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Regional differences in the Belgian
labour market (1846-1947)

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SUMMARY

In this paper regional disequilibria in the labour market are presented in a long-term perspective. The first section therefore includes a critical review of the employment data. Here the goal is to construct figures which come as close as possible to the number of full-time equivalent workers. In section two new estimates about the regional labour force are calculated. The confrontation of employment and labour force in section three leads to the conclusion that, although relative labour shortages generally diminished in the period from 1846 to 1947, most provinces had problems with a structural surplus of labour force. Section four points out that these surpluses resulted in an important mobility of labour. Besides migration, seasonal and frontier work was considerable until the 1930's. Commuting became more and more important from 1870 onwards. Nevertheless, only a part of the labour force surplus could avoid unemployment by mobility.

The present crisis once again clearly suggests a negative influence on the standard of living by unemployment. Unemployment nowadays is mainly considered a result of a decreasing number of jobs. The relatively slow growth of the population since the sixties in most West European countries might obscure the idea that also with increasing employment the number of unemployed may grow. The even faster increase of labour force explains such a contingency.

In this paper the development of employment is confronted with the growth of the labour force. This is done on the level of the provinces, as this allows an exploration of the spatial diversification of long-term development. Besides the time dimension the spatial dimension of employment shortages is important, not least because of possible compensation. Indeed spatial mobility can restore the balance or anyway limit the disequilibrium.

Although the problem as it has been outlined is increasingly popular among scholars, research is not yet fully mature. Especially the quality and the comparability of statistics is a persistent problem. This necessitates a rather lengthy digression in section one about measuring employment. The measurement of the labour force in section two is no smaller problem. The combination of both series in section three will therefore only lead to provisional conclusions on the level of development of unemployment and growth. The same applies to the interpretation in which levels of employment are considered the explanation of spatial mobility (section four).

1. Employment

In a study of employment concentrated on economic prosperity, employment is usually conceived in a restricted fashion. Not all work is regarded as a job. The housewife's work or productive performance during leisure-time are excluded. Essentially employment is limited to work aimed at 'pay or profit' (1). From a historical perspective immediately a problem arises about the delimitation of profitable activities. Mainly in the nineteenth century a lot of members of the household were involved in self-employment. The dividing-line between household activities and productive activities in the narrower economic sense will have caused problems for measurement. Associated with it is the question of how

to compare productive activity. Regardless of variations in productivity among the sectors for instance, the working time should be the same. Occasional jobs are not on the same footing as permanent ones, and similarly part-time and full-time activities are not equivalent. Employment must therefore be conceived as much as possible as a number of 'full-time equivalent workers' (2).

If the insight into the disequilibria between the local labour force and the local opportunities for employment is to be promoted, it is self-evident to determine jobs according to their localization. This implies measuring employment starting from the locus of the activity (3). This leads to a first fundamental problem with the source material. The only source encompassing all economic activities, i.e. the population censuses, inventorizes employed persons according to their residence (4). Only censuses of agriculture or industries register the activities according to the locus of production. From this point of view maximum use is to be made of both sectoral censuses. Because the quality of the latter censuses is sometimes too low, employment figures can only be reconstructed for the years 1846, 1896, 1910, 1937 and 1947. For each of these years we shall discuss the data briefly (5).

As to 1846, we have a census of industries, of agriculture and of population.

However, the situation is not brilliant. Most reliable is the industrial census. Jobs are indicated according to the locus of employment. The few gaps can be filled. The categories not normally belonging to employment (e.g. prisoners) can be subtracted. The quality of the census is derogated, however, by the framing of the question. It just refers to the average number of jobs without further specification. Because of the fiscal system an underestimation of employment in a number of sub-sectors is not improbable. Nevertheless, detailed research about Brussels and Turnhout shows that there is no systematic underestimation and that the totals of industrial employment are hardly influenced (6). The lack of figures about outworkers is therefore a more important problem. In this very period the difference in productivity with manufacturing industry in a lot of sub-branches must have been very small. From the point of view of employment it is very difficult not to include outwork in the research (7). Moreover in the light of the problem of the standard of

living it must be said that these activities provided a sometimes not unimportant complementary income. However, this complementary aspect also means that outwork cannot be considered a full-time activity. Therefore, we suggest using two different figures for industrial employment: on the one hand fairly accurate data about trade and factory work, on the other hand a supplemented total in which the data about home industry in 1896 are also applied to employment of 1846 (see table 1) (8).

The agricultural census poses even more problems than industry, especially because of double counting. Employees with other (mainly larger) farms, who themselves exploit a smaller plot of land, occur both as employers and employees. To exclude this double counting a starting point could be Gadisseur's hypothesis (9) about the critical surface, i.e. the size of the business leading to subsistence of the family. 3 ha per family can be assumed the Belgian average surface, with a labour-input of approximately 1.3 man-years. In this way a national total is reached which, including fishery, reaches almost 779,000 full-time jobs (10). For the distribution of this total over the provinces two hypotheses could be accepted. The most simple one is to suppose that double counting in the provinces was proportional to provincial totals. As a second hypothesis the acreage available could be taken as a starting-point, measuring the differences in productivity via land-prices in non-urban zones. The distributions according to both hypotheses are recorded in table 1.

For the tertiary sector we only have the census of population at our disposal. If the figures are simply accepted this would imply a considerable overestimation. Mainly by including unemployed people under the heading of their former job, but also by recording part-time work there must be large differences with the number of full-time equivalent workers. Therefore table 1 starts from a number of jobs recalculated on the basis of the ratio industrial/tertiary in the census, but applied to the secondary total (a) from the industrial census. The result is rather minimalistic, because no account is taken of outwork, about which indeed there are no accurate data available in 1846. The effect is mainly important for the provinces of West and East Flanders. Especially for these provinces the total should be used with some reservation. Because of the diminishing significance of both outwork and agriculture, this is less the case in 1896 (see table 2).

Generally speaking, 1896 is to be treated in the same way as 1846. As to agriculture this means an estimate of employment on the basis of the cultivated surface. Again the distribution may be carried out with the help of land prices or in the hypothesis of homogeneous errors. The secondary sector is approached more accurately in the 1896 industrial census (there is no mention of an average number of employees) but some gaps must be filled up. This is only possible in approximately 60 % of the cases, viz. the brick industry and the flax-industry (11). As to home industry the recorded jobs can be supposed to imply only a half-time equivalent worker. Not only working time but also differences in productivity support an approach of this kind. Employment in the tertiary sector poses the same problems of overestimation as in 1846. Moreover use must be made of an interpolation between 1890 and 1900. Some specific activities not occurring in censuses after 1910 because of legal reasons (viz. prostitutes and brothel-keepers) have also to be removed. The reduction of the overestimation (inclusion of unemployed and similar categories) can be effected with the ratio secondary/tertiary sector.

The same method was used for the calculation of the volume of the tertiary sector in 1910. This does not imply, however, that the census of that year is not qualitatively superior to the 1896 or 1846 one. On the contrary, some important improvements have occurred. The systematic distinction of chief and subsidiary occupation is of the utmost importance. Obviously the calculation of the proportion of the industrial and the tertiary sector was only carried out on the basis of chief occupations. The reduction is justified among other reasons by the fact that an employed person according to the criteria in the 1910 census need not have worked a minimum number of days and by the inclusion of unemployed (12).

As to the primary sector, the census of agriculture did not deal with the aspect of employment. However, the census of occupations does go into that distinguishing among proprietors, clerks, manual workers and family workers or aids. As to the manual workers Klep states they include undoubtedly a number of seasonal workers, so that the number does not correspond completely with the full-time equivalent workers (13). This is certainly even less the case with aids and those mentioning an agricultural business as a subsidiary occupation. Therefore both groups are multiplied by a coefficient. As there is not enough information available to determine these coefficients accurately (14) we work with a minimum and a maximum variant :

$$V_1 = FT + 0,25PT + 0,1A$$

$$V_2 = FT + 0,50PT + 0,2A$$

in which FT : full-time proprietors and paid labour force
 PT : agricultural subsidiary occupations
 A : unpaid aids

The manufacturing industries pose few problems, because the quality of the industrial census is fairly good. Only the somewhat sloppy treatment of aids could be mentioned as a defect. Highly different are things with outworkers. Although the census looks complete and most of the time fairly reliable, there is an important exception to the rule. This exception pertains to the lace industry, especially in West and East Flanders. There employment between 1896 and 1910 would have increased by about 21,000 jobs. Presumably a large number of lace schools are included. Indeed, the census instruction reckons boys and girls apprentices as workers. The same mistake had by the way already been made in 1846. It is clear that for this branch the same reduction coefficient cannot be applied as for other outwork. Besides the aspect of lace schools hidden unemployment also plays a part. The latter was at any rate even much larger than for instance in metal industry. If for the remaining outwork a somewhat stronger reduction must be proposed than in 1896 - the backwardness both in technology and income was growing in comparison with the manufacturing industry - it may only be more strongly for the lace industry. Thus we take for this branch a value of 1/5, whereas for the others 1/3 is applied. Of course these values are slightly arbitrary. We can only suppose, not prove, that they are close to reality. It must be noted that halving or doubling these values would change total national employment by only 1 %. In the worst case, i.e. in West Flanders, the impact would be 4 % at the most.

However, one has to be aware of the dangers in using these figures. The results must be dealt with due care in the same way as the values of other census years.

This caution will indeed lead to not using the census of commerce and industry of 1930. The unreliability of this census is too high. Because of the difference between residence and place of work, mainly in the secondary sector, the census of population is an unsatisfactory alternative. This census is used, however, but only as a complement to the economic and

social census of 1937. The latter did not involve all branches of activity indeed, so that a supplement is necessary. For this use is made of interpolated figures on the basis of the censuses from 1930 and 1947.

The economic and social census is related to industry, to paid employment in agriculture and to some branches of the commercial and service sectors. All these branches hardly pose any problems because of the fairly good quality of the census. The only weak points to be mentioned are the absence of heads of business with paid employees and the slightly vague definition of aids. The first problem is solved by using the number of businesses with paid employees, the second may imply a (low) overestimation of employment.

The somewhat broader interpretation of aids also occurs in the 1930 census, although not anymore in the 1947 one. An overestimation of employment by using these censuses should therefore hardly be feared. The only adaptation on the basis of 1937 consists in dropping some (small) branches which were specific for the post-war situation of 1947. It is to be noted that in 1947 as well as in 1930 branches of industry were involved and no longer occupations. This is important because the growing dimension of the businesses had brought about an increasing divergence between the professional categories and the branches of industry where they occurred. Moreover, in these censuses a fairly careful distinction was made between chief and subsidiary occupations.

These elements are obviously also important for the 1947 data themselves. Indeed, the commercial and industrial census of that year again only offers exhaustive information about manufacturing industries (including heads of business). For the tertiary and primary sector most data must be got from the census of population. The only meaningful qualification consists in the implicit hypothesis of the absence of inter-provincial commuting. The increasing attractiveness of Brussels (cf. *infra*) makes this hypothesis highly unrealistic.

We should therefore conclude that, notwithstanding attempts at correction the present progress of research does not allow highly accurate calculation of employment according to residence. Apart from the importance of inter-provincial mobility, from an economic point of view also the problem of full-time equivalent workers and of hidden unemployment matter. In spite of attempts to eliminate the various forms of overestimation (agriculture, outwork, tertiary sector) via reduction coefficients or re-estimates, their

inevitably arbitrary character must be underlined, especially for 1846 and 1896. This does not mean that the figures are completely unreliable, but it does mean that they should be treated with due care in what follows.

2. The labour force

The 'active population' or 'labour force' includes both the people working 'for pay or profit' and the people wanting but not being able to do so for lack of jobs. Thus at the same time the problem arises of the measurement of the unemployed (willing to work). Among other facts the statistical significance of this problem is obvious from the census of 1937 as the first in which unemployment as a census category was included. Therefore, for the preceding years difficulties would be expected, the more so because of the lack of sufficient research in this area (15).

The basic problem confronted here is hence to discover how large the labour force was in each of the provinces on the basis of data recognizing this problem most of the time insufficiently.

The source approaching this information best (or least bad) is the census of occupations included in the population censuses. These censuses originally also pertained to the 'situation', so that a number of people not available for the labour market should be removed. In what follows each of the censuses is discussed that are relevant for a comparison with employment.

In 1846 the rentiers and proprietors and the religious not involved in social services (e.g. cult, nursing, education) were counted separately. These groups can therefore be removed easily. The conscripts were manifestly added to the non-commissioned officers. As the latter form a minority, the removal of this category will only lead to a slight overestimation.

As to male employment the general opinion is that the census is fairly complete and as such acceptable. This is not the case for women. Their degrees of participation are underestimated, especially in those rural areas with little outwork. This would be caused by not mentioning female aids in agricultural businesses of these areas (16). An acceptable 'adjustment' or 'correction' with the present state of the art hardly seems workable. Indeed, as to the nineteenth century it must be

questioned whether 'labour force' can be taken in the usual sense of the word. These women were not available to the labour market : they worked within the traditional family business. Most of the time no value added was created, since the production to a large extent was meant for auto-consumption.

Unemployment is another problem. The 1846 census did not go into that, however. Yet, as a rule, manifestly the temporary unemployed were recorded and the concept of 'temporary' may be interpreted broadly (17). The claim that 'chronically' unemployed people were not included in the census at all would seem to be exaggerated (18). As unemployment was not systematically inquired into there might be gaps with reference to the present-day concept of 'labour force'. In this sense, and also because of the underestimation of certain forms of female employment, the figures in table 5 should rather be seen as minimum figures, especially in the provinces with few outworkers.

The 1890 and 1900 censuses of occupations pose a similar problem. Non-active people are defined as 'personnes déclarées sans profession, fonction ou position lucrative' with the stress on the absence of 'resources personnelles'. Although most authors think this definition was not strictly applied to the aids, on the other hand this implies that along with pupils, housewives and the like also the chronically unemployed and unpaid (household) auxiliary labour especially in agriculture can be included in the group of non-active people. To this the same importance cannot be attached as in 1846. Changes in the organization of production to the detriment of the family business, the diminishing importance of agriculture and the different economic conditions considerably restrict the relative significance of these gaps.

In a certain sense the problem of overestimation must be stressed. In these years the censuses mentioned the frequencies of jobs and not of working persons. Thus the chief and subsidiary occupations of a same person led to (at least) two recordings. Hence, it is safer to subtract the number of non-active people from the local population to arrive at the gross labour force. With the non-active population this double-counting is indeed excluded (19).

As in 1846, from these gross figures some categories have to be subtracted:

the conscripts (including the non-commissioned officers), the proprietors and the rentiers, and a part of the clergy (20). To facilitate a comparison with employment in 1896 table 5 makes use of interpolated figures.

In 1910 things are a bit easier because a distinction was made between chief and subsidiary occupations. Double-counting, as in 1890 and 1900, is therefore avoided. Much more persistent is the problem of unpaid aids. In the 1910 census they are treated as a separate category, which is yet not considered to belong to the labour force proper. This exclusion follows from the intentions with preceding censuses. Yet it is not realistic to equate aids in this periode with economically inactive people who were not available to the labour market. In addition, in 1910 it was established that occasional (auxiliary) labour would not be considered, but on the contrary 'usual' aids. A criterium for the time span involved was not given, though. In practice the definition was undoubtedly not applied too narrowly : according to Klep even most boys and girls apprentices were classified among the aids. To allow comparison with former and later censuses we shall construct two versions of labour force : one with and one without aids (21).

Otherwise, the 1910 census poses few problems. In any case it includes the temporary jobless. As to the (chronically) unemployed, Pontanus assumes that they were also mentioned under their former occupation (22). The only additional correction of some importance consists in subtracting the categories of conscripts (including non-commissioned officers), the rentiers, old-age pensioners and proprietors and the economically inactive clergy.

As it was already mentioned the 1937 economic and social census only includes certain sectors, normally according to the locus of production. On this basis the local labour force cannot be identified. Again an interpolation will have to be used, this time between the 1930 and 1947 censuses.

The 1930 census can meet our needs fairly well. The various types of non-working people (rentiers, children, students etc.) were classified in separate categories, whereas the temporary and chronically unemployed were asked the job that had been done before. As a matter of principle, the unemployed are therefore entirely included in the labour force. The aids were counted separately too. In practice the term might not have been used in exactly the same way as in 1910, so that

a somewhat larger overestimation must have resulted. The first symptoms of crisis might play a role here. Adaptations of the census results can be limited to the subtraction of the group of conscripts (including non-commissioned officers) and the economically inactive religious.

In 1947 the situation is even simpler. The unemployed were considered separately and the instructions to the people questioned in the census were simple and clear on this point. The concept of aid was narrowly applied. Although the conscripts had to mention their status on the census form, the census publications only contained totals about defence (excluding the national policy, which in Belgium belongs to the armed forces). Removing this comprehensive category from the results could mean a larger error than the one it hopes to correct. The only category to be subtracted is hence limited to the economically inactive religious.

The preceding immediately reveals that the results of 1947 are not comparable with the ones of 1896 or 1846 without qualification. The changed economic conditions but more so the changes in the census procedures make it impossible to compose more or less homogeneous data-matrices, given the present progress of research. Nevertheless, it seems that with due care some conclusions can be drawn from the data.

3. Demand and supply confronted

The conclusions can be based on the confrontation between the demand for and the supply of labour in a region. This appears most clearly in the employment coefficients, i.e. the proportion between employment (23) and labour force (table 6). In principle a score of 100 % shows that the number of jobs is sufficient to provide work for the local labour force. The most common case is a coefficient smaller than 100 and points out a local shortage of employment. However, this shortage should not be taken in an absolute sense because more than local unemployment is involved. This is shown, inter alia, by the fact that inter-regional mobility (commuting) can solve possible unemployment without changing the employment coefficient. Conversely, a score larger than 100 does imply a shortage of labour force in the local labour market, but this need not constitute a fundamental problem because of incoming commuters.

The interpretation of the results in table 6 is more complex, however, than it was outlined above, because of the varying definitions of employment and especially of labour force. This is mainly the case with the results of the years 1846, 1896 and 1910.

In 1846 two variants occur. The first pertains to the most restricted concept of employment and the assumption of spatially homogenous errors with data about agriculture. Because of the restriction of the concept of employment it is not illogical that in general the value of the coefficient is rather low. The lowest levels are in East and West Flanders and in Antwerp, whereas elsewhere the national average is exceeded. Outwork would clearly make the picture in East and West Flanders much less unfavourable (see table 1). On the other hand the (continuing) existence of outwork was motivated precisely by the very bad opportunities of employment. The second variant takes outwork into account, but also starts from another distribution of agricultural employment. East and West Flanders and Antwerp again remain below the national average, but this time together with Luxemburg. The latter phenomenon is partially associated with the problem of the acreage in this province (cf. section 1). At the same time the dominating position of opportunities of employment in Brabant and in most of the Walloon provinces is a constant fact.

It could be wondered whether this has to do with an underestimation of the active population. In fact, on the basis of a sample of 19 rural communes in the Liège area and 17 in East and West Flanders Gubin and Van Neck concluded that female aids were underestimated in comparison with their Flemish counterparts. The difference between 'degrees of activity' to a large extent goes back to real differences (outwork) and in part to differences of measurement (24). The question is to which extent these differences in measurement have influenced the results in table 6. The sample results suggest that the employment coefficients may be overestimated by one eighth, and in the extreme case by one fifth by using underestimated figures about labour force. This implies even in the most pessimistic hypothesis a higher coefficient of employment for provinces as Liège and Hainaut than for East and West Flanders (25). In the latter provinces the relative shortage of regional employment was therefore the largest and in this sense illustrates the Flemish economic crisis of the middle of the nineteenth century.

The more fundamental character of Flemish employment problems, going more deeply than an occasional crisis, is shown by the 1896 results. In both versions Antwerp, East and West Flanders remain below the national average, which, however, is situated at a much higher level than half a century before. The four Walloon provinces each time remain above that average. Yet, indications of a spatially distorted appreciation of female auxiliary labour have not been found. This should therefore not be the basic explanation of a better employment situation. It should rather be concluded that there industrial growth and/or real agricultural activities were able to absorb the increased labour force. In this process, to a certain extent the home industry still played a positive role.

The importance of unpaid aids is also clear from the 1910 results. Indeed, the results in columns e and f only differ by the inclusion or absence of this group in the labour force. Obviously all scores are influenced negatively. Strikingly, the result is much more outspoken in Luxemburg, in East and West Flanders than in the other provinces. This is the logical outcome of the lower degree of industrialization and the prolonged existence of traditional types of economic activity. That the effect on the labour force is more important than on employment is proved by a comparison of e and g, in which a greater weight to subsidiary occupations and aids and the inclusion of outworkers explain the difference. The scores remain low in the three variants. Except for Limburg and Luxemburg the variants have little influence on the relative level of the ratios and on the position with regard to the national average. It should be observed, however, that the inter-provincial variation of the coefficients in 1910 is lower than in previous years.

The decrease of variations also comes to light in the 1937 and 1947 figures. Yet, from these it should not be concluded that the differences are insignificant, on the contrary. An important shift does show at the top of the hierarchy, where Brabant had been taking an ever more dominating position because of the increasing concentration of employment in the Brussels conurbation. The growth of Antwerp is much more moderate, whereas Liège and Hainaut can maintain their relatively favourable position. This is not the case for Luxemburg and Limburg. The weakest scores, however, remain those in East and West Flanders.

In 1947 the Belgian employment coefficient was higher than in 1937, whereas the latter exceeded the scores of all 1910 variants. It should be observed here that 1937 was the most favourable post-crisis year before the second world war, whereas the reconstruction in 1947 had led to a positive impact. Nevertheless, the increase of employment between 1937 and 1947 is less significant than the decrease of the labour force (compare table 4 with table 5).

Although the level of the national employment coefficient is the highest in 1947, also then a situation of real 'full employment' has not been reached (26). From this point of view one can wonder about the shortage of jobs (see table 7). Using the preceding series of figures, in principle one deals with full-time jobs. The fact that at least part of the labour force described did not want a full-time job or could not do it (e.g. because of the children), implies a maximum view of shortages of jobs, certainly in 1846, 1896 and 1910. Therefore, what is concerned in table 7 is not numbers of unemployed people, the more so as interprovincial and international mobility of labour should be taken into account.

In this perspective the following can be pointed out:

- the permanent character of considerable shortages in East and West Flanders;
- the fairly important shortages in Antwerp and Brabant before the first world war, after which especially in Brabant a substantial improvement occurs;
- the relative decline of basic industrial centres in Wallonia after 1900, which mainly hits Hainaut;
- the decline of the more agricultural regions of Limburg, Luxemburg and Namur with shortages of a moderate size.

It is self-evident that these shortages and their evolution should be considered the main incentive to mobility of labour.

4. Mobility of labour

The mobility of labour can take two forms, viz. permanent movements or migrations and temporary movements (commuting, seasonal work and the like). Mainly the second form will be discussed. Indeed, the causes of

migrations are broader than employment itself. Besides, certainly not all migrants belong to the labour force. The general characteristics of migration are known, including the migration waves to the U.S.A., Canada, Argentina and Brazil (27).

In principle the temporary movements can be considered flows from an area with a surplus of labour force to areas with a shortage. Yet, the differentiation of labour and employment play also a role here.

From the national viewpoint the distinction between international and intra-national mobility is crucial. In the first case an extension of the national labour market on the demand side is involved, in the second an internal adjustment of supply.

The periode before 1896 is poorly documented. The definitive impulse for border-crossing mobility had nevertheless been given by the crisis of 1846-47 (28). Already then hundreds of inhabitants of the frontier-communes crossed the border every day (29). This frontier work related to the industry in Northern France, providing already in 1896 approximately 29,000 Belgians with a job. About 14,700 of them came from West-Flanders and rather more than 9,000 from Hainaut. Besides the industrial workers a still more substantial group came from agriculture. Their number is estimated to be circa 50,000. 19,000 of them would come from East Flanders, 12,500 from West Flanders and another 17,000 from Hainaut (30). For this seasonal labour the decline in outwork and also the soaring rent of agricultural land are the main explanations (31). However, the mechanization of agriculture would gradually limit the opportunity for seasonal work, but this evolution would be (partially) compensated for by industrial frontier work. In this way estimations of about 40,000 seasonal workers in the 1910-1913 period are arrived at. 38,000 of these workers would have a job in France. The share of Hainaut would be lowered to 4,000, the one of West Flanders to 12,000. East Flanders on the other hand would have realized a rise to 22,000 (32). Frontier work would nevertheless have increased to rather more than 40,300 in 1910 with a score of 21,750 in West-Flanders. It may be concluded that before the first world war mainly the surpluses of labour from East and West Flanders and from Hainaut found in France a solution to their possible unemployment.

The climax of frontier labour in France is situated at the end of the twenties when their number was estimated at almost 100,000.

The 1930 census arrives at a total of 73,600, 46,800 or 59 % of which come from West Flanders. The crisis of the thirties and the second world war would reduce the importance of seasonal work to France even more. On the other hand frontier labour in the Netherlands would expand substantially. Mainly the labour force in Limburg and the Campine would increasingly participate (see table 8).

Frontier labour between 1890 and 1950 led therefore to at least 50,000 and sometimes up to 100,000 additional jobs (33). Obviously this was not enough to restore equilibrium in the balances of labour. Mainly in the countryside the pressure to go and look for a job elsewhere persisted. From 1870 when cheap railway season tickets were introduced, important flows originated to the urban concentrations of employment. The first systematic census of commuters dates from 1896 and shows the following four leading centers :

| | |
|-------------|------------------|
| Liège with | 14,933 commuters |
| Charleroi | 12,428 |
| Brussels | 9,233 |
| La Louvière | 8,769 |

These figures, however, only refer to manual workers in industry, so that for Brussels the number is underestimated. Adding clerks and commerce to it, Van der Haegen arrives at 11,000 (34).

Although the Walloon industrial centres would keep playing a not unimportant role for the Flemish labour surpluses until after the second world war, the dominating position of the Brussels conurbation in the domestic commuting flows would become ever stronger. The number increased to almost 27,000 in 1910 (the Flemish share amounted to 80 % instead of 69 % in 1896), to about 65,000 in 1930 and to 137,000 in 1947. The Flemish share had grown to almost 90 % (35). It could be claimed therefore that the decline of mainly seasonal labour in France was compensated for by the growing appeal of Brussels, so that the consequences especially for unemployment in East and West Flanders remained restricted. It should be added that the recruitment area of Brussels extended to the whole of the country and for that matter had done so since 1896.

5. Conclusion

From the preceding the regional shortages of income and employment have been shown to be compensated for insufficiently by the interaction of labour markets. Spatial mobility, both inter-regional and international, limited the damage caused by the defects of employment. The partially permanent character of these shortages during the entire periode of 1846 to 1947 (East and West Flanders are good illustrations) provides sufficient proof of its structural nature. The whole process of mutation of an agricultural and family society into an industrial and urban society implied, besides the development of ever more outspoken centres of activity (Liège and Charleroi first, Brussels afterwards), the successive decline of home industry and seasonal labour.

This concise survey of possible conclusions from the preceding sections certainly does not want to corroborate the illusion that about research into the changes in regional labour markets everything had been said or written. On the contrary, the synthesis offered above rather leads to a research programme. In the first place this programme should aim at an improved quality of the data, especially about the labour force. On this basis the existing explanations could be shaded or improved. At the same time the foundations can be laid to test alternative hypotheses, about dual labour markets, polarization of incomes or centre-periphery relations.

Notes

- (1) A. REES, The Economics of Work and Pay, New York-London, 1979, p. 2.
- (2) See e.g. H.S. PERLOFF et al., Regions, Resources and Economic Growth, Baltimore, 1960, pp. 63-64 or - from another perspective - J.T. ADDISON and W.S. SIEBERT, The Market for Labor : an analytical treatment, Santa Monica, 1979, p. 2.
- (3) A more comprehensive treatment of concepts of employment is included in my article about "De definitie en de classificatie van werkgelegenheid in het licht van de 19de eeuwse Belgische tellingen en de nationale rekeningen" in : XLVⁱème Congrès de la Fédération des Cercles d'Archéologie et d'Histoire de Belgique, Bruxelles-Comines, 1982, Actes, vol. 3, pp. 279-291.
- (4) Only from 1961 onwards the employed population according to locus of employment has been included.
- (5) An extensive discussion of the figures has been included in my dissertation on De regionaal-industriële specialisatie en haar effect op ruimtelijke verschillen in economische groei in België, van 1846 tot 1970, Antwerp, 1979, vol. 2 and 3. When no other sources are mentioned, the discussion is based on this dissertation.
- (6) J. HANNES, De economische bedrijvigheid te Brussel 1846-1847, Leuven-Paris, 1975 and J. HANNES, "Historische kritiek en verder. Een gevalstudie : Turnhout 1846" in : Bijdragen tot de Geschiedenis, 1981, nos. 1-2, pp. 79-105.
- (7) In previous publications, in which the point of view is the growth of economic activities, we have always done so.
- (8) The decrease of outwork between 1846 and 1896 is as it were compensated for by regarding these activities as full-time.
- (9) cf. J. GADISSEUR, "Contribution à l'étude de la production agricole en Belgique de 1846 à 1913" in : Revue belge d'histoire contemporaine, 1973, nos. 1-2, pp. 1-48. The generalization of the hypothesis has been included in my "De regionaal-sectoriële spreiding van de economische activiteiten in België, 1846-1910 : een bronkritische benadering" in : Bijdragen tot de Geschiedenis, 1978, nos. 1-2, pp. 97-184.

- (10) In this context it should be observed that research on the basis of the land-survey register leads to the conclusion that the census of agriculture is fairly reliable as to the cultivated surface. Only arboriculture (Luxemburg ?) is an exception, cf. H. VAN DER HAEGEN, "Het bodemgebruik in België en de evolutie ervan sinds 1834 volgens kadastrale gegevens" in: Statistisch Tijdschrift, 1982, no. 1, pp. 3-29.
- (11) G.L. DE BRABANDER, Regionale Structuur en Werkgelegenheid, Brussels, 1983, pp. 19-20.
- (12) cf. P.M.M. KLEP, "De agrarische beroepsbevolking van de provincies Antwerpen en Brabant en het Koninkrijk België, 1846-1910. Nieuwe evaluaties van kwantitatief-historisch materiaal" in: Bijdragen tot de Geschiedenis, 1976, nos. 1-2, pp. 41-43.
- (13) Ibid., p. 43.
- (14) The values of the coefficients are partly based on more or less similar reductions by Kuznets and Klep; see S. KUZNETS, Economic Growth of Nations, Cambridge (Mass.), 1971, pp. 225-226; P.M.M. KLEP, Bevolking en Arbeid in Transformatie, Nijmegen, 1981, pp. 195-198.
- (15) The few researches that were carried out either relate to national totals or to a restricted sample of districts and/or censuses. Of the first kind is Pontanus's work which, however, only pertains the twentieth century; cf. F. PONTANUS, La population active en Belgique: 1910-1961 et tendances recentes, Brussels, 1974. Partly based on Pontanus's provisional research results is P. BAIROCH, R. DELDYCKE, H. GELDERS et al., The working population and its structure, Brussels, 1968, pp. 141-149. Of the second type and less exclusively directed to the labour force is E. GUBIN and A. VAN NECK, "La répartition professionnelle de la population belge en 1846: un piège statistique" in: Acta Historica Bruxellensia, vol. IV, Brussels, 1981, pp. 269-365, and P.M.M. KLEP (1976) o.c.
- (16) Cf. E. GUBIN and A. VAN NECK, o.c., pp. 308-312. Compare P.M.M. KLEP (1981), o.c., pp. 177-188.
- (17) See J. HANNES, "Kwantifikatie en historische kritiek" in: Tijdschrift voor Geschiedenis, 1971, no. 2, p. 353.
- (18) P.M.M. KLEP (1976) o.c., pp. 43-44.

- (19) Nationally, the average difference between the local population and the sum of the jobs and the inactive people amounts to 3.42 % in 1890 and 3.64 % in 1900. Regional variations are not unimportant. In 1890 the minimum is 1.31 % in Liège and the maximum 5.13 % in Namur; in 1900 this is 2.78 % in Antwerp and 5.38 % in Luxemburg.
- (20) It may further be observed that conscripts according to the census publication are often registered with their previous occupation. In this sense the correction remains below the real figures.
- (21) As complete data were only given nationally, a certain underestimation is inevitable. Yet, the deviation between the sum of the provinces and the national total is only 9.5 %. Because there is also an overestimation by registering boys and girls apprentices it is assumed that the totals in table 5 at best will not differ much from reality and otherwise the picture offered will be too generous rather than too narrow.
- (22) The chronically unemployed "qui vivent exclusivement de secours de la bienfaisance publique" are nevertheless considered jobless and inactive, cf. P.M.M. KLEP (1976) o.c., p. 43 in which the chronically unemployed are even claimed not to be included at all in the labour force. However, compare F. PONTANUS, o.c., p. 25, p. 31 etc.
- (23) One may argue that employment is not equal to demand, since vacancies are not included. This may hold for the present situation, in which demand is dominated by large firms and the special skills asked for often imply long selection procedures. The requests of a small firm economy in which low skilled labour dominated, made vacancies so small a fraction of employment that it is statistically insignificant.
- (24) E. GUBIN and A. VAN NECK, o.c., pp. 357-358.
- (25) A possible positive adjustment of the employment figures is not considered.
- (26) This implies the problem of the cyclical component in the unemployment figures and the request of comparability of the phase in the economic cycles. Since we have discussed this problem at length elsewhere (o.c. (1983) pp. 35-45), it may be sufficient to indicate here that structural unemployment in a regional setting does mean more than total unemployment less cyclical and frictional unemployment. It means also and perhaps

essentially the difference between the capacity of regional economic structure to raise demand for labour and the structural characteristics of the development of the regional labour force.

- (27) A survey is published by L. SCHEPENS, Van Vlaskutser tot Franschman, Brugge, 9173, pp. 111-115 and pp. 156-190.
- (28) O. MARTENS et al., De Westvlaamse Seizoenarbeiders, Brugge, 1956, p. 21.
- (29) J. THEYS, Een analyse van de Westvlaamse grensarbeid in Noord-Frankrijk, Brugge, 1969, pp. 32-33.
- (30) O. MARTENS et al., o.c., p. 22.
- (31) Ibid., p. 21.
- (32) E. RONSE, L'Emigration Saisonnière Belge, Gent, s.d., pp. 76-77.
Compare O. MARTENS et al., o.c., p. 23.
- (33) The incoming frontier labour is insignificant.
- (34) H. VAN DER HAEGEN, "De Brusselse Werkforensen" in: Tijdschrift van de Belgische Vereniging voor Aardrijkskundige Studies, 1952, no. 1, p. 353.
- (35) We use the corrected figures of H. Van Der Haegen.

Table 1 Employment in 1846

| province | industry | | primary sector | | tertiary sector | total | |
|---------------|----------|---------|----------------|---------|-----------------|-----------|-----------|
| | (a) | (b) | (c) | (d) | (e) | (f) | (g) |
| -Antwerp | 37,123 | 8,044 | 71,844 | 51,144 | 23,000 | 131,967 | 119,311 |
| West Flanders | 71,291 | 44,182 | 113,861 | 109,261 | 23,900 | 209,052 | 248,634 |
| East Flanders | 70,573 | 38,642 | 144,427 | 115,027 | 35,100 | 250,100 | 259,342 |
| Limburg | 13,030 | 1,674 | 47,173 | 35,363 | 6,100 | 66,303 | 56,167 |
| Brabant | 53,290 | 15,492 | 131,013 | 139,053 | 32,100 | 216,403 | 239,935 |
| Hainaut | 101,756 | 7,054 | 118,206 | 169,076 | 29,900 | 249,862 | 307,786 |
| Liège | 66,671 | 15,655 | 55,501 | 84,161 | 19,700 | 141,872 | 186,187 |
| Luxembourg | 11,260 | 574 | 45,781 | 17,911 | 6,100 | 63,141 | 35,845 |
| Namur | 21,867 | 1,024 | 50,937 | 57,837 | 9,800 | 82,604 | 90,528 |
| Total | 446,861 | 132,341 | 778,743 | 778,833 | 185,700 | 1,411,304 | 1,543,735 |

(a) According to the census of industries.

(b) Outworkers according to the 1896 census.

(c) Assuming the agricultural employment equally overestimated in all provinces.

(d) Based on the acreage and the land prices; the deviation of the Belgian total in (d) compared with (c) is the result of rounding off the provincial figures.

(e) Based on the proportion secondary sector/tertiary sector.

(f) Sum of (a), (c) and (e).

(g) Sum of (a), (b), (d) and (e).

Table 2 Employment in 1896

| province | industry | | primary sector | | tertiary sector | total | |
|---------------|----------|--------|----------------|---------|-----------------|-----------|-----------|
| | (a) | (b) | (c) | (d) | (e) | (f) | (g) |
| Antwerp | 82,928 | 4,022 | 76,669 | 56,969 | 98,800 | 258,397 | 242,719 |
| West Flanders | 62,806 | 22,091 | 119,244 | 131,134 | 87,300 | 269,350 | 303,331 |
| East Flanders | 126,587 | 19,321 | 148,115 | 117,545 | 106,500 | 381,202 | 369,953 |
| Limburg | 15,958 | 837 | 52,691 | 41,931 | 24,800 | 93,449 | 83,526 |
| Brabant | 159,354 | 7,746 | 127,396 | 118,016 | 168,400 | 455,150 | 453,516 |
| Hainaut | 253,837 | 3,527 | 89,735 | 122,145 | 116,800 | 460,372 | 496,309 |
| Liège | 166,916 | 7,828 | 54,465 | 87,955 | 88,700 | 310,081 | 351,399 |
| Luxemburg | 17,506 | 287 | 53,938 | 35,768 | 22,600 | 94,044 | 76,161 |
| Namur | 51,373 | 512 | 50,697 | 61,487 | 40,700 | 142,770 | 154,072 |
| Total | 937,265 | 66,171 | 772,950 | 772,950 | 754,600 | 2,464,815 | 2,530,986 |

(a) According to the corrected census of industries.

(b) Outworkers according to the 1896 census (x 0.5)

(c) Assuming the agricultural employment equally overestimated in all provinces.

(d) Based on the acreage and the land prices.

(e) Based on the proportion secondary sector/tertiary sector.

(f) Sum of (a), (c) and (e).

(g) Sum of (a), (b), (d) and (e).

Table 3 Employment in 1910

| province | industry | | primary sector | | tertiary sector | total | |
|---------------|-----------|--------|----------------|---------|-----------------|-----------|-----------|
| | (a) | (b) | (c) | (d) | (e) | (f) | (g) |
| Antwerp | 119,949 | 2,757 | 52,860 | 57,528 | 127,900 | 300,709 | 308,134 |
| West Flanders | 97,171 | 12,720 | 94,860 | 99,025 | 76,200 | 268,231 | 285,116 |
| East Flanders | 171,138 | 11,254 | 111,744 | 117,891 | 98,400 | 381,282 | 398,683 |
| Limburg | 21,380 | 300 | 39,417 | 41,739 | 19,800 | 80,597 | 83,219 |
| Brabant | 210,104 | 4,204 | 86,945 | 93,208 | 203,500 | 500,549 | 511,016 |
| Hainaut | 283,391 | 1,775 | 64,989 | 67,591 | 110,200 | 458,580 | 462,957 |
| Liège | 199,313 | 2,758 | 38,310 | 40,082 | 91,200 | 328,823 | 333,353 |
| Luxemburg | 18,440 | 89 | 32,471 | 34,479 | 19,600 | 70,511 | 72,608 |
| Namur | 57,438 | 289 | 29,265 | 30,887 | 36,700 | 123,403 | 125,314 |
| Total | 1,178,324 | 36,146 | 550,861 | 582,430 | 783,500 | 2,512,685 | 2,580,400 |

(a) According to the census of industry and commerce, excluding outworkers.

(b) A reduction coefficient of 0.2 is applied to outworkers in the lace industry and of 0.33 to other outworkers.

(c) According to the census of occupations; a reduction coefficient of 0.25 is applied to subsidiary occupations and 0.1 to aids.

(d) The coefficients are 0.5 and 0.2 respectively.

(e) Based on the proportion secondary sector/tertiary sector.

(f) Sum of (a), (c) and (e).

(g) Sum of (a), (b), (d) and (e).

Table 4 Employment in 1937 and 1947

| province | 1937 | 1947 |
|---------------|-----------|-----------|
| Antwerp | 457,449 | 476,613 |
| West Flanders | 321,847 | 326,677 |
| East Flanders | 443,028 | 442,439 |
| Limburg | 131,609 | 145,219 |
| Brabant | 731,593 | 762,768 |
| Hainaut | 471,129 | 469,462 |
| Liège | 395,498 | 395,387 |
| Luxemburg | 72,740 | 69,007 |
| Namur | 123,211 | 120,609 |
| Total | 3,148,104 | 3,208,181 |

Source: general censuses and own calculations

Table 5 The evolution of the labour force between 1846 and 1947

| | 1846 | 1896 | | 1910 | | 1937 | 1947 |
|---------------|-----------|-----------|-----------|-----------|-----------|-----------|------|
| | | (a) | (b) | (c) | (d) | | |
| Antwerp | 205,293 | 309,103 | 363,978 | 417,108 | 515,221 | 511,773 | |
| West Flanders | 347,778 | 355,050 | 375,783 | 423,464 | 405,705 | 392,401 | |
| East Flanders | 474,641 | 460,554 | 470,684 | 540,623 | 537,704 | 511,497 | |
| Limburg | 71,479 | 86,390 | 88,712 | 111,116 | 150,896 | 159,211 | |
| Brabant | 256,751 | 507,662 | 621,483 | 684,490 | 786,488 | 775,987 | |
| Hainaut | 299,203 | 482,739 | 534,497 | 564,735 | 545,526 | 504,904 | |
| Liège | 185,353 | 340,863 | 380,617 | 402,550 | 434,779 | 407,467 | |
| Luxembourg | 55,888 | 78,594 | 79,727 | 98,451 | 83,524 | 76,461 | |
| Namur | 93,823 | 129,577 | 138,061 | 151,233 | 137,248 | 128,767 | |
| Total | 1,990,209 | 2,750,532 | 3,053,542 | 3,393,770 | 3,597,091 | 3,468,468 | |

(a) Interpolation between 1890 and 1900.

(b) Unpaid aids are excluded.

(c) Unpaid aids are included.

(d) Interpolation between 1930 and 1947.

Source: general censuses and own calculations.

Table 6 Employment coefficients (1846 - 1947)

| province | 1846 | | | 1896 | | | 1910 | | | 1937 | 1947 |
|---------------|-------|-------|-------|-------|------|------|------|------|------|------|------|
| | (a) | (b) | (c) | (d) | (e) | (f) | (g) | | | | |
| Antwerp | 64.3 | 58.1 | 83.6 | 78.5 | 84.7 | 73.9 | 82.6 | 88.8 | 93.1 | | |
| West Flanders | 60.1 | 71.5 | 75.9 | 85.4 | 75.9 | 67.3 | 71.4 | 79.3 | 83.3 | | |
| East Flanders | 52.7 | 54.6 | 82.8 | 80.3 | 84.7 | 73.7 | 81.0 | 82.4 | 86.5 | | |
| Limburg | 92.8 | 78.6 | 108.2 | 96.7 | 93.8 | 74.9 | 90.9 | 87.2 | 91.2 | | |
| Brabant | 84.3 | 93.4 | 89.7 | 89.3 | 82.2 | 74.7 | 80.5 | 93.0 | 98.3 | | |
| Hainaut | 83.5 | 102.9 | 95.4 | 102.8 | 86.6 | 82.0 | 85.8 | 86.4 | 93.0 | | |
| Liège | 76.5 | 100.4 | 91.0 | 103.1 | 87.6 | 82.8 | 86.4 | 91.0 | 97.0 | | |
| Luxembourg | 113.0 | 64.1 | 119.7 | 96.9 | 91.1 | 73.8 | 88.4 | 87.1 | 90.3 | | |
| Namur | 88.0 | 96.5 | 110.2 | 118.9 | 90.1 | 82.9 | 89.4 | 89.8 | 93.7 | | |
| Belgium | 70.9 | 77.6 | 89.6 | 92.0 | 84.5 | 76.0 | 82.3 | 87.5 | 92.5 | | |

(a) Based on table 1, column f, and table 5.

(b) Based on table 1, column g, and table 5.

(c) Based on table 2, column f, and table 5.

(d) Based on table 2, column g, and table 5

(e) Based on table 3, column g, and table 5, column b

(f) Based on table 3, column g, and table 5, column c

(g) Based on table 3, column f, and table 5, column b

Table 7 Shortages (-) or surpluses (+) of full time jobs

| province | 1846 | | | 1896 | | | 1910 | | | 1937 | | 1947 | |
|---------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|--|
| | (a) | (b) | (c) | (d) | (e) | (f) | (g) | (e) | (f) | (g) | | | |
| Antwerp | -73,326 | -85,982 | -50,706 | -66,384 | -55,844 | -108,974 | -63,269 | -57,772 | -57,772 | -63,269 | -57,772 | -35,160 | |
| West Flanders | -138,726 | -99,144 | -85,700 | -51,719 | -90,667 | -138,348 | -107,552 | -83,858 | -83,858 | -107,552 | -83,858 | -65,724 | |
| East Flanders | -224,541 | -214,299 | -79,352 | -90,601 | -72,001 | -141,190 | -89,402 | -94,676 | -94,676 | -89,402 | -94,676 | -69,058 | |
| Limburg | -5,176 | -15,312 | +7,059 | -2,864 | -5,493 | -27,897 | -8,115 | -19,287 | -19,287 | -8,115 | -19,287 | -13,992 | |
| Brabant | -40,348 | -16,816 | -52,512 | -54,146 | -110,467 | -173,474 | -120,934 | -54,895 | -54,895 | -120,934 | -54,895 | -13,219 | |
| Hainaut | -49,341 | +8,583 | -22,367 | +13,570 | -71,540 | -101,778 | -75,917 | -74,397 | -74,397 | -75,917 | -74,397 | -35,442 | |
| Liège | -43,481 | +834 | -30,782 | +10,536 | -47,264 | -69,197 | -51,794 | -39,281 | -39,281 | -51,794 | -39,281 | -12,080 | |
| Luxembourg | +7,253 | -20,043 | +15,450 | -2,433 | -7,119 | -25,843 | -9,216 | -10,784 | -10,784 | -9,216 | -10,784 | -7,454 | |
| Namur | -11,219 | -3,295 | +13,193 | +24,495 | -12,747 | -25,919 | -14,658 | -14,037 | -14,037 | -14,658 | -14,037 | -8,158 | |
| Belgium | -578,905 | -446,474 | -285,717 | -219,546 | -473,142 | -813,370 | -540,857 | -448,987 | -448,987 | -540,857 | -448,987 | -260,287 | |

(a) Based on table 1, column f, and table 5.

(b) Based on table 1, column g, and table 5.

(c) Based on table 2, column f, and table 5.

(d) Based on table 2, column g, and table 5.

(e) Based on table 3, column g, and table 5, column b

(f) Based on table 3, column g, and table 5, column c

(g) Based on table 3, column f, and table 5, column b

Table 8 Frontier Workers in France and the Netherlands

| district | France | | | The Netherlands | | |
|-------------|--------|--------|--------|-----------------|-------|-------|
| | M | F | T | M | F | T |
| Antwerp | - | - | - | 127 | 53 | 180 |
| Turnhout | - | - | - | 1,602 | 718 | 2,320 |
| Leuven | - | - | - | 3 | - | 3 |
| Brugge | - | - | - | 234 | 2 | 236 |
| Kortrijk | 5,541 | 2,824 | 8,365 | - | - | - |
| Mouscron | 8,714 | 5,809 | 14,523 | - | - | - |
| Oostende | 476 | 25 | 501 | - | - | - |
| Roeselare | 5,745 | 3,259 | 9,004 | - | - | - |
| St.-Niklaas | - | - | - | 698 | 417 | 1,115 |
| Gent | - | - | - | 1,414 | 497 | 1,911 |
| Charleroi | 1,126 | 68 | 1,194 | - | - | - |
| La Louvière | 2,042 | 155 | 2,197 | - | - | - |
| Mons | 3,183 | 54 | 3,237 | - | - | - |
| Tournai | 4,259 | 1,049 | 5,308 | - | - | - |
| Liège | - | - | - | 73 | 26 | 99 |
| Verviers | - | - | - | 5 | - | 5 |
| Hasselt | - | - | - | 720 | 862 | 1,582 |
| Tongeren | - | - | - | 622 | 173 | 795 |
| Arion | 2,083 | 54 | 2,137 | - | - | - |
| Namur | 349 | 5 | 354 | - | - | - |
| Total | 33,518 | 13,302 | 46,820 | 5,498 | 2,748 | 8,246 |

Source: Fonds de Soutien des Chômeurs, Les Travailleurs Frontaliers, 1947, p. 1.











