

**URBANIZATION IN A PRE-INDUSTRIAL  
ECONOMY  
THE CASE OF BRABANT, 1374-1930 \***

by

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Brabant has a long tradition in highly developed commercial and industrial activity. From the twelfth century onwards, an important non-agricultural home-market and export-industry, especially in textiles, developed in this region. Agricultural techniques were among the best of Europe. The commercial and industrial activity of this region reached a climax in the first half of the sixteenth century, when the international market of Antwerp stretched from the north to the south and from the west to the east of Europe. (1)

The Religion-War between 1568 and 1648 divided the Netherlands in a northern and a southern part. International conventions, dominated by Dutch and English commercial interests, isolated the Brabantine economy from the international markets, at least partially. We have to wait for the nineteenth century for a second period of such fast commercial and industrial development.

I am especially interested in describing and explaining the transition from agrarian to modern industrial economies. Paucity of pre-industrial macro-economic data, and related problems in collecting the existing data, have brought me to the field of the history of

(\*) This text is an abridged version of the paper presented to the International Symposium on "The Evolution of the Corporate Economy and Some Recent Belgian Contributions to Economic History", Leuven, February 3 and 4, 1976. Another version was prepared for the Annual Meeting of the Belgische Vereniging voor Economische Historici. More details will be found in my forthcoming dissertation (University of Nijmegen, the Netherlands) on the economically active population in Brabant (18th-19th centuries). I wish to thank prof. Herman Van der Wee for his very interesting suggestions.

(1) H. VAN DER WEE, *The Growth of the Antwerp Market and the European Economy*, The Hague 1963, 3 vol.

the factor of production labour. By describing and analysing structures of employment, and reallocation and specialization of labour, I hope to make a contribution to a broad historical explanation of the preconditions for and the beginnings of modern industrialization in general, and especially as applied to Brabant.

In what follows I will present to you some notes on reallocation of labour in a very simple way : the changing ratio between the urban (say non-agricultural) population and total population. The history of Brabantine urbanization can be written for a very long period from 1374 till let us say 1930.

The sources for a demographic history of Brabant are relatively rich. We have reliable data for the 14th, 15th, 16th, 18th, 19th and 20th centuries. Given the paucity of macro-economic data before 1846 I will try to make an effective use of these data.

Brabant can be divided in six "arrondissements". The main cities are : Antwerp in the north, Lier and Mechelen in the middle, Brussels and Leuven in the south. Total population in Brabant is about 350,000 in the fifteenth century, doubling to 700,000 by 1800, doubling again to 1,400,000 by 1880 and again to 2,800,000 in 1930. So, the time span for the population to double has successively been shorter.

As a piece of information I present some data on the development of geographical concentration of population in the Brabantine Duchy. (2) (See table 1.)

TABLE 1.

DENSITIES OF POPULATION IN BRABANT, 1374-1930

Arrondissement	km <sup>2</sup>	1374	1437	1480	1526	1565	1615	1665	1709	1755	1806	1846	1890	1930
Antwerpen	972	33	48	57	90	139	-	-	112	91	128	195	428	754
Mechelen	504	62	75	71	85	106	-	-	135	131	173	231	319	454
Turnhout	1356	27	35	31	32	38	-	-	35	41	54	74	94	148
Brussel	1107	58	86	89	79	108	-	-	111	147	195	340	652	1088
Leuven	1228	81	87	77	59	59	-	-	52	59	102	142	181	240
Nijvel	1048	55	38	33	36	31	-	-	39	52	87	135	153	173
Total	6115	52	61	59	61	76	66	79	74	82	117	180	296	465

(2) More data and comments in my forthcoming dissertation.

The density is already rather high at the end of the fourteenth century. This phenomenon can be observed in all of the Netherlands, the western part of Germany and the northern part of France. (3) In 1374 the "arrondissements" of Antwerp and Turnhout are characterised by relatively low figures. At that time the town of Antwerp has no more than 7,000 inhabitants, while about two centuries later, in 1565, about 100,000. In fact the Antwerp-area, and the Turnhout-area, have in general bad soil, many waste lands and tracts of heath. In absolute terms, the Brabantine density is increasing from a level of about 50 to 60 in the fifteenth and the sixteenth century, to 70-80 in the eighteenth century, and starts increasing very rapidly since the late eighteenth century for the following 150 years.

Urbanization is a very old phenomenon in Brabant. The cities of Leuven and Brussels each count 20,000 inhabitants in 1374.

First I will define the urban unit. I regard as urban population those people residing in communities with a centre of at least 5,000 inhabitants. I have taken a rather high level, because we find in Brabant very extensive rural communities with populations of 3,000 and 4,000 inhabitants. These communities cannot be placed in the urban sector. The level of urbanization is simply the rate of the urban population to total population. One could endlessly debate whether a city of 5,000 is indeed a legitimate urban unit, but it might suffice to say that the Brabantine cities of that kind were almost totally non-agricultural. What's more, the timing of changes in the level of urbanization is quite insensitive to our urban definition.

In table 2 I have collected urban ratios for the 6 "arrondissements" of Brabant (see next page). As you see, the level of urbanization of the total Brabantine population was already very high in the first half of the sixteenth century : 41,47%. After a long period of de-urbanization, up till 1800, a new process of urbanization developed in the nineteenth century.

The levels of urbanization were not the same in the different "arrondissements". Those of Antwerp and Brussels always had a high degree of commercial and industrial activity. Urbanization in this area is high, and displays important fluctuations. (See table 2, the percentages of group A + B.).

(3) N.J.G. POUNDS, "Population and Settlement in the Low Countries and Northern France in the Later Middle Ages", in : *Belgisch Tijdschrift voor Filologie en Geschiedenis*, 49 (1971), pp. 369-402.

TABLE 2.

URBAN RATIOS :  $\frac{U}{P}$  in Brabant, 1374-1930. U = population in urban units.

An Urban unit is a community with a centre of  $\geq 5,000$  inhabitants. P = rural and urban population. In percentages

arrondissement	1374	1437	1480	1526	1565	1615	1665	1709	1755	1806	1846	1890	1930
Antwerpen	22	43	60	63	75	-	-	65	53	48	54	76	83
Mechelen	42	55	61	60	60	-	-	51	41	35	37	48	49
Turnhout	14	10	12	12	15	-	-	13	14	14	14	21	29
Brussel	31	35	40	37	42	-	-	41	37	34	47	72	80
Leuven	35	34	39	38	34	-	-	34	28	30	27	35	34
Nijvel	12	15	17	13	15	-	-	15	11	7	6	11	26
Total	27	32	39	41	47	41	42	42	34	30	36	57	67
A + B	28	37	47	50	59	-	-	52	43	39	49	73	81
M + L	37	39	45	47	45	-	-	43	34	32	32	41	41
T + N	13	13	14	12	14	-	-	13	13	10	9	16	27
AMT	25	34	45	50	58	50	49	50	39	35	39	60	67
BLN	28	31	36	33	36	33	36	34	30	27	34	56	66

The "arrondissements" of Mechelen and Leuven (group M + L) also have a high level of urbanization, but the fluctuations in the long run are relatively small. This region has no particular history of an expansion of commerce and industry, except during the period before 1400. As a compensation for its declining wool-industry Leuven gets its University in 1425. Mechelen has been the residence of a very rich and important archbishopry since 1559. Till 1800 the county of Mechelen is a political independent entity.

The "arrondissements" of Turnhout and Nijvel (group T + N) are strongly agricultural. Before 1800 the cities of Turnhout and Nijvel never exceeded 10,000 inhabitants. As I said before, the Turnhout-area has relatively infertile soil. The villages mostly encompass more than 2,000 hectares or 5,000 acres, and are composed of a range of hamlets. The Nijvel-area, in the south, is very fertile, has small communities and impressive farms, which contrast very favourably to the poor peasant farms in the Turnhout-area.

As Jeffrey Williamson did in his study on American Northeast Urbanization (4) I have taken as an index of the rate at which

(4) J. WILLIAMSON, "Urbanization in the American Northeast, 1820-1870", in : R.W. FOGEL and St. L. ENGERMAN (eds.), *The Reinterpretation of American Economic History*, New York 1971, pp. 426-436.

urbanization occurs, a rather primitive measure, that is, the incremental urbanization ratio  $\frac{U}{P}$ . (See table 3.) This ratio directly captures the share of the population transferred during a certain period to a presumably more productive location.

TABLE 3.

INCREMENTAL URBANIZATION RATIOS :  
 $\frac{U}{P}$  in Brabant, 1374-1930, in percentages

arrondissement length period (years)	1374- 1437	1437- 1480	1480- 1526	1526- 1565	1565- 1615	1615- 1665	1665- 1709	1709- 1755	1755- 1806	1806- 1846	1846- 1890	1890- 1930
	63	43	46	39	50	50	44	46	51	40	44	40
Antwerpen	21	17	3	12		-10		-12	-5	6	22	7
Mechelen	13	6	-1	0		-9		-10	-6	2	11	1
Turnhout	-4	2	0	3		-2		1	0	0	7	8
Brussel	4	5	-3	5		-1		-4	-3	13	25	8
Leuven	-1	5	-1	-4		0		-6	2	-3	8	-1
Nijvel	3	2	-4	2		0		-4	-4	-1	5	15
Total	5	7	2	6	-6	1	0	-8	-4	6	21	10
A + B	9	10	3	9		-7		-9	-4	10	24	8
M + L	2	7	2	-2		-2		-9	-2	0	9	0
T + N	0	1	-2	2		-1		0	-3	-1	7	11
AMT	9	11	5	8	-8	-1	1	-11	-4	4	21	7
BLN	3	5	-3	3	-3	3	-2	-4	-3	7	22	10

By examining the timing of Brabantine urbanization, we see that Brabant witnessed two broad periods of increasing levels of urbanization : the first in the fourteenth, fifteenth and first half of the sixteenth century, and the second in the nineteenth and twentieth century. This is consistent with the commercial and industrial expansion of this region in those centuries.

The de-urbanization of the second half of the sixteenth century coincides with the loss of important export-markets and a disrupted domestic market, caused by the Eighty Year Religion War. The seventeenth century brings stability. The crisis in the Brabantine skilled labor industries of the first half of the eighteenth century generates a further de-urbanization, and although there is a strong agricultural expansion in the second half of this century, the process of de-urbanization continues.

Regional variation in levels of urbanization has some interesting aspects. Overall-urbanization is to be observed in two distinct

periods : from 1437 to 1480 and from 1846 to 1890. There are no periods of overall de-urbanization, but the first half of the eighteenth century shows negative values in five "arrondissements", while in three of them even highly negative values.

The acceleration in Antwerp urbanization is historically very fast between 1846 and 1890 (especially between 1856 and 1890). This is consistent with the economic performance of the harbour of Antwerp in those decades.

In the first centuries the incremental urbanization ratios of the arrondissement of Mechelen seem to follow those of the Antwerp-area, but at a more modest pace. After a period of historically very high rates of urbanization in the fourteenth century, the Mechelen-region urbanization-ratio decreases from 1500 onwards till about 1820, and recovers relatively slowly thereafter. The level of urbanization in this region in 1930 is lower than that in the fifteenth and sixteenth century !

The Turnhout- and Nijvel-areas reveal stability or erratic fluctuations in incremental urban ratios. At the end of the nineteenth century some new small urban centers appear.

Just as in the case of the Antwerp-area, the "arrondissement" of Brussels has enjoyed two urbanization periods, one in the fifteenth-sixteenth century, and one in the nineteenth-twentieth century. The de-urbanization in the seventeenth-eighteenth century is not so considerably as in the Antwerp-area.

The arrondissement of Leuven has low incremental urban ratios over the whole period, except for the strong de-urbanization in the eighteenth century. No drastic nineteenth century urbanization occurs. This area indeed witnesses its high incremental ratios in the twelfth to the fourteenth century.

I believe, that we can't speak of Brabantine "urban booms", neither in the late medieval times, nor in the nineteenth century. Nineteenth century urbanization in Brabant is much slower than, for exemple, in the industrialising centres of the United States. Incremental urbanization ratios of 35%, measured over only three decades, can be observed in Rhode Island, Eastern Pennsylvania, New Jersey, New York, Maryland, and other American industrial and commercial regions. In the nineteenth century the Brussel-area has a long and intensive urbanization-period, of five decades, from 1830 till 1880, starting from 35%, with decennial incremental ratios of about 8%. On the other hand the Antwerp-area has its urban acceler-

ation between 1856 and 1890, during 3 1/2 decades, starting from 56%, with decennial incremental ratios of 6%.

We have to conclude, that the nineteenth century urban acceleration developed after a 50 year period of slow urbanization. It also departed from high established urban ratios : 36% in the total Brabantine region and about 50% in the Antwerp-Brussel-area, where the acceleration was nevertheless the highest.

It is interesting to notice, that rural population in the nineteenth century was growing rather fast : from about 500,000 in 1806 to 1,000,000 in 1930. This contrasts with what happened in the late medieval urbanization process : between 1374 and 1565 urban population increases from 100,000 to 220,000, while rural population continually fluctuates between 220,000 and 250,000.

The only very high incremental urban ratios are negative and pre-industrial. Some data suggest, that in the three or four decades after 1565, Brabant underwent strong de-urbanization. Especially the "arrondissement" of Antwerp lost quite a lot of urban population. In 1565 there are 100,000 inhabitants, about 1600 maximum 50,000. I am not absolutely sure about the evolution of the rural population but it is not unlikely that the negative incremental urban ratio for the Antwerp area is about 35 - 40% in the last three decades of the sixteenth century.

The timing of Brabantine urbanization supports our conventional historical knowledge. However, by comparing the evolution of the incremental urban ratios, it could be interesting to make a further study of the chronology of the urbanization in the Brussel- and Antwerp-area. There are reasons to believe, that in the fourteenth-fifteenth century as well as in the nineteenth century, urban acceleration started earlier in the Brussel-area than in the Antwerp-area. This suggests a possible interdependency, which could indicate the importance of internal Brabantine growth-forces in the expansion of Antwerp urban population. This possible interdependency seems to weaken the importance attributed to specific commercial factors, developed by the Antwerp merchants in non-Brabant oriented international trade. Perhaps the earlier increase of the levels of urbanization and industrialization in the Brussel-area was a necessary but insufficient condition to Antwerp expansion ?

In how far can the changes in the levels of urbanization be ex-

plained by migration, and to what extent are they due to variations in the rate of natural increase ? If I could estimate the surpluses of births over deaths in urban and rural areas, I should in principle get an answer to this question. However there are a great number of practical obstacles to such a procedure : for example, we have no data about births and deaths before 1600.

If I take as hypotheses 1) that rates of urban natural increase were negative in the fourteenth-fifteenth-sixteenth centuries and were positive in the nineteenth century, and 2) that rates of natural rural increase were more positive in the nineteenth century than in the late medieval times, I can try to deduce some kind of answer to this question. (5)

I will compare two periods of increasing levels of urbanization : the first from 1437 to 1565 (with percentages increasing from 32% to 47%) and a second period from 1806 to 1866, with almost the same percentages : 30% and 45%. (See table 4, line 5)

TABLE 4.

DATA CONCERNING TWO URBANIZATION-PERIODS IN BRABANT			
1. period	1437-1565	1806-1866	
2. length (years)	128	60	
3. urban population (000)	121-219	218-576	
4. total population (000)	375-464	717-1292	
5. urban ratios (%)	32-47	30-45	
6. annual rate of increase of the urban population (%)	0.5	1.6	
7. annual rate of increase of the total population (%)	0.16	1.0	
8. 6 relative to 7 (ratio)	3.125	1.6	
9. annual rate of increase of the rural population (%)	-0.03	0.6	
10. annual rate of natural increase of the urban population (assumed, %)	-0.4	0.2	
11. annual rate of increase of the urban population by immigration (6-10, %)	0.9	1.4	
12. annual rate of nat. increase of the rural population (%)	0.34	1.24	
13. annual rate of decrease of the rural population by emigration (12-9, %)	0.37	0.64	

If we assume, that the urban population in the late medieval period has an annual rate of natural increase of, say, - 0.4% and in the (5) Scattered data in : R. MOLS, *Introduction à la démographie historique des villes d'Europe du XIVe au XVIIIe siècle*, Leuven 1955-56, 3 vol.

nineteenth century one of 0.2 %, (working hypotheses), than we have to conclude that in the first period a high proportion of the flow from the rural districts to the towns was spent to neutralization of the natural decrease of the urban population. This is true the more the annual rate of natural increase of urban population is negative in the first period and the more it is positive in the second period. (See table 4, lines 6, 10 and 11.) The late medieval increase of urban population seems to be totally caused by immigration, while the nineteenth century increase is partially generated by natural growth of urban population — which is positive now — and partially by immigration.

In the case of Brabant a certain absolute growth of the towns would seem to require more immigration in the XVth-XVIth centuries than in the nineteenth century. In addition urban immigration requires more than the natural increase of the medieval rural population. In fact the medieval rural natural increase is creamed off, while in the nineteenth century migration costs only about 50% of the natural rural increase. (Table 4, lines 12-13.)

Of course this has an effect on the evolution of the urban ratios. The levels of urbanization can increase relatively fast in the medieval circumstances. An annual rate of increase of the Brabantine urban population of only 0,5% is enough to reach high levels of urbanization in 128 years. The same performance over 60 years should require an annual urban growth of only  $\pm 1\%$ . In the nineteenth century increased rates of natural population growth have a doubly negative effect on the rise of urban levels. First, urban natural growth is now positive. Immigration comes in competition with natural urban growth. Second, natural rural increase is now much higher than four centuries ago. The result is, that the Brabantine urban population has to grow 1.6% a year in order to raise the level of urbanization from 30% to 45% within 60 years. (See table 4, line 6.)

We have to conclude that in Brabant the early nineteenth century increase of urban ratios required a much higher rate of growth of non-agricultural employment than the classic late medieval expansion of the Brabantine cities. (Table 4, line 6.) The fact that their natural increase was negative and had to be surpassed by immigration from a rural sector with a low positive natural increase led to astonishing high urban ratios, induced by a relatively small growth of non-agricultural employment.

But as suggested in table 4, line 7, there is an important difference between the annual rate of increase of total population in both periods : 0.16% and 1.0% respectively. This implies that in the fifteenth and sixteenth century urban population had to grow more than three times faster than total population in order to bring about a given increase in urban ratios. The nineteenth century urban population had to grow only 1.6 times faster than total population. (See table 4, line 8) In terms of employment, late medieval non-agricultural employment had to grow more intensely than nineteenth century non-agricultural employment.

The historiography of the social-economic history of Brabant suggests that relatively rapid structural change, as in the second half of the nineteenth century, but also during some periods in the fourteenth, fifteenth and sixteenth centuries, had a disequilibrating effect on the total economy. Regional divergence would be typical for the growth periods of the Brabantine economy. Especially the explosive growth of medieval and late-nineteenth century Antwerp would be a unique case in Brabant.

In table 5 I have indicated some spatial dimensions of Brabantine urbanization. The mean absolute deviation measures the average absolute difference between, on the one hand, the individual urban ratio of each arrondissement relative to the Brabantine urban ratio, and, on the other hand, the unity. (See my note at table 5.)

The late medieval centuries appear to be ones with divergence. This seems to underline traditional historical knowledge, although it is rather surprising that the sixteenth century boom of Antwerp has so few disequilibrating effects (at least in terms of urbanization) on Brabant.

In the second period of urbanization, slowly beginning in 1800, in fact starting about 1830, we first see divergence, and then, when the acceleration of urbanization loses momentum after 1880, we see a slow convergence of regional urban ratios. Urban ratios are at best only very crude measures of economic structure, but this would appear to support the generalization that the six "arrondissements" of Brabant find their economic structures becoming slowly similar after 1880, that is, after the period with the highest incremental ratios.

Another secular movement of convergence seems to develop from 1565 to 1806, i.e. the period of decreasing levels of

TABLE 5.

PERCENTAGE MEAN DEVIATION OF URBAN RATIOS IN BRABANT, 1374-1930

year	p.m.d.	p.m.d.	year	p.m.d.	p.m.d.	
1374	37		1806	37		$\text{p.m.d.} = \frac{\sum  u_a - 1.00 }{n} \times 100$ <p>n = the number of arrondissements</p> $u_a = \frac{\text{the urban relative}}{P_a : \frac{U_a}{P_{total}}}$ <p>divergence = increasing values convergence = decreasing values</p>
1437	40	3	1829	40	3	
1480	40	0	1846	42	2	
1526	43	3	1856	43	1	
1565	44	1	1866	45	2	
1615	-		1880	44	-1	
1665	-		1890	43	-1	
1709	38	-6	1900	42	-1	
1755	38	0	1910	40	-2	
1806	37	-1	1920	40	0	
1846	42	5	1930	40	0	
1890	43	1				
1930	40	-3				

urbanization. Especially the very rapid de-urbanization of the Antwerp-area, and of the Mechelen-area too, in the three decades after 1565, is responsible for this. This convergence can at least partially be identified as a consequence of a loss of export markets. As long as the penetrating forces of the industrial revolution are not at work, we could say, that convergence in this territory must be the expression of a re-ruralization of the economy. Another factor responsible for pre-industrial convergence seems to be at work in the second half of the eighteenth century, when agricultural prices tended to increase faster than industrial prices, which resulted in a worsening of the terms of trade for the urban population.

Was convergence in levels of urban development achieved, while urban population was becoming more equally distributed in Brabant? I have analysed my data by using coefficients of variation of the geographical concentrations of arrondissement urban population per square kilometer. (See the note to table 6 for a definition of this coefficient.)

TABLE 6.

MEASURES OF DISPERSION OF URBAN, RURAL AND TOTAL  
POPULATION DENSITIES IN BRABANT, 1374-1930,  
SIX ARRONDISSEMENTS

	$V^u$	$\Delta V^u$	$V^r$	$\Delta V^r$	$V^t$	$\Delta V^t$
1374	0.61		0.29		0.35	0.01
1437	0.68	0.07	0.31	0.02	0.36	0.01
1480	0.665	-0.015	0.33	0.02	0.37	0.01
1526	0.835	0.17	0.21	-0.09	0.38	0.01
1565	0.98	0.145	0.28	0.07	0.62	0.24
1615	0.94	-0.04	-	-	-	-
1665	0.915	-0.025	-	-	-	-
1709	0.925	0.01	0.35	(-0.07)	0.55	(-0.07)
1755	0.815	-0.11	0.39	0.04	0.49	-0.06
1806	0.665	-0.15	0.35	-0.04	0.42	-0.07
1846	0.84	0.175	0.33	-0.02	0.47	0.05
1890	0.995	0.155	0.29	-0.04	0.66	0.19
1930	1.04	0.045	0.31	0.02	0.74	0.06

$$V^u = \frac{\sqrt{\sum \frac{(U_a - \bar{U})^2}{n}}}{\bar{U}}$$

The coefficient of variation provides a measure of the dispersion of the arrondissement values around the all-Brabant value.

$U_a$  = arrondissemental urban population per square kilometer  
 $\bar{U}$  = all arrondissements mean  
 $n = 6$  (arrondissements)  
 u,r,t, = concerning urban, rural, total population.

Table 6 suggests that throughout both periods of rising urban ratios in Brabant, urban population became more and more unequally distributed. In the seventeenth century and especially in the eighteenth century, we see that urban population became more equally distributed.

Late nineteenth century convergence in levels of urban development was achieved, while urban population became (slightly) more unequally distributed. In the first five decades of the nineteenth century, before the period of urban acceleration, the dispersion of densities is growing already fast.

Although at the end of the nineteenth century the rural "arrondissements" increased their urban ratios faster than the traditional urban arrondissements, which reached the 100% limit, (see table 2),

they were not able to increase their urban densities faster than traditional urban arrondissements.

Urban population in Brabant tended to concentrate in the first half of the sixteenth century as well as in the nineteenth century. But the growing dispersion between 1480 and 1565 should mostly be ascribed to the very fast growing city of Antwerp, whereas a growing dispersion in the nineteenth century occurred in two "arrondissements" : Antwerp and Brussels.

The eighteenth century provides the only period in which both convergence in the levels of urban development and a decrease in the dispersion of arrondissemental densities occurred.

Table 6 suggests that throughout 5 1/2 centuries, urban population was far more unequally distributed than rural population. Second, in most periods, urban and rural population behaved in an inverse fashion. In periods of fast concentration of urban population, the rural population diffused or became more equally distributed among the "arrondissements". The two exceptions on this rule occur at the end of both urbanization-periods, in which rural population seems to concentrate as well as urban population. A possible explanation is the growth of rural non-agricultural activities in the neighbourhood of the great cities. This phenomenon of ruralization of non-agricultural activities is a special problem inherent to the too great simplicity of a model with an urban, non-agricultural, sector and a rural, agricultural, sector. Lowering the 5,000 inhabitants limit of an urban unit would bring no solution, because rural industry can occur in very small villages. (6)

The first half of the eighteenth century displays the inverse behaviour, but the second half does not : urban population as well as rural population seem to become distributed in a more equal way. The effect of changing agricultural prices seems to be at work in the rural sector. Depression in the first half tended to concentrate people on the best soil; high prices in the second half facilitated reclamations in infertile areas, especially in the "arrondissement" of Turn-

(6) Of course we have to reckon also with the effects of a growing intensification of agricultural activities in the neighbourhood of the great cities.

hout and parts of the "arrondissements" of Antwerp and Leuven. The introduction of the potato, which was very suited for the Turnhout-soil, can be another important factor. (7)

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Some conclusions and directions for further research.

1. Brabantine urban ratios are already very high ( 40%) in the sixteenth and seventeenth centuries. How was this possible ?
2. There is no urbanization crisis in the seventeenth century. The Brabantine cities must have been flourishing.
3. The eighteenth century witnesses a strong re-ruralization as well in a period of industrial and agricultural crisis (the first half) as in a period of agricultural and industrial revival (the second half). Why this de-urbanization ?
4. The nineteenth century brings the second wave of urbanization. The ratios increase very fast in the second half of the century, parallel with fast growing employment opportunities in the industrial sector.
5. Some analyses (migration streams, regional divergence of urban ratios and regional distribution of urban, rural and total population) show interesting aspects and stress the overwhelming influence of the behaviour of Brussels, and Antwerp.
6. The high proportion of the non-agricultural population raises important questions on the structure of demand in Brabant. Demand for non-agricultural activity must have been continually high. A problem is, how much has to be attributed to export-industries. I have the impression that the high quality of the techniques employed in the agricultural sector is a very important, perhaps dominating factor in the explanation of the high level of the Brabantine urban ratios.

(7) P.M.M. KLEP, *Groeidynamiek en stagnatie in een agrarisch grensgebied. De economische ontwikkeling in de Noordantwerpse Kempen en de Baronie van Breda, 1750-1850*, Tilburg 1973.

**URBANISATIE IN EEN PRE-INDUSTRIELE  
ECONOMIE**

**CASUS BRABANT, 1374-1930**

door

**Paul M.M. KLEP**

*SAMENVATTING*

In de schaarste van macro-economische gegevens poogt P.M.M. Klep de overgangproblemen te bestuderen van agrarische naar modern industriële activiteiten vanuit de veranderende verhouding tussen stedelijke (= niet-agrarische) en totale bevolking.

Onderzoeksgebied is Brabant, gebied met een lange traditie van hoog ontwikkelde industriële activiteit. "Stad" is in deze analyse een gemeenschap met minstens 5.000 inwoners. Reeds in de eerste helft van de 16de eeuw was 41% van de bevolking van stedelijk karakter. De eerste kernperiode van snelle urbanisatie liep van 1437 tot 1480. In de 17de en 18de eeuw kwam een relatieve de-urbanisatie op gang, in de absolute cijfers vooral beïnvloed door Antwerpen en Brussel. Een tweede kernperiode van snelle urbanisatie liep van 1846 tot 1890. Binnen dit proces waren er sterke regionale divergenties van de zes Brabantse arrondissementen.

**L'URBANISATION DANS UNE ECONOMIE  
PRE-INDUSTRIELLE**

**LE CAS DU BRABANT ENTRE 1374 ET 1930**

par

**Paul M.M. KLEP**

*RESUME*

Vu la rareté des données macro-économiques Paul M.M. Klep essaie d'étudier les problèmes du passage d'une société agraire à des activités industrielles et modernes à partir des rapports changeants entre la population urbaine (= non-agraire) et la population totale.

Le champs de recherches se limite au Brabant, une région aux traditions industrielles hautement développées. "Ville" signifie dans cette analyse une communauté d'au moins 5.000 habitants. Déjà pendant la première moitié du

*Paul M.M. KLEP*

16e siècle 41% de la population avait un caractère urbain. La première période d'urbanisation rapide se situait entre 1437 et 1480. Aux 17e et 18e siècles s'amorçait une désurbanisation relative. En chiffres absolus cette évolution était surtout influencée par Anvers et Bruxelles. On peut discerner une deuxième période d'urbanisation rapide entre 1846 et 1890. Lors de ce procès il y avait des divergences régionales prononcées entre les six arrondissements brabançons.