The Dutch Economy After 1650: Decline or Growth?

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In the last twenty years much has been done to change scholarly understanding of the economic history of the Dutch Republic. The old account of a sometimes thriving commercial economy has given way to the story of a multisectored economy undergoing impressive growth in the era up to 1650. No longer does one celebrate the merely eccentric glory of seventeenth-century art, trade, wind power mechanisms, and cities, but now also, and in a more general fashion, manufacturing, agriculture, internal transport, even pollution. Only the decentralized and weak, but tolerant, political regime remains in bad odour in economic historiography.

One thing that is especially noteworthy about the scholarly literature of the last twenty years is its additions to the record, its revelations based on previously unconsulted sources. Inevitably the new research has produced fresh ideas about periodization. An issue that used to be debated in terms of golden age (the se-

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venteenth century, the age marked by business virtues) versus periwig period (the eighteenth century, captured by labelling it after the flowing wigs affected by Louis XVI) has come to be looked at in terms of demographic and economic trends. Meanwhile the importance assigned to psychological factors, to perceived changes in the élan of Dutch entrepreneurs and the Dutch people, has diminished. But élan continues to be held out as a possible means of accounting for what most scholars still believe was a trend of decline, even if not from business virtue to ostentatious consumption.

More strikingly the recent literature has revived the issue of trends. In place of the familiar debate over dating the shift from growth to decline, this literature offers sharply contrasting images of trends. At one extreme the economic decline of the Republic after 1650 or so, which has usually been depicted as a slow process, is portrayed as definitive and substantial. At the other, economic sectors believed previously to have been stagnant are observed instead to have been growing. At this other extreme, traditional views of the mix of all economic activity have been challenged, leading to the hypothesis of growth persisting during much of the two centuries after 1650. This new literature also provides a way to solve the dilemma by suggesting that income and product be measured. But merely impressionistic images about these quantities continue to underscore the dilemma.

Here I wish to examine this rift, and to consider the strengths and weaknesses of three hypotheses about the Dutch economy between 1650 and 1860: moderate decline, definitive decline, and growth. These views are summarized in chart I, where each is identified with scholars whose research has led to that conclusion. In general the decline arguments have been constructed out of evidence that deals with regions and sectors of the Dutch economy that fell on hard times after 1650. As everyone acknowledges, other regions and sectors did not fall on hard times. The objective of this paper is to establish the need both to search for more re-

CHART I

THREE VIEWS OF THE DUTCH ECONOMY AFTER 1650

Trend	Trend Indicators	Identified with
I stagnation or moderate decline	*quantitative:* entrepôt tax yield series *impressionistic:* a sense that growth and decline in different sectors more or less balanced out, so that income grew little or not at all	Johan de Vries
II decline	*quantitative:* population estimates	the Wageningen group, especially A.M. van der Woude
a) with a recovery after 1750	*impressionistic:* income distribution and trends in employment	
b) definitive	*quantitative:* towboat passenger travel	Jan de Vries
III growth	*quantitative:* product and income estimates; data on individual growth sectors and periods *impressionistic:* the paradox of putative economic decline in a long era of sustained prosperity	Various, including Richard Griffiths, Jan de Meere, and James Riley

presentative quantitative samples than have yet been brought to bear, and to take a fresh look at the relative importance of different sectors in this diversified economy.

In the current state of knowledge the most plausible of these hypotheses is the one that argues that growth was sustained during much of the long period from 1650 to 1860. It is important to test this hypothesis both to establish more firmly the actual course of change in the Dutch economy and, in the event of sustained growth, to discover how growth was maintained for such a long time in an economy that was in many respects already highly developed. Dutch experience during 1650-1860 constitutes a laboratory for the study of how an advanced economy does, or does not, preserve increasing income.

The hypotheses in summary

The case for a moderate decline. Periodization, especially the periodization of growth and decline in the late seventeenth and early eighteenth century, has long been a controversial issue in Dutch economic historiography. In 1939 Charles Wilson suggested that the then prevailing scheme, which dated the end of Dutch commercial dominance in Europe from the middle of the seventeenth century, would have to be discarded in favour of a scheme dating that shift to around 1730. The old view he associated with Sir William Temple, who, to Wilson's mind too eagerly, observed signs of decay in 1672, and with a strong skein of agreement with Temple in Dutch historical literature from the late eighteenth century onward. Wilson held that recent research, especially the work of J.G. van Dillen and T.P. van der Kooy, demanded a revision that recognized the continued strength of Dutch trade in some regions and some routes through the wars of Louis XIV and for a time thereafter.[1] Without explicitly using either the

[1] Charles H. Wilson, "The Economic Decline of the Netherlands," *Economic History Review*, IX, 1939, 111-112. Of this work see especially J.G. van Dillen, *Van*

language or the concept of relative rather than absolute trend, Wilson's article nevertheless reflected a serious problem in Dutch economic historiography. The dominance of Dutch staple markets, especially Amsterdam's *entrepôt*, diminished between the 1650s and the 1730s, as Wilson acknowledged in writing of a European trade monopoly on the one hand and of "Europe's chief *entrepôt*" on the other hand.[2] But did Dutch trade and shipping diminish in volume between the 1650s and the 1730s?

This problem was taken up explicitly by Johan de Vries in a 1959 dissertation entitled *De economische achteruitgang der republiek in de achttiende eeuw*.[3] De Vries revived the issue of trend and, by distinguishing between relative and absolute terms of consideration, made it considerably more complex.[4] He also cast the question of periodization and trend not only in terms of Dutch trade but also of the variegated economy of the Republic. Against the background of stabilization within indicators about the volume

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rijkdom en regenten: Handboek tot de economische en sociale geschiedenis van Nederland tijdens de Republiek (The Hague, 1970), which summarizes the elements of Van Dillen's work that Wilson had in mind; and T.P. VAN DER KOOY, *Hollands stapelmarkt en haar verval* (Amsterdam, 1931). P.W. KLEIN, *De Trippen in de 17e eeuw: Een studie over het ondernemersgedrag op de Hollandse stapelmarkt* (Assen, 1965), pp. 3-7 and *passim*, takes issue with Van der Kooy's abstraction of the staple market.

[2] WILSON, "Decline," 111 and 113. In modern Dutch historiography reflection on these issues is traced to Hajo Brugmans.

[3] A second edition appeared in 1968 (Leiden). In it De Vries took note of interim additions to the literature but did not find any need to change his interpretations. For an elaboration of certain features of De Vries' case see JOHANNES HOVY, *Het voorstel van 1751 tot instelling van een beperkt vrijhavenstelsel in de Republiek* (Groningen, 1966).

[4] For example, following up on De Vries' notion Knoppers (JAKE V.T. KNOPPERS, *Dutch Trade with Russia from the Time of Peter I to Alexander I: A Quantitative Study in Eighteenth Century Shipping* (3 vols.; Montreal, 1976), pp. 271-74) and Knoppers and Snapper (JAKE V.T. KNOPPERS and F. SNAPPER, "De Nederlandse scheepvaart op de Oostzee vanaf het eind van de 17e eeuw tot het begin van de 19e eeuw," *Economisch- en sociaal-historisch jaarboek*, XLI, 1978, 115-53) depict a situation in which, between the 1720s and the 1770s, the average annual number of ships moving to Dutch ports from the Baltic increased by 30 per cent simultaneously with a decrease in the percentage of all ships leaving the Baltic that went to Dutch ports as compared to all destinations and with a decrease in the average tonnage of Dutch ships but an increase in the size of cargoes. This is not to mention the problem of determining the nationality of shipping, which KNOPPERS, *Dutch Trade*, pp. 296-97, discusses.

of trade and shipping, De Vries asked his readers to consider decline in industry and fishing, growth in financial activities, and, in the second half of the eighteenth century, renewed growth in agriculture.[5] What, in quantitative terms, was the balance of waxing and waning activity in these several sectors? As a way of arriving at an answer De Vries offered a measurement familiar to students of economic growth, the trend of national and per capita income. Unable because of a lack of statistical data to measure income, De Vries had to draw impressionistic conclusions. Real national income was stable or grew slightly during the eighteenth century. Because the Dutch population was increasing, real per capita income may have been stable, but more probably it declined slightly at a time when British real per capita income was increasing at an annual rate of 1/2 per cent.[6]

On the matter of relative and absolute trend De Vries concluded that, relative to neighbouring states, Dutch economic activity waned during the eighteenth century because the Dutch share of foreign markets tended to remain stable or diminish in volume as transactions on those markets expanded. A monopoly position gave way to a position in which the Republic had to compete to supply goods and services to foreign markets. This aspect of De Vries' case appears in an elaborate construct combining eighteenth-century testimony, quantitative evidence, and a clear and logically astute argument. In terms of the historical trend of economic activity within the Republic, however, De Vries came to believe in stagnation, an idea derived from his sense of national and per capita income trends. But this part of his argument proved more difficult to develop because the indicators

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[5] As emerges in JOHAN DE VRIES' introduction to *Economische achteruitgang* (pp. 1–4), he drew inspiration from late eighteenth-century observers like L.P. van de Spiegel and C. van der Oudermeulen who, however, believed the Republic's economy still to be growing. Because Van de Spiegel and Van der Oudermeulen, although able and well-informed men, were also defenders of the old regime, their views were scorned in the nineteenth century.

[6] *Ibid.*, pp. 167–68.

of activity used to specify relative trends dealt with international markets rather than with standards of material prosperity within the Republic. In the final analysis De Vries recast the image of decline but not that of trend.[7] His title, *The Economic Decline of the Dutch Republic in the Eighteenth Century*, was aptly chosen.

The case for a sharp decline. Whereas De Vries's ideas about periodization and trend were greeted with considerable sympathy by historians specializing in aspects of Dutch economic life having an international orientation, especially trade, fishing, finance, and external transport, they were seen rather as controversial by historians specializing in sectors with a domestic orientation, namely agriculture, internal transport, and demography. The first elements of this latter point of view appeared in B.H. Slicher van Bath's 1957 study of the demographic and agrarian history of the province of Overijssel where, ironically, the eighteenth-century problem was not decline but excessive population growth.[8] A more sweeping presentation has emerged in later work by members of the Institute for Agricultural History in Wageningen, which A.M. van der Woude summarized in a 1975 article in the *Journal of European Economic History*.[9] Whereas Johan de Vries based his image of stability or a mild deterioration of material prosperity between the seventeenth and eighteenth century on a reconsideration of published sources, the Wageningen

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[7] This is pointed out by A.M. VAN DER WOUDE, *Het Noorderkwartier: Een regionaal historisch onderzoek in de demografische en economische geschiedenis van westelijk Nederland...* (3 vols.; Wageningen, 1972), I, 66.

[8] *Een samenleving onder spanning: Geschiedenis van het platteland in Overijssel* (Assen, 1957).

[9] "The A.A.G. Bijdragen and the Study of Dutch Rural History," *Journal of European Economic History*, IV, 1975, 215-42. In addition to those mentioned in notes 7 and 8, the major monographs that have contributed to the conclusions of this school are J.A. FABER, *Drie eeuwen Friesland: Economische en sociale ontwikkelingen van 1500 tot 1800* (2 vols.; Leeuwarden, 1973); and H.K. ROESSINGH, *Inlandse tabak: Expansie en contractie van een handelsgewas in de 17e en 18e eeuw in Nederland* (Wageningen, 1976). Johan de Vries has reviewed several of these studies in "Structurele geschiedenis van noordelijk Holland in drie eeuwen," *Tijdschrift voor geschiedenis*, 87, 1974, 211-17.

group has concentrated on adding new evidence to the record, and in particular new evidence on population, agriculture, and the living conditions of the Dutch working classes.

Succinctly put, Johan de Vries recounted economic changes characterized by gradualism rather than breakpoints (with, however, some breakpoints within certain sectors of activity). For him the most interesting part of the story dealt not with periodization but orientation, that is, the structural composition of the economy. Between the middle of the seventeenth and the end of the eighteenth century the Dutch economy underwent substantial change in the types of goods and services it produced even if, on the whole, those changes did not sustain growth. In place of these concerns the Wageningen group has offered an historical narrative focusing on breakpoints, periodization, and structural integrity rather than change and adaptation. Whereas De Vries turned to national and per capita income estimates to assess trends, the Wageningen group prefers other indicators that they think may more satisfactorily capture material prosperity within the general population.

During the period from 1650 to 1680, the Wageningen group holds that the Dutch economy entered a phase of secular decline, but that this reversal cannot be grasped properly by income measurements. Van der Woude, who of the Wageningen group has written the most extensively about the general implications of this new research, offers the view that real national income increased in the Dutch Netherlands in the growth period, extending from 1475 to 1640. Because population growth may have outstripped national income growth, however, per capita income may have declined.[10] When population growth stopped, around

[10] VAN DER WOUDE, *Het Noorderkwartier*, II, 608: "Presumably (European) population growth in this period (1475–1640) was much greater than the increase of production, resulting in a deterioration of real income among large groups in the population. A decline in real national income in per capita terms is in many cases far from improbable." I assume that Van der Woude has the Dutch Netherlands in mind. FABER, *Drie eeuwen Friesland*, accepts Van der Woude's chronology but finds the transition from one phase

1650, real per capita income must have increased. But that does not signal economic growth, much less advancing material prosperity for the population at large because, as Van der Woude argues, the high national income of the post 1650 era was unevenly distributed. This question of income distribution is an important one but, because it deals with the costs rather than with the presence or absence of growth, it can be taken up separately.

If we take these arguments literally it would seem that, for the bulk of the Dutch people, one long era of hard times (1475-1640) was followed by another (1650 onward),[11] so that we should conclude that the Dutch labouring classes of the eighteenth century were worse off than they had been in the sixteenth, or even the fifteenth, century. In preference to that case Van der Woude suggests the dismissal of per capita income estimates as measures of economic trend.[12] This measurement is an artifact of modern economic growth theory, which was "developed for situations in which the total national income is growing as

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another, and the trend in the decline phase, less sharp. In "De Noordelijke Nederlanden van 1480 tot 1780: Structuren en beweging," *Algemene geschiedenis der Nederlanden* (Haarlem, 1980), V, 199, Faber finds an increase in real income among the wage earning part of the populace from 1580 or so to the second or third quarter of the seventeenth century.

[11] VAN DER WOUDE, *Het Noorderkwartier*, II, 608: "Between about 1680 and 1750 the province of Holland experienced a strong decline in population (about 100,000). If we may assume that the total real national income of the province in this period did not fall or did not fall in the same measure, would this have led to an increase of real national income per capita in the province? Yet we would readily venture to attach to this period the term economic decline. The loss of grounds of existence for 100,000 people and of some 30 to 50,000 jobs is in itself a marked economic loss. But moreover it is self-evident that in such situations one must seriously consider that chronic labour surpluses can easily occasion a drastic redivision of national income among different population groups. A stable or even increasing real national income considered in proportion to the population can then accompany a great increase of income for a relatively small group and pauperization for a much larger group." Van der Woude believes that is what happened. Faber, however, interprets the data to suggest that wage earners continued to enjoy increased real income between 1650 and 1740 ("De Noordelijke Nederlanden," 200).

[12] VAN DER WOUDE, *Het Noorderkwartier*, II, 608: "In such a situation the conception of 'real national income per head of the population' loses much of its operational value".

rapidly if not more rapidly than the population". It may not satisfactorily apply in situations in which real national income was stable and the population in decline, or in those in which both were in decline.[13] In place Van der Woude would substitute the measurement of job opportunities, output volume, and the pauperization trend.[14] Since available output data deal usually with unrepresentative segments of the Dutch economy and because they are difficult to interpret in light of some major distorting factors (such as smuggling in import and export duty data), it is chiefly to the measurement of employment and unemployment that Van der Woude would turn.

But employment and unemployment statistics are also lacking, so that substitutes must be used and the best of these is population data. In their creation of an historical demography of the Netherlands, the Wageningen group has developed the scheme of population estimates given in Table 1.[15] Van der Woude's periodization and his inferences about the direction of the economic trend follow directly from these estimates: growth to 1650 or so, stagnation thereafter. Beginning around 1750, and

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[13] *Ibid.* Slicher van Bath earlier expressed misgivings about the use of artifacts of modern theory to measure economic growth in the early modern era, but on grounds of the want of statistical data rather than the inappropriateness of the theory. B.H. SLICHER VAN BATH, "Les problèmes fondamentaux de la société pré-industrielle en Europe occidentale," *A.A.G. Bijdragen*, XII, 1965, 5. J.A. FABER, "De achttiende eeuw," in J.H. VAN STUIJVENBERG, ed., *De economische geschiedenis van Nederland* (Groningen, 1977), p. 120, still regards real per capita income as an appropriate general measure of economic trend.

[14] VAN DER WOUDE, *Het Noorderkwartier*, II, 609.

[15] J.A. FABER, H.K. ROESSINGH, B.H. SLICHER VAN BATH, A.M. VAN DER WOUDE, and H.J. VAN XANTEN, "Population Changes and Economic Developments in the Netherlands: A Historical Survey," *A.A.G. Bijdragen*, XII, 1965, 110. See also Bernard H. SLICHER VAN BATH, "Historical Demography and the Social and Economic Development of the Netherlands," *Daedalus*, XCVII, 1968, 604-621; and the work of Simon Hart, some of which has been gathered in *idem*, *Geschrift en getal* (Dordrecht, 1976). FABER, "De achttiende eeuw," 120, adjusts the 1750 population estimate downward from 1.9-1.95 million to 1.85-1.95 million. A.M. VAN DER WOUDE, "Demografische ontwikkeling van de Noordelijke Nederlanden, 1500-1800," in *Algemene geschiedenis der Nederlanden* (Haarlem, 1980), V, 134, retains the 1750 estimate of 1.9 to 1.95 million.

TABLE 1

DUTCH POPULATION, 1500–1950

1500	.9 to 1 million	
1550	1.2 to 1.3	
1600	1.4 to 1.6	
1650	1.85 to 1.9	
1700	1.85 to 1.95	
1750	1.85 to 1.95	
1795	2.078	(census)
1850	3.057	»
1900	5.104	»
1950	10.2	»

more noticeably around 1800, the Dutch population grew but the economy did not. In the earlier period the trend of population was dependent on the trend of the economy; in the later period it was not.

It would seem, then, that the relationship between demographic and economic forces changed in the middle of the long era of mild or sharp decline in the Dutch economy, but the nature of the relationship before and after that apparent change, and the change itself, remain unexplored. Perhaps this is one reason behind the attempt of the American historian Jan de Vries to find another measure of economic activity that would confirm or deny the inferences of the Wageningen school. But de Vries also hoped to find an indicator that would be more sensitive to the trend of economic activity within the Republic than the international trade tax data usually pressed into service for that purpose.

With that in mind Jan de Vries explored the volume of traffic on the Republic's extensive network of canals accommodating barges or towboats specializing in carrying passengers. He found that the system was built, using mostly existing waterways, between 1630 and 1670 but that, almost immediately after construction was completed, passenger volume began to

TABLE 2

PASSENGER VOLUME ON THE DUTCH TOWBOAT NETWORK

1660-1670	37.1 to 39.6 million passenger kilometres per year
1740-1750	17.6 to 18.6
1800-1806	21.1 to 22.2

decline, as appears in Table 2.[16] Using a gravity model to isolate the effect of population redistribution upon towboat usage, and examining the trend of prices and of towboat fares, de Vries concluded that much but not all of the decline in usage could be accounted for by price and population trends. The unaccounted for portion, which he estimates at 33 per cent of peak passenger volume, must, de Vries believes, be explained chiefly by a decline in per capita income. He is quite understandably reluctant to estimate the quantity of that decline, but suggests 16.5 per cent as a possible figure.[17] This phenomenon was concentrated in cities where, between the 1670s and the 1740s broken only by a 1690s respite, per capita income diminished. After the 1740s income may have "staged a modest recovery".[18] In summary, de Vries's characterization of periodization and trend within the Dutch economy follows this line: growth until the 1670s (a more specific date than that given by the Wageningen group), decline from the 1670s to the 1740s (being decline of a sharp rather than mild sort), and "modest growth or, at worst, stagnation" from the 1740s to 1806.[19]

An elaborate structure of evidence and inference lies behind these conclusions. De Vries rejects the explanation of declining

[16] JAN DE VRIES, *Barges and Capitalism: Passenger Transportation in the Dutch Economy, 1632-1839* (Wageningen, 1978), p. 252. This monograph appears as a lengthy essay in the twenty-first volume of *A.A.G. Bijdragen*, but it is, and should be described as, a book rather than an article.

[17] *Ibid.*, pp. 276-303, the figure appearing on p. 303.

[18] *Ibid.*, p. 303.

[19] *Ibid.*, pp. 259 and 359.

towboat usage based on shifts to other forms of transport, discounts the notion of structural changes in the Dutch economy that might have reduced demand for towboat transport without signifying a decline in economic activity or per capita income, and discounts also the idea that after the 1670s incomes were skewed to the point that "groups whose income elasticity of demand (for towboat travel) was much lower" than that of wealthier segments of the populace were forced to decrease their travel.[20]

Because it is, in the nature of things, possible to speak only of some more and other less plausible inferences that may be drawn from the towboat passenger data, de Vries turns to the Wageningen group's image of economic trends for a supporting argument. Both approaches characterize the period from the 1670s to the 1740s as one of economic decline, but there are some points of detail on which the two descriptions disagree. Van der Woude argues that per capita income may have increased after the 1670s as an era of prices rising in advance of wages gave way to one of price deflation and stable nominal wages. Any increase in income could, however, only have been badly skewed. Jan de Vries rejects the notion that any income skewing that occurred could account for the observed reduction in use of Dutch towboats. He concludes that the decline of per capita income must have been "absolute and substantial" and that it must also have involved a decline in national income.[21] Whereas Van der Woude would prefer to move away from income as a measurement of economic activity, de Vries urges that it be retained.

In terms of Johan de Vries' argument, Jan de Vries suggests that although the concept of a decline that was, in substance, merely relative to the experience of some neighbouring states may be retained for the period after the 1740s, it must be re-

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[20] *Ibid.*, pp. 299-302.
[21] *Ibid.*, p. 303.

placed for the earlier era with the image of absolute decline.[22] After the 1660s or so an economy possessed of well integrated markets saw the degree of integration diminish, an economy marked by little seasonal variation in towboat usage suffered the reintroduction of seasonal variations and their resultant inefficiencies, and an economy with a single urban system of transport saw that system dissolve.[23] In short, the process of economic development, which was highly advanced in the Republic in the mid seventeenth century, was halted and reversed, and the Republic began to sink back to the level of its economically backward neighbours in Europe. These conclusions too are drawn from the towboat network usage data, and they rest in part on Jan de Vries'earlier inference of per capita income decline.

The case for growth. In reexamining the old sources on trade, shipping, and the staple market and in digging out new sources on these activities, the Canadian, French, and Dutch historians Jake Knoppers, Michel Morineau, and Frits Snapper have revived a case similar in some respects to Charles Wilson's arguments of 1939.[24] There is, they have discovered, evidence of growth in trade and shipping in the eighteenth-century Republic and, furthermore, there is evidence that the decline of the staple market was slower and less serious in its consequences than has been held. One of the traditionally used indices of decline deals with shipping movement through the Danish Sound into Dutch ports, implying that an increasing volume of ships moving through the Sound toward other ports was lost to Dutch staple markets and to Dutch

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[22] *Ibid.*, pp. 360–61.

[23] *Ibid.*, pp. 303–354.

[24] In addition to the sources cited in note 4, see M. Morineau, "La balance du commerce franco-neerlandais et le reserrement économique des Provinces-Unies au XVIIIe siècle," *Economisch-historisch jaarboek*, XXX, 1963–1964, 170–235; and F. Snapper, "De generale lijsten van de schepen die in de perioden 1758–1761 en 1783–1786 in Holland zijn binnengekomen," *Economisch- en sociaal-historisch jaarboek*, XLII, 1979, 26–44.

shipping. But some of the vessels going elsewhere were Dutch vessels. Moreover, the decline of the staple market aided the compensatory expansion of commercial finance as resources were shifted toward furnishing other commercial and financial services. As the staple market waned, therefore, Dutch shipping services remained important in Europe, even though the nationality of ships is sometimes difficult to detect and in the eighteenth century was often purposefully made obscure by shippers.[25] Dutch financial services to trade and shipping waxed. Morineau argues that the *first* half of the eighteenth century was a second golden age for the Dutch economy, or nearly so.[26] Other evidence indicates thriving economic activity until the Fourth Anglo-Dutch War (1780-1784) or even thereafter.

This commerce-based appraisal of economic trend coincides with findings in recent examinations of government finance by M. G. Buist and myself. These studies have shown, to no one's surprise, that in government finance in particular and financial activity in general the second half of the eighteenth century was a period of substantial growth.[27] Both studies indicate also that Dutch financial activities in that period have been too narrowly conceived, being seen all too often as so much stock jobbing between intermittent liquidity crises. This sector should be seen instead as one of diverse activity whose economic importance

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[25] During war shipping changed flags, so that it is misleading to attempt to measure shipping activity by the nationality given by skippers. KNOPPERS and SNAPPER, "De Nederlandse scheepvaart," 134.

[26] MORINEAU, "La balance du commerce," 232. "On pourrait presque envisager, pour l'économie hollandaise, un second âge d'or dans la première moitié du XVIIIe siècle." See also P. DEKKER, *De laatste bloeiperiode van de Nederlandse arctische walvis- en robbevangst, 1761-1775* (Zaltbommel, 1971), especially pp. 14 and 278, which disputes the often repeated assumption of continuous decline for whaling and seal taking, arguing that in this industry the period of bloom lasted until 1775.

[27] MARTEN G. BUIST, *At Spes Non Fracta: Hope & Co., 1770-1815* (The Hague, 1974); and JAMES C. RILEY, *International Government Finance and the Amsterdam Capital Market, 1740-1815* (Cambridge, 1980). Also P.W. KLEIN, *Kapital en stagnatie tijdens het hollandse vroegkapitalisme* (Rotterdam, 1967), which persuasively criticizes traditional arguments about the financial sector.

lay not only in the allocation of substantial Dutch savings in one or another direction, but also in a wide range of financial and allied services. Just as in the seventeenth century Dutch *entrepôts* had dominated European markets in commercial services, so in the second half of the eighteenth century Dutch financial markets were dominant in the provision of financial services. It is particularly these services, sophisticated, wide ranging and often quite profitable, that tend to be overlooked in considering finance in terms of stock speculation and liquidity crisis.[28]

Yet another case about growth has been fashioned by two scholars working at the Vrije Universiteit (Amsterdam), Richard Griffiths and Jan de Meere. This argument, which deals with the period after French occupation of the Dutch Netherlands ended (1813), can be designated the case for surreptitious growth — that is, growth without a leading industrial sector.[29] After 1825/1830 income growth outstripped population growth, and manifested itself especially in agriculture and commercial services. One way to view this era is as a period of compensatory growth, making up for shrinkage or stagnation during 1780/1790-1825/1830. Another approach is to suggest that surreptitious growth exceeded prior shrinkage, and constituted a peculiarly Dutch model of balanced economic growth.

Estimating per capita income. These several investigations of trade and finance during lengthy periods, and of economic activity

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[28] Some idea of the range and economic importance of these services can be gotten from Buist, *Hope & Co.*; Riley, *International Government Finance*; and W.H. Berghuis, *Ontstaan en ontwikkeling van de nederlandse beleggingsfondsen tot 1914* (Assen, 1967), but further work is called for in this area.

[29] Richard T. Griffiths, *Industrial Retardation in the Netherlands, 1830-1850* (The Hague, 1979); Idem, *Achterlijk, achter of anders? : Aspecten van de economische ontwikkeling van Nederland in de 19de eeuw* (Amsterdam, 1980), esp. pp. 12-16; and J.M.M. de Meere, *Economische ontwikkeling en levensstandaard in Nederland gedurende de eerste helft van de negentiende eeuw* (The Hague, 1982), esp. pp. 3-33. Also Erik de Vrijer, "Stagnatie en economische groei: Nederland tijdens de negentiende eeuw, een overzicht van de recente literatuur" (1980 typescript).

in general during 1830-1850 all point towards growth during most of the two centuries after 1650. Another approach that leads to the same conclusion is found in the available national and per capita income estimates, which begin with Gregory King's figures for 1688 and 1695 and continue through the retrospective estimates of J.B.D. Derksen and J. Teijl, which attempt to give an idea of income and product toward the middle of the nineteenth century. All of these estimates, it should be noted, are more or less speculative.

According to King, before tax Dutch "Yearly Income par Head" in 1695 was £ 8 2s 9d and rising.[30] King's figure is often cited by economic historians, who usually interpret it to have meant, at the prevailing rate of exchange, some f. 100.[31] However the exchange rate that prevailed in 1695 (King wrote in 1696) was a-typically low. King's figure would, taking the average exchange and agio rates for 1695, have brought no more than f. 75.63.[32] Considering exchange rates for several years around 1695, I believe King had in mind a figure of some f. 90, that he meant to estimate something closer to personal income than per capita income, and that he underestimated Dutch personal income.

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[30] It had, King believed, been £8 1s 4d in 1688. GREGORY KING, *Two Tracts: Natural and Political Observations...*, ed. by George E. Barnett (Baltimore, 1936), p. 55.

[31] JAN DE VRIES, *Barges*, p. 224; and P.W. KLEIN, "De zeventiende eeuw, 1585-1700," in VAN STUIJVENBERG, ed., *De economische geschiedenis*, p. 80, n. 5.

[32] The average rates were 29.55 schellingen banco per pound sterling in Amsterdam on London quotations, which I have used, and 29.82 schellingen banco in London on Amsterdam. Agio was at a premium of 4.83 per cent. JOHN J. MCCUSKER, *Money and Exchange in Europe and America, 1600-1775: A Handbook* (Chapel Hill, 1978), pp. 44, 48, 55, and 57.

It is apparently by using the reputed par value of echange, 37 schellingen banco, that de Vries and Klein reached their interpretations of King's estimate. McCusker shows that an annual average exchange rate as high as 37 is not to be found in Amsterdam on London or London on Amsterdam rates between 1660 and 1775 (when McCusker's averages are suspended). If King was well informed about the exchange, he probably did not have the reputed par rate in mind. I would guess he was thinking of a rate of about 35 schellingen, which had prevailed in the twenty years or so before 1695, and of an agio rate of some 4 per cent. In that case £8 2s 9d would have come to f. 88.87.

Examining the labour hired to maintain the Dutch towboat network, Jan de Vries found a system-wide average wage of some f. 1 per day during a working year of 300 days.[33] This part of the labour force was largely unskilled and hired for casual rather than long-term employment, which seems to suggest that higher wages would be found elsewhere. And in shipbuilding, another activity for which such data have recently become available, higher wages have indeed been found to have prevailed.[34] In agriculture, too, income may have been higher.[35] Alongside some other poorly paid segments of the populace must be considered also the earnings of rentiers, wholesale merchants, members of the liberal professions, and the like. On these grounds I suppose per capita income in the Republic around 1695 to have exceeded f. 75, more probably to have amounted to about f. 100, and perhaps to have been as high as f. 125. (In the long run it may be preferable to shift the investigation into terms of personal income rather than national income per capita).

Incomplete projections by R. Metelerkamp and W.M. Keu-

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[33] JAN DE VRIES, *Barges*, p. 141.

[34] RICHARD W. UNGER, *Dutch Shipbuilding before 1800: Ships and Guilds* (Assen, 1978), pp. 91 and 99-100, found averages for the most part in excess of f. 1 per day in a working year of 312 days. See also the wage information compiled by A. TH. VAN DEURSEN, *Het kopergeld van de gouden eeuw* (4 vols.; Assen, 1978), I, 13-14, which is drawn chiefly from the third volume of J.G. VAN DILLEN, *Bronnen tot de geschiedenis van het bedrijfsleven en gildewezen van Amsterdam* (3 vols.; The Hague, 1929-1974); and the chart and map in FABER, "Noordelijke Nederlanden,", 201-202.

[35] In much of his work Jan de Vries poses the possibility that labour costs in non-agricultural sectors were forced upward by a high marginal productivity of agricultural labour. JAN DE VRIES, "An Inquiry into the Behaviour of Wages in the Dutch Republic and the Southern Netherlands, 1580-1800," *Acta Historiae Neerlandicae*, X, 1978, 79-97; and IDEM, *The Dutch Rural Economy in the Golden Age, 1500-1700* (New Haven, 1974), 183-86 and *passim*.

These wage data and the image of relative prosperity they suggest admittedly conflict with the general poverty that Lis and Soly have found to characterize the labouring populations of Europe throughout the early modern era. CATHARINA LIS and HUGO SOLY, *Poverty and Capitalism in Pre-industrial Europe* (Atlantic Highlands, N.J., 1979), esp. pp. 97-129. About the Dutch Netherlands, however, their evidence is, episodic.

chenius aside,[36] the next estimates are backward projections using mid-nineteenth-century income or product estimates, which themselves are backward projections from twentieth-century estimates. Th. P. M. de Jong has adopted his own version of Derksen's estimate of 1860 per capita income as a fair estimate of per capita income in 1780.[37] Considering the same problem from the perspective of product, J. H. van Stuijvenberg has used Teijl's national product estimates for 1850 and thereafter to infer a Dutch per capita income estimate for 1770 (between f. 235.8 and f. 257.9).[38] This double backcasting procedure has been challenged by Richard Griffiths, who argues that far from stagnating the Dutch economy continued to grow during 1830-1850.[39] By the

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[36] RUTGER METELERKAMP, *De toestand van Nederland in vergelijking gebragt met die van eenige andere landen van Europa* (Rotterdam, 1804), pp. 60-61; and W.M. KEUCHENIUS, *De inkomsten en uitgaven der Bataafsche Republiek voorgesteld in eene nationaale balans* (Amsterdam, 1803), the table after p. 138. Also ANGUS MADDISON, *Les phases du développement capitaliste*, trans. by Roland Gravier (Paris, 1981), pp. 6 and 210-12. Maddison posits a 10 per cent decline in Dutch gross domestic product between 1700 and 1760, and growth thereafter.

[37] TH. P.M. DE JONG, "Sociale verandering in de neergaande republiek," *Economisch- en sociaal-historisch jaarboek*, XXXV, 1972, 3n4. According to Richard Griffiths, who has seen the Derksen manuscripts, Derksen actually estimated 1860 income at f. 266 (not f. 285) in 1900 prices, and f. 302 in current prices. For an extension of Posthumus's price series see J.H. van STUIJVENBERG and J.E.J. DE VRIJER, "Prices, Population and National Income in the Netherlands, 1620-1978," Research Memorandum 8101, University of Amsterdam, Department of Economics, p. 9. The splicing of series necessary to link Posthumus's data with post - 1860 prices needs further consideration.

[38] J.H. VAN STUIJVENBERG, "De economie in de Noordelijke Nederlanden, 1770-1970," *Algemene geschiedenis der Nederlanden* (Haarlen, 1981), X, 106-26, drawing on J. TEIJL, "Nationaal inkomen van Nederland in de periode 1850-1900," *Economisch- en sociaal-historisch jaarboek*, XXXIV, 1971, 232-62. Correcting for estimated changes in employment and productivity, Van Stuijvenberg derives a national income figure for 1770 from Teijl's national product estimates for 1850. However, Van Stuijvenberg adds to Teijl's estimate from production function all of a rather high estimate of income from abroad in 1770 which itself seems to be meant only to estimate current account inflow and not counterbalancing capital account outflows. The range of per capita income estimates is produced by uncertainty about population levels between 1750 and 1795; f. 490 million divided by 1.9 million yields f. 257.9, and the same figure divided by the 1795 population of 2.078 million yields f. 235.8.

[39] GRIFFITHS, *Industrial Retardation in the Netherlands*, esp. pp. 37-38.

mid nineteenth century, after interim inflation, deflation, and recovery, prices had regained their level during the 1770s. But can the same be said of output or income, since growth during 1830–1850 may have been offset by decline during c. 1790–1815 and stagnation during the remainder of the era from 1770 to 1830? In other words, is it reasonable to assume that changes during 1770–1850 or 1780–1860 more or less cancel one another?

One way to deal with this problem is to sidestep it, using the Derksen and Teijl estimates only for the periods to which they were meant to apply. Derksen backcast per capita income for 1860 at a figure he set at f. 302 in 1860 prices (f. 266 in 1900 prices). Teijl estimated constant 1900 guilder national product totals for 1850 and thereafter. Adjusting his figures to current prices will yield an estimated per capita product of some f. 283.0 in 1850 and f. 322.5 in 1860.[40] Derksen's own estimate for 1900 income (f. 333 in 1900 prices) provides another point of comparison.

Although speculative, the income and product estimates provided by King, Derksen, and Teijl call attention to a paradox that undermines all versions of the argument that the Dutch economy declined after 1650. Economic activity, it is said, waned, but the Republic remained in the very long run more prosperous than its neighbours. As Griffiths and Paul Bairoch have noticed, in 1830 the Kingdom of the Netherlands was still either the richest or, after the United Kingdom, the second richest country in Europe in terms of per capita income or product.[41]

Some weaknesses of these estimates will be considered la-

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[40] TEIJL, "Nationaal inkomen van Nederland," 262, converted to current prices using average price index numbers for 1846–1855 and 1856–1865 from VAN STUIJVENBERG and DE VRIJER, "Prices," p. 9. Also the slightly lower estimate by H.C. Bos, brought together with the other estimates in J.H. VAN STUIJVENBERG, "Economische groei in Nederland in de negentiende eeuw: een terreinverkenning," in *Bedrijf en samenleving* (Alphen aan den Rijn, 1967), pp. 220–23.

[41] GRIFFITHS, *Industrial Retardation in the Netherlands*, p. 38; and PAUL BAIROCH, "Europe's Gross National Product: 1810–1975," *Journal of European Economic History*, V, 1976, 286. Bairoch believes that the Netherlands did not lose its second rank until 1860, by which time Belgium and Switzerland had passed it.

TABLE 3

THREE INDEX NUMBER SERIES

	Base period 1721-45 = 100		1580-84 = 100	Base period 1690-1694/1700-1704 = 100		
	I	II	III	I	II	III
1660-1664	124	124	222	101.6	102.9	109
1665-1669	118	120	211	96.7	99.6	103
1690-1694	127	124	207	104.1	102.9	101
1695-1699		no data	227	no data		111
1700-1704	117	117	202	95.9	97.1	99
(1690-1694/1700-1704	122	120.5	205	100	100	100)
1775-1779	138	132	224	113.1	109.5	109
1780-1784	158	148	236	129.5	122.8	115
1855-1859	160	174	—	131.1	144.4	—
1860-1864	149	145	—	122.1	120.3	—
(1855-1864	—	—	—	126.6	132.4)	—

Note:

I weighted index numbers from a group of 44 items, after 1784 21 items.
II unweighted index numbers from the same group.
III index numbers from 26 items examined by Posthumus in studying the Leiden cloth industry.

ter. For the moment it is enough to observe that they coincide with evidence about growth during specific periods and in specific sectors of the Dutch economy, and that they call attention to continued high incomes among the Dutch. Without arguing that the estimates can be taken at face value, let us consider what they imply about rates of growth in the Dutch economy between 1695 and 1860. To derive a growth rate range all the estimates must be converted to constant values, which at the moment can be done only using the price indices constructed by N. W. Posthumus. Posthumus developed three index series, which are given in table 3.[42]

Of these three the unweighted index numbers (column II) provide the most nearly satisfactory reflection of price (rather

[42] N.W. POSTHUMUS, *Inquiry into the History of Prices in Holland* (2 vols.; Leiden, 1946-64), I, CI; and IDEM, *De geschiedenis van de leidsche lakenindustrie* (3 vols.; The Hague, 1908-1939), III, 1142.

than trade) movements. Thus it is to this series that we should turn to examine price distortions between 1695 and 1860.[43] Since Posthumus was unable to find price data for 1695-1699, I have used 1690-1694 and 1700-1704 in combination as the new base period. Between then and 1855-1864 prices first decreased (1690-1739), then increased (1740-1789), and increased more sharply (1790-1814), then decreased (1815-1829), then stabilized (1830-1864 with, however, a peak in 1855-1859). Of the two series that extend over the entire period, the unweighted index numbers show a higher increase than the weighted numbers. The increase recomputed from Posthumus' base period to the new base period tends more to overestimate than underestimate the long-run change in prices among the items surveyed.

According to this index only a small part of the difference between the King and Derksen (or King and Teijl) income estimates may be accounted for by price inflation, as appears in Table 4.[44] In 1690-1694/1700-1704 prices the 1860 per capita income estimate of f. 302 would amount to some f. 228.1 (using index numbers from Posthumus' unweighted series). Real per capita income would therefore appear to have increased by at least f. 103.1 (from King's estimate corrected to f. 125) and by as much as f. 152.5 (from King's estimate at 1695 exchange rates). For national income the minimum and maximum limits of growth in constant prices would be f. 533.0 and f. 626.8 million.

The rates of increase in real per capita income would seem to fall within the limits given in Table 5. On average per capita income continued to increase during 1695-1860 at an annual rate between .365 and .671 per cent.[45] Derksen's estimates suggest a

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[43] In the series of weighted index numbers, Posthumus wished to show changes in the volume and orientation of the wholesale commodity trade on the Amsterdam market. The unweighted series he regarded as a reflection of prices.

[44] Faber, et al., "Population Changes," 110; and Van Stuijvenberg and de Vrijer, "Prices," p. 9, for the population figures.

[45] Teijl's estimate for 1860 (f. 322.5) amounts to f. 243.6 per capita in 1695 prices

TABLE 4

CONSTANT VALUE INCOME ESTIMATES

	King's estimate	King's estimate corrected	population (millions)	national income (millions of guilders)
1695	f. 75.63	f. 125	1.85 to 1.95 (in 1700)	143.7 to 237.5 (using a population estimate of 1.9 million)
	Derksen's estimate			
1860	f. 302			
at 1690-1694/1700-1704 prices	f. 228.1		3.378	770.5

Note: These calculations have been carried to more decimal places than are given here, which leads to what only appear to be rounding errors.

TABLE 5

AVERAGE CONSTANT VALUE INCOME GROWTH RATES, 1695-1860

Amount of increase	continuously compounded rate of increase
Per capita income	
f. 103.1	.365
f. 152.5	.671

rate of growth in per capita income for 1860-1900 (.563 per cent) not much different from the rate estimated by the means used here for the entire period 1695-1860. Comparing Dutch per capita income with Paul Bairoch's national product growth estimates, the eighteenth and early nineteenth-century Dutch economy appears to have continued to grow at an annual rate about half that of European gross national product during 1830-1910 (1.74 per cent).[46] Bairoch believes the annual rate of growth in European per capita income between 1500 and 1800 to have been no more than 0.2 to 0.3 per cent, which is considerably below the rate of increase estimated for Dutch per capita income during 1695-1860. In other words, Dutch growth in this long era *after* the Golden Age seems to have stood between rates of growth found in traditional economies and those found in some economies undergoing industrialization.

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and suggests minimum and maximum continuously compounded annual rates of growth of .405 and .711 per cent. Compare the rate of increase in Table 5 with new estimates of the growth of British income in C. KNICK HARLEY, "British Industrialization before 1841: Evidence of Slower Growth during the Industrial Revolution," *Journal of Economic History*, XLII, 1982, 286. Harley provides these rates:

	national income	per capita income
1700-1770	0.56	0.27
1770-1815	1.31	0.33
1815-1841	2.23	0.86

This comparison points up the higher rate of British than Dutch population growth.

[46] BAIROCH, "Europe's Gross National Product," 276-77.

Simply put, three propositions confront us. 1) Johan de Vries argues that national income was either stable or, more probably, undergoing a slight decline between the seventeenth and eighteenth century. That position is inferred from a sense of the trend within a variegated economy, the trend being either stable or in slight decline. 2) The Wageningen group argues that, whatever the course of national or per capita trends, income became more skewed after 1650/1680 to the point at which it ceases to be a useable measure of economic trend. In its place Van der Woude would substitute the measurement of employment, which is to say, the measurement of earned per capita income among the labouring classes. An impressionistic sense of what that measurement would reveal leads him to the conclusion that economic decline occurred regardless of the trend of national income. The Wageningen group has not offered an opinion about the degree or extent of that decline. Accepting their periodization, which agrees with what the towboat passenger data seem to indicate about trend, Jan de Vries provides an idea of degree and extent: beginning in the 1670s and continuing into the 1740s economic activity in the Dutch Republic fell off absolutely and substantially. Per capita and national income declined. This was expressed not in skewed incomes, but in unemployment and underemployment. The Netherlanders traveled less on their towboats because they had less occasion to do so, and because they were less well able to afford travel. 3) Per capita income estimates for 1695 and 1860 suggest, when adjusted for price distortions, that all or some part of the period experienced substantial economic growth. Recent investigations of Dutch trade, shipping, and finance, and of the economy in general during 1830-1850, indicate growth where previously stagnation or decline had been suspected. There has been some sentiment in favour of portraying the second half of the eighteenth century as a growth era. But the impression left by recent studies is of a quantity of growth that is not great enough to accommodate

the large gap between 1695 and 1860 income estimates. If these estimates are even approximately reliable, then a significant part of the growth they indicate must have occurred before the 1750s or after 1800, or in both periods.

Faults in the hypotheses

Moderate decline. What, to begin with, are the shortcomings of the decline hypothesis according to Johan de Vries? His is a narrative of decline relative to neighbouring states and perhaps, but only very slightly, in relation to previous levels of economic activity in the Republic. In estimating the trend of activity within each sector and among all sectors, De Vries applied certain measures, especially the *convooien* revenues (from fees levied on foreign trade by the Republic's naval administration, the Admiralties) and income from taxes on the wholesale exchange of certain goods. These indices measure activity associated especially with Dutch staple markets, but not Dutch trade and shipping in general. Because the staple markets were, in comparison to other activity in commerce and commercial finance, the segment of the commercial sector showing the weakest trend, these indices lead to an overall impression of substantial decline in the staple which was, at best, just counterbalanced by growth elsewhere. Gains from commercial finance are assumed to have offset losses in staple market activity. But the *convooien* and exchange tax series do not capture activity in an important part of non-staple commerce, especially the direct trade, which the Dutch called the *voorbijlandtvaert*, that is, the trade bypassing Dutch *entrepôts*. How active were Dutch merchants and Dutch owned capital equipment in this more efficient scheme of organizing trade, which did not touch so often at Dutch ports and therefore

did not pay these Dutch taxes? [47] Is it more reasonable to assume that commercial finance, which tended to grow as the staple market contracted, contributed to national income only as much as was lost from staple market contraction, or that commercial finance, a declining but still large-scale staple, and other Dutch trade and shipping enlarged the national income contribution of the commercial sector?

If in the first place the customary measures of commercial activity tend to deal with a partial and unrepresentative segment of that sector, in the second place they tend to specify rather precisely the quantity and ramifications of decline while dealing vaguely with the quantity and ramifications of any compensating growth. It is true, as is sometimes observed, that stock speculation did not compensate for much of anything. In addition to the reasons usually given for believing that, there is a distinct possibility that futures transactions of the classical seventeenth and early eighteenth-century type (i.e., transactions in tulip excrescences or East India Company stock) fell off after 1720. In the realm of finance, measures of growth are difficult to make because neither our factual nor our theoretical grasp is sufficiently detailed. But the same tendency to specify and stress decline is sometimes evident in the economic sector about which our understanding seems to be the greatest, that is, trade.

Take, for example, J. A. Faber's investigation of Dutch imports of grain through the Danish Sound between 1600 and 1749, which are given as a measure of economic trend. Faber discovered a pattern of decline, which he concluded had exerted a " ... crippling influence... " " ... on economic life as a whole in the Dutch Republic ".[48] Against a decrease in grain imports of 147 million

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[47] F. SNAPPER, " Veranderingen in de Nederlandse scheepvaart op de Oostzee in de achttiende eeuw," in *Ondernemende geschiedenis* (The Hague, 1977), pp. 135-39, introduces a measurement of the magnitude of the *voorbijlandtvaert* (of which the modern spelling is *voorbijlandvaart*).

[48] J.A. FABER, " The Decline of the Baltic Grain-Trade in the Second Half of the

Amsterdam pounds per annum, Faber considers imports of colonial produce in an effort to discover the extent to which they may have compensated for lost grain imports.[49] The best available evidence suggests that "... the total import of colonial produce was less than one-third of the decrease by weight in the corn trade". "The prosperity of colonial trade and shipping, of certain industries and of the specie-trade cannot have been an adequate compensation for the decrease in employment caused by the decline of the voluminous grain-trade". Although he mentions some of the multiplier effects of a large-scale grain trade, Faber does not attempt to specify the multiplier effects of large-scale participation in shipping, handling, and processing sugar, coffee, tea, pepper, indigo, and rice. Is volume an appropriate indicator of employment or economic activity in general? If the Dutch chiefly reexported Baltic grain in the same form in which they received it (after repacking), but for sugar (for instance) built a refining industry, what were the relative multiplier effects of this aspect of these two trades rather than their relative impact on shipbuilding, upon which Faber concentrates? In the West Indies the export of colonial produce led to an expansion of financial activity in the form of lending to planters so that they could increase production. Likewise the shift of grain trade out of Dutch hands coincided with increased financial activity in the form of credit and other services extended to foreign and Dutch merchants moving grain directly from ports of export to markets.

In the seventeenth century the grain trade was of central importance to Dutch prosperity. If it had been lost suddenly, economic activity in the Republic might have been devastated. But it was not lost suddenly, and its decline, in some respects

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XVIIth Century," *Acta Historiae Neerlandica*, I, 1966, 119. In the passage as a whole Faber writes of "... the crippling influence this decrease must have had on economic life as a whole in the Dutch Republic."

[49] *Ibid.*, p. 119 and n. 1. One Amsterdam pond equals 494 grams; 4000 Amsterdam ponds equal 1 last.

associated with quite positive economic consequences, occurred simultaneously with a considerable array of counterbalancing growth. As Faber indicates, the relative importance of grain imports and of grain in western and southern European diets was diminishing in the eighteenth century, and with it the demand for Baltic grain.[50] Between 1550 and 1750 seed-yield ratios in eastern Europe fell from 4.3 to 3.5:1.[51] British grain exports increased.[52] These factors presumably made the Baltic grain trade less and less profitable, and therefore an arena of specialization possessed of fewer and fewer merits. Meanwhile the declining price of grain, which the Dutch had to import, increased consumer income available for spending elsewhere. If the Dutch had still carried an annual average of 274 instead of 127 million Amsterdam pounds of Baltic grain throughout the eighteenth century, and allocated to that the shipping, capital, labour, and other resources necessary to sustain it, would they have fared better or worse than they did from the activities in which they actually engaged? In other words, did Dutch entrepreneurs lose or merely give up their near monopoly control of the grain trade?

In this decline hypothesis it is particularly the multiplier effects of the staple market that are believed to have suffered from the trend of activity after 1650. Even a slight decline in the

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[50] *Ibid.*, pp. 126 and 131.

[51] B.H. Slicher van Bath, "Agriculture in the Vital Revolution," in E.E. Rich and C.H. Wilson, eds., *Cambridge Economic History of Europe*, vol. V (Cambridge, 1977), p. 81.

[52] David Ormrod, "Dutch Commercial and Industrial Decline and British Growth in the Late Seventeenth and Early Eighteenth Centuries," in Frederick Krantz and Paul M. Hohenberg, eds., *Failed Transitions to Modern Industrial Society...* (Montreal, 1975), pp. 37–40, on the rise of British grain exports to the Republic, and Jan de Vries' comments thereon in *ibid.*, p. 55. Ormrod shows that from 1700 to 1770 British grain exports to the Republic compensated for diminished Baltic supplies. Although the import of British grain was in British hands, its handling and reexport, and the consumption of part of it in brewing and other directions, gradually fell out of Dutch hands, which means that for the Dutch the grain trade in general, and its multiplier effects in particular, must have diminished gradually.

volume of staple market turnover, it is argued, may have had far-reaching effects on employment and industrial production, especially in shipbuilding, and on urban incomes.[53] This is held to be all the more true in light of a shift in the composition of trade goods, such as Faber exposes. Specifically it is said that commercial finance contributed less to employment than had trade and shipping oriented on Dutch staple markets and, moreover, that commercial finance helped skew incomes. The second part of this argument will be taken up below. Here I want to consider employment. Since the Dutch population leveled off during the period from 1650 to 1750 or so, demand for jobs presumably leveled off also. If the reorganization of trade diminished employment, as it seems to have done, for instance, in the Dutch shipbuilding industry, then it diminished employment during a time of weak demand for an increase in jobs. Some of the jobs thereby lost were, however, regained in the new orientation of commerce and commercial finance. A larger scale of financial transactions meant, for example, more and larger banking firms, increased activity in financial markets, and enhanced postal volume, all of which created jobs for scribes, bookkeepers, runners, and servants, that is, for skilled and unskilled labour, among merchants and their business allies, such as the notaries. The *voorbijlandtvaert* also produced some compensatory employment, although high Dutch wages may have encouraged Dutch shippers to hire foreign sailors to man ships less frequently touching Dutch ports. What, in the stablized demand for jobs after 1650/1680, were the overall effects of structural change on job opportunities?

Perhaps the most intricate problem in assessing the long-term trend of activity in the commercial sector lies, however, with accounting. In a national income computation what must be measured is the overall net credit or debit balance of commercial activity. In the grain trade, for instance, by carrying smaller

[53] Jan de Vries, *Barges*, pp. 321-5.

quantities the Dutch earned smaller current account credits from commercial services. At the same time their profits from the grain trade fell off. But the Dutch were also major consumers of Baltic grain, so that overall the grain trade must have produced a net debit entry on current account that was balanced by other trade and shipping activity. As Dutch control of the Baltic grain trade waned and British merchants began supplying Dutch markets with British grain, the current account entry for the grain trade must have shifted to a higher debit. The correct measure of the national income contribution of trade and shipping would deal not with the volume of trade goods or shipping services, but the much smaller figure of a net entry in the balance of payments account.

The end result of considering the commercial sector in terms of its net balance of payments credit or debit is to direct attention back to the multiplier effects of trade or any other activity within the Dutch economy. For the Dutch more than for any other people in Europe two things mattered: how many jobs were created by trade and shipping?, and how did those activities affect the cost of goods and services? The Dutch shipbuilding industry declined in the eighteenth century, but freight rates continued to fall.[54] On the one hand, then, jobs may have been lost. But, on the other hand, the cost of living for employed and unemployed consumers continued to fall with shipping costs.

Very little of the evidence needed for computations about employment and the balance of payments is presently available. Most probably employment declined slightly and very gradually as staple market activities waned and the *voorbijlandtvaert* waxed, and with that trend most probably also the average compensating job associated with the *voorbijlandtvaert* or commercial finance was slightly less valuable in its contribution to national income than the average lost job. The Dutch balance of pay-

[54] UNGER, *Dutch Shipbuilding*, p. 59.

ments continued until the end of the eighteenth century to be characterized by large earnings on current account and large capital account debits. The Dutch chose to consume less than they might have, and expressed that choice by acquiring vast foreign assets. Throughout the seventeenth and eighteenth century, whether commerce or finance was dominant, the net contribution of the commercial and financial sectors to national income remained a mere fraction of all transactions. Against a probable decline in the quantity and quality of jobs created by commerce and finance, however, must be weighed the contribution of increasing efficiency toward reducing consumer costs in the Republic (and throughout Europe). Between 1650 and 1750, therefore, Dutch consumers benefitted from declining and low real prices, which reflected both a new equilibrium among supply, demand, and money supply, and diminishing costs in the provision of goods and services. In that situation even a stable current guilder per capita income meant an improvement in material comfort.

Sharp decline and income shewing. Proposition 2, in the variation of it identified with the Wageningen group, calls into question the national income method of measuring trend by raising the question of the costs of growth. Suspecting that national income may have increased after 1650/1680 but that any increase was not shared by the population at large, Van der Woude has turned to the idea of income skewing to account for economic decline. An unspecified segment of the population prospered while the bulk of the population suffered.

The idea of income skewing finds considerable support in the scholarly literature.[55] It is based on such largely impressionistic evidence as an apparently quickening pace during the eighteenth

[55] Joel Mokyr, *Industrialization in the Low Countries, 1795-1850* (New Haven, 1976), pp. 213-14, however, takes issue with this assumption, asking how high unemployment and income skewing could have persisted as long as is alleged without inducing an automatic correction.

century of lamentations about the numbers of the destitute, and on a well-developed but still chiefly impressionistic sense that unemployment was growing in the same long period. In that century, it is often said, unemployment became a chronic and structural rather than a conjunctural problem.[56] After 1770 especially, these sources suggest, popular welfare deteriorated.[57]

Here we are better supplied with information on the opinions held by eighteenth-century observers than with evidence that establishes the trend, or the rate of the trend, being decried. But there is some quantitative evidence that is taken to bear on this question.[58] Examining the proceeds of property taxes in the municipality of Gouda between 1599 and 1722, P.W. Klein discovered peaks in 1625 and 1680 and, after the latter date, an era of decline tied presumably to the city's deteriorating economic position.[59] During the period of decline property tended to become concentrated in the hands of a few wealthy residents. The number of people paying taxes on property declared to be worth altogether less than f. 10,000 diminished as did also the total value of their assets. In the median (f. 10,000 to f. 30,000) and wealthiest (f. 30,000

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[56] E.g., H.F.J.M. VAN DEN EERENBEEMT, "Het huwelijk tussen filantropie en economie: Een patriotse illusie," *Economisch- en sociaal-historisch jaarboek*, XXIX, 1972, 33.

[57] *Ibid.*, pp. 29 and 31-34; and JOHAN DE VRIES, *Economische achteruitgang*, pp. 1-2. Another index of the hard times after about 1770 may be found in W.F.H. OLDEWELT, "Twee eeuwen Amsterdamse faillissementen en het verloop van de conjunctuur (1636 tot 1838)," *Tijdschrift voor geschiedenis*, 1962, 432, where the decennial average of bankruptcies in Amsterdam is shown to have increased as follows:

1750s	63
1760s	67
1770s	69
1780s	154
1790s	147

The last previous decade with more than 100 bankruptcies per annum had been the 1670s, when the number at risk was much smaller. Oldewelt (p. 430) portrays the bankruptcy data as a sensitive measure of business conditions which "more than any other statistic gives an image of the degree of well being of the citizenry...".

[58] VAN DER WOUDE, *Het Noorderkwartier*, II, 608.

[59] P.W. KLEIN, "De heffing van de 100e en 200e penning van het vermogen te Gouda, 1599-1722," *Economisch-historisch jaarboek*, XXXI, 1965-1966, 41-62.

and over) groups, however, assets increased between the 1670s and the end of the series while mobility into the above f. 30,000 class diminished. In Gouda the very rich were being polarized from the merely well off.

While the pattern detected in Gouda may also have characterized conditions in some other cities that were also losing population, there are reasons to wonder about how this pattern should be interpreted. Did it represent an adjustment to tax laws which, by assessing only certain types of property and in general shifting from direct to indirect levies, encouraged the rich to rearrange their portfolios. Were the people who disappeared from Gouda's ranks of the well propertied and who failed to move upward in those ranks lost in general or merely lost to Gouda; that is, did such people tend to move elsewhere, especially to Amsterdam and Rotterdam, to pursue their fortunes? Amsterdam's population grew from 105,000 in 1622 to 217,000 in 1795, presumably because employment and business opportunities there attracted people from shrinking cities like Gouda.

But the most disturbing implication of the Gouda inquiry is the question it prompts about proportion. How numerous were the rich? In Gouda all the individuals subject to these property taxes numbered, on average, some 595 in a population whose average number was some 13,000.[60] Only about 4.6 per cent

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[60] Gouda's population declined from 14,627 in 1622 to 11,715 in 1795. VAN DER WOUDE, *Het Noorderkwartier*, p. 114. Taking the average of these two figures, 13, 171, as the city's average population for the period studied by Klein, the three property groups dealt with are seen to have composed these segments of the total populace:

	number	*percentage of populace*
under f. 10,000	451	3.4
f. 10,000 to f. 30,000	111	.8
f. 30,000 and over	33	.3
	595	4.5

Only individuals with taxable assets greater than f. 1,000 (in 1599 f. 3,000 and in 1602 f. 2,000) were liable to pay these levies. KLEIN, "De heffing," 47. Klein's figures would be increased if it were assumed that each individual with taxable property worth more than f. 10,000 was the head of a household averaging 3,8 persons. See note 75. How-

of the populace paid these taxes. If the rich are to be said to have benefited disproportionately, indeed nearly exclusively, from the trend of national income after 1650/1680, then it is necessary to allow for the existence of a large enough group of rich people to make this credible. In Gouda it was only the people with assets less than f. 10,000 that made the group of property taxpayers as large as some 4.6 per cent. Subtracting them leaves a group of only about 1.1 per cent. Nor is there an indication that the rich were becoming richer in sufficient proportion to absorb the skewed income allegedly flowing their way. Polarization among the rich in Gouda does not demonstrate the general immiseration of the poor in the Republic, nor does it reveal anything about the trend of assets or income among the populace at large.

If income maldistribution is to be held to explain economic decline after 1650/1680 then it must have occurred chiefly within the populace at large rather than between the rich and everyone else. In the general population employment presumably stopped expanding around the middle of the seventeenth century. Around 1750 the Dutch population began to expand again, and between then and 1795 it increased at an annual rate of perhaps 1.7 per 1000.[61] Around 1770 economic observers in the Republic began to notice a rift between the trend of population and that of employment. Between 1750 and 1795 the population grew by some 178,000 (from between 1.85 and 1.95, say 1.9, to 2.078 million). If unemployment in the labour force in 1750 amounted to as much as 15 per cent, which is, I think, a high estimate, then the addition to it of all the labour participating part of the population increase thereafter could have pushed unemployment in

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ever, under this assumption the percentage of heads of households with f. 10,000 to f. 30,000 would remain only 3.2 per cent, and that of heads with f. 30,000 and over only .95 per cent.

[61] Taking the highest estimate of 1700 population, 1.95 million, however, eighteenth-century population growth may not have exceeded .7 per 1000 per annum, or that between 1750 and 1795 1.4 per 1000 per annum.

1795 to as much as 22 per cent.[62] In the worst case the newly unemployed — about 7 per cent of the population — may have suffered immiseration. But several observers, including Jan de Vries and Joel Mokyr, suggest that unemployment and underemployment in the eighteenth-century Republic may have been "consciously chosen leisure".[63] If that were the case, then it was not unemployment in grinding poverty but in comparatively tolerable material conditions. Furthermore, if unemployment increased around 1700, such a trend was especially noticeable (and the lamentations it produced most readily understandable) if a situation of low unemployment gave way to one of high unemployment. The force of the lamentations implies that unemployment was lower than 15 per cent before 1750 so that its increase thereafter could have been all the more noticeable.[64]

If it were true, however, that a significant part of the population was very poor, then the rest of the population, totalling about 70 per cent after removing the rich and the poor, must have prospered during a considerable part of the period of putative economic decline. In the years after 1650 prices moved downward but wages remained stable.[65] Therefore for the employed real income was increasing, as J.A. Faber has shown, and in general price changes are suggestive inversely about living standards. The trend of pauperization is ordinarily examined by means of the base period chosen by N. W. Posthumus and the International Committee on Price History, that is, 1721-1745. Since that pe-

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[62] That is, 15 per cent of a labour participation force of .6 in 1750, or some 171,000, plus all of the increase of potential labour force participation after 1750, or .6 times 178,000, which is some 107,000. Unemployment might have totalled 278,000 in a labour force of 1,247,000 or 22 per cent. This potential labour force participation rate may, of course, seem too low or too high, but as long as that rate was stable during the half century considered, the unemployment proportion would not be affected.

[63] JAN DE VRIES, "An Inquiry into Wages," 90-91.

[64] For instance, 7 per cent unemployment in 1750 plus full unemployment among additions to the population would have increased the unemployment rate at a sharper pace to some 15 per cent around 1795.

[65] *Ibid.*, p. 64; JAN DE VRIES, *Barges*, p. 141; and n. 10 above.

riod came at the end of a long era of price deflation, using it produces index numbers which tend already by 1750-1754 to dramatize price inflation. Let us use instead 1650-1679, which has the advantage of falling, for the Dutch Netherlands, amidst the transition from inflation to deflation and which therefore offers a more balanced picture of prices. That base period produces the pattern evident in table 6.[66]

After this adjustment it is more readily apparent that, from a long-term view, declining real income became a problem only in the latter 1760s, about the time it began to be noticed by Dutch economic observers.[67] (Of course complaints about prices were heard earlier than that. The point here is to notice the longer trend of prices against a background of stable wages.) Were observers detecting a trend of employment lagging behind population growth, a trend of prices inflating in advance of wages, or both? In any event, only the last three decades of the eighteenth and the first two of the nineteenth century indeed seem to have been characterized by unevenly distributed income, and then not so much because the rich were getting richer but because the poor were becoming more numerous and poorer at the same time.[68]

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[66] Posthumus, *Inquiry*, I, CI, using still the index numbers of the unweighted group of 44 items. It should be noticed that price increases during the wars of Louis XIV, especially in the early 1690s and 1710s, created brief periods in which wage earners did not benefit from the general deflationary trend.

[67] PETER JANSEN, "Poverty in Amsterdam at the Close of the Eighteenth Century," *Acta Historiae Neerlandica*, X, 1978, 98-114, concurs with the idea of a sharp deterioration of economic conditions toward the end of the century, but argues that it occurred after 1784 (p. 105).

[68] However, charity and poor relief provisions are said to have become more generous at the same time. Some scholars argue that poor relief became too generous, so that the incentive to work was dampened. It is exceedingly difficult to reconcile the idea that the Republic contained a large number of destitute people with the idea that poor relief was nearly as generous as wage incomes which were uncompetitively generous. Perhaps the more persuasive line of argument is that which insists not that the poor were terribly poor but that they were receiving comparatively generous benefits. Certain forces were at work to create a situation of badly skewed incomes, and the chief of those was the tendency of prices to advance ahead of wages or jobs. But countervailing forces were also at work, the chief of those being voluntary and some-

TABLE 6

PRICES ADJUSTED TO A 1650-1679 BASE

	Posthumus' base	1650-1679 base
1650-79	121	100
1750-54	110	91
1755-59	117	97
1760-64	121	100
1765-69	131	108
1770-74	129	107
1775-79	132	109
1780-84	148	122
1785-89	156	129
1790-94	178	147
1795-99	221	183
1800-04	248	205
1805-09	266	220
1810-14	348	288
1815-19	213	176
1820-24	—	—
1825-29	138	114

Whereas the evidence is comparatively unambiguous about the period after 1770, it is both ambiguous and incomplete for the preceding century. On the one hand some of the sectors of growth after 1650/1680, like commercial finance, may have offered fewer employment opportunities than some of the sectors of decline, like fishing and textile processing in Leiden and Haarlem. But that oft repeated proposition had not yet been tested, and in a

times involuntary support for poor relief from better-off segments of the Dutch populace. Some Dutch historians find the origins of the equality of incomes policies of mid twentieth-century Dutch society in this period. DE JONG, "Sociale verandering," 1-27; and VAN DEN EERENBEEMT, "Filantropie en economie," 28-64, which essay is continued in the *Economisch en sociaal-historisch jaarboek*, XXXVIII, 1975, 179-255, and XXXIX, 1976, 13-100. In the Dutch Netherlands more than in most present-day societies the historical distribution of income is a controversial subject bearing on public policy issues. Finally along this line it should be noted that it was L.P. van de Spiegel's 1782 estimate of unemployment compensation of f. 27 million a year that led Johan de Vries to conclude that real national income may have increased slightly in the eighteenth-century Republic. JOHAN DE VRIES, *Economische achteruitgang*, p. 167.

recent paper P.W. Klein has expressed doubt that the " ... rise of the financial sector would have decreased employment opportunities... ".[69] On the other hand, since the population leveled off in advance of or at about the same time as some previously strong sectors of economic activity began to wane, and prices moved toward deflation while wages remained stable, real incomes for the employed population, which was the great bulk of the total population, increased.

Finally along this line, if the idea of income maldistribution is to be used as an explanation of increasing national income that failed to benefit the population at large, then it must be considered in the light of its starting point and historical trend. Kuznets shows a 1938 distribution of national income in the Kingdom of the Netherlands in the scheme presented in table 7.[70] Income was unevenly distributed in 1938 (even though less unevenly than in other societies of that day). It is said to have been unequally distributed in the Low Countries in general, although perhaps not in the still poor provinces of Holland and Zeeland, in the middle ages.[71] How much more or less unevenly distri-

TABLE 7

INCOME DISTRIBUTION ESTIMATES, 1938

Population	National income
top 20%	49%
lowest 60	31
(middle 20	20)

[69] P.W. KLEIN, " The Dutch Regents and the Changes of the Economic Bases of their Power in the XVIIth and XVIIIth Century," an unpublished paper given at the Instituto Internazionale di Storia Economica in Prato, 21 April 1980, p. 3.

[70] SIMON KUZNETS, *Modern Economic Growth: Rate, Structure, and Spread* (New Haven, 1966), pp. 208-209.

[71] UNGER, *Dutch Shipbuilding*, p. 1. Also Posthumus, *Leidsche lakenindustrie*, I, 386-398, estimating that in Leiden in 1498 the top 20 per cent of the population held 83 per cent of the wealth.

buted should we suppose it to have been at any point during the seventeenth or eighteenth century? And what pace of skewing is the argument meant to suggest?

Unemployment and underemployment between 1650/1680 and 1800 require further research and the development of more revealing indicators than population numbers and trend. Until the results of such research are in it is at least as plausible to suspect that the stabilization of population between 1650 and 1750 signals a demographic transition capitalizing on the opportunity for higher per capita incomes as it does a response to economic deterioration and a general trend of immiseration in the Dutch populace.[72] The Wageningen group's research, based on the intensive study of sample areas within the Republic, has yielded reliable evidence about the general demographic trend. Later work may add more information about vital statistics.[73] Without more evidence than is currently available about wages and employment, it is difficult to know how to interpret the data on gross population trends. Furthermore, whereas the demographic samples used by the group are large, and thus do not need to be particularly representative, the economic samples they have investigated intensively (Overijssel, the North Quarter in North Holland, Friesland, and the Veluwe) are smaller and unrepresentative. They reveal a complex picture of mixed growth and decline, and they focus on other areas than South Holland, the most densely populated and richest region of the Republic.

The towboat system as microcosm. In another variation of proposition 2, Jan de Vries has acknowledged that income skewing

[72] The Mentinck-Van der Woude investigation of population in Rotterdam and Cool shows a decline in the average number of baptisms in completed families from 3.67 in 1680-1689 to 2.76 in 1720-1729, and thereafter a trend of gradual growth. G.J. MENTINCK and A.M. VAN DER WOUDE, *De demografische ontwikkeling te Rotterdam en Cool in de 17e en 18e eeuw* (n.p., 1965), pp. 72-73.

[73] See VAN DER WOUDE, *Het Noorderkwartier*, I, 197-258, for some steps toward reconstructing vital statistics which give data for a few small locales at isolated dates.

is an unsatisfactory explanation for putative economic decline after the 1670s. In its place he offers a new indicator, towboat passenger travel, which he believes can be analyzed in conjunction with other evidence to reflect not only the trend and level of economic activity among urban working classes, who seem to have provided the bulk of passengers, but trend and level within the Dutch economy as a whole. These data are important and fresh and de Vries' analysis of them constitutes a model of quantitative economic historiography. But can they be pressed so far? In explaining why he thinks passenger travel to have such general significance as an economic indicator, de Vries constructs an intricate array of arguments. In each of these certain assumptions must be made in order to proceed. There is not space here to consider each argument and its assumptions, but let us take up one central proposition, that towboat passanger travel was a mass phenomenon and as such a representative phenomenon.

At peak volume the towboat network might have carried each fare-paying passenger in the region served a maximum distance of some 40 kilometres a year at a cost of "nearly one per cent of an average family's gross income".[74] From de Vries's income estimates it appears that around 1670 the average household (which he assumes to have numbered four people)[75] spent some f. 2.75 per annum on travel in towboats. That figure represents .79 per cent of de Vries' estimate of average annual household income of f. 350 (which he derives from King's estimate of per capita income interpreted to mean f. 97, which is without explanation reduced to f. 87.5).[76] Since de Vries is dealing with

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[74] JAN DE VRIES, *Barges*, p. 262, summarizing conclusions reached earlier.

[75] See on this A.M. VAN DER WOUDE, "De omvang en samenstelling van de huishouding in Nederland in het verleden," *A.A.G. Bijdragen*, XV, 1970, 202-40.

[76] JAN DE VRIES, *Barges*, pp. 97-99 and 222, indicates a maximum capacity of 79.9 million passenger kilometres per year of which just under 50 per cent, 37.8 million, was used in the 1660s. Of the regional population, estimated at 1.2 million, about 80 per cent are assumed to have been actual or potential fare-paying users of the towboat network. Of the remainder many could travel without paying fares. *Ibid.*, pp. 110-123.

fare payers only, it would be appropriate either to increase the average family income figure to account for this selection from the population of groups more readily able to pay for such travel, or to compute the percentage of income spent on towboat travel for the populace at large. For all 1.2 million people believed to have lived in the region in the 1660s, paid travel averaged not 40 but 31.5 kilometres per year per person.[77] Thus for the average family the sum spent on towboat fares at the period of peak volume travel would have been .62 per cent of income. Or, assuming a higher per capita income for families able to pay fares, say f. 125 per annum, the part of the family's gross income (of f. 500) spent on towboat travel would be estimated at .55 per cent.[78] For the fare-paying part of the populace, per capita travel on the network totalled, in the period of peak usage, about one-eighth of a kilometre a day (assuming that the network was operational for at least 300 days a year).

Since towboat travel declined after 1660-1670, reaching a level of only 17.6 to 18.6 million passenger kilometres per year during 1740-1750, and the fare remained constant, the portion of income devoted to travel also declined. For the 1740s, assuming a fare-paying population at that time of 880,000 (80 per cent of a regional population estimated at 1.1 million), the yearly per capita usage had fallen to less than 21 kilometres, and the daily rate to less than one-fourteenth of a kilometre. By then the portion of family income being spent on towboat travel, using still de Vries's estimate of f. 350 annual income but for the total regional population, had fallen to f. 1.44 or .41 per cent.

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[77] That is, 37.8 million divided by 1.2 million rather than 80 per cent of 37.8 million divided by 1.2 million people.

[78] In other words, for the calculation [4 (family members) times 40 kilometres times 5.5 penningen per kilometre divided by 320 penningen per guilder equals f. 2.75 divided by f. 350 per family income] substitute the calculation [4 times 31.5 times 5.5 divided by 320 equals f. 2.16 divided by f. 350]. Or substitute at the end of the calculation in n. 66: f. 2.75 divided by a per family income estimated for fare-paying passengers, here f. 500.

Are these figures substantial enough to sustain the case that towboat usage was common and costly enough to serve as an indicator of general economic activity? As de Vries maintains, people from all social and economic categories (and many tourists) used the towboats.[79] But we may wonder with de Vries whether they used the towboats in large numbers and in proportion to their weight in the whole population. Or was towboat travel, like travel on intercity buses in the United States today, a mass but unrepresentative phenomenon? Specifically, does it leave an impression of economic trend that is skewed toward the working class populations of certain Dutch cities whose population was declining?

De Vries interprets the trend of towboat travel as evidence of the general decline of the Dutch economy, but in light of the small income and distance figures involved it might just as plausibly be seen as evidence of the small and diminishing merit of this indicator. In more general terms the towboat data construed as a general index of economic activity pose two problems. Interurban mobility diminished between the 1660s and the 1740s by about 50 per cent in the region of the Republic served by the towboats. In part that decline reflects the diminishing economic horizons of cities like Gouda and the concentration of population and economic activity in Amsterdam, Rotterdam, and The Hague. De Vries supposes this concentration to have been unhealthy but, in terms of the efficiency with which resources could be used and in terms of the national rather than the regional economy, concentration in Amsterdam and elsewhere may just as plausibly be seen as a healthy development. In proportion to national population, London was then as large as Amsterdam, and in proportion to urban population it was much larger. In any case the relative healthiness of Amsterdam's growth cannot satisfactorily be measured by the towboat data.

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[79] *Ibid.*, pp. 110-23 and 263-4.

Another problem associated with using these data is similar to a problem encountered in all the standard indices purporting to measure Dutch economic trends in general. The new data seem to measure economic activity from the mid seventeenth century onward, but is their effectiveness as a measure more or less constant over time? De Vries discounts structural changes within the Dutch economy as a factor distorting his interpretation,[80] but of course it is not the structural changes that he has explored. It seems to me more reasonable to suspect that changes in the orientation and geographical distribution of economic activity, the distribution of population, the weight and direction of government intrusion into the economy, and in other areas also substantially altered the utility of the towboat network, and altered it in a fashion that reduces the value of towboat travel as an indicator of economic trend. Especially in light of the King-Derksen income estimates, structural changes seem likelier than income decline to provide an explanation for the fall in towboat usage not explained by price and population trends.

Growth. As long as decline is accepted as the most plausible characterization of economic activity in the Dutch Republic after 1650/1680, then the economic indicators (*convooien* income, population, towboat travel) underlying propositions 1 and 2 seem plausible. But as soon as the trend of decline itself is doubted, then the persuasiveness of the indicators diminishes. But the growth hypothesis has its own shortcomings. In the first place the work that is now emerging about growth sectors has not yet produced a means of estimating the contribution of enhanced commerce and finance to national income. Like the decline hypotheses, its case about income remains chiefly impressionistic. The turn away from impressions toward apparent quantitative measurement still depends in part upon Gregory King's estimates. Al-

[80] *Ibid.*, pp. 300-302.

though King's income accounts are often cited, it is obligatory to question their reliability. Aside from the problem of deciding whether King was well informed,[81] we must wonder just what it was he had in mind. Did he mean to include income from government securities, as Derksen apparently did in estimating 1860 per capita income, but as most later national income accountants would not? That is, on what terms should the two income estimates be compared? Since government transfer payments are excluded in Derksen's accounting, what effect might the deduction of all income from public relief funding be supposed to have on national and per capita income estimates for the eighteenth century?

It is an easy matter to poke holes in any case that the King-Derksen or King-Teijl estimates should be accepted without qualification, but it is a difficult matter to establish what qualifications should apply. In the final analysis, however, it is difficult to escape the conclusion of substantial growth in income.

Some further damage to the reliability of proposition 3 arises from the need to adjust prices to constant values over such a lengthy period. How much confidence should be put in such a procedure when any technique of adjustment, including the one used here, prompts misgivings?

Another weakness in the growth hypothesis follows from what we know about the sectors of economic activity more likely to have continued to grow after 1650/1680. In finance and probably also in commerce activity continued to expand until the end of the eighteenth century, but the contribution of both sectors to national income was considerably less extensive than the aggregate volume of activity or gross profits. There is good

[81] On population demonstrably he was not. For 1695 King estimated France's population at 13.5 million; more probably it totalled 19 to 20 million. He estimated the Republic's population too high, at 2.24 million. That is, King was far off the mark in both cases, and in different directions, G.S. HOLMES, "Gregory King and the Social Structure of Pre-Industrial England," *Transactions of the Royal Historical Society*, XXVII, 1977, 41-68, also finds King's English income estimates inaccurate.

reason to doubt whether there could have been enough growth in commerce and finance (and, after 1750 or so, in agriculture) to have compensated for decline in other sectors *and* provided a substantial addition to national income. The growth hypothesis seems therefore to demand a reconsideration of activity in other sectors, industry, fishing, internal transport and trade, and business services in general. In particular it demands further research into growth activities to determine the extent to which distilling, refining, and processing industries; the colonial trade (including its ancillary, the slave trade);[82] rural industry, commercial and government finance and the large realm of financial services; and other areas compensated for economic activities in decline.[83]

Finally among the aspects of proposition 3 must be included Van der Woude's doubts that per capita or national income estimates can persuasively capture the reality and the breadth of material prosperity in this society. I am not persuaded by Van der Woude's case for income skewing or by his rejection of na-

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[82] Ernst van den Boogaart and Pieter C. Emmer, "The Dutch Participation in the Atlantic Slave Trade, 1596-1650," in Henry A. Gemery and Jan S. Hogendorp, *The Uncommon Market: Essays in the Economic History of the Atlantic Slave Trade* (New York, 1979), p. 355, note that the Dutch slave trade expanded only after 1656. On the colonial sector see also Johannes Petrus van de Voort, *De westindische plantages van 1720 tot 1795: Financiën en handel* (Eindhoven, 1973); on copper, Johannes MacLean, "Koperindustrie in Nederland, 1750-1850," *Economisch- en sociaal-historisch jaarboek*, XLIII, 1980, 39-63; on one precision industry, F.C. Spooner, "On the Road to Industrial Precision: The Case of Coinage in the Netherlands (1672-1791)," *Economisch- en sociaal-historisch jaarboek*, XLIII, 1980, 1-18, and on premodern industry the papers given at a conference organized by the Stichting Maatschappijgeschiedenis in April 1981 and published in the *Economisch- en sociaal-historisch jaarboek*, XLIV, 1982, especially D. Damsma and L. Noordegraaf, "Een vergeten plattelandsnijverheid': Vlasarbeid, bevolkingsgroei en proto-industrialisatie in Zuid-West Nederland, 1700-1900," 145-54. Also R. Th. Griffiths, "Ambacht en nijverheid in de Noordelijke Nederlanden, 1770-1844," in *Algemene geschiedenis der Nederlanden* (Haarlem, 1981), X, 219-52; X, 219-52; and De Meere, *Economische ontwikkeling*, esp. 21-26.

[83] Roessingh, *Inlandse tabak*, exemplifies the kind of work that remains to be done in detailing the rise of a new area of commercial horticulture and processing industry that emerged in Gelderland and eastern Utrecht in the seventeenth century and waned in the eighteenth century.

tional income accounting as a measure of economic trend,[84] but his remarks prompt the question of whether even a long-term increase in income may coincide with a healthy economic evolution. The point of economic growth is, of course, to expand material prosperity, although there is some disagreement about the optimal way of dividing the greater wealth that may be achieved. To Jan de Vries " the Republic continued to be a rich country long after it had ceased being a prosperous country ".[85] Not only did it cease to be prosperous, but in his opinion per capita and national income diminished after the 1670s. The growth hypothesis suggests, to the contrary, that income continued to grow.

But in the medium or long run which condition was healthier? Where labour costs figure prominently as a production factor, considerable material prosperity must, if it is to assist rather than dampen continued growth, contribute to continued growth in labour productivity. In the Dutch Republic, as nearly everyone seems to agree, that did not happen. Here again we confront an assertion frequently repeated rather than frequently tested. But let us accept it, and agree that because of high labour costs and insufficient labour productivity Dutch goods and services diminished in competitiveness during much of the period after 1650/1680. Recent experience suggests that such a situation will commonly be reached by economies that pioneer in development. But, presumably, attractive labour costs can be regained. For the seventeenth and eighteenth-century Dutch Republic the question seems to be: Why were competitive labour costs not regained sooner? If per capita income declined absolutely and substantially, as Jan de Vries maintains, then the attractive labour cost situation should have been regained all the sooner unless productivity continued to decline with income. That is a possibility that should be explored.

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[84] See also KLEIN's remarks in " De zeventiende eeuw," 115-6n4.

[85] JAN DE VRIES, *Barges*, p. 360.

If, on the other hand, per capita income continued to increase after 1650/1680, then the failure of the Dutch to regain a status of competitive labour costs could be explained by the absence of any need to do so. In conditions of sustained material prosperity and income as high as that in any other society in the world, where were the incentives for further rapid growth? In this interpretation it seems that the Republic had achieved the goal of economic growth and material prosperity too well rather than too poorly.

Whether the trend in the Dutch economy after 1650 should be depicted as one of growth or decline or, in compromise, one of stagnation, the economic history of the Dutch Netherlands after 1650 seems more rather than less intriguing. For slightly more than two centuries, whatever spontaneous and controlled forces existed in that economy cast about before ,finding a new scheme of growth in mimicking other industrializing economies toward the end of the nineteenth century. When that long era of casting about began the Dutch had achieved a level of material prosperity exceeding that of any other large society in the seventeenth-century world, and indeed one apparently greater than that prevailing in some modern underdeveloped societies.[86] At the end of that era the Dutch remained still near the head of the list of per capita incomes among world societies. The pace of economic growth may have slowed after 1650/1680, although perhaps with some subsequent spurts.[87] But, considering the pre-

[86] DEANE, *First Industrial Revolution*, pp. 6-7, speculates that per capita income in England and Wales at the middle of the eighteenth century, some £12 or 13 per annum (that is, at current rates, some f. 130 to f. 140), was two or three times higher than per capita income in Nigeria or India in the early 1960s. Even at a much lower level, 1650 Dutch per capita income in the Republic would have exceeded early 1960s income in some countries.

[87] Considering, however, the levels of estimated national and per capita income at the end of the period of growth, and the very length of that period (1475 or so to 1650 or so), it may be that the rate of growth after 1650/1680 was equal to or higher than that before that period. Of course population stability made it in some respects easier to sustain increasing per capita income after 1650/1680.

sent-day circumstances of developed economies, it may be more useful to wonder not whether relative decline set in, but whether absolute growth continued, and if so, how. The historical experience of the Dutch Netherlands between 1650 and 1860 looks like a laboratory in which may be considered the problems of sustaining economic growth in conditions of high material prosperity.