

Economic Growth and Living Standards. Private Consumer Expenditure and Food Consumption in Nineteenth Century Belgium

Yves Segers

Interfaculty Centre for Agrarian History, K.U.Leuven, Belgium
EHSAL European University College Brussels, Belgium

Belgium became a leading nation in economic and industrial development during the nineteenth century. Per capita gross national product tripled between 1820 and 1913. But what impact did this economic success have on the standard of living? This article examines the evolution of private consumer expenditure and food consumption, two important and complementary indicators of material well-being. The methodology of the national accounts is used as a guide for the reconstruction of a comprehensive database that throws light on the spending of individuals on several commodities and services in the years 1846-1913. This article finds that living standards increased markedly. Private spending grew by a yearly average of 1.08%. The share of expenditure on food (and beverages) declined from 60% to 49%. The fall in spending on primary foods such as potatoes and bread was even more significant. The newly available income was used for the purchase of better and more varied foods (meat, dairy), new consumer goods and services. These crucial changes are explained by examining population pressure, purchasing power, retail prices and the fiscal policy of the government.

1. Introduction

During the nineteenth century Belgium grew into an industrial and economic superpower. A crucial marker in this transformation was the start of modern economic growth around 1800, a process more widely known as the “Industrial Revolution”. This modern economic growth led to the uprooting of traditional agrarian society. The industrial sector evolved from a small-scale industry, using traditional methods, into a modern, mechanised and capital-intensive sector. During the “long nineteenth century” (1800-1913), Belgium experienced impressive economic growth. Provisional estimates indicate that the per capita

gross national product tripled between 1820 and 1913. In the space of a century Belgium broke away from the European pack to become the clear front-runner by the beginning of the twentieth century. From a macro-economic, technological and industrial point of view, the nineteenth century can then undoubtedly be given a positive report¹. But what influence did this economic success have on the living standard of the Belgian people? That is the central question considered in this article.

The impact of modernisation on the standard of living is the subject of a lively international discussion. There are two opposing points of view in this debate, which are often politically and ideologically inspired. The "optimists" see the influence as positive, while the "pessimists" on the contrary deem it as negative. The debate, which has aroused much enthusiasm in Great Britain and other Western European countries, is approached from many different angles and disciplines. Initially the standard of living was evaluated on the basis of the movement of real wages and national income or GNP. However, from the 1980s onwards, mounting criticism of the use and composition of real-wage series drove historians and economists to work out new and original approaches. Body height, life expectancy, private consumption, food use and aggregated indices (such as the *Human Development Index* and the *Index of Sustainable Economic Welfare*) were hailed as new, highly promising indicators of the quality of life. In that sense is it warranted to speak of an "old" and a "new" debate².

Developments in the standard of living during the nineteenth century

¹ J. Mokyr (ed.), *The Economics of the Industrial Revolution*, (London 1985); P. Hudson, *The Industrial Revolution*, (London 1994); G. Dejongh and Y. Segers, 'Een kleine natie in mutatie. De economische ontwikkeling van de Zuidelijke Nederlanden/België in de eeuw 1750/1850', *Tijdschrift voor Geschiedenis* 2 (2001), pp. 171-194; E. Hurlings and J.P. Smits, 'A Comparison of the Pattern of Growth and Structural Change in the Netherlands and Belgium, 1800-1913', *Jahrbuch für Wirtschaftsgeschichte* 2 (1997), pp. 83-106.

² A recent overview of the "old" and "new" standard of living debate in Great Britain, The Netherlands and Belgium is presented in Y. Segers, *Economische groei en levensstandaard. De ontwikkeling van de particuliere consumptie en het voedselverbruik in België, 1800-1913*, (Leuven 2003), pp. 37-61.

also received a lot of attention in Belgium. The principal protagonists in the debate were on one side Jan Blomme and Michel Neiryck and on the other Chris Vandenbroeke, Peter Scholliers and Patricia Van den Eeckhout. The first group of researchers deliver a positive verdict. They are of the opinion that purchasing power increased significantly during the second half of the nineteenth century and certainly after 1890, and that the average Belgian's range of food improved both quantitatively and qualitatively³. The second group of historians are much more pessimistic. They conclude that food consumption did not significantly increase or improve until after the First World War. In their view, the rate of increase in real wages after 1850 must be adjusted downwards, since its starting point was in a period of deep crisis⁴. However, historians are unanimous on the decline of prosperity during the first half of the century. Both real wages and urban food consumption as well as the average height of recruits dropped between 1800 and 1850⁵. Yet, despite the fundamental differences of opinion, the debate in Belgium has not generated any heat until today, or at least not in

³ J. Blomme, *The Economic Development of Belgian Agriculture, 1880-1980. A Quantitative and Qualitative Analysis*, (Brussels 1992), pp. 282-287; M. Neiryck, *De loonen in België sedert 1846*, (Leuven 1944), pp. 200-204.

⁴ P. Scholliers and C. Vandenbroeke, "The Transition from Traditional to Modern Patterns of Demand in Belgium", in H. Baudet and H. Van der Meulen (eds.), *Consumer Behaviour and Economic Growth in the Modern Economy*, (London 1982), pp. 23-71; C. Vandenbroeke, 'Kwantitatieve en kwalitatieve aspecten van het vleesverbruik in Vlaanderen', *Tijdschrift voor Sociale Geschiedenis* 9 (1983) pp. 221-257; P. Van den Eeckhout and P. Scholliers, 'De hoofdelijke voedselconsumptie in België, 1831-1939', *Tijdschrift voor Sociale Geschiedenis* 4 (1983) pp. 273-301; P. Scholliers, "Modes of Production, Social Policy and Nutrition in the 19th and 20th centuries", in R.W. Fogel (ed.), *Long-Term Changes in Nutrition and The Standard of Living*, (Bern 1986), pp. 107-117.

⁵ Y. Segers, "Oysters and Rye Bread. Polarising Living Standards in Flanders, 1800-1860", *European Review of Economic History* 3 (2001) pp. 301-336; C. Lis and H. Soly, 'Food Consumption in Antwerp between 1807 and 1859. A Contribution to the Standard of Living Debate', *Economic History Review* 30 (1977), pp. 460-486; C. Vandenbroeke, 'Voedingstoestanden te Gent tijdens de eerste helft van de 19de eeuw', *Belgisch Tijdschrift voor Nieuwste Geschiedenis* 4 (1973) pp. 109-169; P. Scholliers, "A Century of Real Industrial Wages in Belgium, 1840-1939" in P. Scholliers and V. Zamagni (eds.), *Labour's Reward. Real Wages and Economic Change in 19th and 20th Century Europe*, (Aldershot 1995), pp. 106-137; P. Scholliers, "Industrial Wage Differentials in Nineteenth-Century Belgium", in Y.S. Brenner, H. Kaelbe and M. Thomas (eds.), *Income Distribution in Historical Perspective*, (Cambridge 1991), pp. 96-116.

Flanders. Francophone social and economic historians rarely (and certainly not explicitly) devote any research to the problem – surprisingly so, given the early and rapid industrial development of Wallonia.

In this paper I choose to study the evolution of the standard of living in Belgium by means of two complementary indicators: first, the development of private expenditure (or of individual consumption) and second, per capita food consumption. In contrast to Great Britain and The Netherlands, no research has been done as yet in Belgium into the evolution of individual spending during the nineteenth century. Nor have developments in the range of food been completely or adequately traced. The food consumption of industrial workers has been studied in depth, but the number of budgets is rather small and their representativeness is questioned⁶. My choice implies that I focus on evaluating the material (and thus quantifiable) standard of living. Other approaches focusing on rather subjective concepts such as well-being and happiness are not considered here. The way in which ordinary people and consumers at that time perceived and evaluated prosperity and (economic) modernisation would however be a fascinating subject for further research. Such a study would undoubtedly supply exciting findings for a better understanding of economic, social, political and cultural history.

In the following sections, I will attempt to chart the development of private consumer expenditure and per capita food consumption in Belgium during the “long nineteenth century”. In the first section I will present and discuss the methodology and sources used to draw up a reliable database. The second section focuses on the development of private consumer expenditure (1846-1913) and food consumption (1800-1913). In a third section I will explain this evolution and the

⁶ Scholliers en Vandenbroeke, “The Transition from Traditional to Modern Patterns of Demand”; Scholliers, “Modes of Production, Social Policy and Nutrition”; P. Van den Eeckhout, “Onderzoek naar kwalitatieve en kwantitatieve wijzigingen in de consumptie, 1840-1890”, in J. Hannes (ed.), *Consumptiepatronen en prijsindices*, (Brussels 1981), pp. 21-29.

important structural changes in private consumer expenditure. A short conclusion summarises the main findings of this article.

2. Methodology and sources

In order to be able to make a well-grounded judgement about the evolution of private consumption and food use, I have drawn up a comprehensive and representative database that throws light on the development of individual expenditure in nominal and real terms during the "long nineteenth century". I define the total value of private consumer expenditure as the sum of domestic output, net imports of goods and the output of services destined for household consumption. The methodology of the national accounts, an internationally agreed accounting system that throws light on the macro-economic performance of a country, is used as guide here and I carefully follow the prescribed guidelines, insofar as the available historical sources and figures will allow. The advantage of this approach is that it makes international comparisons possible⁷.

The information necessary for this challenging task is not readily available and intensive research into the archives and literature was necessary. I make use of the results of studies done in the context of the Leuven National Accounts Project, which were supplemented and further adjusted, if necessary⁸. My research relies above all on new, original estimates based on a broad spectrum of sources: the fiscal and

⁷ C. Feinstein, *Statistical Tables on National Income, Expenditure and Output of the UK, 1855-1965*, (Cambridge 1972).

⁸ Blomme, *The Economic Development of Belgian Agriculture*; P. Clement, *Government Consumption and Investment in Belgium, 1830-1940. The Reconstruction of A Database*, (Brussels 2000); V. Duchêne, *De brutobinnenlandse kapitaalvorming in woongebouwen in België tussen 1830 en 1890. Reconstructie en analyse van de investeringen en van het investeringsgedrag*, (Unpublished PhD Thesis Leuven, 2000); B. Van der Hertten, *De ontwikkeling van communicatie en transport in België tijdens de lange negentiende eeuw* (Unpublished PhD Thesis Leuven, 2000); M. Goossens, *The Economic Development of Belgian Agriculture. A Regional Perspective, 1812-1846*, (Brussels 1992). A methodological overview is presented in E. Buyst, J.P. Smits and J.L. van Zanden, "National Accounts for the Low Countries, 1800-1990", *Scandinavian Economic History Review* XLII (1995), pp. 53-76.

accounting records of associations, municipal and provincial governments, prisons, the offices of the Institutions of Charity and Municipal Almshouses (Bureaux de Bienfaisance and Hospices Civils). I also consult budget surveys, government statistics and contemporary professional journals. The result is a very broad and detailed database that contains new information on the development of industrial and agrarian production, services, wages and retail prices in the period 1800-1913. The collected set of data offers many new insights into the long-term development of individual expenditure and per capita food consumption in Belgium. I estimate the spending of individuals on the following commodities and services:

- food: bread and cereals (wheat, rye, buckwheat, meslin and spelt wheat), rice, potatoes, meat, fish, dairy products (milk, skimmed milk, butter, cheese), eggs, margarine, vegetables, sugar and honey;
- beverages: beer, wine, gin, coffee, tea, chicory;
- tobacco;
- clothing and shoes (leather shoes and clogs);
- house-rental and running water;
- fuel and lighting (coal, town gas, electricity, petroleum, firewood and candles);
- house-maintenance (household textiles and domestic services);
- personal care and health expenses;
- transport (purchase and/or use of railway, tram, motor car, motor cycle, bicycle);
- communication (postal services, telegraphy, telephony);
- entertainment and recreation (purchase of books, newsletters, magazines and expenditure in cafes, hotels and restaurants);
- expenditure by non-residents and personal expenditure of Belgian citizens abroad⁹.

Given the scarcity of direct sources particularly, my estimates are clearly very reliable and can stand up perfectly to any comparison with

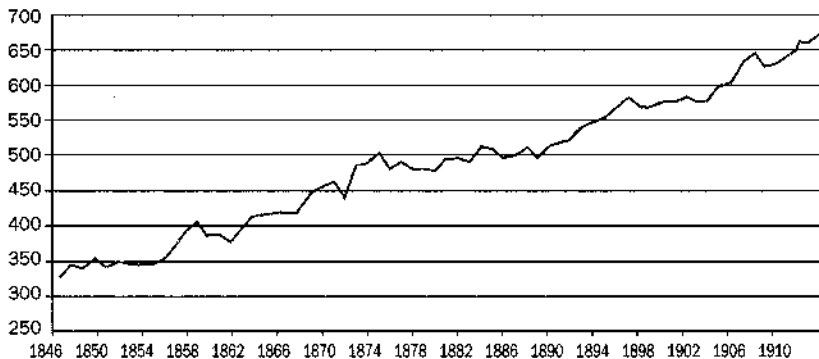
⁹ The calculation of the various components of private consumer expenditure in Belgium during the years 1846-1913 is described in detail in Segers, *Economische groei en levensstandaard*, pp. 64-228.

similar international studies¹⁰. It is possible to test my results for the XIXth century with estimates of consumer expenditure during the interbellum period, made up by the NIS (Belgian National Institute of Statistics) and the research done by Schroeven. My estimate for 1920 is only 2% lower (in comparison with the results of Schroeven and NIS) and the structure of private consumption in the years 1910-1913 compares favourably with that of the period 1920-1924¹¹.

3. Private consumer expenditure, 1846-1913

How did the level of aggregate consumer expenditure develop in nineteenth century Belgium? Individual consumption rose in real terms from 1425 million BEF in 1846 to 5111 million BEF in 1913, or an annual

FIGURE 1. Private consumer expenditure per capita in Belgium, 1846-1913
(BEF, real prices of 1910)



Source: Segers, *Economische groei en levensstandaard*, 233; Duchêne and Segers, "Les revenus de la propriété immobilière belge".

¹⁰ See for instance Feinstein, *Statistical Tables*; E. Horlings and J.P. Smits, "Private Consumer Expenditure in the Netherlands, 1800-1913", in *Economic and Social History in the Netherlands. Historical National Accounts in the Netherlands*, (Amsterdam 1996), pp. 15-40; S. Heikkinen, *Labour and the Market. Workers, Wages and Living Standards in Finland, 1850-1913*, (Helsinki 1997).

¹¹ C. Schroeven, *Consumer Expenditure in Interwar Belgium. The Reconstruction of a Database*, (Brussels 1994), p. 260 and Segers, *Economische groei en levensstandaard*, p. 243.

growth rate of 1.9%¹². Even taking account of the strong demographic increase, this growth spurt was impressive. Put in terms of costs per head of the population, private spending grew by a yearly average of 1.08% (see *Figure 1*). Private consumer expenditure per capita (expressed in real terms) increased from ca. 330 BEF to almost 680 BEF between 1846 and 1913. From this point of view living standards rose considerably in Belgium.

The rise of individual consumption during the nineteenth century did not always work out in a linear fashion, but was characterised by some four phases which closely followed the general movements in the Belgian (and international) economy. The booming periods of 1854-1873 and 1888-1913 saw a real annual per capita growth dynamic of 1.9% and 1.22% respectively. The growth rate was much lower during periods of economic crisis. During the decade 1846-1854 per capita expenditure increased only moderately by 0.68%, while between 1874 and 1888, a period characterised on the international level by industrial and later agrarian crises, expenditure was recorded at a quasi-zero growth rate of -0.08%.

Not only the level of aggregate consumption changed and increased. The shifts in the composition of the range of consumer goods likewise point to an improvement in the standard of living, even though at first sight they do not look spectacular (see *Table 1*). Expenditures for essential goods and services such as food, beverages, housing, clothing, heat and lighting (in current prices) contracted slightly between 1846 and 1913 from 85% to 79%. The share of expenditure for food and beverages declined more pronouncedly from 60% to 49%. Even more significant was the decline in spending on primary foods (potatoes and bread): their share of total expenditure decreased from more than 30% around the mid-century to about 10% on the eve of the First World War. Thanks to the purchasing power made available thereby, the average Belgian consumer could eat better and more varied foods (such as meat and dairy products, see *Table 2*), buy new clothes and shoes and live more comfortably. A smaller proportion of the newly available income was

¹² I choose 1910 as base for two reasons: 1) there is plenty of reliable price information for this year, and 2) the year 1910 is, from a socio-political and economical point of view, a calm and average year.

likewise used for the purchase of new consumer goods such as motorbikes, cars, bicycles, entertainment and recreation. This evolution conforms to Engel's Law of changes in the structure of consumer expenditure. As purchasing power increased during the second half of the nineteenth century, the relative expenditure for basic necessities decreased. Private consumption of more luxurious goods and services (with a higher income elasticity) became more important¹³.

A comparison of the two extreme ends of private consumption, namely primary foodstuffs (bread and potatoes) and services reveals an interesting evolution (see *Figure 2*). The share of basic foodstuffs in total private consumer expenditure decreased from approximately 30% during the 1840s-1850s to 10% in the 1890s, due to a sharp decline in

**TABLE 1. Structure of total private consumer expenditure
in Belgium, 1846-1913 (% , current prices)**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1846-1850	49	10	13	8	2	3	0	1	11	2
1851-1855	49	10	14	8	3	4	0	1	9	2
1856-1860	45	12	14	7	3	4	0	1	11	3
1861-1865	43	13	14	8	3	4	0	2	11	3
1866-1870	40	12	16	8	3	4	0	2	11	3
1871-1875	37	12	19	8	3	5	0	2	10	3
1876-1880	37	13	16	10	3	5	1	2	10	3
1881-1885	36	13	15	11	3	5	1	2	10	4
1886-1890	34	13	14	12	3	5	1	3	11	4
1891-1895	35	14	13	11	3	5	1	3	11	4
1896-1900	33	14	12	11	4	5	1	4	12	4
1901-1905	35	12	11	11	4	5	1	4	12	5
1906-1910	36	12	13	11	4	5	1	5	11	5
1911-1913	38	11	12	10	4	4	1	5	10	5

(1) Food (2) beverages and tobacco, (3) clothing and footwear, (4) rents and water charges, (5) fuel and lighting, (6) household operations (= domestic service), (7) personal care and health expenses, (8) transport and communication, (9) entertainment and recreation (10) other expenses.

Source: Segers, *Economische groei en levensstandaard*, p. 236.

¹³ Working families clearly had less budgetary discretion. Expenditure on necessities during the nineteenth century represented about 90% of their budget. In comparison with the national average, they spent about 10% more on necessities, thus limiting their possibilities for expenditure on leisure activities. The improvement in their standard of living seems to have been principally in the category of food; in the course of the nineteenth century they were able to spend more on meat and dairy products. Segers, *Economische groei en levensstandaard*, 249-254.

food prices, primarily from wheat. The following two decades the share of potatoes and bread remained more or less unchanged. Expenditures on various services became increasingly important during the nineteenth century. Their share increased between 1855 and 1870 from 1 to 2.5% and especially from the early 1890s onwards. By 1913 services accounted for circa 7% in total private consumption.

It is possible to compare my results for Belgium with similar recent research for Great Britain, The Netherlands and Finland (see *Table 3*)¹⁴. Private consumer expenditure grew most considerably in Finland after 1870, with an annual average growth of 1.65%. In The Netherlands, Belgium and Great Britain where the annual growth rate was respectively 1.24%, 0.87% and 0.8%, private consumption grew at a much slower pace. Taking into account the little development of the Finnish economy and the industrial modernisation starting in the third quarter of the century, the impressive growth of consumer expenditure in Finland is not surprising.

The growth performance of private consumption and the structure of average spending patterns in Belgium reveal striking parallels with developments in Great Britain and the Netherlands. The increase in consumption was very pronounced in Belgium during the economically

TABLE 2. Structure of private consumer expenditure for food (%)

	(1)	(2)	(3)	(4)	(5)	(6)
1846-1850	54	18	21	3	4	3
1856-1860	51	17	21	3	5	4
1866-1870	47	21	21	3	5	4
1876-1880	44	20	23	3	4	5
1886-1890	36	25	26	3	4	6
1896-1900	33	23	28	3	4	7
1906-1910	30	24	28	3	4	7

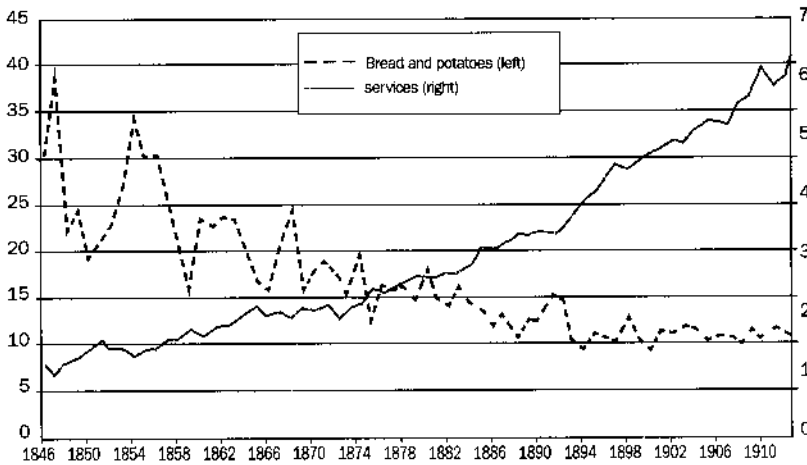
(1) Bread and potatoes, (2) meat, (3) dairy products, (4) honey and sugar, (5) fruit and vegetables, (6) other expenses.

Source: Segers: *Economische groei en levensstandaard*, p. 239.

¹⁴ This research on the development of private consumer expenditure during the "long nineteenth century" was also part of a larger project which intended to reconstruct national accounts (for the nineteenth and twentieth centuries) J.P. Smits, E. Horlings and J.L. van Zanden, *Dutch GNP and its Components, 1800-1913*, (Groningen 2000), pp. 110-111; Feinstein, *Statistical Tables*, 142; Heikkinen, *Labour and the Market*, pp. 244-248 and Segers, *Economische groei en levensstandaard*, pp. 246-247.

golden years of 1854-1873. It would seem that at that time industrial expansion was spurred more by the home market than by the demand for exports. By comparison with both neighbouring countries, individual spending in Belgium grew rather slowly during the years 1870-1900 (and then mainly during the first two decades), but grew sharply after the turn of the century. The hesitant (and even negative) growth of the British economy around the turn of the century, is

FIGURE 2. Share of basic foodstuffs and services in private consumer expenditure in Belgium, 1846-1913 (% , current prices)



Source: Segers, *Economische groei en levensstandaard*, 241.

TABLE 3. Average growth per year of private consumer expenditure per head in Europe, 1846-1913 (% , real prices 1910)

	Finland	Belgium	The Netherlands	Great Britain
1846-1913		1.08	1.18	
1870-1913	1.65	0.87	1.24	0.8
1846-1870		1.46	1.08	
1870-1900	1.86	0.72	1.09	0.91
1900-1913	1.16	1.21	1.58	0.53

Source: Smits, Horlings and van Zanden, *Dutch GNP*, pp. 110-111 and 160-162; Feinstein, *Statistical Tables*, T42; Heikkinen, *Labour and the Market*, pp. 244-248; Segers, *Economische groei en levensstandaard*, pp. 246-247

reflected in the slow development of private consumer expenditure during the years 1900-1913. In Great Britain the annual average growth was barely 0.53 %. Belgium and The Netherlands performed much better with respectively 1.21 % and 1.58 %¹⁵.

4. Food consumption

The development of private consumer expenditure in Belgium clearly points at an improvement of living standards during the second half of the nineteenth century. However, consumer expenditure is just one aspect of the standard of living. Another important indicator is food consumption and caloric intake. The development of food consumption is a useful approach for gaining an impression of the quality of life in the nineteenth century. Food and drink habits are reliable witnesses of the stages of society's development¹⁶.

During the first half of the nineteenth century (the initial phase of Belgian industrialisation) the quality of the daily menu declined. Recent research into urban consumption of foodstuffs in eight Flemish cities (using the octroi tax, an indirect tax levied on various consumer items) proves that. The consumption of meat, fish, cereals, beer, wine and gin decreased. Moreover, a number of factors indicate an acceleration in the widening of the gap between rich and poor. The first sign of this was the rise in wheat consumption, together with the decline in rye consumption and the growing popularity of the potato. Further, the supply and consumption of various expensive foods and beverages (ranging from oysters to game, poultry, quality beer and wine) soared. On the other hand, the range of foods of the average Flemish city-dweller declined sharply between 1800 and the middle of

¹⁵ R. Floud, "Britain, 1860-1914: A Survey", in R. Floud and D. McCloskey (eds.), *The Economic History of Britain since 1700. Volume 2: 1860-1939*, (Cambridge 1994), pp. 2-3 and pp. 14-19.

¹⁶ The particular importance of food consumption as an indicator of the standard of living is stressed in Lis and Soly, *Social Change and the Labouring Poor: Antwerp, 1770-1860*, (New Haven 1986), p. 86 and H.J. Teuteberg, "Agenda for a Comparative European History of Diet", in H.J. Teuteberg (ed.), *European Food History: a Research Review*, (Leicester 1992), pp. 1-3.

the nineteenth century, whether he lived in a big industrial city or in a small provincial town. Only from the mid-1850s onwards did a slight improvement become evident¹⁷.

The movement towards recovery is also to be discerned in the macro figures available that report the per capita food consumption of the average Belgian from 1846. Due to a lack of reliable sources, it is impossible to produce faithful figures on a national level before that time. The decade 1846-1854 was a tragic low point, characterised by successive failed harvests of basic foodstuffs. The nutritional value of the average diet at that time did not even reach the minimum limit of 2,500 calories per head (see *Figure 3*)¹⁸. A slow recovery became evident from the years 1855-1860, roughly following the growth dynamic of private consumer expenditure. What is striking, however, is the stagnation, even slight decline, of caloric intake during the period 1866-1875. Belgian consumers, who at that time consumed about 2,700 calories per day, evidently chose to spend their additional real income – for which they had been waiting for decades – on new clothes, textile products and fashion accessories. They did not opt for a more varied or discriminating range of foodstuffs¹⁹.

However, from the early 1890s on, the nutritional value of the food supply increased significantly. During the decades from 1896-1905 and 1906-1913 the daily diet consisted of circa 3050 and circa 3250 calories respectively. It was during this period that a “nutritional transition” or “diet revolution” began to appear in Western Europe and not only in Belgium (see *Table 4*). From that time on the consumer was in a position to purchase more expensive and more flavourful foodstuffs such as wheat bread, meat, dairy products,

¹⁷ Segers, “Oysters and Rye Bread”, pp. 301-336.

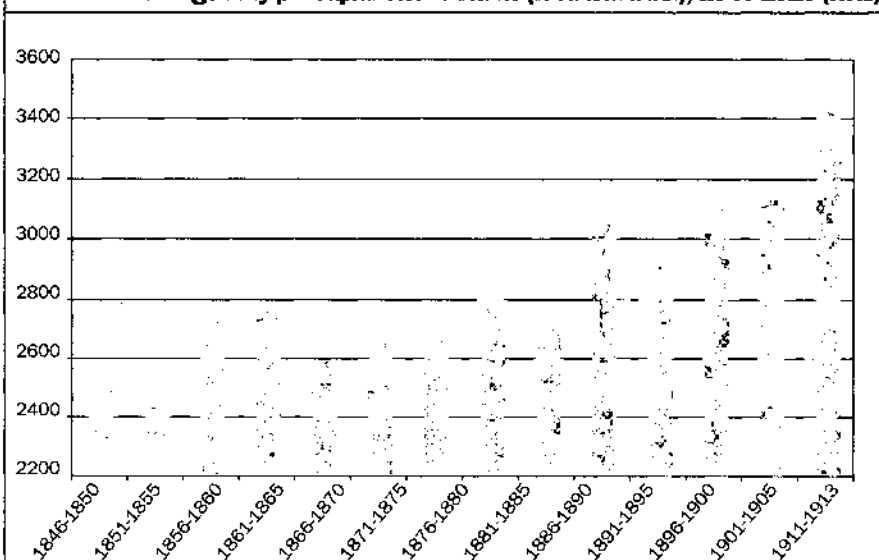
¹⁸ Hans de Beer estimates the per capita requirement in around 1850 at approximately 2500 calories a day. H. De Beer, *Voeding, gezondheid en arbeid in Nederland tijdens de negentiende eeuw. Een bijdrage tot de antropometrische geschiedenis*, (Amsterdam 2001), pp. 23-29.

¹⁹ The share of clothing and footwear in total private consumption rose in this period from 14% to 19% (see table 1). R. Leboutte, *Reconversions de la main-d'oeuvre et transition démographique. Les bassins industriels en aval de Liège, XVIIIe et XIXe siècles*, (Paris 1988), pp. 137-157.

vegetables, fruit and sugar. The result of this process was a sharp drop in the importance of the potato as a purveyor of calories and carbohydrates. The consumption of carbohydrates in fact rose by about a quarter between 1846 and 1913 (from 400 to 540 grams), principally because of an increase in the consumption of (wheat) bread. The consumption of fats and proteins in Belgium also grew more quickly; just before the First World War each had increased by about half over figures for the previous half century (respectively from 40 to 65 grams and from 85 to 125 grams).

On the eve of the Great War the average Belgian's diet was relatively varied and (in terms of nutritional value) ample. The centuries-long overwhelming domination of vegetable products had been broken in the last quarter of the nineteenth century. The period 1890-1910 also signalled a turning point in the food situation and the consumption of foods. Animal-derived foodstuffs (meat and dairy products) were eaten more and more, though with wide variations in quantity and quality. The diet changed from a monotonous, carbohydrate-rich range of foods

FIGURE 3. Average daily per capita caloric intake (food and drink), 1846-1913 (kcal)



Source: *Belgische voedingsmiddelen tabel* and Segers, *Economische groei en levensstandaard*, pp. 259-261; Segers, "Nutrition and living standards in industrializing Belgium".

that were difficult to digest to lighter, more varied, protein-rich and tasty food. The share of primary foodstuffs (bread and potatoes) in the total caloric value of food consumption illustrates this: it declined from 72% around 1850 to 63% in the years 1910-1913. And even more important: the share of potatoes fell sharply back in this period, namely from 41% to 20%. Eating and drinking came to have not only a physiological purpose, but also increasingly a pleasure function. And that positive story applied to almost everybody. The wealthier circles could enjoy a more delicate cuisine, even from the third quarter of the nineteenth century. Bourgeois boys who studied at the the College of Melle, for example, ate a (more than) adequate and varied diet. The menus enjoyed by farmers, industrial and agrarian workers also improved during the nineteenth century, even though the diet of many families about 1910 was still relatively monotonous. Regional and professional factors played an important role in the timing and degree of this improvement. However, for the time being our knowledge of this aspect is very limited²⁰.

TABLE 4. Average daily caloric intake in Europe, 1800-1910 (kcal)

	1800	1820	1840	1850	1860	1870	1880	1890	1900	1910
Belgium	2.850			2.423	2.426	2.553	2.663	2.851	2.987	3.278
Germany	2.210				2.120					
Italy						2.647	2.197	2.119		2.617
France	1.846	1.984	2.377	2.480	2.854	2.875	3.085	3.220	3.192	3.323
The Netherlands	2.227		2.493		2.721					
UK	2.349				3.240		2.773			2.760
Iceland		2.887	3.080	3.381		2.573	3.002	3.106	3.316	3.499

Source: : The Belgian and Dutch data relate to the three years around each benchmark year. D. Grigg, 'The Nutritional Transition in Western Europe', *Journal of Historical Geography* 12 (1995) p. 249; de Beer, *Voeding, gezondheid en arbeid*, p. 59; M. Kribbe, "De ontwikkeling van de voedselsituatie in Nederland, 1851-1950", in *NEHA-Jaarboek* 64 (2001) pp. 206-210 and Segers, *Economische groei en levensstandaard*, p. 621

²⁰ P. Scholliers, *Arm en rijk aan tafel*, (Antwerp-Brussels 1993), pp. 58-59; D. Bauters, 'Voedingspatroon van een internaatspopulatie in het Jozefietencollege te Melle (1837-1914)', *Tijdschrift voor Sociale Geschiedenis* 9 (1983), pp. 267-268; Segers, *Economische groei en levensstandaard*, pp. 273-285 and Y. Segers, "Women Farmers' and Food Culture in Rural Flanders: *Ons Kookboek, 1920-2000*", in D.J. Oddy and L. Petranova (eds.), *The Diffusion of Food Culture. Cookery and Food Education during the last 200 years*.

5. Explaining private consumption during the nineteenth century

The two paragraphs above clearly point at an improvement of living standards in Belgium during the “long nineteenth century”. How can we explain the crucial changes in consumer expenditure and food consumption? I propose five key factors: 1) the growth in the population; 2) the evolution of purchasing power; 3) the (relative) increase in prices; 4) the fiscal policy of the government 5) the modernisation of the distribution and advertising sectors. The influence of these factors on consumer behaviour was continuous and was strengthened or weakened by still other decisive factors. In the following section I analyse the interaction between these explanatory factors and the growth dynamic of consumer expenditure and food consumption in the period 1800-1913.

The decline in food consumption during the first half of the nineteenth century (and in all likelihood also of individual expenditure) was caused by a combination of many factors, the most important of which were strong population growth and the decline in purchasing power. I ascertain that the Belgian population grew considerably from the middle of the eighteenth century. Between 1750 and 1850 the total number of inhabitants doubled to 4 million. Initially this occurred mainly in the countryside. Population pressure resulted in rising prices for land and property, and led to extensive fragmentation of agricultural land into small holdings. This trend is one of the reasons why, despite all its efforts, the Belgian agricultural sector was barely able to keep pace with the population explosion. Only by producing huge quantities of basic foodstuffs, principally potatoes, could the sector succeed in keeping up. Around 1850 the potato crop accounted for two thirds of the production of basic foods. The limited supply of food – imports remained rather limited for the time being – made prices for agricultural products considerably higher. The average price of cereals and potatoes increased significantly between 1780 and 1850-1855. The rural population was put under further pressure by the crisis in the linen industry. For a long time many families had made ends meet by carrying on cottage industries (spinning and weaving). The growing supply of workers (also a consequence of the declining returns from small agricultural businesses)

and the competition from mechanically-produced and therefore cheaper textile products ensured that wages in the traditional and proto-industrial linen industry fell sharply. This resulted in a flight from the land and in increasing pressure on the urban labour market. The purchasing power of broad population groups – both in urban and rural areas – declined significantly and manifested itself in a growing income inequality²¹. The process of impoverishment must be explained by reference to that initial Malthusian tension. Industrialisation (and capitalism), which to date has been assigned a leading role in the Belgian historiography, functioned here as a catalyst, accelerating already existing changes on the socio-economic level, but it was not the primary factor. The acuteness of the crisis is strikingly visible in the available consumption figures. Per capita consumer expenditure between 1846 and 1852 reveals a very slight growth; in fact it was more a status quo. Moreover, food consumption per head also scored very low both on the national and municipal levels. The nutritional value of the average Belgian remained under the minimum caloric limit²².

A noticeable improvement set in from the mid-1850s. From then on purchasing power strengthened considerably until about 1873-1874, and was reflected in the strong growth of per capita consumer expenditure (see figure 4). The economic revival pushed the nominal wage level of both industrial and agricultural workers significantly higher. A considerable income gap opened up between both groups as a worker in the primary sector earned almost half less than his equivalent in industry. Nevertheless, the nominal wage rise during this period was more than enough to compensate for the rising cost of living, which evidenced wide fluctuations, due mostly to price fluctuations for basic food. A good grain and/or potato harvest meant more discretionary income for expenditure on extra non-essentials; a failed harvest meant belt-tightening for a while. Uncertainty about an affordable food supply continued during the years

²¹ Goossens, *The Economic Development*, p. 192 and p. 313; Segers, 'Oysters and Rye Bread', pp. 324-325; Scholliers, "Industrial Wage Differentials".

²² L. de Kezel, 'Grondbeitz in Vlaanderen, 1750-1850. Bijdrage tot de discussie over de sociaal-economische ontwikkeling op het Vlaamse platteland (einde 18^e-midden 19^e eeuw)', *Tijdschrift voor Sociale Geschiedenis* 1 (1988) pp. 89-90; P. Scholliers, 'From the Crisis of Flanders to Belgium's Social Question. Nutritional Landmarks of Transition in Industrializing Europe 1840-1890', *Food and Foodways* 5 (1992), pp. 162-165.

1855-1875. Agricultural production could only with difficulty keep pace with the growth in population and the increase in the urban population. Thanks to the cutbacks in protectionist tariffs during the crisis years 1846-1855, the supply of food had in fact risen, but not yet sufficiently to have an effect on prices, nor did the abolition of the municipal consumption taxes in 1860 result in a palpable lowering of retail prices (at least of foodstuffs)²³. The burden of taxation shifted towards a very limited group of products (principally luxury goods and sugar) and indirect consumer taxes continued to dominate. In nineteenth-century Belgium property and income were hardly taxed at all. Nevertheless, the abolition of the municipal taxes was not insignificant. The disappearance of municipal customs transformed the Belgian territory into one unified and integrated trading area. Because of this, and also the reliable and extensive transport infrastructure, consumer goods could be handled more quickly and more smoothly and relations between town and countryside could be

FIGURE 4. Evolution of real wages in Belgium, 1846-1913 (1910 = 100)



²³ The "octrois communaux" were communal taxes levied on the consumption of food, animal feed, construction materials, fuel and furniture, levied within the city walls. This tax existed between 1798 and 1860. For a more in-depth analysis of this system see Y. Segers, 'Een omstreden verbruiksbelasting: de stedelijke octrooien in België (1799-1860)', *Belgisch Tijdschrift voor Nieuwste Geschiedenis* 3-4 (2000).

strengthened. Contemporaries were not then completely surprised by the increasing supply in the urban markets²⁴.

The period from 1874 to 1888 saw a slightly negative growth in consumer expenditure. Food consumption also remained both on the quantitative as well as on the qualitative level more or less constant, though the share of animal-derived products rose slightly. The principal explanation for this stagnation must be sought in the sharply decreasing purchasing power in the mid-1870s of both industrial and agricultural workers as well as of farmers. The (international) economic crisis pushed nominal wages down, initially in secondary industry. In the meantime the cost of living continued to rise until around 1880. The result was a lessening of real income, which even dropped back to the level of the mid-1860s. However, in the 1880s, thanks to the decline in the cost of living, and principally in the prices for basic foodstuffs (due to the import of cheap American grain) and clothing, purchasing power recovered relatively quickly. Private consumption hesitatingly followed that rise and in the mid - 1880s even showed signs of decline. I assume that the weak impact of income on private consumption must be attributed to the prominent role of retail prices in this mix. The increase in purchasing power was, indeed, mainly the result of declining prices and not so much (as in the preceding boom period) a consequence of rising nominal wages and growing employment. Though the economy recovered slowly, consumers continued to take an expectant and cautious attitude. Until the end of the 1880s, industrial workers had to contend with few future prospects and (periodic) unemployment. The prospects in the farming sector were even less rosy. The consequences of the massive grain imports came to be fully felt in the period 1880-1895. Farmers and agricultural workers were both faced with declining agricultural prices and income. But of course for consumers reliant on the commercial circuit for their food supply, and these were ever more numerous, the decline in primary food prices was seen as a gift from heaven.

²⁴ Scholliers, 'From the Crisis of Flanders to Belgium's Social Question', pp. 152-158; Segers, *Economische groei en levensstandaard*, pp. 330-349.

From the end of the 1880s private consumption again picked up, parallel with a short but powerful rise in purchasing power that lasted until about the turn of the century. The growth of real income, which applied to all socio-professional groups, was now principally spurred by a vigorous surge in nominal wages, because the cost of living also increased from 1895 onwards. Basic commodities, such as food and clothing became relatively more expensive. The revival of private consumption came to a standstill in the period 1896-1903. Strangely enough, that was a period when the wages of industrial workers and the income of farmers experienced a moderate to considerable increase. Quite possibly that income surplus was used to finance the transition to cattle breeding and market gardening, or to participate in the ever more popular saving schemes for industrial workers. Influenced by a growth in the real income of both industrial workers, servants and farmers (based on a rapid rise of nominal wages), private consumer expenditure again increased from 1903 onwards until the eve of the First World War (except for the years 1908-1909). Rightfully, this period was called the "Belle Epoque"²⁵.

The period after 1895 was a turning point in the development of private consumption and food use. The caloric intake of the average Belgian then increased considerably. Expenditures for non-essential consumer goods and services, such as canned food, recreation, transport and communication, gained in importance both in absolute and relative terms. New (mass and industrially produced) products appeared such as confectionery, bicycles and chocolate. The development of a modern and effective distribution and advertising sector also played a significant role in this development. Warehouses, retail chains and also consumer cooperatives took advantage of growing consumer demand (also a consequence of the flight from the land and growing urbanisation) and the new supply of industrially produced goods. At the same time, they also spurred on consumer activity through innovative sales techniques, such as attractive shop layouts, promotions, free entry and advertising. These innovations also pressured the other traditional players in the retail sector to undergo modernisation, as became evident in the setting up of

²⁵ Blomme, *The Economic Development*, p. 275; Scholliers, "A Century of Real Wages", pp. 130-133; Segers, *Economische groei en levensstandaard*, pp. 330-349.

covered markets and shopping galleries, better organisation and the extension of the usual weekly and daily markets. Advertising by warehouses, smaller shopkeepers and producers in newspapers and magazines, which had experienced a spectacular increase in their readership thanks to increasing literacy, now took off in a big way. Advertisements became bigger, more attractive and more adept at subtly and seductively packaging their message (“buy me!”)²⁶.

6. Conclusion

Living standards in industrializing Belgium increased profoundly during the “long nineteenth century”. The level of aggregate and per capita private consumption rose. The evolution in the structure of consumer expenditure and food consumption shows an important improvement in the (material) quality of life. With this conclusion I join the camp of the “optimists”. Indeed, besides the progress in consumer expenditure and food consumption, other indicators also – such as life expectancy, infant deaths, literacy, educational level – support a positive judgement for nineteenth-century Belgium²⁷. However, in comparison

²⁶ S. Jaumain, *Les petits commerçants belges face à la modernité, 1880-1914*, (Brussels, 1995), pp. 52-56; R. Laermans, ‘Learning to Consume: Early Department Stores and the Shaping of the Modern Consumer Culture (1860-1914)’ *Theory, Culture & Society* (1993), pp. 82-84 and pp. 93-94; S. Jaumain, ‘Die Anfänge des Massenvertriebs in Belgien und seine Auswirkungen auf die Verbraucher, 1880-1914’, in H. Siegrist, H. Kaelhe and J. Kocka (eds.), *Europäische Konsumgeschichte. Zur Gesellschafts und Kulturgeschichte des Konsums* (18. bis 20. Jahrhundert), (Frankfurt-New York, 1997), pp. 681-703; P. Scholliers, ‘The Social-Democratic World of Consumption: The Path-Breaking Case of the Ghent Cooperative Vooruit Prior to 1914’ *International Labor and Working-Class History* 55 (1999), pp. 71-91.

²⁷ M. Oris, ‘Mortalité, industrialization et urbanization au XIXe siècle. Quelques résultats des recherches liégeoises’, in C. Desama and M. Oris (eds.), *Deux essais sur la démographie urbaine de la Wallonie au XIXe siècle*, (Brussels, 1998), p. 291; G. Alter, M. Neven and M. Oris, ‘Individuals, Households and Communities Facing Economic Stresses: A Comparison of Two Rural Areas in 19th Century Belgium’, in M. Neven and C. Capron (eds.), *Family Structures, Demography and Population. A Comparison of Societies in Asia and Europe*. (Liège 2000), pp. 190-192; M. Debuissou, ‘The Decline of Infant Mortality in the Belgian Districts at the turn of the 20th Century’ *Belgisch Tijdschrift voor Nieuwste Geschiedenis* 3-4 (2001), pp. 497-527; M. Neven, ‘Epidemiology of Town and Countryside. Mortality and Causes of Death in East Belgium, 1850-1910’ *Belgisch Tijdschrift voor Nieuwste Geschiedenis* XXVII (1997), pp. 39-82; J. Backs, ‘Mortality in Ghent, 1850-1950’, *Belgisch Tijdschrift voor Nieuwste Geschiedenis* 3-4 (2001), pp. 529-556.

with others, my optimism is moderate. I consider Blomme's standpoint on the evolution of food consumption to be overly positive. On the contrary, the studies done by Vandenbroeke, Scholliers and Van den Eeckhout pay too little attention to the improvements that became evident in the course of the nineteenth century, even in the spending pattern of working-class families (especially from the 1890s onwards).

The end of the nineteenth and beginning of the twentieth century marks an important dividing line in the history of (food) consumption and living standards. Not completely coincidentally Western Europe was at that time in the grip of the Second Industrial Revolution, when the production of consumer goods was central. New industrialisation and technological developments made it possible to manufacture more and better-quality (and cheaper) products. If pre-modern consumption was concentrated mainly on clothing, food and household products, from the 1890s the supply and the range of choices for the consumer increased considerably. Brand-name products appeared, which were widely advertised. More aspects of everyday life became commercialised, such as birthdays, Christmas, St. Nicholas' Feast, etc. All these developments led to an expansion and standardisation of consumption. Moreover, from the turn of the century (admittedly very gradually), leisure time also increased and new forms of entertainment and recreation were on offer. Parallel with the growth in purchasing power, more and more consumers were taken up into this new "consumer society". This applied initially to the (urban) elite who had adequate financial means to buy the new consumer goods, but later it extended (although slowly) to the middle-class and the better-paid workers. The role of consumer cooperatives in this process may not be underestimated. Around the turn of the century also modern economic growth resulted in a substantially higher (material) standard of living for broad sections of the population, certainly in comparison with pre-industrial society²⁸.

²⁸ However, before the First World War one cannot yet speak of a true, fully-grown consumer society. All the conditions or characteristics in Benson's definition of a consumer society are not yet in evidence. According to Benson, a consumer society is "a society in which choice and credit are readily available, in which social value is defined in terms of purchasing power and material possessions, and in which there is a desire, above all, for that which is new, modern, exciting and fashionable".

REFERENCES

- ALTER G., NEVEN M. and ORIS M., "Individuals, Households and Communities Facing Economic Stresses: a Comparison of Two Rural Areas in 19th Century Belgium", in NEVEN, M. and CAPRON, C. (eds.), *Family Structures, Demography and Population. A Comparison of Societies in Asia and Europe*, (Liège 2000), pp. 185-210.
- BACKS J., "Mortality in Ghent, 1850-1950", *Revue Belge d'Histoire Contemporaine* 3-4 (2001), pp. 529-556.
- BAUTERS D., 'Voedingspatroon van een internaatspopulatie in het Jozefietencollege te Melle (1837-1914)', *Tijdschrift voor Sociale Geschiedenis* 9 (1983), pp. 258-271.
- BENSON J., *The Rise of Consumer Society in Britain, 1880-1980*, (London, 1994).
- BLOMME, J., *The Economic Development of Belgian Agriculture, 1880-1980. A Quantitative and Qualitative Analysis*, (Brussels, 1992).
- BLUYST E., SMITS J.P. and VAN ZANDEN J.L., 'National Accounts for the Low Countries, 1800-1990', *Scandinavian Economic History Review* XLII (1995) pp. 53-76.
- CLEMENT, P., *Government Consumption and Investment in Belgium, 1830-1940. The Reconstruction of A Database*. Unpublished PhD Thesis Leuven, 2000.
- DEBUISSON M., 'The Decline of Infant Mortality in the Belgian Districts at the Turn of the 20th Century', *Revue Belge d'Histoire Contemporaine* 3-4 (2001), pp. 497-527.
- DEJONGH G. and SEGERS Y., 'Een kleine natie in mutatie. De economische ontwikkeling van de Zuidelijke Nederlanden/België in de eeuw 1750-1850', *Tijdschrift voor Geschiedenis* 2 (2001), pp. 171-194.
- DE KEZEL L., 'Grondbezit in Vlaanderen, 1750-1850. Bijdrage tot de discussie over de sociaal-economische ontwikkeling op het Vlaamse platteland (einde 18^{de}-midden 19^{de} eeuw)', *Tijdschrift voor Sociale Geschiedenis* 1 (1988), pp. 61-102.
- DUCHENE V. and SEGERS Y., 'Les revenus de la propriété immobilière belge. Reconstitution d'un poste de la comptabilité nationale, 1830-1913', *Histoire & Mesure* 1-2 (2000), pp. 33-82.

Nevertheless at the end of the nineteenth century, with the coming of the *Belle Epoque* era, a new important step in that direction was taken. J. Benson, *The Rise of Consumer Society in Britain, 1880-1980*, (London 1994), p. 4; R.W. Fogel, "The Conquest of High Mortality and Hunger in Europe and America: Timing and Mechanisms", in P. Higonnet, D.S. Landes and H. Rosoky (eds.), *Favorites of Fortune. Technology, Growth and Economic Development since the Industrial Revolution*, (London 1991) pp. 33-71; Segers, *Economische groei en levensstandaard*.

- FEINSTEIN C.H., *Statistical Tables of National Income, Expenditure and Output of the U.K., 1855-1965*, (Cambridge 1972).
- FLOUD R., "Britain, 1860-1914: A Survey", in FLOUD R. and McCLOSKEY D. (eds.), *The Economic History of Britain since 1700. Volume 2: 1860-1939*, (Cambridge 1994), pp. 1-28.
- FOGEL R.W., "The Conquest of High Mortality and Hunger in Europe and America: Timing and Mechanisms", in HIGONNET P., LANDES, D.S. and H. ROSOKY (eds.), *Favorites of Fortune. Technology, Growth and Economic Development since the Industrial Revolution*, (London 1991), pp. 33-71.
- GOOSSENS M., *The Economic Development of Belgian Agriculture. A Regional Perspective, 1812-1846*, (Brussels 1992).
- GRIGG D., 'The Nutritional Transition in Western Europe', *Journal of Historical Geography* 21 (1995), pp. 247-261.
- HEIKKINEN S., *Labour and the Market. Workers, Wages and Living Standards in Finland, 1850-1913*, (Helsinki 1997).
- HORLINGS E. and SMITS J.P., 'Private Consumer Expenditure in the Netherlands, 1800-1913', in *Economic and Social History in the Netherlands, (Historical National Accounts in the Netherlands*. Amsterdam 1996), pp. 15-40.
- HORLINGS E. and SMITS J.P., 'A Comparison of the Pattern of Growth and Structural Change in the Netherlands and Belgium, 1800-1913', *Jahrbuch für Wirtschaftsgeschichte* 2 (1997) pp. 83-106.
- HUDSON P., *The Industrial Revolution*. London, 1994.
- JAUMAIN S., *Les petits commerçants belges face à la modernité (1880-1914)*. Brussels, 1995.
- JAUMAIN S., "Die Anfänge des Massenvertriebs in Belgien und seine Auswirkungen auf die Verbraucher, 1880-1914", in SEGRIST, H., KAELEBE, H. and KOCKA, J. (eds.), *Europäische Konsumgeschichte. Zur Gesellschafts- und Kulturgeschichte des Konsums (18. Bis 20. Jahrhundert)*, (Frankfurt-New York 1997), pp. 681-703.
- KNIBBE M., 'De ontwikkeling van de voedselsituatie in Nederland, 1851-1950', *NEHA-Jaarboek* 64 (2001), pp. 200-226.
- LAERMANS R., 'Learning to Consume: Early Department Stores and the Shaping of the Modern Consumer Culture (1860-1914)', *Theory, Culture & Society* (1993), pp. 79-102.
- LEBOUTTE R., *Reconversions de la main-d'oeuvre et transition démographique. Les bassins industriels en aval de Liège, XVIIe-XXe siècles*, (Paris 1988).
- LIS C. and SOLY H., 'Food Consumption in Antwerp between 1807 and 1859. A Contribution to the Standard of Living Debate', *Economic History Review* 30 (1977), pp. 460-486.
- LIS C. and SOLY H., *Social change and the labouring poor. Antwerp, 1770-1860*, (New Haven 1986).

- MOKYR J. (ed.), *The Economics of the Industrial Revolution*, (London 1985).
- NEIRYNCK M., *De loonen in België sedert 1846*, (Leuven 1944).
- NEVEN M., 'Epidemiology of Town and Countryside. Mortality and Causes of Death in East Belgium, 1850-1910', *Revue belge d'histoire contemporaine* XXVII (1997), pp. 39-82.
- ORIS M., 'Mortalité, industrialisation et urbanisation au XIXe siècle. Quelques résultats des recherches liégeoises', in DESAMA, C. and ORIS, M. (eds.), *Dix essais sur la démographie urbaine de la Wallonie au XIXe siècle*, (Brussels 1998), pp. 289-322.
- SCHOLLIERS P. and VANDENBROEKE C., 'The Transition from Traditional to Modern Patterns of Demand in Belgium', in BAUDET H. and Van Der MEULEN H. (eds.), *Consumer Behaviour and Economic Growth in the Modern Economy*, (London 1982), pp. 23-71.
- SCHOLLIERS P., 'Modes of Production, Social Policy and Nutrition in the 19th and 20th Centuries', in FOGEL, R.W. (ed.), *Long-Term Changes in Nutrition and the Standard of Living*, (Bern 1986), pp. 107-117.
- SCHOLLIERS P., 'Industrial Wage Differentials in Nineteenth-Century Belgium', in BRENNER Y.S., KALBE H. and THOMAS M. (eds.), *Income Distribution in Historical Perspective*, (Cambridge (Mass.), 1991), pp. 96-116.
- SCHOLLIERS P., 'From the 'Crisis of Flanders' to Belgium's 'Social Question': Nutritional Landmarks of Transition in Industrializing Europe (1840-1890)', *Food and Foodways* 5 (1992), pp. 151-175.
- SCHOLLIERS P., *Arm en rijk aan tafel. Tweehonderd jaar eetcultuur in België*, (Berchem 1993).
- SCHOLLIERS P., 'A Century of Real Industrial Wages in Belgium, 1840-1939', in SCHOLLIERS P. and ZAMAGNI V. (eds.), *Labour's Reward. Real Wages and Economic Change in 19th and 20th Century Europe*, (Aldershot 1995), pp. 106-137.
- SCHOLLIERS P., 'The Social-Democratic World of Consumption: The Path-Breaking Case of the Ghent Cooperative Vooruit Prior to 1914', *International Labor and Working-Class History* 55 (1999), pp. 71-91.
- SCHROEVEN C., *Consumer Expenditure in Interwar Belgium. The Reconstruction of a Database*, (Brussels 1994).
- SEGERS Y., 'Een omstreden verbruiksbelasting: de stedelijke octrooien in België (1799-1860)', *Revue belge d'histoire contemporaine* 3-4 (2000), pp. 325-369.
- SEGERS S., 'Oysters and Rye Bread: Polarising Living Standards in Flanders, 1800-1860', *European Review of Economic History* 3 (2001), pp. 301-336.
- SEGERS Y., *Economische groei en levensstandaard. De ontwikkeling van de particuliere consumptie en het voedselverbruik in België, 1800-1913*, (Leuven 2003).
- SEGERS Y., 'Nutrition and Living Standards in Industrializing Belgium, 1846-1913', *Food & History* 2004, 2, pp. 165-180.

- SEGERS Y., "Women Farmers' and Food Culture in Rural Flanders: Ons Kookboek, 1920-2000", in ODDY D.J. and PETRANOVA L. (eds.), *The Diffusion of Food Culture. Cookery and Food Education during the last 200 years*, (Prague 2005), pp. 202-212.
- TEUTEBERG H.J., 'Agenda for a Comparative European History of Diet', in TEUTEBERG H.J. (ed.), *European Food History: A Research Review*, (Leicester 1992), pp. 1-23.
- VANDENBROEKE C., 'Voedingstoestanden te Gent tijdens de eerste helft van de 19^{de} eeuw', *Revue belge d'histoire contemporaine* 4 (1973), pp. 109-169.
- VANDENBROEKE C., 'Kwantitatieve en kwalitatieve aspecten van het vleesverbruik in Vlaanderen', *Tijdschrift voor Sociale Geschiedenis* 9 (1983), pp. 221-257.
- VAN DEN ERCKHOUT P., 'Onderzoek naar kwantitatieve en kwalitatieve wijzigingen in de consumptie, 1840-1890', in HANNES J. (red.), *Consumptiepatronen en prijsindices*, (Brussel 1981), pp. 21-29.
- VAN DEN ERCKHOUT P. and SCHOLLIERS P., 'De hoofdelijke voedselconsumptie in België, 1831-1939', *Tijdschrift voor Sociale Geschiedenis* 4 (1983), pp. 273-301.
- VAN DER HERTEN B., *De ontwikkeling van communicatie en transport in België tijdens de lange 19^{de} eeuw*, Unpublished PhD Thesis, Leuven, 2000.

reviews of books

