

Beer and Taxes

The Fiscal Significance for Holland and England in the Seventeenth and Eighteenth Centuries'

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Abstract

Beer taxes were long a significant source of government revenue in northern Europe. In Holland the income from beer taxes went into long-term decline from 1650 onward. In England the take remained more stable. In both, beer produced a falling share of total revenue as expenses increased in an era of frequent and increasingly costly wars. The fiscal policies pursued in reaction to beer contributing a declining share of total government income led, by 1800, to policies that made the tax burden more broadly shared in the Netherlands than it was in Great Britain. The failure of beer to support the states, as the drink had previously, was less important to fiscal health than more general developments in population and in the economies of the two.

‘Beer is proof that God loves us and wants us to be happy.’
Benjamin Franklin (1706-1790)

For the maritime states, that is England and the Dutch Republic, the seventeenth and eighteenth centuries were a period of marked increases in the fiscal burden for governments. Largely driven by the rising costs of waging war, both explored potential sources of income. Tax-

¹ I am indebted to Ruud Koopman, Robert Allen, Jaap Bruijn, D'Maris Coffmann, Marjolein 't Hart, Edwin Horlings, Christiaan van Bochove, Jan Luiten van Zanden, to two anonymous reviewers for their helpful comments, and to the staffs at a number of archives in the Netherlands for their advice, for their help, and for expediting the collection of data.

es on beer had long been a generator of income for different levels of government in both jurisdictions. It was a practice reaching as far back as the fourth millennium BCE in Sumer in southern Mesopotamia. In the eighteenth century if only everyone thought as the American Enlightenment thinker Franklin did, then there would have been no implications for government finances from waning European beer consumption, a decline that started in the mid seventeenth century and continued through the middle of the nineteenth. The fall in the Netherlands was absolute, the fall in Great Britain was relative to total consumption. This investigation compares the impact of decreasing beer consumption on changes in beer excise revenue and the reaction of governments to the decline, absolute and relative, in receipts from beer taxes. It thus offers not only additional understanding of the fiscal history of emerging nation states but also further reveals the differences between the two, which led to their relative success in meeting their financial obligations and, by implication, led to their shifting roles in international politics.

Cities in northern Europe, especially after the general adoption of beer made with hops from the thirteenth century on, made a practice of taxing beer sales. Those levies provided a remarkable share of total revenue. In Holland in fifteenth-century Leiden the proportion varied between 42 and 59 percent. In Haarlem the figure was over 50 percent. One hundred years later in Amsterdam the direct beer tax produced 55 percent of town receipts. At the same time in Dordrecht the figure was almost 40 percent, and in 1610-1612 it was still between 26 and 33 percent.² Brewing was a reason for the prosperity of a number of Dutch towns and of their governments. From the fifteenth century, after the shift to using hops in brewing, English cities as well found taxing beer lucrative. The sixteenth century was the golden age of brewing with per person consumption levels possibly the highest they have ever been. That was true in both Holland and in England.

National governments found beer a source of revenue too good to pass up. Early modern states, armed with expanding bureaucracies, realized they could follow the established successful practices of cities and levy burdens on sales of goods. The ideal commodities were those with low price elasticity, since any state-imposed increases in what consumers paid had less of an impact on consumption. Beer was an ideal candidate. The expansion of violence on land and sea that political

2 Richard. W. Unger, *A history of brewing in Holland, 900-1900. Economy, technology, and the state* (Leiden 2001) 53-106. Figures for specific towns at 60-61, 68-71.

units exercised, set in motion in the sixteenth century, led to the emergence of states devoted to mobilizing funds for the prosecution of war.³ The principal expenditure of the Dutch and English states was for their armies and navies. Though those expenditures fluctuated widely over time, military effectiveness depended on a flow of funds, and so revenues from levies on beer were an obvious and even necessary resource for maintaining a fiscal-military state. The Dutch, thanks to their revolt against Spanish rule, were first to get on the bandwagon moving toward standardized beer taxation in the Republic as a whole. In 1574 the States General, the representative body of the United Provinces, agreed to impose a tax on each barrel of beer sold in the four provinces of Holland, Zeeland, Utrecht, and Gelderland. There was already a provincial tax on beer in Holland, first tried in 1523 and later institutionalized as a continuing levy, which served as a precedent.⁴ It also set in motion the development of a structure of oversight for tax collection, thus decreasing the opportunities for fraud. The common means (*gemeene middelen*) levied after 1574 fell on beer and wine and sometimes peat, but the list of taxed items increased to include meat, milling of bread grains, woollen cloth, fish, soap, horned cattle, and land under cultivation. Over time there would be more additions to the list of taxed goods. The excises had the advantages of great flexibility in what the government taxed and in how much it taxed, since consumers might hardly notice an increase.⁵

3 John Brewer, *The sinews of power. War, money, and the English state, 1688-1783* (New York 1989); Philippe Minard, 'L'état militaro-fiscal Anglais au xviii^e siècle. À propos de John Brewer, *The sinews of power. War, money and the English state, 1688-1783* (London 1994 [1989])' *Revue d'histoire moderne & contemporaine* 65-64 (2018) 162-177, doi: 10.3917/rhmc.654.0162; Patrick O'Brien, 'The nature and historical evolution of an exceptional fiscal state and its possible significance for the precocious commercialization and industrialization of the British economy from Cromwell to Nelson', *Economic History Review* (hereafter EcHR) 64 (2011) 408-446; N. Geoffrey Parker, *The military revolution. Military innovation and the rise of the West, 1500-1800*, 2nd ed. (Cambridge/ New York 1996); Rafael Torres Sánchez, 'The triumph of the fiscal military state in the eighteenth century. War and mercantilism', in: Rafael Torres Sánchez (ed.), *War, state and development. Fiscal-military states in the eighteenth century* (Pamplona 2007) 13-44; Charles Tilly, *Coercion, capital, and European states, AD 990-1992* (Cambridge (MA) 1992) 51-61, 70-95.

4 James D. Tracy, *A financial revolution in the Habsburg Netherlands. Renten and renteniers in the county of Holland, 1515-1565* (Berkeley 1985) 77-107; Idem, 'The taxation system of the county of Holland during the reigns of Charles V and Philip II, 1519-1566', *Economisch- en Sociaal-Historisch Jaarboek* 48 (1984) 71-177, 75-76, 86-94.

5 Marjolein 't Hart, *The making of a bourgeois state. War, politics, and finance during the Dutch revolt* (Manchester/New York 1993) 93-94, 118-128; Idem, *The Dutch wars of independence. Warfare and commerce in the Netherlands 1570-1680* (London/New York 2014) 157-159.

In England the general national charges on beer began as the members of the House of Stuart tried to establish something of an absolutist state. Thanks to the political ambitions of King James I, brewing was the target of a centralized national malt tax, instituted in 1614. The proceeds benefited the king's finances directly. Subsequent regulations in the reign of King Charles I were designed to be sure the tax was collected fully. In 1643 Parliamentarians, to finance their military forces during the Civil War, established national excise taxes on beer sales. The levy proved highly durable, continuing in some form to 1869. Already by 1655 the tax on beer was by far the most lucrative of all excises. While the form of the tax changed through the 1650s, it survived the 1660 Restoration of Stuart rule. Parliament then granted King Charles II duties levied on each barrel of beer with the rate on small beer, lower in price and alcohol content, being one fifth the rate on strong beer. There were increases in the beer excise, for example one of 30 percent in 1671, but it was the expulsion of James II, the accession of William III and Mary II in 1688, and the subsequent wars against France that led to sustained significant increases in the taxes on beer.⁶

In the sixteenth century governments in western Europe did show a general tendency, driven by the higher cost of warfare, to adopt some form of fiscalism. Efforts to raise tax revenue increasingly consumed them.⁷ In 1651 a full 20 percent of all revenues for the province of Holland came from excise taxes on beer. Around 1700 in England the figure was about 20 percent as well, reaching a peak of almost 30 percent in 1697. The heavy dependence on beer taxes meant that a decline in brewing or a fall in beer sales had the potential for undermining the ability of the government to carry on with planned policies. The Netherlands was a major player in the power politics of the first half of the seventeenth century, deploying significant naval and military forces, financing allies, and serving as a bulwark against the offensive of Catholic monarchs to suppress the Reformation. By the beginning of the eighteenth century, it had faded in significance. England, on the

6 O'Brien, 'The nature and historical evolution', 428-429; William Ashworth, *Customs and excise. Trade, production and consumption in England 1640-1845* (Oxford 2003) 102.

7 Marjolein 't Hart, 'The emergence and consolidation of the "Tax State" II. The seventeenth century', in: Richard Bonney (ed.), *Economic systems and state finance. Origins of the modern state in Europe* (Oxford 1995) 281-293, 281-288; Winfried Schulze, 'The emergence and consolidation of the "Tax State" I. The sixteenth century', in: Bonney (ed.), *Economic systems and state finance*, 262-279, 268-273; Jacob van Klaveren, 'Fiskalismus – Merkantilismus – Korruption. Drei Aspekte der Finanz- und Wirtschaftspolitik während des Ancien Régime', *Vierteljahrschrift für Sozial- und Wirtschaftsgeschichte* 47 (1960) 333-353, 333-339.

other hand, replaced the Dutch Republic in all those categories. After 1707 as Great Britain in a series of wars against France and her allies, Britain established a dominant position among great powers in Europe and was, moreover, the most successful in establishing successful colonies globally. For England and Holland the ability to deploy effective military forces worldwide depended on access to revenues on an unprecedented scale, so what happened to beer drinking automatically had an impact on the finances of the two states.

The brewing industries in Holland and England evolved in different ways. Both faced serious threats to their prosperity, among them government fiscal policies. In both, brewing saw sales per person fall, so neither overcame those threats. The difficulties in the Netherlands appeared earlier and, over time, proved to be greater. In both, the changing drinking habits of citizens forced changes in government finances. Ultimately, however, the different performance of the two states in the eighteenth century had less to do with the reaction to the problem of declining relative revenues from beer taxes than with the character of the two economies.

Coordinated examination of state finances in different parts of early modern western Europe has promoted and made possible exploring what the effects were from changing receipts from taxing beer in Holland and England. At the end of the 1990s, authors of a series of publications on Britain, the Netherlands, and Spain, among others, brought together their findings in a collection of essays. The data collected are easily available online, so the potential exists to place the patterns of change side by side in order to assess to what degree shifting revenue from beer taxes affected government tax policy. A number of authors in other related works discussed, in greater detail, the methods they used and the practices of the emerging bureaucracies that fed the growing needs of European states.⁸

The fall in beer consumption was absolute and per person in Holland but not absolute in England. Brewers there enjoyed considerable advantages over their Dutch counterparts, but even so they could at best only hold their own through the second half of the seventeenth

8 Bonney (ed.), *Economic systems and state finance*; Richard Bonney, *The rise of the fiscal state in Europe, c. 1200-1815* (Oxford 1999); W.M. Ormrod, Margaret Bonney, and Richard Bonney (eds.), *Crises, revolutions and self-sustained growth. Essays in European fiscal history, 1130-1830* (Stanford 1999); Bartolomé Yun Casalilla, Patrick O'Brien, and Francisco Comín Comín (eds.), *The rise of fiscal states. A global history 1500-1914* (Cambridge/New York 2012); Catherine Casson, 'The European state finance database'. <https://www.esfdb.org/Default.aspx>. Accessed 13 November 2020.

and the eighteenth century, while many other industries enjoyed unprecedented growth. Temperance movements were still a century in the future. General ideas about beer were positive in both Holland and England. People associated the drink with healthier and more productive lives. In England beer was not only popular with moralists but also with Protestant clerics, who associated wine with autocracy and popery. Despite the favourable context, over time on average in western Europe people drank less beer.

Revenue from beer taxes in Holland

In Holland as well as in England beer faced challenges from alternative drinks. Originally only used for medicinal purposes, coffee, tea, and chocolate increased in popularity as prices fell through the eighteenth century. The East India Companies of both countries saw imports of tea as well as coffee rise dramatically. At some time around the middle of the eighteenth century, supplies from Asia and, for coffee, supplies from the Americas meant that once-exotic drinks became items of mass consumption, drawing people away from beer.⁹ A more consistent and serious threat was other drinks with alcohol. Wine and brandy remained expensive and so were competition for beer only among those with higher incomes. Not necessarily candidates to drink brandy, Netherlands labourers in the fifteenth century spent 15 percent of their income on drink, and beer was the favoured choice. In the eighteenth century the share was only 5 percent, a sign of changing tastes and consumption patterns in general.¹⁰ It was gin that was the first and most important challenger for brewers. With as much as ten times the alcohol content, it was easier to store and transport than beer, and it did not turn sour after about six months which beer could do. The correlation between the excise revenue from beer sales and the value of gin

9 Pim de Zwart and Jan Luiten van Zanden, *The origins of globalization. World trade in the making of the global economy, 1500-1800* (Cambridge 2018) 41-42, 44; Anne E.C. McCants, 'Poor consumers as global consumers. The diffusion of tea and coffee drinking in the eighteenth century', *EcHR* 61 (S1) (2008) 172-200; Anne E. McCants, 'Exotic goods, popular consumption, and the standard of living. Thinking about globalization in the early modern world', *Journal of World History* 18 (2007) 433-462, 443-448.

10 Jan Luiten van Zanden, 'What happened to the standards of living before the Industrial Revolution? New evidence from the western part of the Netherlands', in: Robert C. Allen, Tommy Bengtsson and Martin Dribe (eds.), *Living standards in the past. New perspectives on well-being in Asia and Europe* (Oxford/ New York 2005) 173-194, 177-181, 187.



Illustration 1 The card game in a pub has many typical features. Steen, an unsuccessful brewer and later pub operator, has a glass of beer central to the painting most likely as a reminder of the identity of the artist. Jan Havicksz Steen, *Ace of Hearts*, c. 1660 (source: Nationalmuseum, Stockholm. NM 647 <http://emp-web-84.zetcom.ch/eMP/eMuseumPlus?service=ExternalInterface&module=collection&objectId=17650&viewType=detailView>.)

sales from 1650 to 1800 was -0,76, strongly suggesting drinkers made a switch from one to the other.¹¹ Brewers also saw the prices of inputs, especially grain, go up in the eighteenth century. Often located in towns in order to be close to customers, brewers found land costs tending to go up. Along with all those other problems brewers paid taxes on their inputs, such as malt, and on the beer when it left the brewery. On top of all those burdens, towns levied excises on sales in pubs.

The fall in beer consumption had an obvious and considerable negative impact on the finances of the United Netherlands. Holland, the most populous and prosperous province of the union, was the princi-

¹¹ Center for Global Economic History, Jan Luiten van Zanden and Bas van Leeuwen, 'Reconstruction national accounts of Holland, 1510 – 1807', <http://www.cgeh.nl/reconstruction-national-accounts-holland-1500-1800-0>. Accessed 7 April 2020. The comparison is between the interpolated total beer sales in barrels and the estimated net value of gin sales in current guilders.

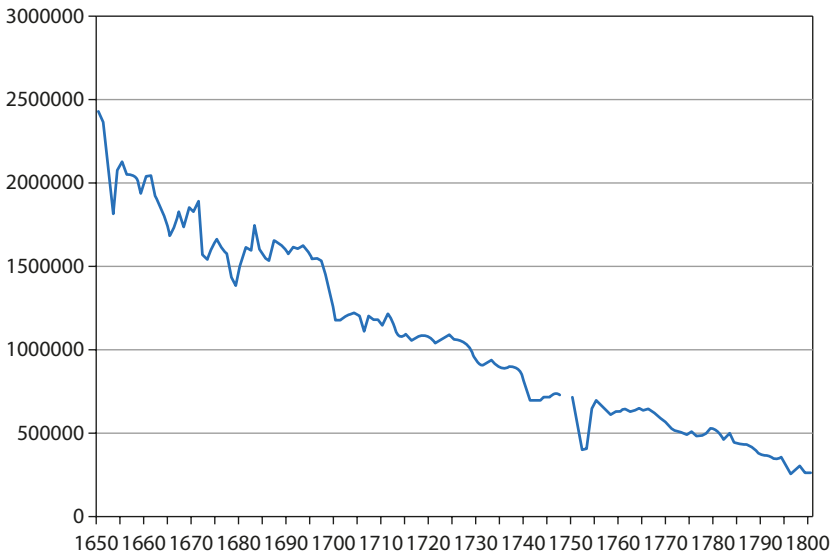
pal source of revenue for the Dutch Republic. Since such a large proportion of tax receipts came from Holland, and since Holland carried so much of the country's debt, the financial records from that county can serve as a reasonable proxy for the entire country. With beer taxes, the income for that source was so much higher in Holland that it swamped the meagre returns to governments in the other six provinces.¹² The population of Holland was greater than the others, which helped to explain its dominance in fiscal matters, though it had higher revenues per person from taxes on beer. In around 1650 on average Hollanders paid about five times as much as people in Zeeland or Groningen. By around 1750 the rate had fallen sharply in Holland, so it was only twice the also lower level in Zeeland.¹³

The rates of tax on beer tended to rise over time, though; from the 1650s on there was greater stability with no change from 1671 to 1749. Increases in the second half of the eighteenth century came on what was a declining volume of sales, and so the fall in tax income after 1754 understates the fall in production.¹⁴ There were special rates of taxation for foreign beers and certain specialty beers of very high quality. The lowest quality of beer was sold tax free. There are no records of the mix

12 Marjolein 't Hart, 'The United Provinces, 1579-1806', in: Bonney (ed.) *The rise of the fiscal state in Europe*, 309-325, 314, 318-321. Holland contributed about 60 percent of the total revenue of the Republic. By around 1700 Holland carried a debt some three times that of the central government. In Zeeland and Utrecht there was a tendency to rely more on land taxes which contributed to the relative difference in beer tax income. Marjolein 't Hart, 'The merits of a financial revolution. Public finance, 1550-1700', in: Marjolein 't Hart, Joost Jonker and Jan Luiten van Zanden (eds.), *A financial history of the Netherlands* (Cambridge/ New York 1997) 11-36, 15-17, 20-22. Jan Luiten van Zanden and Arthur van Riel, *The strictures of inheritance. The Dutch economy in the nineteenth century* (Princeton 2004) 376.

13 R. Liesker and W. Fritschy, *Gewestelijke financiën ten tijde van de Republiek der Verenigde Nederlanden, Deel IV Holland (1572-1795)* (The Hague 2004) 246-251; Leendert van der Ent and Victor Enthoven, *Gewestelijke financiën ten tijde van de Republiek der Verenigde Nederlanden, Deel III Groningen (1594-1795)* (The Hague 2001) 150-159; Wietse Veenstra, *Gewestelijke financiën ten tijde van de Republiek der Verenigde Nederlanden, Deel VII Zeeland (1574-1795)* (The Hague 2009) 102-109; Population figures are from R. Paping, 'General Dutch population development 1400-1850. Cities and countryside', paper presented at 1st ESHD conference, Alghero, Italy, University of Groningen/UMCG research database, <https://research.rug.nl/en/publications/general-dutch-population-development-1400-1850-cities-and-country>. Accessed 16 May 2021.

14 Wantje Fritschy, 'A "financial revolution" reconsidered. Public finance in Holland during the Dutch Revolt, 1568-1648', *EcHR* 56 (2003) 57-89, 60-70; Marjolein 't Hart, and Edwin Horlings, 'Long-term trends in the fiscal history of the Netherlands 1515-1913', in: Bartolomé Yun Casalilla, Patrick O'Brien and Francisco Comín Comín (eds.) *The rise of fiscal states. A global history 1500-1914* (Cambridge/ New York 2012) 39-66, 45; Liesker and Fritschy, *Gewestelijke financiën*, 304-311; E.M.A. Timmer, 'De impost op de gijlbieren. Bijdrage tot de geschiedenis der bierbrouwerij in Holland in de 16de en 17de eeuw', *Bijdragen voor Vaderlandsche Geschiedenis en Oudheidkunde Vijfde reeks* 3 (1916) 360-391, 361-381.

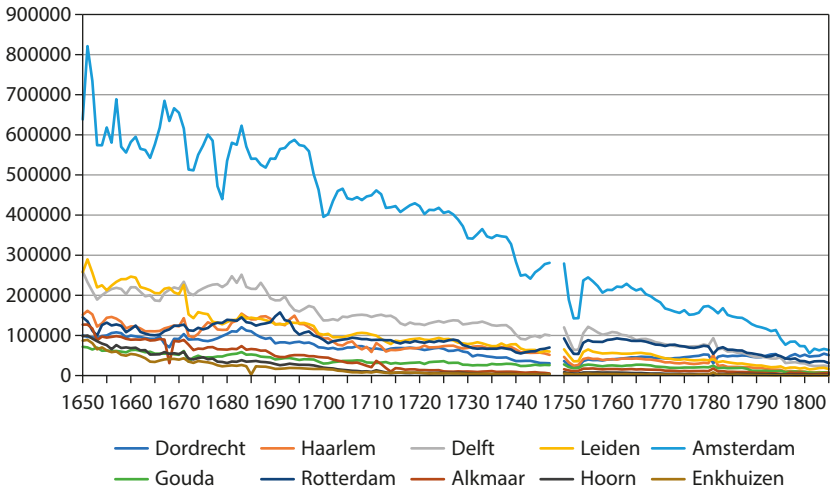
Figure 1 Holland: Beer excise tax revenue (guilders)

Source: R. Liesker and Wantje Fritschy, *Gewestelijke financiën ten tijde van de Republiek der Verenigde Nederlanden, Deel IV Holland (1572-1795)* (*The Hague 2004*) 246-251.

of production or consumption, making the tax receipts even harder to interpret. From the beginning the provincial tax in Holland was, as with civic taxes, farmed out, so the government records report what the successful bidders at the thrice-yearly auctions agreed to pay for the right to collect the tax. With any tax records there are problems with reliability because of evasion, the degree and sources being all but impossible to quantify. In the Dutch Republic methods of administration minimized avoidance of payment. The tax receipts of Holland do not show the exact level of beer production or consumption because of the various taxes that fell on beer and the different types drunk, as well as the changing rates. There is, however, every reason to believe that they do reflect the general trends in and state of the Dutch industry, and they certainly give a direct indication of the fiscal problem the government faced.¹⁵

Despite some signs of relative success in port towns, the decline in government income from beer taxes generally occurred throughout the province. In most of the towns for which data are available in absolute numbers, the decline was small. Amsterdam was the exception. The

¹⁵ Tax returns and production figures from a number of towns confirm the general trend toward a fall in beer production and consumption, see: Unger, *History of brewing*, 233-244.

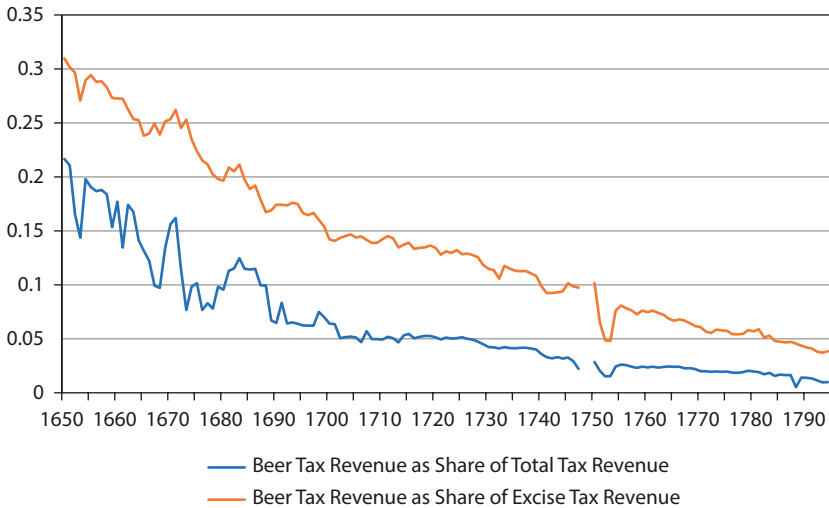
Figure 2 Holland: Beer excise taxes in ten towns 1650-1805 (guilders)

Source: National Archives, The Hague, *Financien van Holland*, no 3.01.29, inventory no 826.

proportion of payments among ten towns did not change much over the entire period. The Amsterdam share rose from about 1660 to the 1730s and only fell below a third in the last days of the eighteenth century. A slightly higher level of payments in Dordrecht and Rotterdam helped to lower the share of Amsterdam after mid-century. Even so, considerable alcohol consumption continued in Amsterdam. In 1613 the city had 518 alehouses or one for every 200 inhabitants. Though the total number went down over time, there was still a pub for every 234 inhabitants in 1800. England was not far behind with, in 1631, about one drinking establishment for every 187 people. At the same rate, Holland would have had over 10,500 public bars.¹⁶

In Holland average revenue from beer excises fell, in current (non-bank) guilders, from 2,105,997 in the 1650s to 454,256 in the 1780s, 22 percent of what it was in the earlier years. That meant that the province got on average 17 percent of its total revenue from beer taxes in the 1650s, while in the 1780s the share was down to just 2 percent. The shrinking proportion was a result of the dramatic drop in beer tax returns but also of the rise in total Holland tax revenue, with the average, in current guilders, rising 2,6 times over the same period. From 1620

16 Simon Schama, *The embarrassment of riches. An interpretation of Dutch culture in the Golden Age*. (New York 1987) 191; Richard J. Yntema, *The brewing industry in Holland, 1300-1800. A study in industrial development* (Doctoral dissertation in history; University of Chicago 1992) 88.

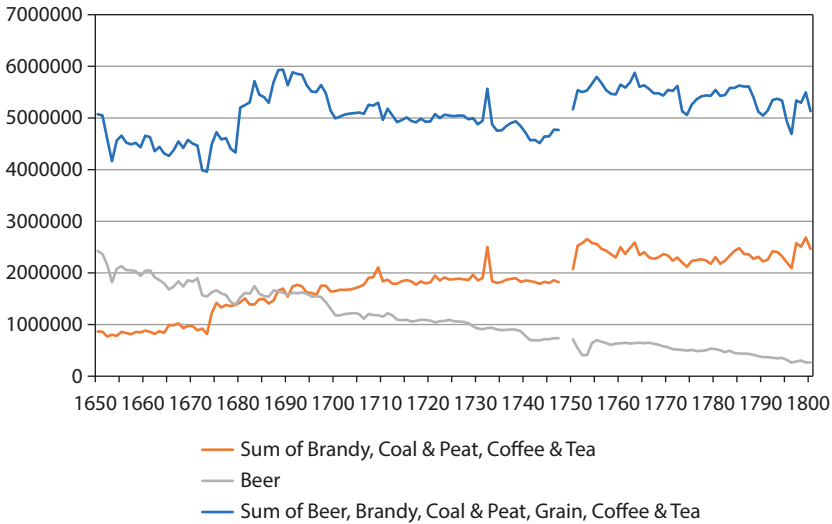
Figure 3 Holland: Beer tax as share of total and of excise tax revenues

Source R. Liesker and Wantje Fritschy, *Gewestelijke financiën ten tijde van de Republiek der Verenigde Nederlanden, Deel IV Holland (1572-1795) (The Hague 2004) 153-156, 246-251.*

to 1665 there was, if anything, a small decline in GDP and then some slow recovery, of about 0,04 percent per year on average to 1805. Per person incomes were all but stagnant from the mid-sixteenth century through to the end of the eighteenth.¹⁷ In those years while growth sharply slackened government expenditures rose. The Republic was left to shoulder a considerable debt throughout the eighteenth century with little if any increase in the tax base.

The decline in the share of Holland's total revenue from taxing beer fluctuated wildly from 1650 to the 1690s, more reflecting changes in total tax revenues brought on by the need to fight wars than by changes in beer sales. Through the eighteenth century the downward trend in the share was more consistent. The anomalous temporary sharp drop at mid-century resulted from a temporary change in the tax rate. Holland brewers, facing a considerable increase in 1749, argued that the higher levy would destroy them. In 1751 the government agreed to a re-

17 Growth may have been faster because of unrecorded increases in returns from overseas investments. Jan Luiten van Zanden and Bas van Leeuwen, 'Persistent but not consistent. The growth of national income in Holland 1347-1807', *Explorations in Economic History* 49 (2012) 119-130, 123-126; Jan Luiten van Zanden, 'The Dutch economy in the very long run – Growth in production, energy consumption and capital in Holland (1500-1805) and the Netherlands (1805-1910)', in: Adam Szirmai, Bart van Ark and Dirk Pilat (eds.), *Explaining economic growth. Essays in honour of Angus Maddison* (Amsterdam/ New York 1993) 267-283, 270.

Figure 4 Holland: Combinations of excise tax revenue (guilders)

Source R. Liesker and Wantje Fritschy, *Gewestelijke financiën ten tijde van de Republiek der Verenigde Nederlanden, Deel IV Holland (1572-1795) (The Hague 2004) 246-251.*

duction of approximately 50 percent. Revenue fell as much as the tax. Beer consumption levels were not sensitive to price or at least to levels of taxation, not unexpected for a good of low price elasticity. Just three years later the government restored the tax to its earlier level. As a share of just excise tax income, the decline in the contribution from beer was more linear, with the pace of the fall slackening in the 1690s but then sustained at around the same rate through the following century. There was a drop from the failed experiment with lowering the beer tax in 1751, but the trend was quickly restored.¹⁸

While the contribution of the beer excise to total tax receipts declined, the gross income of the province of Holland rose. Over the long term, then, other sources of revenue must have increased.¹⁹ Higher income from excise taxes on grain, peat, and coal, as well as on coffee and tea, compensated in large part for the shortfall in beer tax revenue. Sharp jumps in tax income from both grain and peat with coal in 1680 and 1674, respectively, and with grain again in 1750, increases which were sustained, made a considerable contribution to filling the gap. The

18 Liesker and Fritschy, *Gewestelijke financiën*, 306-307; Unger, *History of brewing*, 317-323.

19 The income of the United Netherlands remained highly stable during its life (1579-1795). 't Hart, 'The United Provinces', 317; 't Hart, 'The merits of a financial revolution', 27-30.

tax on coffee, tea, and chocolate showed long-term growth from its inception but remained at a low level. It made a contribution, though not on the order of the growth from the other two taxes. The sum of taxes on brandy, coal with peat, and coffee with tea rose steadily through the period, even while the income from the beer tax was dropping consistently. The total income from taxes on the drinks, coal with peat, and milled grain taken together was higher in the 1780s and 1790s than it had been, in current guilders, in the 1650s and 1660s.

The rise in revenues from taxes on the other drinks combined with that on heating fuel compensated for something around 60 percent of the fall in beer tax revenue. Surprisingly it was not the rising receipts from the grain tax that filled the gap left by less beer-paying tax. It was a tax on horned beasts with cultivated land that supplied much of the remaining 40 percent of the difference.²⁰ The trend also suggests an increase in meat consumption.

In the years from 1650 to 1800 sharp increases in tax rates were rare. There were considerable rises in excise tax income in different categories that cannot be explained by changes in levies. That is the case with some dramatic fluctuations in the income from the tax on brandy. From 1750 on there was a sharp rise in the income from the tax on distilled products, as well as some significant swings in the seventeenth century, but there are no viable explanations for the changes.²¹

Starting in the middle the eighteenth century, the rise in the tax on distilled spirits accounts for a considerable part of the compensation for the fall in returns from beer. That was, however, not the only way that the tax system captured the shift away from beer to gin.²² Distillers had to use more grain for each litre of gin they made, relative to the amount brewers used for a litre of beer. They needed greater quantities of vegetable matter that yeasts could ferment and so create more alcohol for each litre of their drink. Even though distillers made fewer litres of *genever*, still a portion of the increase in government returns from taxes on grain is attributable to distillers' purchases. Those same distillers needed to boil the alcohol-rich combination they made in order to separate out the strong liquor. After the increase in tax rates on peat

20 Some other taxes – those on salt and soap, for example – were subsumed in that category from 1684 on, which helps to explain the increase in revenue. Liesker and Fritschy, *Gewestelijke financiën*, 321–323.

21 Liesker and Fritschy, *Gewestelijke financiën*, 316, 318–321.

22 The government included the levy on *genever* in the tax on brandy. Pieter Hendrik Engels, *De geschiedenis der belastingen in Nederland, van de vroegste tijden tot op heden mit eenen beknopten inhoud der tegenwoordig in werking zijnde belastingwetten* (Rotterdam 1848) 97–98.

with coal in 1674 and in 1679, the charges were stable but receipts continued to go up. More people burned more coal. Dutch brewers did shift over time to coal, even if early on they were not eager to do so. They did not like the potential for coal fumes to adulterate their beer but they did need a convenient form of thermal energy, especially when peat supplies were interrupted.²³ Distillers showed no reluctance to shift to coal. The imported fuel was always acceptable to them. If brewers made less beer, they used less fuel, and yet the returns to the state from the fuel tax stayed the same or rose, so other consumers, including distillers, made up for the decline in beer-making.

The government shifted the items taxed, adding levies on land and wealth to those on sales and production. The tax base was stagnant after about 1675, so excise taxes, on which the Republic had relied heavily from its foundation, were not going to yield much more.²⁴ In addition, the Netherlands went through a period of de-industrialization in the eighteenth century. Brewing was only one example of the trend. Other European regions closed the technological gap with the Dutch Republic while cost structures shifted, so export markets for Dutch goods were less lucrative. Wealth accumulated in Holland through the seventeenth century boom went to better-paying investments in government debt rather than to industry. Under those circumstances, faced with the high cost of wars and the large debts incurred fighting those wars, the government logically and necessarily altered the targets of taxes.²⁵ Whereas direct levies on land and houses contributed 31 percent to total state income in 1600, by 1790 that figure was 44 percent. Customs and excise taxes then fell from a 61 percent share in 1600, to 57 percent in the years from 1661 to 1667, and then down to 43 percent by 1790. Among the excise taxes there was a shift away from necessities like grain, beer, and salt, which in 1700 had accounted for 83 percent of revenue from all such levies. By 1790 taxes on luxuries such as wine, brandy, tobacco, and coaches had risen enough that the share of excise payments coming from levies on necessities was down to 66 percent. The tax burden per person rose about 40 percent from the 1670s to the 1790s, with a

23 Stadsarchief Amsterdam, 366/55,6 Archief van de Brouwerscollege Maten, Vaten, Steenkool, Hop en Gist, #1717 Stukken betreffende het stoken van steenkool, Resolutiën, later notulen, 1674-1789.

24 Fritschy, 't Hart and Horlings. 'Long-term trends', 46-47.

25 On the rise in debt and efforts to repay it, Wantje Fritschy and René van der Voort, 'From fragmentation to unification. Public finance, 1700-1914', in: 't Hart, Jonker and Van Zanden (eds), *A financial history of the Netherlands*, 64-93, 68-74.

shift from regressive excise taxes to more progressive wealth taxes, a process that began in the 1680s.²⁶

It was not just the fall in beer production which led to the shift in the sources of taxes in the eighteenth-century Netherlands. To ensure state finances remained sound, the government reacted to changes in consumption patterns and in the distribution of wealth. The disappearance of beer did influence the change, but it was one reason among others for adjustments. A much greater force in the fiscal history of the Dutch Republic was the massive debt incurred from fighting wars. Debt interest payments consumed large quantities of tax revenue in Holland.²⁷ The tax burden per person was higher in the eighteenth than in the seventeenth century. The shift in the structure of taxation addressed to some degree the changes in the character of the economy as a whole and the changes in the potential sources of state income.

Revenues from beer taxes in England

The revenues of most European states grew sharply in the seventeenth and eighteenth centuries. The most striking rises were in the Dutch Republic and England. In the latter, revenue increases came from population growth, increases in prices, rising real GDP per person, and the ability of the government to impose taxes on production and sale of goods in a consistent and effective way. The Netherlands was especially good at extracting a rising share of personal income, something that Britain made formidable advances in imitating over time.²⁸ Total English tax income and that of Holland were similar through much of the second half of the seventeenth century. It was in the years of the War of the Spanish Succession when England began to move ahead and at an increasing pace after the 1760s. In the 1670s English government income was 2.7 times that of the 1620s, by the 1720s eight times, and in the 1770s eleven times.

Overall economic growth contributed to the increase, but more important was the rising share of GDP appropriated by the English state,

26 The figures are for the entire Dutch Republic but are very much the same for Holland. Fritschy and Van der Voort, 'From fragmentation to unification', 78; 't Hart, 'United Provinces' 310-311, 319-321; Fritschy, 't Hart and Horlings. 'Long-term trends', 55-61.

27 Van Zanden and Van Riel, *Structures of inheritance*, 36.

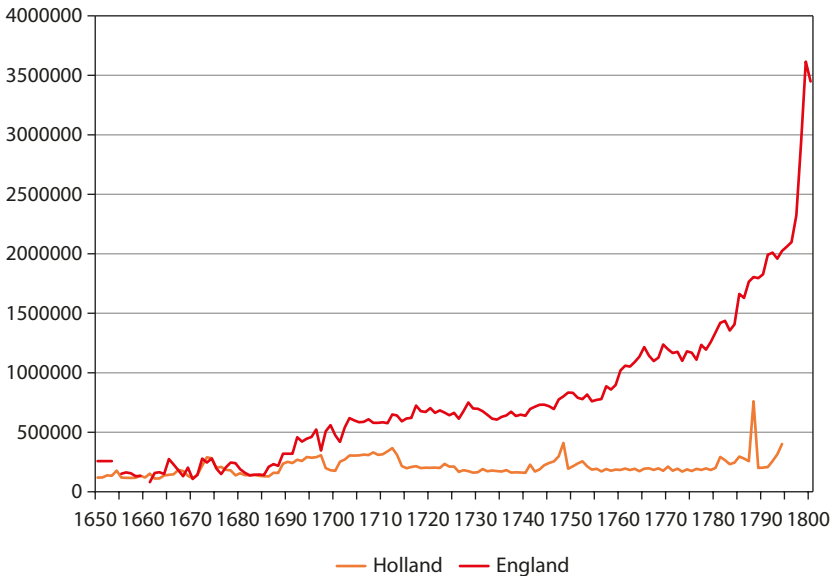
28 K. Kivanç Karaman and Şevket Pamuk, 'Ottoman state finances in European perspective, 1500-1914', *Journal of Economic History* 70 (2010) 593-628, 610-615; Ashworth, *Customs and excise*, 48-49.



Illustration 2 Part of diptych, on the left was Gin Lane, a site of debauchery, degradation, and disorder while on the right was Beer Street where people are hard-working, well fed, there is no need for a pawn shop and good order prevails. In short, beer consumption was better for society than drinking gin. William Hogarth, *Beer Street*, 1751 (source: Royal Academy of Arts, London. <https://www.royalacademy.org.uk/art-artists/work-of-art/beer-street-1>.)

which climbed from between three and 4 percent in 1688 to 9 percent as early as 1715. A quadrupling of import duties in those years, a doubling of the beer excise in 1695, and a duty on imported malt all contributed significantly to the sharp rise in revenues.²⁹ The wars King

29 Patrick K. O'Brien, 'Inseparable connections. Trade, economy, fiscal state, and the expansion of Empire, 1688-1815', in: Alaine M. Low and P.J. Marshall (eds.), *The eighteenth century. The Oxford history of the British Empire* (Oxford/ New York 1988) 54-77, 64; Patrick K. O'Brien and Philip A. Hunt, 'England,

Figure 5 Holland and England: Total tax income (kilograms of silver)

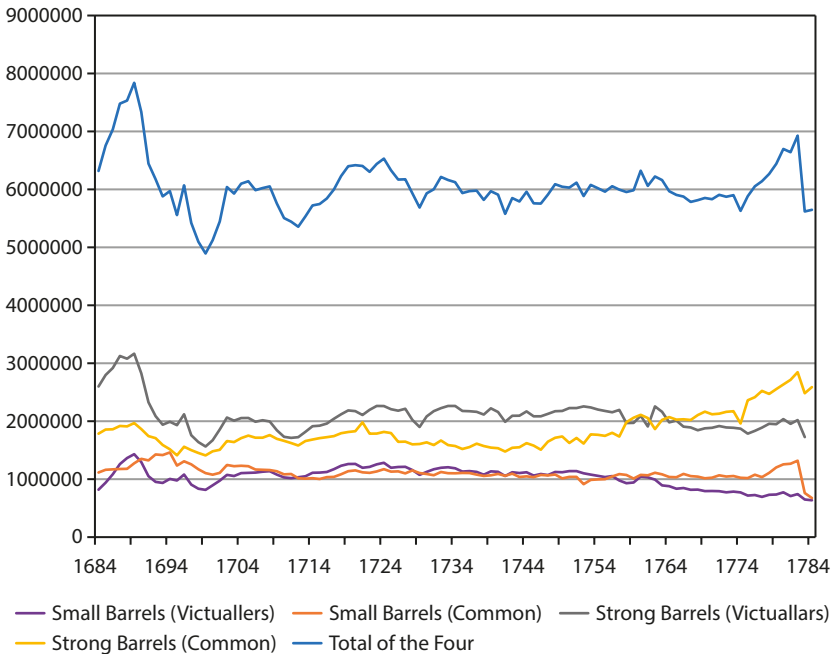
Source [http://resources.huygens.knaw.nl/gewestelijkefinancien/Spreadsheets,4RevProvGnrItAdm,H-def,PublicrevenueHolland,1575-1794\(definitiveversion\)](http://resources.huygens.knaw.nl/gewestelijkefinancien/Spreadsheets,4RevProvGnrItAdm,H-def,PublicrevenueHolland,1575-1794(definitiveversion).). Accessed 20 November 2020); Catherine Casson, 'The European State Finance Database',

<https://www.esfdb.org/Database.aspx> Data prepared on English revenues, 1485-1815, by P. K. O'Brien and P. A. Hunt. <https://www.esfdb.org/table.aspx?resourceid=11459>, <https://www.esfdb.org/table.aspx?resourceid=11402>, <https://www.esfdb.org/table.aspx?resourceid=11403>, <https://www.esfdb.org/table.aspx?resourceid=11228>, <https://www.esfdb.org/table.aspx?resourceid=11229>. Accessed 20 November 2020.

William III waged against Louis XIV's France after 1688 were expensive, and the government found in excise taxes and import duties the sources of income to finance the military effort. By the late eighteenth century, 80 percent of government revenue came from indirect taxes, part of a long-term trend as expenditure grew. Yet the government, despite repeated efforts, could not find a way to tax income and wealth in any uniform way. There was nothing like the shift toward wealth taxes that occurred in the contemporaneous Netherlands.³⁰ In England opposition from the landed interest, heavily represented in Parliament, made the

1485-1815', in: Bonney (ed.) *The rise of the fiscal state in Europe*, 53-100, 57-60; Patrick K. O'Brien, 'The political economy of British taxation, 1660-1815', *ECHR* 41 (1988) 1-32, 3-11; Ashworth, *Customs and excise*, 40.

30 O'Brien and Hunt, 'England, 1485-1815', 61-65, 84-88; Patrick K. O'Brien, and Philip Hunt, 'Excises and the rise of the fiscal state in England, 1586-1688', in: W.M. Ormrod, Margaret Bonney and Richard Bonney (eds.), *Crises, revolutions and self-sustained growth. Essays in European fiscal history, 1130-1830* (Stamford 1999) 198-223, 203-209, 213-215; Richard Bonney, 'Revenues', in: Bonney (ed.) *Economic systems and state finance*, 423-505, 501-503.

Figure 6 England: Barrels of beer paying excise

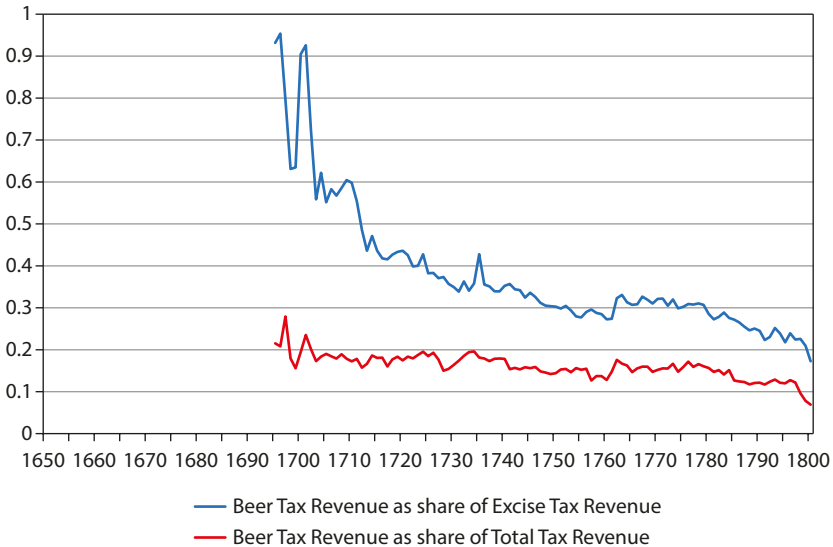
Source D'Maris Coffman, 'Excise revenues in England, 1683-1825, excisable liquors – beer and ale (National Archives, CUST 145/4-CUST 45/13)'; <https://www.esfdb.org/table.aspx?resourceid=12079>. 20 November 2020.

turn to levies on wealth halting and inconsistent. From 1788 to 1792 revenue from assessed taxes and land taxes produced only 22 percent of all revenue, while the contribution from articles of general consumption, including beer, was 45 percent. The trend toward reliance on excise and away from import duties was accelerated by the policy of the Pitt government in the 1780s, the excise being easier to collect.³¹ That meant taxes fell more on necessities, items of regular consumption, and that meant beer.

Following beer production in seventeenth- and eighteenth-century England is difficult because of the late start of surviving records. The complex combination of rates, along with the poor quality of administration of the beer excise in the years after 1688, followed by effective reform in the first two decades of the eighteenth century, created considerable volatility in returns before about 1715.³² In addition, changes

31 Ashworth, *Customs and excise*, 333, 350-351; O'Brien and Hunt, 'England, 1485-1815', 82-88.

32 John R Krenzke, 'Change is brewing. The industrialization of the London beer-brewing trade, 1400-1750. Paper 1276 (Doctoral dissertation in History; Loyola University of Chicago 2014) <http://>

Figure 7 England: Beer tax revenue as share of total and of excise tax revenues

Source D'Maris Coffman, 'Excise revenues in England, 1683-1825, excisable liquors – beer and ale (National Archives, CUST 145/4-CUST 45/13)'; <https://www.esfdb.org/table.aspx?resourceid=12079>. Accessed 20 November 2020. D'Maris Coffman, 'European state finance database, excise revenues in England, 1683-1825, main excise data – Revenue and charges (National Archives, CUST 145/4-CUST 45/13)'; <https://www.esfdb.org/table.aspx?resourceid=12081>. Accessed 20 November 2020.

in tax rates of the early 1780s make the figures after that date not truly comparable to the years from 1684 to 1784.

In England beer tax revenues fell as a share of excise tax revenue and of total tax revenue from the last decade of the seventeenth century. Those levels were always higher than Dutch ones but showed the same tendency to fall behind in shouldering their share of expenditures. In the Dutch case it was much more the decline in beer output that caused the decline, while in England it was the failure of beer tax revenues to keep pace with the growth in the scale of state tax collection.

In 1695, when the system of excise taxes was just taking shape, beer was about the only good that produced excise returns for the Exchequer. Over time an expanding array of levies on other industrial products joined beer taxes. By 1712 those other goods were producing enough that the share of revenue from beer taxes was under half the total. By the 1790s it was a quarter. The fall was sustained but still nothing on the

ecommons.luc.edu/luc_diss/1276 Accessed 17 May 2021, 192-205; Idem, 'Resistance by the pint. How London brewers shaped the excise and created London's favorite beer', *Journal of Early Modern History* 23 (2019) 499-518, 500-507.

order of the precipitous Dutch fall in the same period from one eighth to one thirty-third.

For total tax income the share from beer in England varied from a fifth to a sixth through the first half of the eighteenth century. In the 1750s the trend turned downward. One reason was pressure from gin sales. Until the 1740s rates of excise on beer and gin tended to move together. Even with that government action, Londoners were drinking some 4,7 times as much gin in 1750 as in 1700. The growth in England overall was even greater: 4,9 times. Absolute levels of beer consumption of the 1720s only recovered after 1758, the more than 30-year dip coinciding with the greatest enthusiasm for drinking gin. Recovery also coincided with greater government restrictions on producing and selling spirits in the 1750s.³³ Even with the attack from spirits, beer excises still contributed an eighth of all revenues at the beginning of the wars against Revolutionary France, a time when total expenditure was rising sharply.

Taxation meant regulation to assure the government received all the tax revenue it was due. Holland brewers faced more stringent government control than did those in England. Civic institutions in the Netherlands long enforced rules on what brewers could do when and with what equipment and at what scale and with what grains and how frequently, among other things. Starting in the second half of the thirteenth century, England did regulate brewing. The Assize of Bread and Ale of 1267 set standards for the kingdom with fines, imposed and collected locally, for violations of the rules. Though not a direct tax on beer sales, the frequency with which village residents, overwhelmingly women, were cited for violations made it function like a levy on brewing even though the charges lacked consistency. In the seventeenth century, surveillance of brewing increased.³⁴ In 1637 the king required all sellers of beer in alehouses and taverns to buy what they sold from common brewers. That was so the crown could monitor and, therefore, tax beer more easily. It was the start of a system of national regulation of the trade and, with it, closer oversight from state tax assessors. In 1653 the government shifted from taxing consumption to production, making the levy less obvious to the drinker while reducing evasion.

33 J.A. Chartres, 'Food consumption and internal trade', in: A.L. Beier and Roger Finlay (eds.), *London 1500-1700. The making of the metropolis* (London/ New York 1986) 168-196, 175; Peter Mathias, *The brewing industry in England 1700-1830* (Cambridge 1959) 22; John V.C. Nye, *War, wine, and taxes. The political economy of Anglo-French trade, 1689-1900* (Princeton 2007) 41-43.

34 Judith M. Bennett, *Ale, beer and brewers in England. Women's work in a changing world, 1300-1600* (New York 1996) 4, 15; Peter Clark, *The English alehouse. A social history 1200-1830* (London 1983) 28.



Illustration 3 Next to the glass of beer is a crock, presumably containing more beer when a refill was needed. Playing cards and smoking materials are common companions in seventeenth century Dutch paintings with beer in them. Frans van Mieris (1635-1681), *A soldier smoking a pipe*, c. 1657/1658 (source: National Gallery of Art, 2016.10.1. <https://www.nga.gov/collection/art-object-page.205573.html>.)

From the late seventeenth century brewing stagnated or declined in much of England, but some London brewers thrived, especially those well capitalized. They took over an increasing share of a local market that was growing with the rising population of the capital. By the 1750s London brewers produced about one fourth of all strong beer made in England and Wales, and people in the metropolis may have been down-

ing over 2,5 times as much as other Englishmen.³⁵ The relative centralization of beer production in large London breweries made monitoring the industry, and collection of taxes due, easier.³⁶ Even so, it is doubtful that the surveillance of English excise tax officers ever equalled that of tax farmers and the local receivers of revenues due in Holland. While there had long been breweries in many Dutch towns and villages, over the course of the eighteenth century their number declined, and the tendency toward concentration made it even easier to know who owed what and to be sure they paid the sums owed. Evasion of import duties posed problems for the English government in the eighteenth century. Evasion of excise did as well, though the volume of the product and the scale of operations made it easier to keep track of beer output. The constant monitoring of brewing in both England and in Holland, then, at least indicates that enforcement was consistent and that tax records are reliable indicators of how the two industries fared.

Holland and England compared

Government policies in both England and Holland had only limited effects on the performance of brewing. Shifting tastes and competing drinks along with rising costs were problems that had a much greater impact than taxation rates. The failed experiment in Holland from 1751 to 1754 proved that lowering the rates of beer tax, and so lowering the price of the drink to the consumer, did not increase consumption. Government fiscal ambitions reached into almost all parts of the economy, and still some sectors thrived and few met the fate of brewing. Comparison of the patterns of change in the tax receipts does throw light on the larger questions of developments in the two economies. It makes clear that the decline in beer consumption in Holland is not the explanation for the political and military and naval problems of the Dutch Republic in the eighteenth century, nor does the endurance of beer consumption absolutely, though not per person, explain the political and military success of England.

The reactions of the two governments to what happened to beer excise tax revenue was different. In the Netherlands the state more or less kept the tax burden on beer per barrel about the same and

35 Chartres, 'Food consumption', 175; Mathias, *Brewing industry*, 26; Peter Mathias, 'Agriculture and the brewing and distilling industries in the eighteenth century', *EcHR* 5 (1952) 249-257, 250, n.1.

36 Ashworth, *Customs and excise*, 49, 101, 213.

sought differing ways to tax the brewing industry, while raising taxes on other drinks and turning increasingly to taxes on wealth, both financial and landed. In Holland from 1572 to 1713 real tax revenues increased about eighteen times, while national income increased some eleven times. The share of income captured by the state increased. In England in the much shorter period from 1688 to 1715 revenues increased about fifteen times, and national income increased some five times.³⁷ For England the years were ones of sudden rapid growth in military expenditure, and yet it was the Netherlands over the longer period that had similar success in expanding the contributions the population made to state activity. Through the eighteenth century, England would follow the pattern established in the Dutch Republic. If, indeed, from 1670 to 1810 English national income tripled, while state tax income rose more than sixteen times, obviously the government there learned well from the Dutch example.³⁸ What it did not do was spread the burden more broadly. England found more room to push up taxes on consumers, at least domestically. In some colonies in North America, on the other hand, efforts at the same time to increase tax revenues to finance wars ultimately led to a successful revolution.

Flexibility was critical to success among states financing greater military and naval efforts in the eighteenth century.³⁹ The decline in the brewing industry curtailed flexibility in the Netherlands. Shrinking beer production was only one part of the fiscal adversity of the Dutch Republic. The stability of beer production was only one part of fiscal good fortune in England. The difference in the patterns in the two makes clear that larger issues of the general development in the economy, in trade and diversification of industry, and in population growth had more prominence in the state of government finances than beer production. The fiscal-military state went and got tax income wherever it could within existing political and economic constraints. The main difference between various states in terms of access to public credit resided in the uneven possibilities they had of accompanying public debt with an expansion of the tax base.⁴⁰

Because of long-standing reliance on beer taxes, the pattern of consumption of the drink was important to the fiscal condition of the governments of the United Netherlands and the United Kingdom. By the

37 Fritschy, 't Hart and Horlings, 'Long-term trends', 66.

38 Ashworth, *Customs and excise*, 48.

39 Sánchez, 'The triumph', 34-40.

40 *Ibid*, 43.

1680s both relied heavily on the excises on beer, but first Holland and then England found the importance of those revenues declined. There were two reasons. Beer consumption fell per person. In England the decline was less dramatic than in Holland where competition from domestically produced and imported exotic drinks took a greater toll. The other was that success with taxing the commonly consumed beverage inspired both governments to extend the scope of excise taxes to other goods. Goods in common use, necessary consumption goods, were the logical and most lucrative targets. Both jurisdictions found ways to tax the drinks competing with beer so that alcohol consumption continued to make a significant contribution to fiscal health. In England the government over time moved toward increasing excises, even shifting from tariffs by the late eighteenth century to concentrate on retail purchases of common commodities. Because population and incomes were growing there, tax receipts rose continually and at an increasing pace. Holland did not enjoy either of those advantages.

Constrained by the cost of servicing the considerable debt built up in the wars of the seventeenth and first years of the eighteenth century, the Dutch Republic was left with two options. First, the state shifted more of the tax burden to the wealthy. Total government income stayed much the same because the authorities moved more of the burden of taxation to other consumption goods and to levies on wealth. Second, they reduced expenditure. The latter forced a withdrawal from international conflicts, opening the door for England to take over a leading political role thanks to the success of the British Army and the Royal Navy.

In the competition among western European states, the Netherlands fell behind in raising state income almost precisely at the time brewing declined. The temptation is to overstate the connection between the two trends. The extent of the fall in the returns from beer taxes, as a share of the total taken in both, did not lead directly to relative performance on the international stage. The contraction of the brewing industry belonged to the history of the changing character of the Dutch economy in the eighteenth century, of the shift from industry to services, while maintaining high income per person. The shift in taxing patterns in Holland, however, was a reaction to the general changes in the economy, ones spurred along first and most dramatically by the failure of beer to retain its place on the tables of Dutch households. For England there was not the pressure that existed for the Exchequer that plagued the finances of Holland. At the same time the shift away from taxing beer to levying excises more broadly was successful because of

the general state of the English economy. Innovation and concentration of industry in London, where brewers reaped scale economies, made it possible for English tax collectors to keep on earning substantial rewards from beer excises. The role of beer in the finances of the two maritime states was just one factor in the general changes in population, production, international trade, and the structure of the economies.

About the author

Richard W. Unger (1942), trained in economic history, taught courses in the Middle Ages and other periods of European history at the University of British Columbia, where he is now professor emeritus. He has published widely on the history of Dutch and European shipbuilding from the Middle Ages to the end of the age of sail, on the history of the brewing industry in the Netherlands and in Europe from the early Middle Ages to the nineteenth century, on the history of medieval and Renaissance cartography, and most recently on levels of energy consumption in Canada in the last two centuries.

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