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Mats MORELL*

Subsistence Crises during the *Ancien* and *Nouveau Régime* in Sweden? An Interpretative Review**

Abstract. This article treats the development of living standards in Sweden in the eighteenth and nineteenth centuries with reference to the concepts of *Ancien* and *Nouveau Régime*. Three watersheds are identified. In the 1720s a recovery began after a protracted famine-war-pes-tilence-population crisis. Per capita food production rose, but living standards remained low throughout the eighteenth century with demographic responses to harvest failures. By the early nineteenth century, population growth had begun to accelerate and consumption levels rose. However, more people became dependent on rural wage work and among some landless groups demographic responses to price fluctuations persisted. From c. 1860, all indices point to rising living standards. Given this chronology and new data showing relatively high production and consumption levels, the proposed connection between the late nineteenth century mass emigration to the Americas and rising rural poverty is thrown into question.

Résumé. Crises de subsistances au cours de l'Ancien et le Nouveau Régime en Suède ? Une interprétation

Cet article interroge la pertinence des concepts d'Ancien et de Nouveau Régime pour analyser l'augmentation du niveau de vie en Suède au XVIII^e et au XIX^e siècle. Trois tournants sont identifiés. Dans les années 1720, on observe un phénomène de rattrapage après une longue période combinant famine, guerre, épidémies et crise démographique. Si la production agricole *per capita* augmente alors, le niveau de vie reste bas tout au long d'un XVIII^e siècle caractérisé par la mise en œuvre d'ajustements démographiques aux mauvaises récoltes. Au début du XIX^e siècle, la croissance démographique s'accélère et les niveaux de consommation augmentent. Toutefois, le travail agricole salarié touche une part croissante de la population et parmi les ruraux sans terre, les réponses démographiques aux variations des prix persistent. À partir de 1860, tous les indicateurs sont à la hausse. L'examen de la chronologie et de nouvelles données relatives aux hauts niveaux de production et de consommation invite cependant à mettre en doute la relation entre l'émigration de masse vers les États-Unis, à la fin du XIX^e siècle, et le développement de la pauvreté rurale.

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Was there an *Ancien Régime* crisis in Sweden in terms of demography and agricultural production? Did society manage better under a « modern » era to withstand recurrent agricultural failures without letting them develop into demographically manifested crises? Is it at all possible to discover a certain moment or single brief period when an *Ancien Régime* was replaced by a *Nouveau Régime*? Often this pair of concepts seems used to rather bluntly denote a vaguely defined « old » time and a « new » age or alternatively to denote the years before and after the 1789 revolution in France without any specific content being attached to them. However if one periodize history and gives periods certain labels, it is for some reason. In France of course the pair of concepts refers to the sociopolitical systems prevailing before and after the 1789 revolution and in this case it is reasonable to conceive the regime change as involving sudden (although socially explainable), broad, manifest, political, constitutional and legal changes which by reshaping the overall conditions for economic activity also had a bearing on economic and demographic performance. As the legal foundations of the French revolution spread over the western and central parts of the European continent in the Napoleonic wars, it may be no less appropriate to use the terms in a pan-European setting.

But is it at all defensible to use this pair of concepts analytically in interpretations of Scandinavian, or specifically Swedish economic history? It would be, if it could be shown that in Sweden too, a juxtaposition of massive institutional changes occurred at a certain suggested time of regime shift and if those institutional changes gravely affected the functionality of the economy and the socioeconomic resilience of the society; *i.e.* its ability to recover from crisis or withstand economic stress¹.

An older historiographic tradition – foremost represented by Eli Heckscher, the founder of economic history as a formal academic discipline in Sweden – at least implicitly, spoke of a regime change around the eve of the nineteenth century. According to this tradition there occurred a distinct move from dirigist, regulative, « mercantilist » economic policy towards *laissez faire* liberalism. To some extent this proposition was an expression of an idealistic view of historical change (programmatically opposed to a materialist one²), but it was also a rationalization of political views:

1. Naturally a belief in the importance of institutional change does not presuppose such a juxtaposition of changes.

2. This is perhaps most explicit in a passage in *An economic history of Sweden* reading « The motive power behind most social changes is a transformation in outlook and attitude and the industrial revolution is no exception » (HECKSCHER, E. F., 1963, p. 214). Cf. the more hesitant expressions in E. F. HECKSCHER, 1944.

Heckscher seems to have intended Swedish economic history to be an alternative historical economics discipline, with the ambition to « explain » industrial growth and endorse political-economical programmes and ethics he believed to have promoted it. That Heckscher's major efforts in economic history concerned the early modern period – and particularly the eighteenth century – despite his immediate interest in economic policy of the early twentieth century, may be explained by a wish to elucidate the virtues of the liberal nineteenth century era, against the alleged massive darkness of earlier centuries³.

Although Heckscher viewed the eighteenth century as transient, taking a first step on the road to modernity, everything is painted in black. Peasants were conservative and reluctant to accept innovations promoted by the much too sparse cultural and economic elite and when they invested in reclaiming new land in response to rising grain prices, he complains that they revealed an irrelevant passion for large fields and that they spread too meagre capital resources on too large areas⁴. He even maintained that the very lack of serfdom was paid for by a – for that very reason – retarded economic development. The governments wasted money by granting hopeless monopoly privileges to manufacturing industries which produced for stocks rather than demand and regulated and hindered the development of the singular most important export industry, iron production. Trade policy was based on regional monopolies for different towns, only few sea ports were allowed to harbour direct international trade and a Swedish version of the British navigation act stifled imports of certain goods and kept up prices on imported necessities as did tariffs and import prohibitions. Towns were small and insignificant. Heckscher granted mercy foremost to domestic crafts working outside of the privilege system and to a handful of premature « liberal » economic thinkers, with the Finland-Swedish priest Anders Chydenius in the forefront⁵. It is quite evident that he meant that the economic policy of the rulers, the institutional arrangements at large and not least the economic mentality of actors adversely affected economic development, and living standards.

Consequently, in explaining the fundamental change from old to new economic regime, Heckscher referred to a general mental metamorphosis a « transformation in outlook and attitude » (« *ändrad sinnesförfattning*

3. This has recently been proposed by Y. Hasselberg, cf. Y. HASSELBERG, 2007.

4. A point probably directly taken from the chief Land Surveyor Jacob Faggot's *Svenska lantbrukets hinder och hjälp*, written in 1746.

5. HECKSCHER, E. F., 1949, II, p. 1-2.

or *andlig strömkäntring* » lit. « spiritual turning of the tide ») which made relevant economic actors and people in common, subscribe to « the belief that the golden age lay ahead » rather than in the past. It was this change of mentality which led society to sweep away the entire apparatus regulating the economy, an apparatus which according to Heckscher was rather a medieval than a mercantilist heritage⁶. Successive liberalisation of international, interregional, and local trade as well as of handicrafts and manufacturing and more generally the establishment of liberal government in the nineteenth century were the engines of economic development. Heckscher were vigorously in favour of all these changes. Nowhere, he claimed, was the mentality upheaval more important than amongst the hitherto stubbornly conservative agriculturalists and he defended, in long run debates with geographers, the relevance and virtue of the radical enclosures, which consolidated the fields of each farmer into one plot, abolished the « village rule » over the individuals and thus concentrated, secured, and increased the range of property rights of individual farmers and eased the introduction and broad acceptance of new farming methods. Other important changes of the same era involved the secured hereditary leases for crown tenants, the improved property right of freeholders and the right for commoners to buy tax exempt land.

Important as all these institutional changes were, it is still hard to conceive of them as adding up to any *abrupt* regime change or producing any enormous quick effect on the functioning of the economy. Economically just as important was a secular fall in the rent- burden from the mid eighteenth century onwards which gave freeholders and crown tenants possibilities to raise consumption and both means and incentives to make investments to further increase production⁷. The enclosure movement in Sweden was also a very gradual process. The first enclosure act, which paved the way for a modification of the open field system of large villages, was put in force in 1749, and recurrent amendments were made in the following decades. These early acts did not demand (let alone cause) dissolution of village communities. Rather they set rules for how the procedure of land exchange between villagers (which certainly had occurred before⁸) should

6. HECKSCHER, E. F., 1963, p. 214. Swedish original in E. F. HECKSCHER, 1941, p. 280-281.

7. GADD, C.-J., 2011.

8. GRANÉR, S., 2002, p. 135-146.

proceed, if at least one villager wanted to have his multitude of strips replaced by somewhat more consolidated fields with fewer strips⁹.

In the first two decades of the nineteenth century large parts of Skåne was quickly enclosed following newer, more radical *enskifte* (lit: one field) acts, in 1803-1807. The radical enclosures in Skåne implied the dissolution of village communities and profound restructuring of the settlement structure. In most other parts of the country however, a somewhat modified enclosure act of 1827, *laga skifte*, which did not formally demand that all land of an owner was assembled in one piece, became important. When put in use it did affect settlement structures profoundly in areas with large villages, but it generated milder effects in the small hamlets dominating in forested areas and in most of East Central Sweden. Enclosures were carried out at the request of at least one land owner in the village who could enforce enclosure upon fellow villagers without their consent¹⁰. This has been considered a factor behind the relative speed of the process. Still, by 1865, only half of the agricultural acreage ever enclosed according to the 1827 act, was enclosed. Only by 1894, 75% of land ever enclosed according to this act was enclosed¹¹. Some land was however *never* enclosed according to *this* act, and some of the land was never enclosed *at all*. Therefore, while most of the *plains* in southern Skåne surely were radically enclosed by 1820, 50% of the farm land in the rest of Sweden was hardly (radically) enclosed before 1870 and 75% hardly before 1900, about a hundred years after the first radical enclosure acts were stipulated and 150 years after the first enclosure act. Furthermore, while it is indisputable that enclosures were contextually bound to agricultural progress, it is clear that the frequency of applications for enclosure varied with corn price cycles so that enclosures appeared more dependent on economic development than being the explanation for such development. The strong wave of enclosures in Skåne for example was connected to the peaking (international) corn prices at the turn of the century¹².

9. It is even possible that the village rule was strengthened simultaneously as land was redistributed according to village norms and as the first enclosure acts standardized village bye-laws which were widely accepted were issued more or less at the same time as the enclosure enactments.

10. As shown by R. PETERSSON, 1983, there were however ways for villagers to resist enclosure.

11. *Historical Statistics of Sweden*, II, table D.4.

12. GADD, C.-J., 2000, p. 288-302; UTTERSTRÖM, G., 1957, I, p. 535 ff; OLSSON, M., 2005, p. 125-126.

Ironically, the greatest promoter of early enclosures was not a « liberal » thinker in any modern sense, but the director of the authority of the land survey Jacob Faggot, a stubborn « mercantilist » if there ever was one. Like many other contemporary writers Faggot was concerned with the unfavourable balance of trade, stemming (it was claimed) from grain imports. He also believed that a vitalized agriculture would promote household formation and an increase of the population. A land consolidation reform was one amongst many institutional and technological changes suggested to promote agriculture¹³.

Similarly the liberalisation of trade and manufacturing was a gradual, secular procedure involving a series of enactments starting with the liberalisation of the grain trade in the 1770s and ending with the acceptance of the French foreign trade tractate in 1865. However peasants had long before been allowed to freely supply the copper mine in Falun with grain. In the interregional trade the concessions from the 1770s onwards made it possible for peasant farmers to trade more freely neglecting the privileges of urban burghers, and it seem that the necessity of the trade *de facto* being performed by peasant tradesmen drove the reforms to a conclusion rather than the reforms *per se* brought about their trade. The prohibition of open general stores outside towns, which was abolished in two steps 1846 and 1864, had also been efficiently circumvented by peasant tradesmen in some areas¹⁴. The first free trade concessions were weapons in battle of conflicting economical (and sometimes political) interests.

All in all, the dichotomy on the economic-political level between a « mercantilist » eighteenth century and a liberal nineteenth century seems oversimplified. Embryonic liberal economic ideas were not uncommon in the late eighteenth century and on the other hand the first academic textbook in economics in Sweden written in 1747 by the foremost representative of the eighteenth century regulative German-cameralist tradition in Sweden, Anders Berch – preoccupied with calculating the proper proportions of people who ought to be occupied in different professions – remained the only economics text book in use several decades into the « liberal » nineteenth century¹⁵. Furthermore liberalisation in the nineteenth century was in many ways a matter of reregulation rather than de-regulation of the

13. FAGGOT, J., 1746; MORELL, M., 2011b.

14. UTTERSTRÖM, G., 1957, II; MORELL, M., 1982. Still, as shown by E. LINDBERG, 2001, the abolishing of craft guilds for example was clearly an important institutional reform, and not simply an enactment of already prevailing practices.

15. LINDROTH, S., 1978, p. 98-101; HÖGBERG, S., 1961, p. 140-141; MAGNUSSON, L., 2006.

economy. As Lars Magnusson has emphasised, the governments kept on intruding into economic life in order to attain growth and stability. For example the minister of finances in the mid century, Gripenstedt, sometimes viewed as a (ultra)liberal adherer of « harmony economists » like Say and Bastiat, took the initiative to let the state (by foreign credits) finance and monopolize the major railway lines and to let the state grant guarantees for shaky large banks, in times of financial crisis¹⁶.

Many development lines which started in the eighteenth century were still followed (and sometimes fulfilled) in the nineteenth century. With reference to agricultural reform, it is for example clear that the foundation in 1811 of the Royal Academy of Agriculture, which henceforth acted as a semi official governmental authority handling agricultural matters, research stations, agricultural trade schools and institutes and also headed the regional agricultural societies that emerged in the 1790's, represented not a break with the past but a fulfilment of organizational efforts amongst the cultural, scientific and political elite emerging from the 1730's with the mission to procure and disseminate practical knowledge in agricultural matters among peasant farmers, in order to raise production¹⁷.

In short there indeed occurred a regime change, but it was too gradual to allow for a clear dichotomy between *Ancien* and *Nouveau Régime* in the Swedish case. In as much as political and institutional change affected agricultural productivity and living standards, it is likely that the effects were out-stretched in time. The important institutional reforms took shape in interplay with the actual social and economic development.

1. Three watersheds

What remains are a few brief periods when salient economic and demographic changes occurred *roughly* at the same time. Three such periods before the major onset of industrialisation shall be considered here.

The first one occurred in the 1720s when several indices point at living standards being at nadir: height of soldiers born then was lower than ever after; food rations at hospitals/poorhouses recurrently dropped to very low

16. MAGNUSSON, L., 2009; 2006; 2000.

17. HÖGBERG, S., 1961, p. 13, 41, 199-202; LINDROTH, S., 1967, I, p. 218 f; LINDROTH, S., 1967, II, p. 194; UTTERSTRÖM, G., 1957, p. 625-640; LANGE, U., 2000; EDLING, N., 2003; 2010.

figures in the 1690s and remained low during the Great Nordic War to the 1720s; real wage estimates indicate low levels as do estimations of *per capita* production of grain. Also by the 1720s a period of recurrent crisis mortality ignited by severe recurrent crop failures of the late 1690s, and aggravated by some of the last outbreaks of plague, foremost in 1709 was ending. By the 1720s start a period of perpetual growth of grain production and a long period of substantial population increase. This population increase did not lead to declining but rather more likely came together with somewhat increasing *per capita* production of grain. In a couple of decades, height of born soldiers rose considerably¹⁸.

The second watershed appeared around 1800. The pace of population growth accelerated and reached 1% per annum from 1815-1860¹⁹. The immediate reason was a drop in mortality – led by a fall in infant mortality since the late eighteenth century – which proved to be persistent²⁰. Grain production increased strongly and Sweden emerged as an exporting rather than an importing country from the 1820s. The breakthrough of the potato contributed to this and there was an evident increase in *per capita* production of grain, potatoes and also animal foods²¹. While the heights of soldiers born in 1750-1780 had stagnated and even fallen, stature of soldiers born 1800-1830 increased again (although later to fall temporarily). Real wages started to rise strongly after a long downfall and nadir around 1800, caused by rising grain prices in the wake of the Napoleonic wars. For day labourers in Stockholm the rise continued over the middle of the century, for agricultural day labourers real wages fell again in the 1820's and rose consist-

18. Heights: SANDBERG, I. G. & STECKEL, R. H., 1980. Institutional diets: MORELL, M., 1989, p. 258-260; 287-289; 1990; Real wages: EDVINSSON, R., 2009, p. 6-7; Grain production: EDVINSSON, R., 2009a, p. 22. Heckscher estimated population growth to 0.22% per annum in 1620-1720 and to 0.56% per annum in 1720-1815 (HECKSCHER, E. F., 1936, I, 2, p. 383-384; 1949, I, 1, p. 147-162). L. A. PALM, 2001, who most surely starts at too low a point in 1571 as well as in the early seventeenth century estimates growth in 1571-1699 at 0.6% annually, while R. Edvinsson using other entrance values but Palms annual data for later years ends at 0.3% in 1620-1699 (EDVINSSON, R., 2009, p. 9).

19. *Historical statistics of Sweden*, 1, table 2 and 4.

20. *Historical statistics of Sweden*, 1 table 41; FRIDLIZIUS, G., 1984; FRIDLIZIUS, G. & OHLSSON, R., 1984; BENGTSSON, T., 1999. Child mortality also fell, although the continuous fall in infant mortality dominated the early mortality drop in Sweden. Adult mortality remained high until after 1850, when mortality started to fall in all age groups.

21. See for example R. EDVINSSON, 2009, p. 20-22; GADD, C.-J., 2000, p. 342-350; 2005, p. 65-66; and SCHÖN, L., 1995, p. 39-49. In some areas, most notably south west Skåne, the productivity increase of agriculture gained pace already in the 1780s (OLSSON, M., 2005).

ently only from the 1860's²². On the institutional arena, enclosures started to spread in southern Sweden.

Still Sweden remained a predominantly agricultural society. On a national level cities stagnated rather than grew compared to rural populations, and for a while the basic cause behind economic cycles remained harvest fluctuations in the way described by among others Wilhelm Abel (1980). Age specific mortality responses (particularly for people of working ages) to real wage changes (effectively grain price variations) remained in the first half of the nineteenth century, and although they generally seem to have been considerably weakened compared to the eighteenth century figures²³, it has been shown by Bengtsson and Dribe, that the incidence of mortality and fertility response to economic stress (grain price changes) among rural poor, at least in Skåne in fact became *stronger* than in the late eighteenth century²⁴.

The third watershed appears around 1860. By then there has occurred a clear increase in living standards among even landless rural populations, mortality falls in all age groups, not as earlier mainly among infants and children and the incidence of demographic responses to grain prices vanish²⁵. Real wages rise consistently. Patterns of textile consumption

22. Real wages have been at centre of discussion of living standard at least since Gilboy's classic study in 1930. For recent Swedish data, see R. EDVINSSON, 2009, p. 7, Stockholm 1540 to 1850). Cf. L. JÖRBERG, 1972; SCHÖN, L., 1995, p. 41-44 and BENGTSSON & DRIBE, M., 2005, p. 344. Jörberg used day rates of agricultural labourers and market scale prices. Apart from problems to convert day rates to annual incomes, Edvinsson (and earlier Utterström) questions the usefulness of these data, since the dominant employment form in farming was one year contracts with major part of payments being in kind and remaining stable for very long periods. Daily rates concerned a small, albeit admittedly fast growing part of the population (EDVINSSON, R., 2009a, p. 6; UTTERSTRÖM, G., 1957, I, p. 875; UTTERSTRÖM, G., 1978. Cf. T. BENGTSSON & R. OHLSSON, 1985, p. 311-313, and T. BENGTSSON & M. DRIBE, 2005, p. 344-345). Therefore, while changes in real wage changes for agricultural labourers more or less solely mirrors food price changes, it is not certain to what extent these « real wage » changes or indeed grain price fluctuations reflected consumption levels among annually employed agricultural workers. While T. BENGTSSON & M. DRIBE, 2005, p. 356, argue that in the case of payments in kind, wages « could be denoted in money and then converted into grain using the official market price scales which implies that also payments in kind were negatively affected by high prices of grain », G. Utterström's analysis of annual contracts makes it clear that it was the other way around: farm hand contracts stipulated quantities of items in kinds, which could be transformed into current money values, with the use of market prices. Similarly taxes noted in kind, were transformed into money taxes using the official market scale prices (JÖRBERG, L., 1972, p. 1; LINDGREN, H., 1971; HEGARDT, 1975.

23. BENGTSSON, T. & OHLSSON, R., 1985, p. 316-319, 324-325.

24. BENGTSSON, T. & DRIBE, M., 2005. See further discussion below.

25. BENGTSSON, T. & DRIBE, M., 2005.

imply increased spending power of wealthier strata from the 1830s and for broader strata since the 1840s²⁶. Also urbanisation leaps ahead²⁷. A new infrastructure (railroads, regular steamships and some telecommunication) binds the country together. People can travel quicker and food and other resources can be transferred quicker than before between surplus areas and (regular or occasional) deficit areas. Prices become increasingly integrated over the country and in 1879, Swedish normal time is inaugurated. The political constitution is modernized on both national and local level, regular obligatory schooling emerges and new credit institutions serve both savers and investors. Industrialization moves ahead and a couple of decades later, not only the relative, but the absolute size of the agricultural population starts to fall²⁸.

Did low living standards lead to recurrent demographic crises during the *Ancien Régime*?

I will concentrate on the periods before and after the second watershed. The changes in the 1720s have been attributed to the peace and to the more constitutional political leadership looking inwards for growth rather than outside for (territorial) expansion which replaced the great power politics and perpetual war that had lasted for several decades. Furthermore the crisis mortality is thought to have sorted out weaker individuals and the recurrent epidemics may have contributed to increased immunity amongst those who survived.

Still *medium* term fluctuations in total grain production, production *per capita*, grain imports, stature of born to be soldiers as well as mortality, occurred in the period 1720 to 1820. The initial growth period ended about 1740, when a short crisis period occurred. Otherwise most indices were stagnating from c. 1740 until the 1770's when a fall in stature and real wages (due to increasing prices) began. Population growth stagnated and imports of grain peaked in the 1780s. The upturn appeared in the early nineteenth century²⁹.

26. SCHÖN, L., 1979, p. 60-70.

27. *Historical Statistics of Sweden*, 1, tables 3-4.

28. Cf. L. MAGNUSSON, 2000; MORELL, M., 2011a.

29. GADD, C.-J., 2000, p. 342-350; 2011, p. 144. Similar periodization in L. MAGNUSSON, 2000, p. 3-4. G. UTTERSTRÖM, 1957, I, using contracts for soldiers supported by parish peasants, notes a tendency for food consumption to fall somewhat from the 1770s. R. EDVINSSON, 2009, p. 20-21, using his *per capita* harvest index is somewhat more specific, claiming stability from 1740 to about 1780, from when on a very volatile period starts.

There were also *short* term fluctuations in harvests, grain prices, grain imports and mortality and Rodney Edvinsson's recently presented *per capita* harvest index makes clear that the harvest disasters connected to the mortality peaks often appeared in clusters, *i.e.* two or several years of bad harvest followed closely to each other. For one thing, these failure clusters led to the most severe mortality peaks some of the years, since more perpetual malnourishment increased vulnerability to diseases and since grain storage was badly organized and more or less impossible at those occasions³⁰. Imports did hardly press down prices substantially in the most severe crisis cluster years as import volumes hardly ever covered the deficit occurring due to bad national harvests, and thus did not entirely smooth out fluctuations. Moreover national Swedish harvest fluctuations were normally well correlated with harvest fluctuations in exporting areas³¹. According to Edvinsson's analysis, the recurrent clusters of bad harvest years composed the medium term downturns in the late seventeenth century and the eighteenth century: in 1693-1698 harvest failed every year except 1694 and the five worst harvest years of the entire 1665-1820 period occurred between 1693 and 1726. In 1739-1746 again there were 5 years of crop failures and again there were severe harvest failures in 1771-1772 and 1781, 1783 and 1785 (while crops of 1782 and 1784 was good, explaining a less strong fall in death rates in the 1780's than what may have been expected). Again the early nineteenth century was volatile, with severe crop failures in 1800, 1805, 1808 and 1817. However these failures were rather far between and by then the production trend was unmistakably rising steeply³².

Over-layered these medium and short term variations there was clearly a rising trend in grain production from the 1720s to around 1820 – whereas the period 1665-1725 had been stagnant in this respect. Whether there was a long term *per capita* growth may perhaps be disputed. Heckscher thought so. From his data for in kind payments to workers at large estates, he concluded that grain *consumption* increased *per capita* and that this reflected a grain production increasing by 75% over the period (0.6% per annum), *i.e.* somewhat faster than population (70% for the period or 0.56% per annum)³³. Edvinsson, resting on his grain harvest index, made up ba-

30. B.-Å BERG, 2007, insists that the creation of parish grain storages in many parishes were of little importance for evening out consumption levels. Rather they functioned as « grain banks » for landed peasants.

31. Cf. R. EDVINSSON, 2009. The importance of imports in the formation of prices has been debated. B.-Å BERG, 2007, argues for efficient import markets and strongly emphasises the role of imports.

32. EDVINSSON, R., 2009, p. 20-23; GADD, C.-J., 2000, p. 348.

33. HECKSCHER, E. F., 1949, II, 1, p. 147-162.

sically by use of tithes records, subjective harvest assessments and new data from Gadd³⁴ on the production level in the early nineteenth century, concludes that there was stagnation in *per capita* production, implying long term stagnant *per capita* grain consumption 1665-1820 (although he notes a substantial growth at the very end of the period)³⁵. With the sharp downturn in 1665 to 1725 (which everybody would agree to) in mind it is clear however, that there must have occurred some *per capita* growth according to Edvinsson's figures as well for the « Heckscherian » period 1720-1815. Direct consumption data remains indeterminate. Food rationing at institutions became somewhat more stable and plentiful over the century, but it is not clear how far these results should be generalized³⁶.

It is clear however, that food consumption became increasingly based on vegetable sources. Until the early nineteenth century this meant that the proportion of grain in diets increased – and more and more of it was rye rather than barley – but by the turn of the century potatoes was added to give the « vegetabilization » of diets yet another dimension. This is evident from accounts of institutional diets³⁷, soldiers' contracts³⁸ as well as data on in kind payments from large estates³⁹.

All in all we dare to conclude that there was some long term increase in *per capita* production and consumption of grain in 1720-1815, while *per capita* production and *per capita* consumption of animal food stuffs (at best) stagnated. Did this represent a long term rise of *general* standard of living and increasing capacity to overcome temporary crisis?

34. GADD, C.-J., 2007a.

35. EDVINSSON, R., 2009, p. 24-25. The weak point in this index is the eighteenth century period where it is based on the annual subjective harvest assessments which are more useful (albeit not unproblematic) when it comes to analysis of short term fluctuations.

36. Institutional rations show a much stronger stability after about 1730 but this is basically because most institutions studied received their main incomes from designated tithes and in most cases tithes were frozen to fixed annual grain deliveries in the early eighteenth century. Up to the 1730s however, fluctuation in consumption levels at Weckholm's and Västerås' hospital closely resemble output fluctuations *e.g.* according to Edvinsson's harvest index. Cf. M. MORELL, 1989.

37. MORELL, M., 1989; 1990.

38. UTTERSTRÖM, G., 1957, p. 1.

39. HECKSCHER, E. F., 1949 II, 1. It is a continuation of a more or less general development in Europe, discernible in Sweden from the mid sixteenth century onwards. Cf. among many researchers, W. ABEL, 1980, E. LE ROY LADURIE, 1966, and F. BRAUDEL, 1979. For the Swedish case, see assessments of Heckscher's investigations in M. MORELL, 1987; 2006a.

For several reasons no. It may seem impressive that grain production grew at least on par with population in a long period with substantial population increase. Accepting the reasonable assumption that the proportion of population engaged in agriculture did not grow, this implies some increase in labour productivity (measured as output per worker, work load per worker may have increased). Firstly, however, hectare yields did not rise so expansion was attained through the reclaiming of new arable land, largely at the expense of fodder producing meadows and pastures. This led to situations where lack of fodder, draught power and manure in fact may have threatened yields, had not acreage saving innovations like iron ploughs and potatoes come in for rescue⁴⁰. Secondly (and consequently), part of the price for long term increasing grain harvests was an increased dependency on grain, and moreover as rye came to dominate in central and southern Sweden, an increased dependency on one single crop. As already noted this was reflected in qualitatively, if not quantitatively, deteriorated diets. To some extent the incidence of rinderpest may have contributed lack of animal food stuffs.

Thirdly and finally, the agricultural transformation emerging after 1750 and resting on a basically peasant led development process, also involved strong social differentiation. In 1750-1850 the number of landed peasant farmers (freeholders and tenants of cadastral holdings) increased by merely 11%, whereas the number of landless agricultural workers and crofters quadrupled⁴¹. Furthermore within the strata of freeholders there was some differentiation. Particularly in some forested districts, and in the Skåne plains there was a strong increase in the number of smallholdings⁴² whose relations to the market varied. Forest area smallholders presumably always had to buy grain in exchange for animal products, craftwork etc., while smallholders in the plains presumably had grain to sell in good harvest years with low prices, but may have had to buy grain when harvest failed and prices rose. There is some evidence for certain periods *e.g.* the 1750s and 1830s of rising wealth among well-to-do peasants (silver hoarding and increased demand for craftwork in the earlier period, rising demand for higher quality textiles in the later period⁴³) and it seems likely that the emerging group of well-to-do freeholders increased their standard

40. GADD, C.-J., 1983, p. 21-24; 2000, p. 235-239, 315; 2011, p. 144-148; MORELL, M., 2008.

41. WINBERG, C., 1977, p. 17.

42. WOHLIN, N., 1912; OLSSON, M. 2005.

43. GADD, C.-J., 2011, p. 136-137 for the 1750s; SCHÖN, L., 1979, p. 60-70, concerning the 1830s. Cf. C. AHLBERGER, 1996.

and aspirations in the long run. Eventually the rise of the freeholders – always represented in the diet – was reflected politically, as this group came to dominate the second chamber of the reformed parliament in the 1860s and a few decades onwards⁴⁴.

The social differentiation originated from downward social mobility among some peasants, *i.e.* failures for lesser peasants to provide their children with land in the expansion process, leading to many of them having to revert to crofts and/or wage work. More optimistically viewed, it stemmed from the increased possibilities for wage work resulting from the agricultural expansion which led to increased early household formation: young couples formed households without waiting for (inherited or purchased) farm land. This implied that a diminishing proportion of the population shared the fortunes of the emerging freeholders and crown tenants⁴⁵. It remains unclear whether the standards of the landless strata fell or not, but the proposed, very small long term increase in *average per capita* consumption levels implied by the small *per capita* production increase, and an obvious standard increase for a declining proportion of the population, speaks for a downward trend or at best stagnation for the growing landless strata. Similarly it seems likely that living standards fell, with the grain price increases in the last decades of the eighteenth century for townsfolk working for wages, and perhaps even for more established handicraft masters, as the relative prices of grain grew⁴⁶. What then about the absolute level of living?

Heckscher detected a low standard of living in the eighteenth century by connecting the variations in (crude) mortality to harvest fluctuations. The Malthusian positive checks appeared in a society living within small margins even in normal years he argued, and he further supposed that the mortality peaks in malnutrition related disease foremost concerned infants and elderly, weak and vulnerable and mostly members of the lower strata of the population⁴⁷. Since then it has been contended by for example Utterström and by Bengtsson & Ohlsson⁴⁸ that infant and child mortality followed its

44. MORELL, M., 2011a.

45. Cf. C. WINBERG, 1977.

46. Cf. E. F. HECKSCHER, 1949 II, 1, p. 239-240. Heckscher however had hard to accept that living standard fell for any major population group after the 1720s. Concerning relative standard changes between population groups in pre-industrial Sweden, cf. J. SÖDERBERG, 1983.

47. HECKSCHER, E. F., 1949, II, 1.

48. UTTERSTRÖM, G., 1957; BENGTSSON, T. & OHLSSON, R., 1985.

own cycles less correlated to economic fluctuations⁴⁹. In their reconstruction of the *English population history* Wrigley & Shofield⁵⁰ played down the importance of Malthusian positive checks for sixteenth century England and instead managed to show strong fertility responses – *i.e.* Malthusian *preventive* checks – to economic crisis. Since then the method of detecting standard of living levels and changes by measuring demographic responses (mortality and fertility) to economic stress, indicated by peaking grain prices have been vigorously developed by the use of more sophisticated statistical analysis and the use of age specific data and longitudinal data for specific social groups. This way Bengtsson and Ohlsson has been able to confirm Heckscher's somewhat impressionistic and preliminary conclusions concerning the level of living in eighteenth century Sweden. With this method standard of living is measured as the ability of the investigated population to withstand economic shocks, without this leading to downfalls in mortality (other than infant/child and old age mortality) and fertility (through decreased nuptiality and/or planned postponements of childbirths and/or un-intentional decreases in fertility caused by malnourishment/malnutrition?). It is now proven that there were indeed strong fertility and mortality (in certain age groups) responses to economic stress in Sweden in the second half of the eighteenth century, and particularly among landless rural strata. Thus for such groups at least, the level of living was, as Heckscher had proposed, low⁵¹.

There is one caveat. Carl-Johan Gadd has recently presented preliminary data showing (*per capita*) grain production for human consumption in Sweden in the first decade of the nineteenth century to have been considerably higher than according to earlier estimations. As the production level at that stage offers the best benchmark for estimations of earlier levels of production as well, this *may* lead to a conclusion that domestic

49. See also discussion in T. BENGTSSON, 1999.

50. WRIGLEY, E. A. & SHOFIELD, R. S., 1981.

51. BENGTSSON, T. & OLSSON, R., 1985; BENGTSSON, T. & DRIBE, M., 2005. To relate mortality variations (and fertility variations) to harvest fluctuations – or to grain price fluctuations which reflected the subsistence situation more comprehensively by reflecting inter-local, interregional and international trade – has been a perennial in research into early modern Economic history in Sweden as well as in Europe at large. To correlate mortality rates (age specific or not) or other demographic responses to short term fluctuations in real wages seem superfluous, since short term variations in grain prices in these times, most certainly was the active element causing the fluctuations in real wages. Variations in labour demand, in the short term may have occurred, but they were likely to enforce the tendencies induced by prices, since high prices normally reflected tiny harvests and falling labour demand and vice versa. In the long run, and for estimating long run changes in living standards on the other hand, real income calculations are of course of great value.

production levels were relatively high, despite regular (marginal) imports. Gadd sets the high average consumption figures his data implies in connection to the series of stature measures, which apart from moving up and down, remains relatively high in Sweden compared to, for example Britain. That would imply a *comparatively* high standard of living even in the eighteenth century⁵². Furthermore the series of height data for Sweden concerns soldiers, a group definitely not recruited amongst the wealthier strata in society, in fact therefore their stature indicate living levels amongst landless rather than landed peasants.

Still the conclusion must be that eighteenth century Sweden was a society vulnerable to recurrent economic fluctuations stemming from harvest failure. The variations in marginal imports did not compensate for harvest fluctuations. Grain, namely rye, was exceedingly dominating in diets and price peaks following from harvest failures regularly led to mortality spikes and temporary lowered fertility.

Contemporary agronomic and economic writers – the publication of books, articles and pamphlets in economic and agricultural matters exploded in Sweden after 1739 – were aware of the vulnerability of grain supplies, although they were concerned foremost with the unfavourable balance of trade it was believed to cause, and in particular the necessity of regular grain imports⁵³. Thus Heckscher did not find out about the correlation between mortality spikes and crop failures by himself – he read about it in writings of Pehr Wargentin, an eighteenth century statistician, astronomist and secretary of the academy of science for several decades. Several contemporary writers came up with relevant proposals of organisational and technological reform of farming, in order to increase productivity. Some of these proposals turned up as actual praxis much later. What seems to have been lacking was an overall understanding of how relevant social actors (which with the Swedish distribution of land was mainly the free holding peasantry) would attain the resources and incentives to make the generally most fruitful types of investments⁵⁴. The long period of frozen taxes, production increase and thereby

52. GADD, C.-J., 2009. Speculations on implications for the eighteenth century are mine. The principal difference between the estimations by C.-J. GADD, 2009 and L. SCHÖN, 1995 (and forerunners) stems from the latter suggesting non-realistically high proportions of grain attributed to animal fodder in the early nineteenth century.

53. MORELL, M., 2011b.

54. MORELL, M., 2011b.

transfer of more and more of the agricultural surplus to peasant producers took care of that⁵⁵.

2. Crises in the nineteenth century?

To what extent did things improve in the early nineteenth century? Clearly grain (plus potato) production increased strongly in the first half of the nineteenth century. For the period 1815-1860, Utterström calculated a constant *per capita* consumption of vegetable foods. While population increased by 60%, (1% per annum) he estimated that production of grain and potatoes increased by close to 100% (almost 1.6% annually). This made room for considerable export, while grain had been regularly imported earlier. He further argued for constant *per capita* consumption and production of animal foods up to 1850. Martinus similarly estimates stable *per capita* food consumption in 1830-1870, but still argues for a 0.6-0.9% annual *per capita* growth of production, allowing for growing exports. He speaks of a *per capita* production increase for the period 1790-1830 as well, albeit of lesser magnitude. Schön estimates a 0.3% annual growth in *per capita consumption* of animal and vegetable foods in 1800-1861, a *per capita* production increase of vegetable food by roughly 45% (0.62% annually) and a *per capita* production increase of animal foods by 31% (0.44% annually) for the same period⁵⁶.

Gadd's recent reworking of the nineteenth century agricultural statistics preliminary gives different results. He calculated with various alternatives, but estimates a minimum 112% increase in crop production (grain plus potatoes) for human consumption animal feed and export from 1802-1805 to 1856-1860. That amounts to 1.4% annual increase. As much of the increase in production went for export (while there was net import for human consumption in the early years) and as Gadd estimates that the percentage of crop used as fodder increased, *per capita* consumption of vegetable foods is estimated to have increased by merely 6.3-9.4 per cent according to different alternatives (0.12-0.17% per annum). Moreover, Gadd's figure imply – in value terms – a domestic crop production less seed and fodder which was 47% higher than according to Schön in the early nineteenth century and

55. HERLITZ, L., 1974; GADD, C.-J., 2000; OLSSON, M., 2005; GADD, C.-J., 2011; MORELL, M., 2006b.

56. UTTERSTRÖM, G., 1957, I, p. 694-701; MARTINIUS, S., 1970, p. 173-174; 1982, p. 15; SCHÖN, L., 1995, p. 39-49.

42% higher in 1856-1860⁵⁷. As already noted this means that absolute *per capita* consumption levels (and implicitly the living standard) were much higher – already in the early nineteenth century and by analogy, even late eighteenth century – than one would expect from earlier research.

For sure we should dare to conclude that there was some average increase in *per capita* consumption of vegetable and animal foods c. 1805 to 1860. Production increased much faster, due to rising exports. Whether in fact this created more stability in periods of crisis, implying that exported grain could be redirected for the domestic market, when domestic demand increased (and caused rising prices) remains uncertain, since the net exporting areas were found on the southern plains and particularly in Skåne, while deficit areas mostly laid far in the north and in large cities and since it was fodder grain, mostly oats that was exported. However it is attested that developments around 1810 meant increasing self sufficiency of forested, previously marginal agricultural areas and particularly in traditional deficit areas concentrating on iron making⁵⁸.

Crises before the second watershed mainly emanated from harvest failures and short term fluctuations of harvests, or more generally, grain prices. With strongly increasing *per capita* production was that still valid? First of all it seems that the number of devastating crop failures, in particular several general crop failures in adjacent years occurred more and more rarely. Only two of the 30 worst crop failures in 1665-1820 according to Edvinsson's *per capita* harvest index occurred in the 1800s, namely in 1800 and 1808. I remain more dubious about the value of the official subjective harvest assessments, than Edvinsson⁵⁹, but if we restrict ourselves to noting apparently very clear cases and take account only of instances between 1786-1900 when the harvest value given is 1 or lower – while the average harvest value was set at 3, such failures occurred twice in the late eighteenth century (1798 and 1799) and 5 times in the entire nineteenth cen-

57. GADD, C.-J., 2009, tables 5, 14, 16, 17. The difference is largely because Gadd has reckoned with a far lower (and more realistic) percentage of crops being used for animal fodder than Schön and his forerunners. Gross figures including grain used for fodder are largely the same in the two estimations, despite very different approaches were used and this gives credence to both estimates (GADD, C.-J., 2009, p. 23-25).

58. This was acknowledged already in a pioneer work on Swedish grain trade, ÅMARK, K., 1915, p. 29, 55. Very high growth rates have been noted for example from southern Dalarna (ISACSON, M., 1979, p. 116-119) and from the west coast county of Bohuslän (HERLITZ, L., 1988, p. 200-218).

59. I am for example not convinced that assessments from different decades are strictly comparable.

tury: 1800, 1812, 1816, 1826 and 1841. Values of 2 or lower also appears in 1805, 1808, in four years between 1811 and 1818, in 1831, 1837, 1843 and 1845, but *national* assessments are far from that low in the late 1860s when the last outright famine hit northern Sweden, largely because transport networks were not yet sufficiently built out⁶⁰.

Yet even though the severity of harvest related economic stress ought to have diminished and while age specific mortality data show decreasing response to economic stress in the first half of the nineteenth century, a study using longitudinal data for landless rural labourers in four Skåne parishes shows *increased* demographic responses (mortality and fertility) to economic stress measured as peaking grain prices. Only for the late nineteenth century do the demographic responses to food prices changes vanish away as far as this strata is concerned, indicating a rise in their standard of living⁶¹. Furthermore Sandberg's and Steckel's series of height data, show a dip for soldiers born in the 1840s, which *could* be related to the series of bad harvests 1837, 1841, 1843, 1845. Real wages for agricultural workers (with all doubts we could have about them) also dipped in the 1840s and rose consistently and perpetually only after 1860. These findings has led Bengtsson and Dribe to the conclusion that while living standards for landed peasant farmers most surely rose in the first half of the nineteenth century, following the intensified transformation and increased productivity in agriculture, this was *not* the case for landless rural labourers who grew in numbers by the process of social differentiation noted above. Living levels for these groups may even have worsened according to the stress-sensitivity study and the authors relate this to the differentiation process, the enclosures which broke up village communities, replacing more horizontal relations among rural dwellers with vertical and hierarchal ones, often depriving crofters of the little land they had and forcing many people into insecure wage relations (although demand for agricultural labour may have increased occupation time and therefore real incomes for people living on day rates). Also the social distance between master and servant in agriculture tended to increase and finally the lack of alternative occupations, and the non-option of out-migration as close-by areas with better prospects of making a living was lacking, contributed to increased vulnerability⁶². The lowered standard of living within this stratum is connected, by the authors, to the discourse of pauperism emerging in the 1830s.

60. *Historical statistics of Sweden*, 2, table E12.

61. BENGTSSON, T. & DRIBE, M., 2005.

62. BENGTSSON, T. & DRIBE, M., 2005.

It is unclear how Bengtsson's and Dribe's conclusion of increased vulnerability to economic stress, falling standards and pauperisation specifically in the proletarianized parts of Skåne relates to results by Lundsjö and Söderberg⁶³ who managed to show that rural poverty in the nineteenth century emerged foremost in areas *not* being characterised by proletarianization rather than vice versa. Even so it seems convincingly shown that living standards for some groups in society at least regionally did stagnate or even fell in the early nineteenth century. It remains to determine how general this fall in living standards may have been.

Firstly, the development in Skåne differed in some respects from that in other parts of the country. As noted radical enclosures which created (or sharpened) the hierarchal relations between landed farmers and farm workers occurred much earlier in Skåne than elsewhere. Furthermore, it is an established ethnological research result that social distance between masters (landed peasants) and their employees in the late nineteenth century was greater in the southernmost regions of Sweden, Skåne in particular, than they were further to the North⁶⁴. This may speak for the landless strata in Skåne being a special case. Secondly, as proposed by Gadd, the falling height of soldiers born in the 1840s may reflect rising problems to recruit as tall soldiers as before, due to improved possibilities for young males in other parts of the labour market. In fact it has been shown that for the late nineteenth century, the average height of soldiers was distinctly lower than the average of young males in general⁶⁵. Thirdly, the reference to stagnating real wages concerns agricultural day labourers and there are reasons to be sceptical about how widely these indeed represented living standards of large groups. Moreover real wages in Stockholm actually rose at the same time⁶⁶. Fourthly, Schön's data showing increasing demand for coarse textiles from the 1840's imply that incomes for lower social strata rose well *before* the middle of the century. Finally adult mortality also started to fall by mid century⁶⁷. That adult mortality stayed high in the early nineteenth century despite evidence of raised living standards, may in fact be explained by increasing male alcohol related mortality, in turn reflecting eased access to

63. LUNDSJÖ, O., 1975; SÖDERBERG, J., 1978.

64. HELLSPONG, M. & LÖFGREN, O., 1976; MORELL, M., 2001.

65. GADD, C.-J., 2007b, p. 314.

66. EDVINSSON, R., 2009.

67. *Historical statistics of Sweden*, I, table 40.

potato and grain from which spirits was distilled – itself in a way an indication of increased material standard⁶⁸.

Conclusively it does not seem likely that there was any *general* fall in living standards among the landless groups in Sweden after 1820, rather the opposite.

3. Living standards, crisis and mass emigration

A generalisation of the results that the living standard of certain landless groups was worsened before 1860 would support the popular view that increasing rural impoverishment explained the mass emigration to the United States in the second half of the nineteenth century and early twentieth century and that emigration saved the nation from mass pauperisation by letting out the overpopulation which could not gainfully be supported at home. Several historians and at least one contemporary economist, Knut Wicksell, have subscribed to this view. Wicksell particularly attacked the smallholders' movement of the turn of the century. Support for the establishment of smallholdings was viewed at the time as the best remedy against emigration – which was by the turn of the century regarded as a massive national catastrophe – as it was thought that people migrated because they wanted to establish themselves as farmers and they lacked the possibility to do so in Sweden⁶⁹. Wicksell claimed that smallholdings were uneconomical: their high output per hectare resulted from overexploitation of labour. He regarded emigration as a blessing, and if people did not believe it would enhance their living conditions, it would end by itself. The individual governmental premium loans for smallholdings provided from 1904 onwards, were so small that they seemed to « aim at recreating a new agrarian proletariat, new cottagers instead of those emigration has liberated us from »⁷⁰.

Wicksell's arguments against the nationalistically stricken smallholders lobby were well founded, but the belief that migration would improve one's situation does not necessarily originate from rising absolute poverty. Emigration to the US of any magnitude started in the 1850's when

68. GADD, C.-J., 2011, p. 249. By mid century home distilling was prohibited and the temperance movement started to make way.

69. KÄLVEMARK, A.-S., 1972; EDLING, N., 1996.

70. WICKSELL, K., 1910, p. 104. On critique of smallholdings, see cf. K. WICKSELL, 1912.

15 000 Swedes emigrated overseas, another 12 000 went in 1861-1865, but the first mass wave was in 1866-1870 with over 80 000 migrants, most of them going in direct relation to the crop failures by the end of the decade. The next – and strongest – wave occurred in the 1880s, and the final large one in 1901-1905. In fact 88% of all overseas emigration from Sweden in 1851-1908 occurred after 1870 and 77% after 1880⁷¹. Thus the large waves of emigration occurred when industrialisation was well under way, and when most researchers agree that living standards, whether indicated by real wages or demographic responses to food prices, was definitely on the rise. The great emigration cannot really be explained by Sweden becoming a poorer country: on the contrary it occurred when economic growth, production *per capita* and in all likelihood consumption levels for large layers of population was rising quicker than before. For this reason it is also hard to, in any simple way, relate emigration to the agricultural transformation and increased rural poverty of the *early* nineteenth century.

It may be argued however that the proportion of landless or semi-landless rural inhabitants grew in the first half of the nineteenth century and that this proportion as well as total population grew faster in counties which later showed high emigration rates. Thus it is visible that emigration figures are rather high from Skåne and western parts of Sweden where agricultural expansion and population increase had been comparatively strong in the first half of the nineteenth century⁷². Malmöhus county in Skåne, where Bengtsson and Dribe showed mid century examples of demographic responses to economic stress among rural labourers, was indeed a major emigration county. But emigration from Malmöhus County was insignificant in the 1850s and set in relation to the county's large population, emigration was not so high there later either. Malmöhus had the tenth highest emigration rate among the 26 counties in the 1860s and rank as number 8 in the 1880s. Furthermore 90% of total emigration from Malmöhus county in 1851-1910 occurred after 1870 and 71% after 1880, *i.e.* long after the indices of deteriorated living standards had vanished⁷³.

Improved migration possibilities, not least transport facilities and vicinity to harbours, propaganda and contacts with previous emigrants as well as local employment possibilities had roles in determining the shifting

71. *Historical statistics of Sweden*, I, table 43.

72. Cf. *Historical statistics of Sweden*, I, table 47 and L. NYSTRÖM, 1998.

73. *Historical statistics of Sweden*, I, tables 9 and 47. Emigration rates for each county (and Stockholm city) are calculated as net emigration in 1861-1870 divided by the average of population 1860, 1865 and 1870 and as net emigration in 1881-1890 divided by the average of population in 1880, 1885 and 1890.

magnitude of emigration and the regionally varied emigration rates. It is clear that the first emigration wave in the 1860s was related to crop failure and economic downturn and that the emigration wave in the 1880's was related to the ongoing transformation of agriculture involving a crisis for large grain producers and therefore employment possibilities in agriculture. However not only employment cycles in Sweden, but also increased literacy, growing awareness of (even) better living prospects abroad, *i.e.* pull factors represented by economic cycles in the recipient country, USA, played their part⁷⁴.

Gadd's re-estimation of the levels and growth of vegetable food production in the nineteenth century supports the conclusion that people did not migrate because of rising and emerging general and absolute poverty. The bulk of the growth in *per capita* production of vegetable food production in the nineteenth century occurred before 1860. Change from then on was practically nil, while *per capita* production of animal foodstuffs increased greatly in the last 40 years of the nineteenth century, which reflects both rising incomes and the fact that more and more of the arable was used to produce animal fodder from the middle of the nineteenth century⁷⁵.

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It is hardly fruitful to discuss pre-industrial agricultural productivity, production *per capita*, or living standard in Sweden embarking from the concepts of *ancien* and *nouveau régimes*. The development – as well as the institutional changes connected to it – was much more gradual than such a notion suggests. Furthermore, while there was indeed a period 1800-1820 when *per capita* production grew particularly quickly, elements of fertility and mortality responses to economic stress – an accepted indicator of low living standards – still prevailed for certain social groups far in to the nineteenth century.

From 1720 to the early nineteenth century, grain production grew at least on par with population in a long period when population increase was probably faster than (ever?) before. Most likely there was some increase in *per capita* production (and consumption) of grain. However the increase in *per capita* grain production was basically attained through the reclaiming of

74. Cf. GADD, C.-J., 2000, p. 366-367; MORELL, M., 2001, p. 76-79; MORELL, M., 2011, p. 179; THOMAS, D. S., 1941.

75. GADD, C.-J., 2009. Cf. M. MORELL, 2011a.

new arable land at the expense of fodder producing meadows and pastures, leading to situations where lack of fodder, draught power and manure in fact may have threatened yields, had not acreage saving innovations like iron ploughs and potatoes come in for rescue. This was a reason why production (and consumption) *per capita* of animal food stuffs at best stagnated. The dependency on grain (rye) implied a qualitatively deteriorated diets. Despite growing grain production, marginal volumes had to be imported annually. Imports did not suffice to even out crop failures or price fluctuations. Absolute consumption levels remained low, and at least among certain groups this low level of living was indicated by mortality peaking and fertility falling when grain prices rose. Harvest failures tended to come in clusters, and this worsened the situation. Thus there was a connection between low agricultural productivity and recurrent demographic downturns. Contemporary writers were aware of the problems.

Although it is clear that living standards remained appallingly low or possibly fell for certain strata in the early nineteenth century agrarian society, we dare conclude that living standards, in terms of food consumption was in a comparative perspective high in Sweden at the time, and that several indices points at a rise: production *per capita* of grain and potatoes increased, even allowing for substantial grain exports, replacing earlier regular imports; average heights of born to be soldiers rose; real wages rose more or less continuously from the beginning of the century, admittedly with one backlash among agricultural day rate labourers; consumption of textiles among poorer strata rose at least from the 1840s; clusters of crop failure years resulting in very high mortality peaks became fewer; the mortality downturn in the early nineteenth century – although its relation to increased production and living standard remain unclear, as it was a question foremost of decreasing infant mortality – proved to be persistent and resulted in the era of the strongest population increase hitherto⁷⁶. By mid century adult mortality also fell. This is a result hardly compatible with generally or decreased living standard if that was very low at the outset.

Finally a historiography strongly connecting the late nineteenth century Swedish mass emigration directly to increased rural poverty and to low and lowered living standard, must be questioned.

76. Cf. T. BENGTSSON, 2006. Earlier medium range changes in mortality that may have occurred for example through variation in virulence has obviously not led to similar results.

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