional jobs in Brussels, which represents + 7.9% of jobs located in Brussels in 1947: where

do these 36,350 men now (in 1961) employed in Brussels come from ? Conversely, male
employment in Wallonia dropped by 152,963 units; undoubtedly this reduction of 16.8%
cannot necessarily be explained by an equivalent volume of unemployment, because
during this period the Walloon population could have diminished for demographic
reasons and their behaviour could have modified: they could have emigrated or
reduced their inclination to work.

Table III, 6.

Process of regional development of total male employment (1947-61)

Process	Development of emp-loyment attributable to:	Flem. R.	Wall. R.	Bruss. R.	NATIONAL
	natural development of population	+ 8.5	- 7.9	- 6.5	- 0.1
	permanent migration	- 2.7	- 0.4	+ 9.4	+ 0.3
	modifications to the rates of activity (male)	- 5.1	- 6.1	- 3.4	- 5.1
	reabsorption (+) or rise (-) in unemployment	+ 0.9	- 1.1	+ 1.2	+ 0.2
	modifications in alterna-ting migration	- 3.5	- 1.3	+ 7.3	- 0.8
	ACTUAL DEVEL. OF EMPLOY-MENT	- 1.8	-16.8	+ 7.9	- 5.5
	Actual devel. of self-employed	- 9.6	- 6.3	- 3.9	- 6.9
	Actual devel. of wage-earners	+ 6.8	-10.5	+11.9	+ 1.5
	Ditto, but as percen-tage of wage earners	(+10.6)	(-14.0)	(+15.4)	(+ 2.1)

N.B. All processes are expressed as % of total employment (active population
less unemployed) of males in 1947, at the place of work, except in the
last line.

Source : Ph. De Ville and R Leroy, op. cit.

a._ Method

A formula has been worked out and calculated (1) in order to determine the respective
importance of each of the processes as exactly as possible, by which the population
(supply of labour) have adapted themselves to the development of regional employment
(demand for labour). Carried out at the level of 41 "arrondissements", the calcula-
tion is applied to each quinquennial category of age and sex, so as to take account

(1) Ph DE VILLE and R LEROY, "L'Evolution régionale de l'emploi comme rencontre de
    l'offre et de la demande de travail".Labour Dept. Louvain 1968 (Stencilled). The
    essential is found in an article in "Recherches économiques de Louvain"
    "Processus et facteurs de l'évolution régionale de l'emploi".

of the development of the demographic structure.

The example of Wallonia will make the results easy to understand. First of all, let us remember that all processes are expressed as percentages of employment in 1947 at the place of work. The disparity between employment at the place of work and employment at the place of residence represents alternating migration; from 1947 to 1961, the balance became less favourable in Wallonia — either more negative or less positive. This development of the balance of alternating migration constitutes a negative contribution of 1.3%. The other processes are calculated on the basis of the population living in Wallonia, even if their contribution is, finally, expressed as a percentage of employment at the place of work.

On one hand, the Walloon population likely to work could have diminished. In order to isolate the sole incidence of the development of population, it is assumed that at each age level the rate of activity (more precisely the rate of employment — unemployed workers not being included here in the active population) has remained unchanged. The development of population has two causes: natural demographic move- ment, as a consequence of mortality and births in preceding years and permanent migration (internal and external, Belgians and foreigners). At the rate of constant employment, the natural development of the population implied a reduction of 7.9% in employment (place of work) and the contribution of the migratory balance was negative (— 0.4%).

On the other hand, the inclination of the Walloons to work could have changed. At an identical volume and age structure, the reduction in rates of activity (unemployed included in this case) of male workers should have entailed a contraction of 6.1% in employment. Furthermore, these rates of activity included an increased proportion of unemployed: the rise in unemployment "rates" (unemployment being calculated here as a percentage of the total population of each active age group) corresponded to a fall of 1.1% of employed workers in Wallonia.

The following outline summarises the calculation :

1. At the place of residence: (a) population: — natural movement   — 7.9

                                                  — permanent migration — 0.4

                      (b) inclination to
                          activity:

                                                  — rate of activity   — 6.1

                                                  — unemployment   — 1.1

2. At the place of work: — development of alternating migration   — 1.3

3. Total: actual development of employment at the place of work   — 16.8

Finally, since the analysis of registered unemployment bears essentially on wage- earners, the latter items in the table divide employment into self-employed persons and wage-earners. In order to facilitate subsequent comparisons, the actual develop- ment of salaried employment is expressed not only as a percentage of total employment (— 10.5%), but also as a percentage of salaried employment (— 14.0%).

b._ Two means of measurement

So as to specify the relative importance of processes of supply in regional develop- ment, two more general measurements are given in table III, 7; they concern total employment of males and females and they start from the most disaggregated level of developments in the 41 "arrondissements" :

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1. The maximum disparity in the contribution of a process: the disparity between the contribution in manpower from the "arrondissement" where it is greatest and the contribution from that where it is the least.

2. The transfers of employment linked to a process: the sum in absolute values (whether with plus or minus values) in the 41 "arrondissements", of contributed employment attributable to a process.

Table III, 7.

Two means of measuring the relative importance
of processes of development of employment

| Process | Maximum disparity of contribution | | | "Displacements of employment |
	Max. contr.	Min. contr.	Disparity	
natural movement	+ 40.7 Maaseik	- 12.1 Charleroi	52.9	283.6
migrat. : permanent	+ 10.0 Brussels	- 18.1 Ypres	28.1	198.0
alternating	+ 9.1 Courtrai	- 21.0 Maaseik	30.1	169.9
perm. + altern.	+ 16.4 Brussels	- 31.0 Dixmude	47.4	
rate of activity : males	- 1.9 Antwerp	- 9.7 Mons	7.8	129.4
females	+ 9.5 Dixmude	+ 0.4 Verviers	9.1	130.2
unemployment	+ 2.7 Ostende	- 3.3 Mons	6.0	34.5
ACTUAL DEVELOPMENT OF EMPLOYMENT				
M + W; wage-earners and self-employed	+ 18.5 Bruges	- 28.9 Mons	47.4	322.2
M : wage-earners and self-employed	+ 13.2 Bruges	- 34.8 Mons	48.0	277.2
self-employed	- 13.3 Ostende	- 31.6 Louvain	18.3	174.3
wage-earners	+ 43.6 Turnhout	- 36.9 Mons	80.5	242.4

N.B. : All percentages pertaining to processes have been calculated in relation to total employment of males and females at the place of work in 1947; developments - 1947-1961

"Displacements of employment" are expressed in thousands

Source : Ph De Ville and R Leroy, op.cit.

c. The development of five processes

In wishing to explain the development of unemployment by the development of (salaried) employment, it was noted that even if the relationship is often highly significative, its scope - the reactivity-employment of unemployment - is limited. The comparison of five processes of supply reveals that, in general, the unemployment process has by far

the least quantitative importance (1). In the long term, unemployment does not con-
stitute the main quantitative mechanism in the adaptation of supply to demand: the
growth of employment is more dependent on other processes of supply.

Among these latter, natural movement has a special place. From an explanatory point
of view, it may be considered as being exogenous, or determined outside the labour
market during the period under analysis, since it depends only on the number of
births during the years prior to 1947 and on mortality. From the point of view of
the criterion of satisfactory employment, it does not constitute evidence of any
problem — at least, not directly. The reduction of employment, which corresponds to
a "natural" drop in the population, does not raise a problem of the well-being of
individuals, even though the size of the region or social group may suffer as a
result.

It appears to be quite clear that the natural movement of population has varied
greatly in volume from one region to another; it is the process possessing the high-
est degree of variability. For instance, between two "arrondissements" in Limburg
and Hainaut respectively, its contribution to employment could differ by as much as
52.9%. Nevertheless, stress must also be laid on how much employment has developed
in a manner different from the expected demographic development. In the Flemish
region, the demographic growth of + 8.5% was counter-balanced by a slight fall in
total male employment; in Brussels, employment grew by 7.9%, despite a drop in popu-
lation of 6.5%, whereas in Wallonia a similar demographic trend (- 7.9%), was matched
by a reduction in employment of 16.8%. Natural movement has thus had a very strong
influence, but the other processes of supply are essential for understanding the
interplay of effects in regional developments of employment.

The two last processes — migration and the rate of activity — are endogenous; they
constitute "voluntary" adaptations of the population. Moreover, they may constitute
indications of unsatisfactory employment. Such an interpretation, however, is
necessarily dependent on judgements of value, which do not always have the benefit of
a general concensus of opinion. Let us take the case of migration: it may involve
the decline of a particular region and make the recovery of the situation more diffi-
cult, although being beneficial to the individual; but even for the individual,
migration may constitute a costly remedy. Without making any commitment to one par-
ticular interpretation, let us look at the important and greatly varying role migra-
tion has played in the different regions. Permanent migration and development of the
alternating balance make a positive contribution of 16.7% to Brussels and a negative
one to Wallonia and especially to the Flemish region (- 2.7% for permanent migration
and, more unexpectedly, - 3.5% for alternating migration).

With regard to the rate of male activity, although it has fallen everywhere, its
contraction — bearing in mind age structure — has not had the same impact everywhere.
The question is whether such contraction has been more pronounced where the demand
for labour was low, so that the phenomenon of hidden employment could be discerned.
The same question could be put in connection with self-employed persons, since a

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(1) Without prejudice to the conclusion drawn, various reservations must be made with
respect to detailed quantification, by reason of available statistics. 1. Assess-
ed at two different dates, the unemployment process does not include the rises
and falls which have occurred in the interim. 2. Unemployment is calculated
here on the basis of the rate in % of wage-earning active population. 3. Wage-
earners — in the meaning of the Census on unemployment — include certain cate-
gories of worker (mainly civil servants) who are not covered by Social Security
statistics; thus, there is some time-lag in regional developments of wage-earners,
according to figures taken from the 1947 and 1961 unemployment Censuses, or
according to trends calculated earlier on the basis of ONSS statistics.

return to independent activity _could_ be a reflection of under-employment on the wage-earning labour market.

2. Population and migration

Statistics do not permit each process to be followed from year to year, nor even to assess them fully at either extremity of the period under consideration. Nevertheless, an analysis is possible with respect to population and migration, though limited by the fact that it deals with the entire population (all age groups, men and women) and certainly not only the active or working population. The way in which statistics are prepared and published leaves something to be desired, however; by making large-scale adjustments (1), it is possible to obtain a fairly reliable series at the level of the main regions.

a. Wallon and Flemish populations

Once again, the contract between the Flemish and Walloon regions is striking (graphs III, 3A and B); moreover, the development of the Walloon population is rather surprising. Indeed, demographic development there is governed by the development of the current economic situation: the population increases during boom periods, whereas the annual trend is negative in times of recession. Because annual variations in population depend mainly on external migration, the demand for foreign workers is made according to the exigencies of the current economic situation. Births less deaths produce only a minimal credit balance and internal migration often shows a debit balance.

In the Flemish region, on the contrary, population movement depends primarily on births and deaths. External migration also depends on current economic conditions in this region, but its impact is much less. In addition, the trend of internal migration will also be noted, the balance of which tends to become positive; the amounts involved are certainly minimal, but the trend is regular enough for a dual indication

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(1) The basic data come from the I.N.S., but they have been considerably reworked.

    a. External_migration. Three corrections are to be made:

1. The factor: "Persons who have departed and whose new residence is unknown" (P.D.U. external), must be added to the figures on departures.

2. The balance of internal migration appearing at national level ("Population movements to...."), must be added. It is possible to obtain the geographical distribution of this balance by comparing, for each "arrondissement", the apparent balance of internal migration with that calculated on the basis of the matrix of internal migration ("Migratory movements to ..."). This matrix is not available for 1963, however; thus, the breakdown between internal and external migration for this year has been estimated.

3. At each Census (1961 and 1970), the recorded population appeared to be greater than the population assessed from year to year. The 1961 adjustment was distributed equally over the preceding 14 years and that of 1970, over the preceding 9 years.

    b. Population: figures are adjusted according to point a.

    c. Births_less deaths: published balances.

    d. Internal_migration: obtained residually (corresponding to figures for matrices on internal migration).

Graph III,3 (a)

In thousands

POPULATION : (a) Flemish region
(M + F ; Belgians + foreigners)

Births and deaths

Population : annual increase

Ext. migr.

Int. migr.

1948 1950 1955 1960 1965 1970

50 40 30 20 10 0 −10

Graph III,3 (b)

POPULATION: (b) Walloon region
(M + F; Belgians + foreigners)

in thousands

Births and deaths

Int. migr.

Population: annual increase

Ext. migr.

in thousands
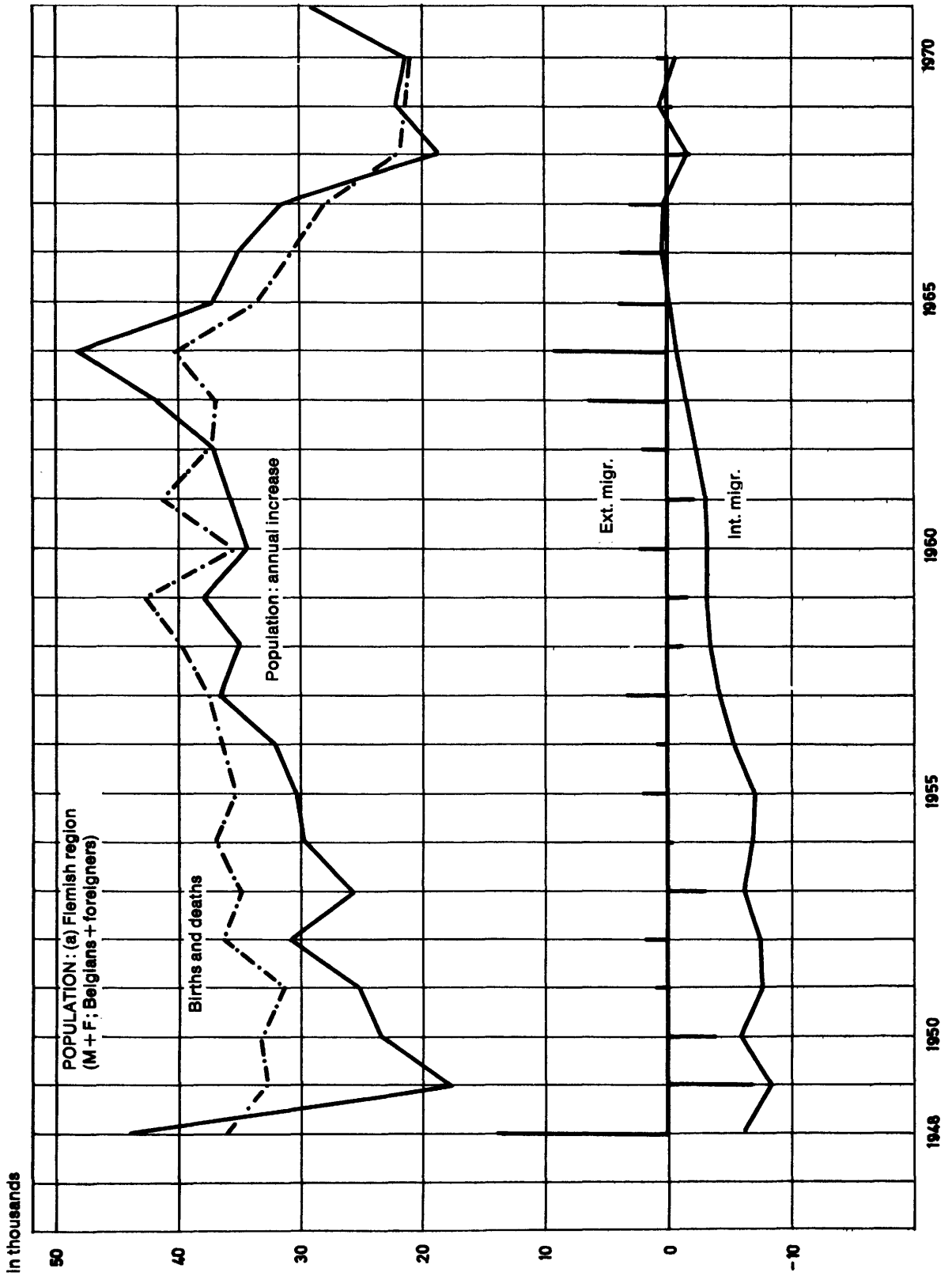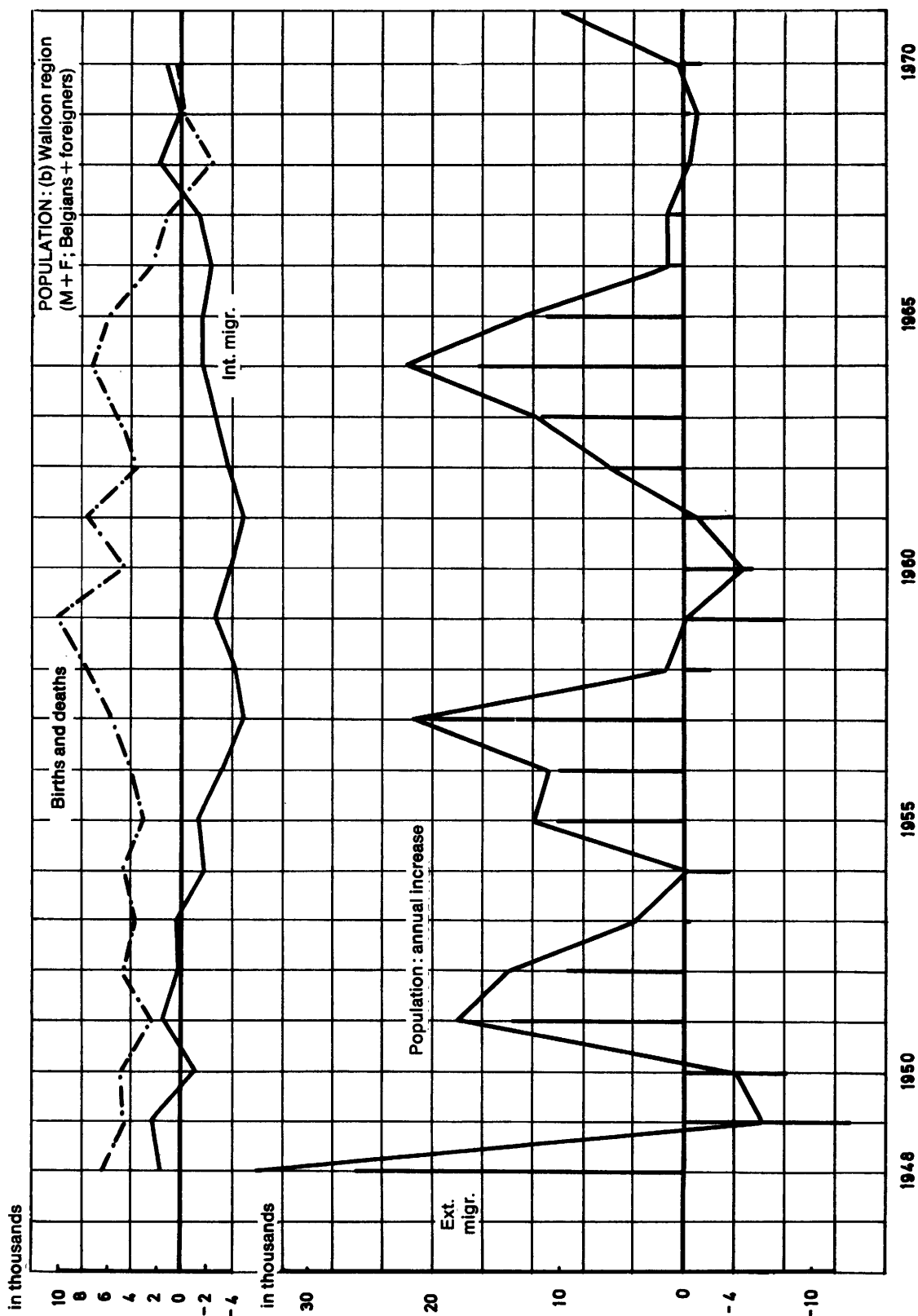
to be seen there: firstly, the region had a deficit of employment and, secondly, the situation had a tendency to reverse itself.

b._ Contribution_by_active_persons

Another factor to be noted is that, in the Flemish region, there has been a fall in the curve of births less deaths since 1965, entailing a reduction in the growth of population. But this could have had no influence at all on the labour market, since all age groups of the population were involved. A provisonal calculation enablesthe development of contributions, by natural movement, to the active population to be assessed better.

Table III, 8.

Expected development of the active population, by natural movement

	Flem. R.	Wall. R.	Bruss. R.	NATIONAL
a._ as _%_of basic year				
1947-61	+ 6.7	- 8.3	- 9.4	- 1.2
1961-70	+ 5.4	+ 1.6	- 2.5	+ 2.8
b._ as_a_rate of_annual growth				
1947-61	+ 0.45	- 0.58	- 0.65	- 0.15
1961-70	+ 0.39	+ 0.12	- 0.17	+ 0.20

NB: — the "natural movement" process is concerned, as defined above;

     — nevertheless, here it is calculated as a percentage of employment (1947-61) or of the active population (1961-70) at the place of residence.

     — Sources: 1947-61 : Ph. De Ville and R Leroy, op. cit.
                       1961-70 : approximate calculation, based on the period
                                   1965-70.

For the country as a whole, the natural development of the population of active age has been slightly modified: annual falls of 0.15% have been succeeded by rises of 0.20%. But such modifications have been sharper at regional level, since developments in the opposite direction have been noted. In the Flemish region, the demographic contribution has dminished, whereas in Brussels, it is the fall that has diminished further (and considerably) and in Wallonia, a slight rise has replaced a pronounced drop. Thus there has been, in this region, an interruption in this process of the supply of labour between the two periods, whereas employment continued with its contraction. Although, during the period 1947-61, the demographic fall was a contributing factor in the explanation that the reduction of employment was not to be considered as increased unemployment, during the second period, population was no longer falling; this is one of the possible reasons for the rise in unemployment since 1965.

c._ The influence of_migration_on_unemployment

Permanent migration can have a dual influence on unemployment. The direct influence is obvious: with emigration, a fall in employment may result in causing less unemploy-

ment; like other processes of supply, migration constitutes a substitute for unemployment — both in the short and in the long term. But, because of its connection with the current economic situation, emigration in periods of low economic activity can have an indirect influence as well. By reducing the necessary volume of dismissals, it restricts the role played by cumulative mechanism which commits elderly workers, insofar as they have been dismissed, to long-term unemployment, even to the point of being rejected from the circuit.

Both in the Walloon and Flemish regions, the migratory balances, expressed as a percentage of the population (MB), are related to the current economic situation, as their relation to the rate of unemployment (RU) testifies :

		R^2	D.W.
Flemish region	$MB = 0.17^{@} - 0.03^{@} \; RU$ $(.03) \quad (.005)$	0.69	1.71
Walloon region	$MB = 0.77^{@} - 0.20^{@} \; RU$ $(.17) \quad (.05)$	0.45	1.54

If the relationship is closer in the Flemish region, whereas migration is of less volume there, it means that in addition to the current economic situation, there is a more long-term relationship between the fall in unemployment and the rectification of the balance of internal migration (MB comprises permanent migrations, both external and internal).

At the methodological level, these correlations between migration, unemployment and employment, encourage the introduction of migration in the unemployment regression as an element of employment. By ignoring them, the other variables could involuntarily cover migration and their coefficients could, therefore, become distorted. Conversely these correlations bring about a considerable difficulty: in fact, the first relationship between unemployment and migration is a negative one. It is by virtue of a high rate of unemployment that immigration policy is slowed down; moreover, by simply introducing the migratory balance in the regression, the balance appears to have a negative significance. What we want to isolate is the possible second relationship: thanks to this contraction of immigration, is unemployment reduced to a greater extent ? The expected sign is positive.

In order to get out of the difficulty, the time factor must be better grasped. The solution adopted consists of :

1. calculating the cumulative migratory balance from year to year so as to take account of migratory contributions in previous years;

2. calculating the trend, in relation to time and of assessing the annual disparities (RMB) between the observed value and the value calculated in the long term, with a view to isolating the component part — current economic situation — of the cumulative curve;

3. conserving the migratory balance (MB) so as to embrace the other component parts of time development.

Table III, 9.

Unemployment rate, with respect to employment and migration

Region	Constant	TEI trend	REI residues	RMB	MB	Dt	R²	D.W.
Flemish	47.40* (3.47)	− 0.39* (.03)	− 0.568* (.084)	+ 2.10* (.48)	+ 0.34 (2.73)		0.98	1.46
Walloon	6.80* (1.39)	− 0.03* (.01)	− 0.301* (.060)	+ 1.99* (.45)	+ 0.50 (.66)		0.82	0.63
Walloon	2.07 (1.68)	+ 0.01 (.02)	− 0.282* (.043)	+ 1.62* (.36)	+ 0.16 (.51)	+ 0.26* (.07)	0.90	1.09

This economic component of permanent migration is quite significative in the two regions. Although it does not improve the Flemish regression, which does not need it, it does raise the R² for Wallonia and, together with the dummy variable (Dt), it reduces the bias of the auto-correlation of the residue (D.W.). We have already seen that the taking into consideration of migration, modified the estimate of reactivity-employment of unemployment.

At first sight, the value of RMB coefficients is fairly high, but caution must be exercised. Firstly, the variable itself often has values of around 1%; such a negative value entails a drop in unemployment of only 0.16 points (in Wallonia). Secondly, it is difficult to know how many male wage-earners constitute this migratory balance of 0.1% of the total population.

If the scope of the phenomenon cannot be appreciated any better, there remains the fact that migration has an influence on unemployment and contributes significantly towards explaining the development in Wallonia. In a period of low economic activity, emigration means that unemployment increases less, and in a period of high economic activity, immigration constitutes a manpower reserve which can be used in place of unemployed workers. The fact that this mechanism raises the R² in Wallonia from 0.67 to 0.90 (viz., + 0.23), or from 0.49 to 0.82 (+ 0.33), if the partial trend (Dt) is not introduced, means that it explains a not inconsiderable part of the low rate of Walloon unemployment (at least 23%).

3. Conclusions

Although limited by the statistics available, this analysis brings to light certain relationships between unemployment and the supply of labour; let us try to place them, by distinguishing the current economic cycle from the more long-term context.

a. In the current economic situation

1. Permanent migration, especially external migration by foreigners, has played a substitute role for unemployment in the current economic situation, a particularly important one in Wallonia. If the migratory process appears to be a substitute for unemployment, it may be thought that it constitutes an indication of "unsatisfactory unemployment"; if this is the case, then the consequences of the deficiency of employment have their effect on workers from foreign countries.

2. Two other processes of supply may have played the same role. Firstly, modifications to alternating migration: it would be a good idea to include them in the

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analysis by virtue of the time-lag between unemployment statistics, established at the place of residence, and employment statistics established at the place of work, so as to rectify any possible distortion in the coefficient of reactivity-employment of unemployment. It is, however, less probable that modifications to alternating migration could constitute a substitute for unemployment in the <u>current economic situation</u>, since it develops in all regions with a high degree of synchronisation.

Secondly, fluctuations in employment brought about by economic conditions can be expressed in variations in rates of activity. Foreign research, especially American, has established the existence of this hidden unemployment, created by the current economic situation, among elderly workers (as well as among young workers and women). Belgian statistics do not enable the phenomenon to be verified directly. On the other hand, the peculiarities of unemployment statistics give grounds for thinking that a proportion of this phenomenon may be covered by a proportion of recorded unemployment. If elderly unemployed workers (long-term) were included among inactive persons, the rate of activity should have 'ipso facto' an economic nature. Thus, indirectly, it appears highly probable that this other process of adaptation of supply based on the current economic situation, has had an influence, and it signifies a phenomenon of unsatisfactory unemployment.

3. These adaptations, of economic origin, may make their effects felt in the longer term. If emigration caused by the current economic situation reduces the number of elderly workers dismissed, the scope of this unemployment, which only reabsorbs slowly, will be less over the longer term. This is what appears to have been the case in Wallonia, for some time now.

<u>b._ In_the_long term</u>

1. Permanent migration is also a factor in the long-term relationship, by the indirect effect of its sensitivity to economic situations, but also by the long-term trends that it manifests. In the Flemish region, the growth of employment is matched by a regular reduction of internal emigration, which has constituted an alternative reserve of manpower to unemployment.

2. The natural movement of the population of active age, diametrically opposed in the two regions, is of a nature to explain the differences in reactivity-employment of unemployment in the long term. In the Flemish region, the demographic pressure explains the high level of unemployment, which is evidence of structural under-employment; it also helps to explain why the growth of employment makes progressively less demand for unemployed persons. In Wallonia, the reduction in population has enabled the fall in salaried employment not to raise the level of unemployment for a long term; at the end of the period, the reversal of the trend in population ended this source of adaptation and unemployment increased.

3. The importance of still other processes could also be quantified for the period 1947-61, such as changes in alternating migratory movements, differential reductions in the rate of activity for males and self-employed persons. They demonstrate how the relationship between population and employment, especially in the long term, can be carried out by other mechanisms than unemployment and by the same fact, to what extent unemployment is complex; we must show how, even briefly, the entire labour market functions.

4. MECHANISMS OF THE LABOUR MARKET

1. The interdependence of supply and demand

In seeking to explain unemployment and interpret its significance we first turned

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towards the demand for labour; then we looked at the supply of labour by attempting to consider it <u>simultaneously</u> with demand. The addition of variables of supply thus modified certain estimates of coefficients of employment variables. But such interdependence does not stop there: there is still the question of whether supply and demand are interdependent or not, and whether, for example, regional development of employment depends on the development of the population or not.

This question is obviously essential in order to understand the regional labour market; but it is also important for our more limited objective, which is to interpret unemployment; this is, in effect, a process of adaptation — or rather, inadaptation — of supply to demand. Nevertheless, the degree of adaptation required of the population is less if employment adapts itself to population development. In other words, unemployment is governed by the relationship between employment and population and not only by employment <u>and</u> population together.

Without attempting to tackle the problem head on, which would require a complete model of the labour market, certain results could be advanced which would be a preliminary to a market survey, at least for the period 1947-61 (1).

The fact that employment is adapted to demographic resources at regional level and in the long term is evidenced by the positive correlation between the actual development of employment (dJ) and the natural movement of the population (dENA); it is, however, low: the R^2 is only 0.30. But the correlation is too simplistic to embrace the phenomenon; the factors pertinent to demand must be taken account of simultaneously.

In particular, it would seem that the sectoral structure of employment should be considered. In a small country, that is geared to a large extent to international trade, production — and thus employment — must be geared to a large extent to conditions proper to each sector (final demand, technical progress, investment), but common to all undertakings in the sector, wherever they may be located in Belgium. Thus, the development of "sectorally expected" or hypothetical (dH) employment has been calculated — a development that each region would have if, in each sector, employment had developed in the region at the national rate. The dH variable thus reflects the expected influence of the sectoral structure of each region in 1947. More intuitively speaking, this variable communicates the common idea that if employment has fallen in Wallonia, it is due to the closing of coal mines or to the decline to an industry concentrated in Wallonia.

To move on, let us mention the somewhat surprising result: the expected sectoral development accounts for only 15% of the actual development of employment in the "arrondissements". What is of direct concern to us is that the regression or development of employment is dependent on the natural movement of the population, bearing in mind the sectorally expected development:

$$dJ = 0.45 + 0.83^@ \ dENA + 1.24^@ \ dH \qquad R^2 = 0.76$$
$$(1.82) \ (.09) \qquad (.14)$$

The two variables are highly significative and, considered together, they account for 76% of the developments of male employment in the 41 "arrondissements" between 1947 and 1961, whereas, taken separately their scope is only 30% and 15% respectively; the presence of a complex mechanism can be felt.

The examination of the coefficients will reveal this. Let us take a region where the demographic potential (dENA) shows a growth of 10% of employed persons in the region; suppose also that, as regards demand, the sectoral structure of employment (dH) gave reasons to expect an identical rise in employment; without any further adaptation of supply, the market could stablise itself with a level of employment of plus 10%. The regression tells us that, on the contrary, in such conditions employment has had a

(1) see the two publications of Ph DE VILLE and R LEROY already quoted.

tendency to increase by 20.7%; indeed, 0.87 (+ 10%) + 1.15 (+ 10%) = + 20.7% (leaving out the constant, which is not significative and very low). Similarly, in the case where dENA and dH each equal - 10%, the effective fall has been, not - 10%, but - 20.7%.

This seems to us to confirm an idea which is often advanced - although in vague terms and without evidence - to the effect that regional growth is "cumulative". Here, the idea takes on a very specific meaning. When, in a particular region, a predetermined trend in supply (demographic potential) goes hand in hand with a predetermined trend in demand (growth of employment within the sectoral structure) and in the same direction, these two trends combine and employment develops more than the simple equality of trends in supply and demand would give reason to believe.

The case of Wallonia clearly illustrates this point. The demographic level implied a reduction of 7.9% in the rate of employment and the sectoral structure implied a drop of about the same (8.8%); thus, the market could stablise at a level of about - 8%. The coefficients in the regression indicate a dual fall of - 17.5%; in fact, employment has fallen by 16.8%.

The scope of this result with regard to the interpretation of unemployment is complex - but the reason for it is the complexity of the labour market; it concerns the incidence of the population on employment and thus on unemployment. In one way, population has an influence on the development of employment; in itself, this diminishes the risk of unemployment. But this influence is affected by the trends proper to demand and it is "cumulative".

If there is growth of population where conditions of demand are favourable, employment will grow more quickly than "natural" population growth and the danger of unemployment will be reduced. Conversely, however, if there is a fall in population within an unfavourable industrial structure, employment will drop more than the population, the risk of unemployment will emerge and the population will have to adapt itself to a level of employment diminished by migration or a reduction in its rate of activity.

2. Relationships with wages

These few results outline an analysis of the labour market which when considering supply and demand simultaneously, analyses their relationship and reveals the way the market functions. The fact that employment follows the natural movement of the population to some extent indicates one of the mechanisms of this function: an adaptation of the quantity demanded to the potential of the quantity supplied. The question may also be raised, however, as to what extent prices - wages - fulfil an adaptive function, as with the model of the competitive market. The question has two sides to it: firstly, do wages depend on the quantities of supply and demand? Secondly, are supply and demand dependent on wages ?

The question of the influence on wages of quantitative market conditions is an important one in several respects and, in particular, from the point of view of the significance of unemployment; if this is a trustworthy indication of surplus supply, it may be expected to exercise a downward pressure (or slower growth of) on wages. This is the basic idea behind the well-known Phillips curve, which shows that increases in nominal wages are so much the higher as the level of unemployment is lower. As, in Belgium, the levels and developments of unemployment vary greatly from one region to another, the question deserves to be put at regional level. If developments in wages vary according to regional unemployment levels, the significative character of unemployment is reinforced, otherwise, either recorded unemployment is not a good indication of under-employment, or the labour market does not function at regional level according to the competitive model.

Two recent studies (1) have given a reply to this question that is clear but "nuancée"; because, once again, a distinction must be made between the current economic situation and the long-term one.

a._ In_the_current_economic_situation

In this connection, the Phillips curve is of course confirmed at national level. But the study carried out by J LIEVENS throws considerable doubt on the existence of specifically regional Phillips curves (2). First of all, the relationship between annual growth of regional wage levels and the rate of regional unemployment is very slight and even non-significative in some provinces. Then, the relationship improves if, in each province, one takes national unemployment and even more if one takes as an explanatory variable, the annual development of national wages. Finally, by taking this latter variable conjointly with regional unemployment, it is non-significative in 8 of the 9 provinces. The four regressions of the province of Liege are an exemplary illustration of this.

Table III, 10

Annual growth of wages in the province of Liege (1954-70)

Constant	Regional unemploy-ment	National unemploy-ment	Growth of national wages	R^2	D.W.
4.02 (2.01)	+ 5.16 (6.98)			0.03	0.50
- 2.18 (1.03)		+ 31.37 (4.08)		0.79	1.37
0.26 (.55)			+ 0.89* (.08)	0.87	2.06
0.02 (.84)	+ 1.16 (2.59)		+ 0.89* (.08)	0.87	2.13

Variables: Wages = $\dfrac{w_1 - w_0}{w_0}$, where w is wages for males (manual and non-manual workers)

Rate of male unemployment given as $\dfrac{I}{TC}$

Source : J LIEVENS, op. cit.

(1) —J LIEVENS, "Phillips curves régionales." Rech. Econ. de Louvain, 1973, no. 3.
    —R LEROY and A FURNEMONT, "L'évolution des disparités régionales des salaires, Belgium 1950-70, ibid.
    —Statistics and their methodology are given in R LEROY, "Statistique régionale des salaires, 1948-1970" Revue Belge de sécurité sociale, Sept. 1973 (next number).

(2) The "regions" here are the 9 provinces, which appears to be the most appropriate geographical division; because of alternating migration, the "arrondissements" would be too small and the three main regions would not give such a faithful reproduction of geographical peculiarities. The results given here concern wages and unemployment for male workers for the period 1954-70; the main conclusions remain if the period 1949-70 had been chosen, despite certain peculiarities of the immediate post-war period.

Thus, in the short term, annual growth of wages follows the development of the nat-
ional (and international) current economic situation, of which unemployment is the
indicator (it has not yet been proved that it is the cause of wages growth and
specially not the sole cause).

Nevertheless, the annual level of regional unemployment does not appear to exercise
an influence: annual variations in wages vary very little from one province to
another, whereas it varies greatly from year to year, but simultaneously in all
regions. If the level of regional unemployment according to current economic condi-
tions — of which the conomic scope is not to be underrated — does not influence
wages, the conclusion to be drawn would appear to be that in the short term the
regional labour market does not operate according to this rule of the competitive
model.

b._ In_the_long-term_period

The situation, however, appears to be quite different if it is looked at in the long
term. These annual variations in wages, which appear to be almost identical in all
regions, conceal long-term regional developments, clear but slow: in six of the nine
provinces, wages have a trend that is significatively different from the national
trend (1). In the two Flemish provinces where the initial wage was low, the trend
was upward (East and West Flanders); in the four Walloon provinces, the relative wage
is falling, whether it had been initially high (Liege and Hainaut) or not (Luxemburg
and Namur); it is stationary in Antwerp and in Limburg, where it was fairly high, as
well as in Brabant, where it was average. Apart from the "nuances", the aggregate
at the level of the three main regions gives a fairly true picture. Graph III, 4
shows that developments revealed themselves especially during the second half of the
period. Since about 1960, the situation in the Flemish region has improved regularly,
whereas the relative wage in Wallonia has fallen sharply, dropping from 103 to 96 in
the index.

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(1) Regressions are calculated according to the formula $\dfrac{w_i}{w_R} =$
    $a + b$ (time), where the dependent variable is the
    "relative wage": the provincial wage (w_i) is given in
    relation to the national wage (w_R) for the year; male wages
    (manual and non-manual workers), 1954-70.

Graph III,4. — Regional developments of relative wages for male workers
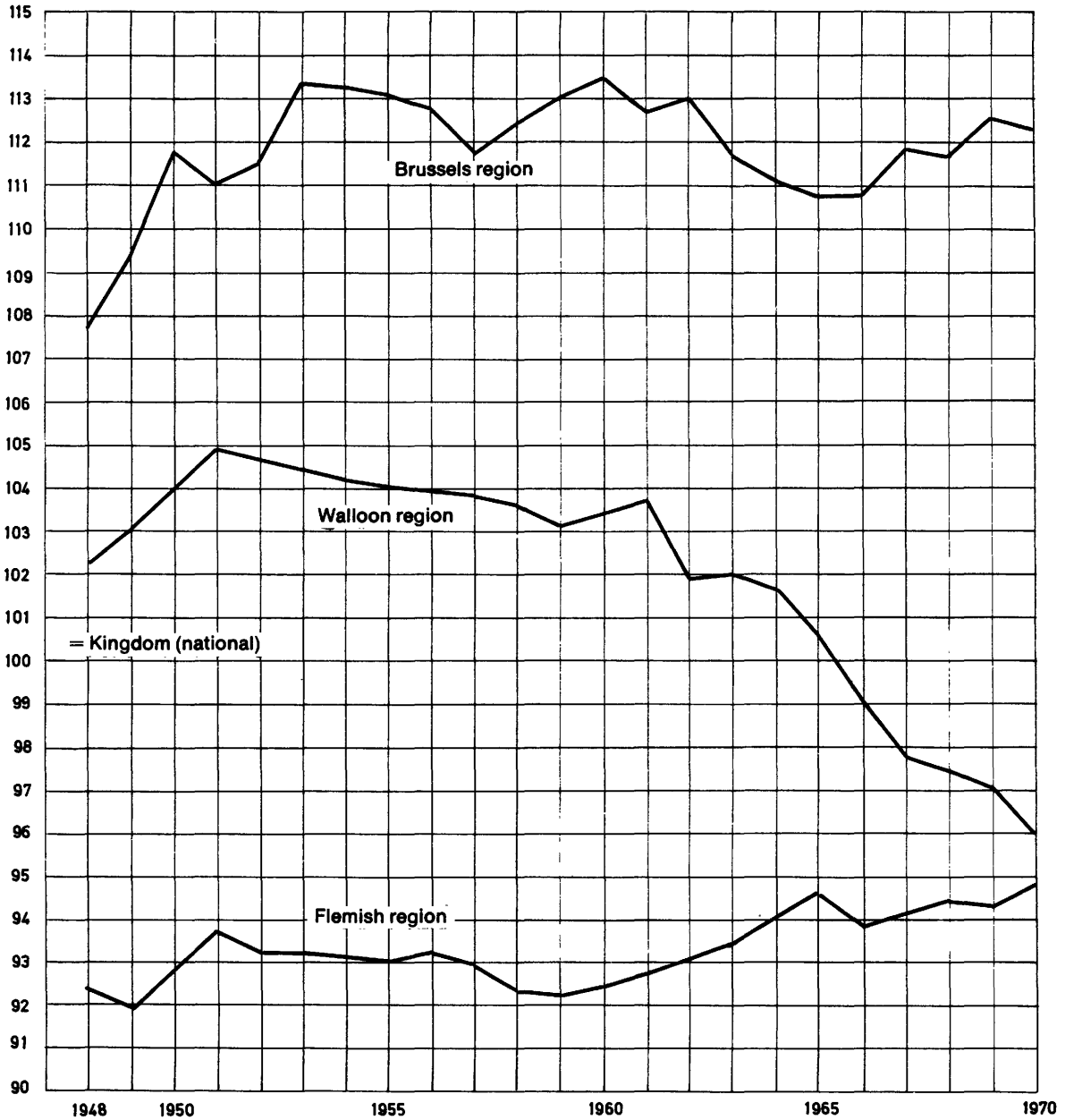
Even in an econometric analysis, these differential developments in wages seem to bear witness to an operational logic on the labour market. The Flemish region was initially characterised by a relatively low wage level, which was accompanied by a high unemployment rate: employment has greatly increased there and unemployment has been reabsorbed; wages have also risen. In Wallonia, on the other hand, high wages went together with a low unemployment rate; employment fell, and by more than the development of population would have given reason to think. Although unemployment has not risen very much, the level of the relative wage has dropped. Thus, the following points of relation may be considered:

1. Initially, the regions with high unemployment rates were simultaneously characterised by low wages, which supports the conclusion that unemployment constituted a significative indication of unsatisfactory employment.

2. Employment increased more where unemployment was high and wages low; thus regional demand for labour appeared to be sensitive either to low wages, or to unemployment, or again to manpower reserves for which the first two variables were the indicator.

3. Wages are held back where employment diminishes, and they rise more quickly in regions where they were low. We are now witnessing a reduction in the regional dispersion of wages, by means of a mechanism of convergence (1). This differential development in wages appears in relation to the relative rarity of manpower, but the relationship can pass through a mechanism of differential regional growth in sectors with high and low wages.

4. Unemployment was reabsorbed in regions where relative wages rose or remained static: this again confirms the significative nature of this unemployment and its development. In Wallonia, nevertheless, the fall in employment hardly made unemployment rise, whereas it applied the brake to wages: this development in wages would seem to indicate a relaxation on the market that unemployment only faintly reveals; but perhaps it is precisely this recent increase in the unemployment of elderly workers that is a revealing indicator.

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(1) The proofs and reservations on this point will be found in the article quoted, by R LEROY and A FURNEMONT.

Chapter IV

SUBJECTS FOR REFLECTION

1. How can we survive zero growth of the population ?

Wallonia constitutes the model example of a population with a very low birth rate.
Although the total population has increased very little, the actual relationship
between births and deaths itself brought about a fall of about 7% in the active
population between 1947 and 1970; in fact, male salaried employment fell there by
more than 25%. What were the consequences of this development ?

In quantitative terms, Wallonia's place in the world has obviously shrunk; Wallonia
now accounts for no more than 26% of Belgian salaried employment, whereas it repre-
sented 35% in 1947. From one point of view, which can well be called nationalistic,
one must speak of a decline. One may subscribe to this point of view in the same way
that reference was made to the "decline of the West", but one is not obliged to like
this criterion.

On the other hand, it is another criteria that is the subject of a general consensus
of opinion: the criterion of well-being, at least economic well-being. Has the sharp
fall in employment affected the well-being of the Walloons ? An honest answer
requires some "nuances".

a._ Employment_and_well-being

A start must be made with a major fact. Whereas employment diminished more quickly
than the working population, there was no mass unemployment. Wallonia has, of course,
become the region with the highest unemployment, but this situation was directly
caused by the fall of high unemployment in other regions, whereas in Wallonia, it
remained practically at its relatively low long-term level.

Having said this, recorded (male) unemployment shows signs that some deterioration in
the situation has taken place since 1965. The relative situation of young workers has
deteriorated more than elsewhere and elderly unemployment in particular jumped by
4.2%: it rose from 7.3% (1957-61) to 11.5% (1968-72), whereas, during the same periods,
it dropped in the Flemish region by 6.4% (from 16.3 to 9.9%).

Two other indications, more fragmentary, or more debatable, give grounds for thinking
that the labour market has become less and less favourable for Walloon workers.
First of all, the male rates of activity, at least for the period 1947-61 - but will
the 1970 census deny these trends ? - have fallen more sharply in Wallonia and the
female rates have increased less (1); the systematic relationship between the
development in rates of activity and the development of employment (demand for labour)
encourages one to see in it a development of disguised unemployment. The indication
is, therefore, important; the sharp upsurge in elderly unemployment, which partly
constitutes an equivalent phenomenon to that of so-called hidden unemployment, also
gives an indication in this sense.

Then, the relative wages in Wallonia have diminished, especially since 1960. But this
indication must be treated circumspectly. In fact, the direct cause of it is not
necessarily that greater availability of manpower has kept down wage rises; it is
possible that in each sector wages have developed everywhere at the same rate, but
that the share of industries paying high wages has grown relatively smaller in

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(1) See article quoted, by Ph. De Ville and R Leroy

Wallonia. Whatever the importance of this reservation, it does not affect the conclusion that the labour market has become less favourable in Wallonia - at least relatively speaking. This is because - and it is a second and very different sort of reservation - it is the relative wage which is concerned. The nominal wage has obviously not diminished in Wallonia, it has increased less than elsewhere. It may of course be considered desirable that wages should increase more in places where they were low, as in the Flemish region; but beyond this judgement of value, there remains the fact that since about 1960, the labour market, in terms of wages, has been developing less favourably in Wallonia than in certain (1) initially low-wage regions, but more still than in other high-wage regions.

Faced with these indications, the least one can say is that the fall in employment has not been favourable to the Walloons' well-being and that whereas it has continued at the same rate of - 1.34% per year, its effects have become progressively worse. This latter point deserves attention. If the analysis of the labour market over 25 years has revealed anything, it is certainly that there is a long-term logic where developments - almost imperceptible on an annual scale - form extremely well-defined long-term trends which govern the future of the labour market. It may legitimately be asked if the deterioration of the Walloon situation, still limited in scope, but continually worsening, will become a major problem unless a specific policy to break the trend is launched.

b._ Population_and_employment

Faced with this example of the slow-term growth of population, zero or negative, according to whether this or that section of the population is selected, the consequences which have led to the fall in employment must be specified. A first question is, however, whether this fall in employment was the unavoidable consequence of the drop in population and whether it may be considered as the inevitable corollary of a zero rate of growth.

The Belgian case gives a categorically negative reply. The fall in employment in Wallonia is out of proportion to the natural movement of the population of active age; employment was able to grow strongly in Brussels, despite equally negative demographic development. In addition, employment has not grown as fast as the population in the Flemish region. The natural movement of the population does not dictate the regional development of employment; it accounts for only 30% (1947-61, for the 41 "arrondissements").

It has, however, influenced regional development of employment; if the trends observed in the industrial structure are taken into consideration at the same time (sectorally expected development), the regression explains 75% of regional developments in employment (still for 1947-61). In other words, if the demand for labour had had an autonomous trend towards growth in Wallonia, employment would have diminished at a lower rate than the population by natural movement, whereas in fact it diminished at a much faster one.

Abundant population represents a facility to which Belgian economy has not been insensitive in its regional deployment; but it is not an absolute stricture. It is enough just to recall the importance of the process by which regional supply can adapt itself, outside natural movement. In Wallonia, all factors played a negative role during the period under analysis: alternating migration (- 1.3%), permanent migration (- 0.4%), whereas a policy of immigration was expected, the rate of male activity (- 6.1%) which fell more than elsewhere. Wallonia was involved in a cumulative process, where the influence of the population went together with that of

(1) Because Wallonia also comprised provinces with average or low initial wages;
    in all Walloon provinces, relative wages for male workers have diminished.

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industrial structure; with a different development of the demand for labour, the Walloon population could have had quite a different development in employment.

c._ Unemployment_and_population

Since employment has developed as it has, the population was able to ease the problems of unemployment that this development could have brought about. The natural contraction of the population was the process which offset dismissals the most, in the same way as the pressure of population must have contributed to the high rate of Flemish unemployment whereas employment was rising.

It is, moreover, likely that the more advanced deterioration at the end of the period was partly due to modifications in natural movement, which indicated a slight rise for the period 1961-70, unless one can also see in that the exhaustion of all other possibilities of adaptation.

Furthermore, the migratory movement of the population contributed significatively towards maintaining Walloon unemployment at a fairly low level. The halt brought to immigration at a time of low economic activity, going so far as to cause negative balances because of the rotation of migrants, applied the brake to the development of unemployment caused by current economic activity, but whose effects could continue beyond recessions.

If these two processes in population have really contributed to preventing the development of unemployment in Wallonia, one may ask if they have not also helped to disguise the problems raised by the decline in unemployment, even if they were not characterised by high unemployment rates. Were these solutions not simply a matter of facility ?

d._ Solutions_of_facility

This is perhaps the best term to summarise the experience undergone in Wallonia. Firstly, it is easier to create undertakings where the population provides natural reserves of young manpower; to establish them in Wallonia required more effort. Secondly, the fall in employment is less painful if the market permits workers to find another job, if in each recession, foreign labour is available to soften the blow and if, finally, unemployment is transferred to the backs of elderly workers, to whom a "preliminary" pension is granted in accordance with the needs of the economy.

Wallonia is an example, which could become representative, of a very slowed-down population. This is a new situation to which we are not accustomed and which obviously poses new questions. The economy cannot count on the same renewed contribution of young manpower, but could it not accustom itself to a situation of less available manpower by making better use of human resources ? The proportion of elderly workers is increasing: could not a better solution be found than unemployment or compulsory pre-retirement ? If recourse is had to immigration, should an economic compensation factor be made of it ? Wallonia puts these questions urgently: but the palliatives adopted are an example of what not to follow.

2. What is to be the fate of elderly workers ?

a._ A differential_mechanism_of_rejection

As it is recorded in Belgium, male unemployment comprises a large proportion of elderly workers: about 65% in 1968-72. The figures for this age group indicate a high risk of unemployment after 50 years of age (and even increasing as from 40): 14% during the 1958 recession and 7% at the high of the economic boom period in 1964; the last recession caused it to rise less (10.8% in 1968), but the last minimum situation

did not see it descend below 8.6%.

The econometric analysis confirms that its intensity is in close relationship with the more or less favourable conditions of the market. In particular, the elderly rate is closely linked to the unemployment rate for 25-39 year-olds, which can be considered as a significative economic reference. The relationship is multiplicative: the elderly rate is systematically more than double the reference rate; a recession that creates unemployment of 3% for 25-39 year old workers, provokes an increase in the elderly rate of 7%; similarly, if the risk of unemployment of 25-39 year-olds tends to grow by 3% during a particular period, that for the elderly grows by 7%. More generally speaking, elderly unemployment increases when the market becomes unfavourable, as the recent jump in Wallonia of 4% bears witness, whereas the reference rate does not show a long-term increase.

In the varying economic conditions that the Belgian regions have known throughout the period, the minimum unemployment rate for elderly workers can be evaluated at 3%; the "inevitable" minimum thus appears to represent less than one third of elderly unemployment over the past five years (9.6% average from 1968 to 1972).

To the extent that they depend on economic conditions, these percentages of unemployed persons — if they are not called unemployed in the strict sense of the term — may at least be interpreted in the same way as rates of activity (or inactivity) are interpreted in analyses on hidden unemployment. Over the last few years, there would thus have been the equivalent of hidden unemployment to an extent of 6.6% of elderly wage earners. It is not disguised, because Belgian statistics record it. But it is comparable to it, to the extent that the inclination to work of these persons becomes more conditional. It is very possible that some elderly workers no longer constitute a reserve of easily mobilisable manpower; as long as undertakings have the choice, they will give preference to younger persons and the elderly element will be left aside. When the market is firm, however, — that is, when it has not been upset by dismissals — elderly workers can stay in the circuit to a much greater extent. The labour market shows internal dynamics, according to age: differential rejection dynamics for the elderly, the less "suitable", the less in demand and those categories of less qualifications.

b._ Other indications

If one subscribes to this analysis, the problem of elderly workers becomes more urgent than is generally realised. It is also important to see if other indications corroborate it.

1. The analysis has dealt with a fairly wide age group. If it is subdivided into the three age classes: 50-54, 55-59 and 60-64, we have much higher rates for the last class: during the last low point for unemployment brought about by current economic conditions (1971), national figures were respectively 3.1%, 6.6% and 17.6% (average 8.6%) and in Wallonia the rates were 4.1%, 7.8% and 23.3% ! (average: 10.6%).

2. Apart from unemployed, it is interesting to consider the other persons who do not work: inactive persons, as per official statistics. Rates of activity (employment and unemployment, as % of the male population over 50 years) are lower in Belgium than in many European countries (in the table below, there is only one exception: Italy for 60-64 years).

	50-54	55-59	60-64
Belgium (OSCE, 1960)	91.4	83.9	68.7
France (do.)	94.1	85.8	71.0
Germany (do.)	94.0	88.5	71.4
Italy (do.)	93.1	86.6	61.4
Netherlands (do.)	96.7	95.6	85.1
Great Britain (1961 Census)	95.0	94.5	90.0

3. If it is considered that Belgian "unemployed" should be regarded as inactive persons and that the other countries classify such persons among the inactive population, the result is :

- that Belgian rates of activity are over-estimated : but although they are over-estimated, they are lower than elsewhere;

- that real rates, comparable to those of other countries, should exclude unemployed: in other words, the rates of employment should be considered; but in considering them, the situation of the elderly appears to be more surprising: as from 55, 20% of the male population no longer works and 41% no longer work prior to the normal retirement age (figures from 170 census).

	50-54	55-59	60-64
Rate of activity (employment + unemployment as % of the population)	89.2	82.3	63.8
Rate of unemployment (ONEM unemployed as % of insured persons)	3.4	6.0	17.5
Unemployment (Census) as % of the population)	1.5	2.4	5.0
Rate of employment (employment as % of the population)	87.7	79.9	58.8

4. Wages constitute an interesting indication of the labour market; they provide an indirect indication of the quality of employment. Little known statistics (1) give the wages of workers by year of age and not simply the major age groups. It is known that wages and income have a typical curve according to age at any given moment. It is surprising to note, however, that in Belgium, the maximum wage of workers (manual) is earned at about 40; at any specific moment, a worker of over 40 earns less than a worker of under 40, on the average.

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(1) Published by the National Workers' Pensions Office (ONPO) and appearing in the "Revue belge de Sécurité Sociale". For an analysis, see R. LEROY, "Le salaire ou le prix de l'âge", "Reflets et perspectives de la vie économique" Brussels, January 1975.

5. It is even more surprising to note that the <u>relative</u> situation of elderly workers has manifestly deteriorated during the period in question (1955-1972), as the graph given below shows. All wages are expressed every year as an index of the 35-39 age class – the class where the highest wages are to be found. In a general sense, the scale of wages over 40 has expanded. Between 40 and 55, however, the relative fall halted towards 1964 and was followed by a certain revival. On the other hand, in the two latter classes, the wage drop has characterised the entire period. The regularity and convergence of developments give grounds for taking these developments – although they are minimum ones – as significative.

Graph IV, 1 . — Development of relative wage for elderly manual workers.
(100 = wage at 35-39 for each year)

35-39 years = 100

40-44

45-49

50-54

55-59

60-64

100
99
98
97
96
95
94
93
92
91
90

1955   56   57   58   59   60   61   62   63   64   65
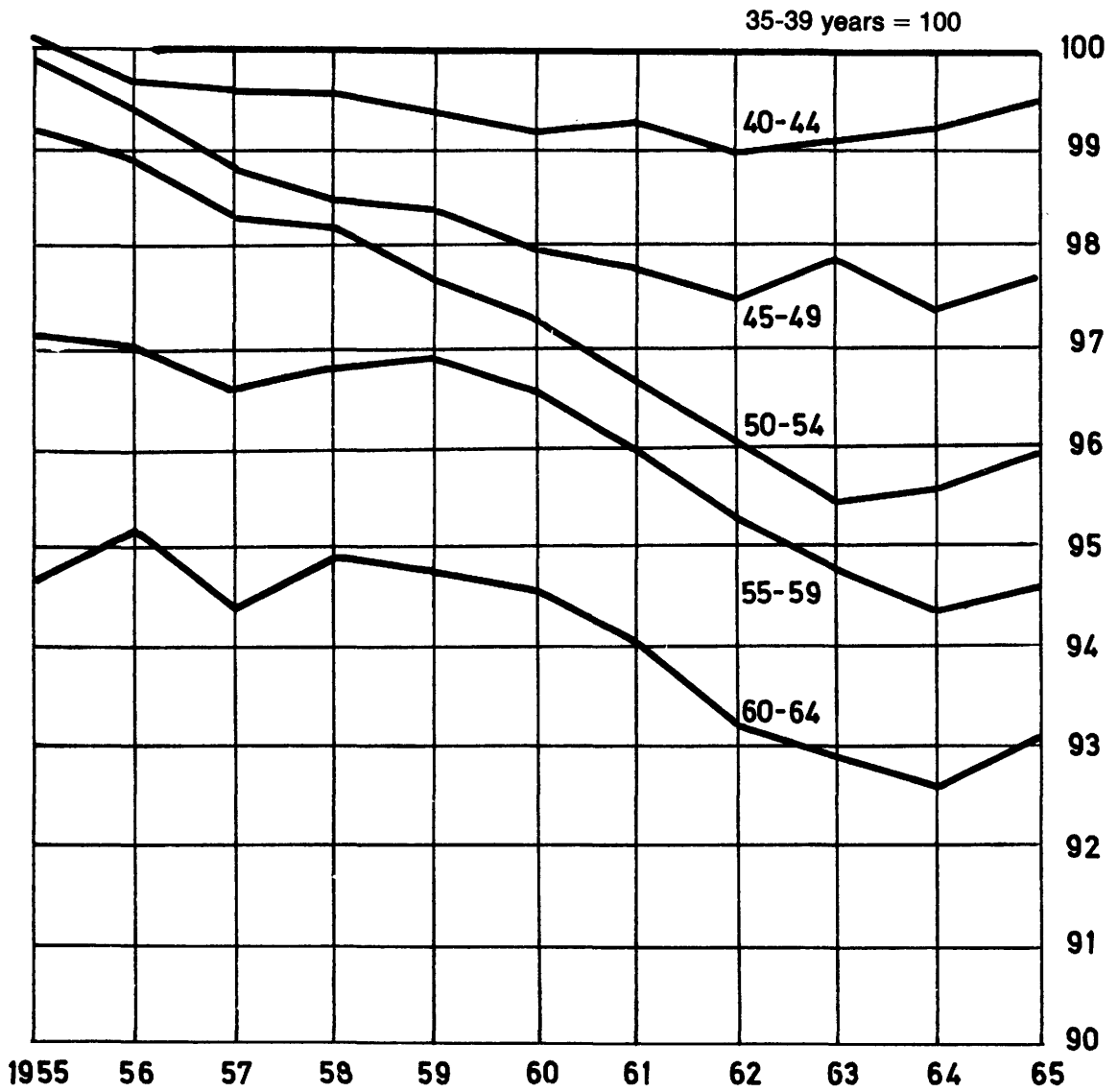
c._ A free_choice of_leisure

The convergence of these indications is too massive to ignore the fact that there is
a problem for elderly workers. But it must still be specified of what the problem
consists, because it is a very special one. It appears to me to belong to that large
discriminatory group of the population that stands out so much: like elderly people,
women and racial minorities. On the labour market, discrimination resides in the
different treatment reserved by undertakings (demand for labour) to these categories
of the population (the supply of labour); and this difference has an unfavourable
trend. Undertakings have a preference for the main category of national male adults.
Such treatment is reflected in wages, in the type of jobs and in the fact of employ-
ment itself, recruitment and dismissals. Such different treatment is met with a
certain consensus of opinion in the collective conscience, and even some complicity
by the main category, being the major group.

With regard to employment and unemployment for instance, the social conscience finds
it obvious to stop immigration when there is unemployment in the host country,
without seeing in this an export of unemployment; it finds good reasons for not
worrying too much about unemployment that affects only the elderly or the very young.

Such discrimination maintains a circuit-like relationship with full employment and
power. First of all, the categories discriminated against have a higher unemployment
risk because they are less desired by undertakings; the more full employment decreases,
the more the power of workers, suppliers of labour and sellers, also decreases. But
then, this lesser power makes it more difficult for them to obtain full employment,
since the social conscience is less disturbed about the under-employment and,
furthermore, these feelings or judgements are likely to become more adopted or con-
firmed, to a greater or lesser extent, by the very categories discriminated against.

The example of Wallonia illustrates this. The fall in employment finally brought
about a sharp rise in elderly unemployment, but without a notable increase in the
adult cateogry: the burden of unemployment was placed on the elderly. What power do
they possess to prevent this ? In this form, unemployment appears to be less serious;
it calls less for the creation of jobs since, in order to fill them, there are only
the elderly ..... Moreover, this palliative seems to be more human: an elderly worker
who is ensured an additional indemnity to unemployment benefit for him to leave the
the employment circuit, will not receive much sympathy if he complains about being
dismissed in place of an adult.

Moreover, they say, he does not complain, he is not at all unhappy. This really
strikes the note of the problem. These differential rejection dynamics avoid the
creation of a thorny problem: it is glossed over. At the same time, the problem
changes character and it becomes a question of whether it is necessary or even desir-
able that elderly workers continue until 65, that women should work or that recourse
should be had to immigration. Though essential, these questions appear to be less
urgent and more debatable than unemployment in the strict sense.

At a time when the obsession with growth and labour is diminishing, there is no need
to insist on the notion that everyone ought to work until 65. Nevertheless, everyone
should have the free choice between work and inactivity. Indeed, inactivity in the
form of recorded unemployment is closely linked to the state of the labour market; it
is governed by the imperatives of the economy, which finds there a means of absorbing
shocks and which, by giving precedence to the employment of those it considers to be
the more productive workers also sees there, perhaps, the optimum exploitation of
human resources; it does not reflect the free choice of the population.

3. What level of full employment ?

<u>a._ A relative_norm : history</u>

It is generally agreed that under-employment is a relative phenomenon: there are degrees of under-employment. Under-employment during the post-war period, for instance, was one degree less than that reached during the big crisis of the 'thirties. Divergencies from the norm may be more or less large, but it would seem that there is a single norm, even if the specific quantification thereof, is debatable; under-employment is relative, but full employment is an absolute norm.

I wonder if this concept should not be ignored and conceive that the norm itself is variable; more specifically, that the demands for full employment should be transformed and intensified with socio-economic development. The economic system of the economically developed countries has succeeded in eliminating mass under-employment and major crises, where unemployment has reached extreme levels (more than 17% from 1932 to 1935 in Belgium, for instance). Since then, the problem is no longer one of a "reserve army" of unemployed; but it is raised essentially in terms of the current economic situation: I think it is time to go a little further.

It is not that the problem created by the current economic situation is no longer with us: on the contrary, Belgium appears to be one country where it is more in evidence than in others. During every recession, employment has not only known - as in many countries - a slowing down of growth, but also absolute lows (eg, in the Flemish region - 6.5% in 1949, - 2.5% in 1952, - 2% in 1958; in Wallonia, - 2.2% in 1954, - 3.8% in 1959, - 3.9% in 1967); and the current economic situation constitutes an essential cause of Belgian unemployment. If we have laid less emphasis on this point, it is because the question is well-known and recognised. Since Keynes, the economic system has understood that recessions, even they relax the labour market, have been more harmful: these temporary reductions in the wage-earning masses disturbed the growth of consumption, which is more and more indispensable to advanced capitalism.

Apart from major crises and periods of recession, Belgian experience reveals two other types of unemployment. The first is exemplified by Flemish unemployment which, with the current economic situation, constitutes the essential cause of very high national rates during the first period: it appears as a consequence of a delay in economic growth, characteristic of a weakly industrialised region and aggravated by the "slow growth" of the Belgian economy, during this period (1). Again, if we have laid less emphasis on this point, it is because this type of unemployment has now been largely reabsorbed.

The second type of unemployment is exemplified by unemployment of elderly workers. It has characterised the entire period; it has affected all regions; but in Wallonia it has gone together with the decline of a region that has been industrialised since the earliest times and has thus taken on a special aspect, particularly towards the end of the period. As far as I am concerned I see in the unemployment of elderly workers, an example of under-employment which affects the weaker categories of the population differentially: elderly workers, handicapped persons, women, racial minorities and the very young. This unemployment or under-employment, raises the question of full employment in different and more demanding terms. The reason is given in one word: discrimination. But this discrimination is subtly veiled.

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(1) It will be recalled that after the "economic miracle", as the revival of the Belgian economy during the immediate post-war period was called, the major theme was that of the slow growth of the Belgian economy.

b._ Full_employment and discrimination

As regards employment and recruitment, discrimination takes the form of a preference, or even a monopoly granted by undertakings to the major cateogry of national adult males for a proportion of the jobs available (not for all, naturally) at a given period (practice develops with time). When recruitment among the privileged category becomes difficult, undertakings and society consider that full employment has been reached. Indeed, when the unemployment rate of males between 25 and 39 fall below 1%, this category of the population has achieved full employment — both as regards current economic conditions and structurally, at least in all probability. This unemployment rate is also an indicator of the current economic situation for the other categories — we have seen how much the unemployment of elderly workers and that of young persons was linked to the reference rate — but there is no guarantee that it has the same structural scope.

In other words, a quantitative level of employment that is satisfactory to adult males can coexist with long-term under-employment among the elderly or females. Indeed, the analysis of unemployment of males according to age has shown, during the last economic boom period (1970-71) for instance, that a rate of 0.7% among men between 25 and 39 went hand in hand with a rate of 9% for the 50-64 year-olds. Similarly, various research studies on the labour market for women seem to me to impose the conclusion of more intense under-employment among the female population.

The interplay of discrimination, however, forges a link between the full employment of the preferred and that of the discriminated against: it is only when the majority category become hard to find that undertakings are induced to revise their behaviour. Such behaviour may be based on prejudice, customs, or even on considerations of cost. It may be more costly, or less profitable to employ elderly workers or women and to adapt working conditions to the needs of these categories, or to have to innovate. But the relative importance — the relative cost that rational economic calculation places in the vanguard — of these factors modifies when the usual manpower, since become hard to find, must be recruited at a higher cost. It is in these conditions that substitutions occur; that undertakings agree to employ the categories discriminated against to fill jobs which were formerly closed to them. Once the custom is established, it is found that elderly workers, women or foreigners are perfectly suitable (1).

The norm of full employment is thus made relative: the level of full employment varies according to the categories of the population chosen by way of reference; but this norm becomes more demanding at the same time since full employment only reaches the secondary categories when it is intense and durable among adult males. But is this not an historic stage, to pass from full employment governed by the current economic situation or restricted to a part of the population, to generalised full employment ?

c._ Derivatives

Again, it is necessary — if this trend towards generalised full employment is to develop — that the interplay of the lack of availability of national adult male manpower not be confused with derivatives.

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(1) This is obviously not enough to eliminate discrimination in wages or the type of employment, but these aspects do not come within the scope of the problem of quantitative full employment.

The rise in elderly unemployment as compared with that of adults, which has occurred
in Wallonia since 1965, seems to me to be such a derivative. When the drop in popu-
lation slackened off, the long-term contraction of employment resulted in a rise in
elderly unemployment, without any connection with the usual relationship between the
elderly rate and the reference rate. Unemployment in Wallonia has affected the
elderly more than elsewhere. In this way, the socially recognised indicator of full
employment has not risen to a level where there was any encouragement to adopt
measures to raise employment rates (the rate for the 25-39 age group stands at 1%,
whereas that for elderly workers exceeds 10%).

By making elderly workers bear the burden of unemployment, the direct effect is to
accentuate under-employment in this category. Moreover, the full employment of
adults is more rapidly achieved, which justifies a halt to the growth of the demand
for labour, before it reaches a point where generalised full employment is reached.

Recourse to the immigration of foreign workers - because of the current economic
situation - is a second derivative. The falling into a recession has the same mean-
ing as the placing of the burden of unemployment on elderly workers: a category that
is discriminated against bears the burden of a drop in employment - and unemployment
is thus less: the palliative has its advantages, but lower unemployment gives less
encouragement to develop employment. Nevertheless, in periods of economic boom, a
call is made for foreign workers. The lack of availability of the main category of
manpower gives work to a lower population; one may wonder, however, if this type of
immigration is more advisable than to try to raise the level of employment of the
weaker categories already living in the country, such as the elderly and women.

d._ Intensification of_demand

As long as discrimination in employment obtains, the condition necessary for the
achievement of generalised full employment is a very intensified demand for labour.
When this condition is satisfied, the qualitative conditions have more chance of being
satisfied as well, since it is obvious that the employment of elderly workers, the
engagement of handicapped workers and increased recourse to female manpower, require
qualitative adaptations of the organisation of labour.

The growth required for employment thus appears in a more demanding perspective. The
analysis of the relationship observed between unemployment and employment has already
shown an urgent indication: when there is about 5% unemployment, 100 additional jobs
reabsorb only 47 unemployed and the effect is reduced if the unemployment level is
lower (28 unemployed fewer if the rate is 3%), since the Flemish experience has shown
that the relationship is not a linear one. In other words, in order to reduce
recorded male unemployment by 100 units, it was necessary to create 212 jobs when the
unemployment rate was 5% and 357 when it dropped to 3%. These figures only refer to
one component part of under-employment, however, since they concern recorded unemploy-
ment of the average male population (all age groups). Generalised full employment
increases the demands of employment still further.

At a time of preoccupation with inflation, this conclusion will not easily be accep-
ted. Wage rises will be cited as an argument against it; they appear to be implied by
increased tension in the labour market: the Phillips curve. It is obvious that there
is a correlation between annual increases in wages and the current economic situation;
but, first of all, with regard to the current economic situation, this correlation
does not imply that a place of causality. A great deal of discussion will take place
on the exact proportion of inflation that can be attributed to current tensions on
the labour market. Moreover, the relationship observed is of the nature of an econo-
mic situation at any given moment; it is even more debatable as to whether it applies
to long-term levels. Experience gained in the United States, has shown high wage
rises despite a fairly high level of unemployment over the long term. This is one of
the aspects of what is known as "stagflation". The estimate of Phillips curves on

the regional level strengthens this negative conclusion: the regions characterised over the long term by a lower level of unemployment have not had high wage rises. There have certainly been long-term relationships: relative wages have tended to rise in regions of high initial unemployment; if the relationship is rather the converse of the Phillips curve, it is nevertheless possible that it bears witness to the influence of increased lack of availability of manpower on relative levels of regional wages; but this relationship of a long-term nature can certainly not be assimilated with a phenomenon of inflation.

But at this time when we are thinking in terms of zero growth, is this objective of the intensification of growth of employment really desirable ? I would say: frankly, no, if it is pursued with a view to obtaining maximum growth of economic production. But this is not the objective being aimed at. Neither is the objective the increase of the quantity of labour provided; this could easily diminish through the reduction of the working week in any form whatsoever. It is not even, in itself, an increase in the number of persons employed. It is an intensification of the demand for labour in terms of persons (not in terms of hours of work), as compared to the supply of labour, in such a way that all categories of the population can exercise their freedom to work when they want to more freely and even not to work at all if such is their free choice.

A high level of full employment is such as to modify very profoundly the social extent of the mechanism of the labour market. As long as there are more suppliers and sellers than buyers, the demand for labour will benefit from an advantage. If suppliers become rare, the power of all workers will be increased and the specific weakness of those categories discriminated against will diminish. This represents an overtaking of the norm of full employment as opposed to the manner in which it is conceived in a context of the eccnomic situation of the moment; but is this not a logical development in industrialised society ?

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[1] The abbreviations after each title indicate the languages in which the documents have been published: dk = Danish, d = German, e = English, f = French, i = Italian, n = Dutch.

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