

Apologies! This is still very much in outline, however, it may give an idea of the intended style and coverage.

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Vol. 2, Draft chapter 2: Population and living standards [in Europe 1870-1914]

Those who lived through the half century before 1914 experienced tremendous changes in the living conditions. This can be said not only for the early industrialising regions of Europe but also for large parts of the peripheral areas, in particular to the north. Whereas the early industrialisation had had ambiguous effects on the living standards, now the time had come for broader layers of the population to share in the increasing supply of goods and opportunities. This chapter will describe these profound changes by looking at, firstly the population or demographic changes including the great Trans-Atlantic emigration; secondly the improvements in the urban infrastructure which had important effects for health and living conditions; thirdly the inequality or income distribution about which we, however, don't know very much; and finally, how all these changes could be assessed in an overall measure of the living standard across regions or countries of Europe.

Estimates indicate that the total population of Europe (excluding Turkey [have taken Malanima's figure for 1870 and the growth rate derived from Maddison's population figures, which include Asian parts of Tsarist Russia, 1870 and 1913) amounted to some 314 millions in 1870. In 1913 numbers had increased with 50 per cent, to 471 millions. That corresponds to an average annual population growth of just below 1 per cent (0.95), which probably meant a slight acceleration over the preceding half century (0.78). [My research on the 50 provinces of European Russia shows an increase in the rate of population growth for Russia after 1900, relating, as in Hoch, mainly to lower mortality rates. A transition in fertility also seems to begin in these years.CSL] Interestingly, one should be careful and avoid to closely connect the rapid population growth with industrialisation and rising living standards. Thus, already in the eighteenth century Finland experienced a population growth as fast as Britain during the industrial revolution. And in the period we are dealing with here, Tsarist Russia had the highest population growth (1.33). In Britain on the other hand, population growth began to decelerate in our period. That was in part due to decline in the fertility rate, and to some extent also to emigration [have to check impact of emigration].

Broadly speaking [check, and give some numbers!] the emigration of some 35 million Europeans 1870-1914 meant that population growth had exceeded 1 per cent a year had they stayed. The most remarkable case is Ireland, where population decreased to not much more than half the numbers of sixty years earlier, before the potato famine. The Trans-Atlantic emigration, which before 1870 had been dominated by the British and Irish, expanded greatly during the half-century up to 1914. Already before the beginning of our period

came the first wave of German emigrants. In the late 1860s there was also a bulge of Scandinavians, pushed over the Atlantic by the last harvest failure with significant demographic effects – on mortality as well as emigration. The 1880s signified a new wave in the emigration, driven both by a push from the recession in Europe and a pull from the boom in North America. Germans and Scandinavians dominated but now also came the Italians, who for the coming three decades should take the major role. After the turn of the century 1900 the Polish took a growing share of the flow. Thus there was a shift of the emigration source, from the northwest towards south and east, but the First World War interrupted the tide – and after the war restrictions on immigration stemmed a resumption. As a measure of the importance of the emigration, the number of the emigrants in relation to the size of the population in the country of origin can be taken. Thus, around 1914 one in six Swedes lived in North America [comparable numbers for some other countries to be added]. Much discussion has been devoted to the question whether it was despair, causing an exodus, or the seeking of opportunities that drove the emigrants. One argument for the opportunities view has been that the poorest could not afford to go, which should explain the late emigration from pauperised Mezzogiorno. On the other hand, it is argued, earlier emigrants paid the travel costs for relatives and friends. Also the impact of the emigration on those who stayed behind has been discussed, whether it improved their lot or retarded the economic growth. From the point of view of living standards, however, it is clear that the emigration contributed to an increase in unskilled wages over the period 1870-1914, even though the impact was conditional on other economic factors. Two extremes are represented by Scandinavia and Iberia. In the former region the emigration in combination with concomitant industrial transformation raised wages, whereas no corresponding internal demand for labour made wages stay low in the latter. The issue of unskilled wages and income distribution will be further discussed below.

Besides emigration, the decline in fertility was mentioned as a factor that held back the evolving population growth. The decline in the fertility rate was, however, not only a British phenomenon. More or less over the whole of western and central Europe from the 1870s onward, women began to give birth to fewer children. In most European countries, ranging from Italy to Sweden but excluding Iberia and the eastern parts, in 1870 the number of children per woman was around five. In 1910 this number had fallen to between three and four, and to less than three in England. An exceptional case was France, which is not known ever to have experienced the high fertility rates of other countries [revisit numbers and point to probable other exceptions; I extrapolate French demography before 1750, check!]. In 1870 the average number of children of a French woman was 3.4, and in 1910 it had decreased to 2.25 (Bacci 2000, p. 136). However, besides in France and Britain, the large cohorts of young people, born before 1870, implied that the fertility decline overall did not show up in a slow-down of population growth until in the twentieth century. Demographic changes oftenmost take time to work through and the effects therefore usually come as a surprise despite the possibility to predict them.

Some two-three decades after the fertility decline, and partly up-weighing its impact on population growth, was a decline in infant mortality, that is, the proportion of children who did not survive their first year in life. It is worth noting that through the previous history there was no linear relationship between infant mortality and the general level of living standards. Thus, in Scandinavia infant mortality had matched that in Britain whereas the farther east, and also to the south, one travelled, the worse were the infant mortality numbers. However, during the last twenty years up to 1914 a significant improvement occurred, remarkably enough more or less proportional over Western and Central Europe (Bacci 2000, p. 149). As a consequence the latter achieved the previous level of the former, while the former continued to lead. [to be elaborated; also numbers; Russia?] [Russia was also an exception. Marriage was universal and fertility was high, although dropping slightly around 1900. CSL]
[To develop: Maternal mortality (important as check on other data) CSL]

The general retardation of fertility is an indication of the more rapid diffusion of social norms, modernity, than the spatial progress of economic transformation. Another indication hereof is the spread of the male-breadwinner household, which typically had been a sign of the bourgeois life-style. In the latter part of the nineteenth century this also set the pattern for the British working class family and it spread over Europe with modernisation and industrialisation. Instead of combining production and consumption, the family now changed to a consumption unit [has to be elaborated!].

As already discussed, a factor with huge impact on population change was migration. Besides the emigration with an impact on populations growth, internal migration literally changed the social landscape and drove urbanisation.

Urbanisation, defined as conglomerates of at least 10,000 inhabitants, comprised 15 per cent of the European population in 1870, according to Malanima's estimate (this book, part 1, ch. X). The differences were substantial between the highly developed Northwest, where England and Wales headed with 43 per cent urban dwellers, and the sparsely populated northern and eastern areas of Europe, where in Scandinavia only 5.5 per cent of the population qualified as truly urban. The remark "truly" intends to remind that definitions of urbanisation differ, and when taking a lower level of 5,000 inhabitants as the threshold, urbanisation in Scandinavian countries varied between 10 and 25 per cent, and about 60 per cent in England and Wales, with 23 per cent as the European average. At the end of our period, in 1914, the All-European urbanisation had increased to 25 per cent (or 38 per cent with the weaker definition [25% extrapolated from the Bairoch stuff in Hohenberg's graph! Check!]). Given the rapid overall population increase, this meant a significant acceleration of urban growth. This notwithstanding, in Britain the degree of urbanisation stabilised toward the end of the nineteenth century. Germany, on the other hand, probably exhibited the most outstanding case of rapid urbanisation, in particular in the Ruhr area.

Regional migration, from east to west, was important in Germany although it is said (Bacci 2000, p. 2) that the natural population increase was a major component in the Ruhr growth [I don't think this should be retained: Bacci's figures seem unbelievable: Düsseldorf-Arnsberg-Aachen-Münster grew from 1.5 to 5.8 million over 1861-1910, and "only a small part of it was the result of immigration"; a total growth rate of 2.8%....!]. Still in the beginning of this period Italian, French, and Russian cities would have declined had it not been for the inflow of migrants. In England, Germany and central Europe as well as in the North, however, also the surplus of births over deaths added to growth. Several indicators point to the miserable human conditions in nineteenth century urban areas. Heights were generally lower and mortality higher (meat consuming urban dwellers again a French exception, Weir 1997). Towns and cities hosted congestion and diseases. However, towards the end of the nineteenth century communal water supply [indoors – the word?] and sewage systems gained in importance. This contributed to the improvement in the health of urban dwellers, and also reduced their mortality [looking for Europe-regional data on water and sewage, to elaborate on this!] Bacci (2000, p. 144) quotes the incidence of cholera in 1892, which killed 9,000 in Hamburg, with traditional water supply, and only 6 in neighbouring Bremen with a newly installed water system [the word!?!].

A remarkable achievement of the period was the improvement in health. In England, around 1870 one of seven deaths was caused by tuberculosis, but there as in other Western Europe [Russia? Southern Europe?] this death toll was progressively reduced, in the late 1880s to about one in ten (Bacci 2000, p. 144-5). It is true that tuberculosis continued to be a severe danger until the invention of antibiotics, but improvements in hygiene and housing standards led to a continuing alleviation during the last third of the nineteenth century. The above mentioned construction of water and sewage systems contributed, however, so did also less crowded housing and, not the least, nutritional standards. According to one estimate (Hoffman [Twarog 1997]), was the German population insufficiently fed at the beginning of our period but consumption improved and the caloric intake of the total population was about 30 per cent higher in 1914. [to be developed!]

The reduction of the infant mortality together with the overall mortality, following the improvements in health, meant that life expectancy increased significantly up to 1914. Still in 1890 only in the Northwestern corner of Europe, including Scandinavia and Switzerland, a newly born child could expect to survive to 40. In Russia life expectancy was as low as 30 and the majority were in between. In 1914 the life was still as short as around 35 in Russia and the Balkans, but for the majority clearly above 40 and the previously leading group had advanced above 50. [to be developed! One thing, related to the question of the role of medical technology, worth emphasise is the importance of pre-emptive action, so striking in this late nineteenth century development!]

[To elaborate] Evidence of increasing heights during this period, but also setbacks as in Germany (Twarog 1997). There are, however difficulties to draw comparative conclusions about living standards from heights: 1) no standard measures 2) genetic differences mapped? 3) height estimates influenced not only by nutritional standard but also by exposition to disease at early age which further imposes a cohort effect...
 [See Komlos on Austria in the 19th century. CSL]

[to be developed!!!!!!!] about expansion of primary education and the growth of human capital. *Ljungberg & Nilsson on Sweden. Claude Diebolt has in various publications data, at least for Western Europe. Mitchell has enrolment in primary and secondary education for diverse countries in this period (some eastern are there although some western are missing). Interesting is that Mitchell also has numbers for teachers which allows for a reflection on quality.*

[To be developed!] *Proceeding to the issue of inequality and income distribution – very scarce data but shortcuts as used by Williamson et al workable: inequality as reflected in land distribution, wage-rental ratios, unskilled wage/GDP p. c. ratios, and possibly earnings differentials; Williamson has extensively used wage-rental ratios for central and western Europe although the quality of the data sometimes can be doubted Compare table 1 below about income distribution – think the Bourguignon-Morrison stuff could be either scrapped or contrasted with discussion of **unskilled real wage / GDP per capita ratios** that show another picture for some regions...*

Table 1. Income distribution: The share in national income of the lower five decentiles, and the highest vintile of the population

	1870		1890		1910		1992	
	Low ½	High 5%	Low ½	High 5%	Low ½	High 5%	Low ½	High 5%
Balkans	17.4	34.5	17.4	34.5	17.4	34.5	26.6	22
Poland	17.4	34.5	17.4	34.5	17.4	34.5	26.6	22
Russia	17.4	34.5	16	37	16	37	26.6	22
Turkey	17	37	17	37	17	37	17	37
AU-CZ-HU	21.4	26.9	20.1	30	20.1	30	31.1	15
Benelux-CH etc	18	27.5	18	27.5	18	27.5	23	17.1
France	19.7	38.7	20.9	36	21.9	33	25.4	19.5
Germany	21.4	26.9	20.1	30	20.1	30	23	18.1
It	20	35	20	35	20	35	25.4	19.5
Iberia	21.9	33	21.9	33	21.9	33	25.4	19.5
Scandinavia	19	31	19	31	19	31	25.2	20
UK – Ireland	18	38	19.4	35.7	19.4	35.7	24.2	19.5

Source: Bourguignon and Morrison dataset.

[to be developed!] As a general approach we consider the Human Development Index, used by Crafts on historical data. The table2 below is based on his EREH 2002 article, although I think one has to go back to the EHR 1997 article to look more in detail on his data sources, and the possibility to fill in the gaps for the East in 1870...

Table 2. Human Development Index in European countries, 1870 and 1913
Ranked according to position 1913

	1870	1913	Rate of change, % p.a.	Index UK=100 1870	Index UK=100 1913
Denmark	0.512	0.660	0.59	102.4	102.5
Netherlands	0.486	0.649	0.67	97.2	100.8
UK	0.500	0.644	0.59	100	100
Switzerland	0.515	0.643	0.52	103.0	99.8
Sweden	0.483	0.641	0.66	96.6	99.5
Norway	0.454	0.631	0.77	90.8	98.0
Germany	0.463	0.614	0.66	92.6	95.3
France	0.463	0.607	0.63	92.6	94.3
Ireland	Na	0.599	--	--	93.0
Belgium	0.469	0.590	0.54	93.8	91.6
Czech Republic	Na	0.541	--	--	84.0
Hungary	Na	0.507	--	--	78.7
Austria	0.331	0.501	0.97	66.2	77.8
Italy	0.268	0.485	1.39	53.6	75.3
Finland	0.239	0.450	1.48	47.8	69.9
Spain	0.301	0.421	0.78	60.2	65.4
Bulgaria	Na	0.403	--	--	62.6
Russia	Na	0.345	--	--	53.6

Source: N. Crafts 2002, "The Human Development Index, 1870-1999: Some revised estimates", EREH 6: 395-405, and calculations.
 Rate of change not very enlightening here, possibly speed of convergence (halving-time)...

In conclusion we will be able to sum up the unprecedented improvements in the quality of life that took place in Europe over period 1870-1914 – and try to be a bit more precise about the variations across Europe.