

**Re-Examining the Role of Exports in
The Economy of Colonial North America:
Evidence from the Middle Colonies and Lower South**

Peter C. Mancall
USC

Joshua L. Rosenbloom
University of Kansas and NBER

Thomas Weiss
University of Kansas and NBER

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Almost the only data available for income estimates are hard external trade figures and estimates of population. Most conceivable methods of estimating income therefore are likely to make the internal production of goods and services vary with the population and leave external trade as the only independent variable besides population, hence the one that has to bear the full burden of accounting for any changes in per capita income.

--Jacob Price, "The Transatlantic Economy", p. 19

Most interpretations of colonial economic growth lean heavily on the performance of international exports. Whether one looks at the literature about the colonies taken as a whole, or for any of the major regions (except New England), exports loom large as the primary engine of economic growth. According to the dominant theme found in textbooks as well as scholarly works, enterprising Europeans arrived in North America and through hard work and abundant land created a prosperous and burgeoning economy based on the export of agricultural staples.

The key feature of the so-called staple thesis is the argument that the growth of external demand for colonial exports was a crucial factor determining the pace colonial economic growth.¹ Summarizing the literature, McCusker and Menard (1984) noted that "the idea that the export sector provides a useful point of departure for understanding the

¹ Shepherd and Walton (1972, pp. 20-21), for example, stated that "demand plays a crucial role in our analysis of colonial development...[by raising] the price of natural-resource intensive goods, thus attracting mobile factors to the natural resource-abundant colonies. This effect, in conjunction with learning by doing and the reduction of risks which lowered production costs, expanded markets for colonial exports and sustained colonial development."

economy of early British America is not new to these pages. That the staples thesis fits neatly with many facts of the case and that it is valuable as an organizational device have long been recognized. But the role of trade transcended even the suggestions of that model” (p. 71). Although they do not explicitly articulate the nature of the linkage between exports and the colonial economy it appears that they have in mind the sort of accelerator model spelled out by Douglass North in his analysis of American economic growth in period after 1790.²

Marc Egnal (1975, p. 199) opened the door to the possibility that factors other than exports influenced economic growth, having argued that per capita income increased between 1720 and 1775 because new techniques increased productivity, the terms of trade improved, and capital investment increased, but exports were nonetheless the primary piece of evidence that he used to estimate the actual rate of growth. And more recently, even while acknowledging the limitations of the ‘staple thesis,’ Egnal (1998, pp. 4-5) nonetheless reaffirmed the usefulness of the staples thesis by arguing that “...the export of primary products was the engine of growth for the colonial economy...[and that] the nature of these exports shaped the pattern of regional development.”

Yet for all the interpretive weight that has been placed on the export sector, our understanding of export performance in the colonial period remains relatively incomplete. It is true that there is considerably more quantitative evidence relating to foreign trade and exports than about any other economic activity in the eighteenth century. But most past scholarship has relied on a rather impressionistic and incomplete

² According to North (1961, p. 388), economic prosperity, by which he meant primarily economic growth, derived from: the importance of the foreign sector in the economy; the expansion of income in that sector that resulted from an increase in exports, the expansion of the domestic economy induced by that increased income from exports; and an increase in imports for consumption at very favorable terms of trade.

analysis of trade performance focusing on the rates of growth of one or two prominent commodities, colonial trade with Great Britain, or other fragmentary indicators of trading patterns. Beyond this unsystematic approach to the data, previous work has often failed to set the quantitative measures used in the context of the overall growth of the size of the colonial economy and has thus failed to provide an adequate context to interpret the growth of exports.

In this paper we seek to advance the discussion by presenting new and more comprehensive measures of exports performance for two colonial regions: the Middle Colonies (New York, New Jersey, Pennsylvania, and Delaware), and the Lower South (South Carolina, Georgia, and the North Carolina).³ By combining the available data for these regions in a coherent and explicit theoretical framework we are able to construct time series of total export volumes from near the beginning of the eighteenth century until American independence.

The results of our investigation challenge the relevance of the staples thesis as an explanatory framework for analyzing colonial economic growth. In both regions, exports grew no faster than, and at some points lagged behind, population. Such a finding appears to be at odds with the central proposition of the staples thesis—that the expansion of foreign demand shaped colonial economic growth. We do not wish to dispute the importance of exports as a source of foreign earnings that enabled colonists to afford imported luxuries and manufactured goods that they could not produce themselves. And it may still be the case that forward and backward linkages played a role in the

³ We have collected and analyzed these export data as part of our efforts to develop better estimates of economic growth in these colonial regions. Our ultimate goal is to construct estimates of exports and of aggregate economic performance for all of the colonial regions that became the United States.

development of increasingly sophisticated colonial economic institutions. But it appears that the importance of export earnings was stable or diminishing over the course of the eighteenth century, a fact that suggests that the central feature of the colonial economy was its extensive growth, a conclusion that implies that more weight should be given to Malthusian forces of abundant resources and scarce labor.⁴

Data on Colonial American Exports

Virtually all of the quantitative evidence underlying discussions of the commodity exports of the British colonies that became the United States are derived from data collected by British officials. During the eighteenth century “naval officers” in American ports compiled quarterly reports of all ships clearing and entering colonial ports along with details of the cargoes they carried. While a large number of these naval officers lists have been preserved, their coverage for most ports is spotty and incomplete.⁵

British customs inspectors compiled similar records of all arrivals in English and Welsh ports beginning in 1696 and Scottish ports beginning in 1740. These data were compiled at the time into annual ledgers listing the value of imports arriving from and

⁴ See Smith (1980) for further discussion of the merits of the Malthusian perspective. Although McCusker and Menard (1984) place much more emphasis on the staple export model, they do nonetheless acknowledge the relevance of Malthusian forces (ch. 1).

⁵ McCusker (2006) provides a good introduction to these data, but see also Price (1984). Louis Harper undertook the collection and systematic analysis of the naval officers list data, but much of this work remains only partially accessible in the Harper archives located at the University of California, Davis. Records for Charleston, in the Lower South, are relatively complete and have formed the basis for Clowse (1971) analysis of trade from this port. On the other hands, no data have survived for Philadelphia, apparently because the records were lost in a fire at the British Public Records Office during the nineteenth century. Data for other ports are available only for scattered years, or for only one or two quarters in other years, making it difficult to construct consistent and complete records of colonial exports. See Shepherd and Walton (1972, p. 167-75) for a compilation of some of these data and a discussion of what can be learned from them.

exports leaving for different trading areas. Rather than using current prices, however, the compilers of these ledgers used a set of “official values” that reflected prices near the beginning of the eighteenth century. As a result the series is best interpreted as a fixed-price index of the volume of trade (McCusker 2006, pp. 641-43).

Table 1 and Figure 1 summarize the volume of British imports from mainland North American colonies and regions. These series provide a convenient time-series of colonial exports to Britain, but do not, of course, provide evidence about colonial exports to other areas, a limitation which is especially important for analyzing the trade of the Middle Colonies and New England which sent only a small fraction of their exports to British ports.

The extent of this limitation is made clear by data collected in the so-called American Inspector General’s Ledgers for 1768-1772. These records, which were compiled by the American Board of Customs recorded the quantities of all commodities legally exported from and imported into 42 colonial port districts throughout the British North American Colonies from January 5, 1768 through January 5, 1772. According to Shepherd and Walton (1972, p. 204) these “records...represent the only period for which we have data that purport to be a complete coverage of colonial overseas trade.” Shepherd (1969) and Shepherd and Walton (1972) have provided extensive analysis of these data including compilation of estimates of the value of different commodities exported from different ports and the aggregation of these data into broader geographic regions.

Table 2 summarizes data drawn from there work showing the breakdown of Colonial exports from different regions between shipments bound for Great Britain and

those bound for other destinations. As this table makes clear, the bulk of southern exports were shipped to Britain, though a large fraction of these shipments were then re-exported to other European destinations. In contrast, however, shipments from the Middle Colonies and New England to Great Britain made up only a small fraction of total exports from these regions.

The bottom panel of Table 2 reports the value per capita and per free person of exports from each region, illustrating the greater importance of exports to the economies of Chesapeake and Lower South. The regional differences are especially pronounced when expressed per free person, suggesting the role of slavery in raising the standard of living of the free population in the southern colonies.

Exports from the Middle Colonies

Although, as Table 2 make clear, the Middle Colonies' exports were less valuable than such southern staples as tobacco, rice and indigo, the region's fertile soil and abundant water supported a productive agricultural sector that generated surpluses for export that figured prominently in the region's economy. From the outset, the region's founders had assumed that maritime commerce was essential to provide goods that could not be produced locally, and actively pursued the search for profitable exports (Jensen 1963, p. 2; McCusker and Menard 1984, p. 190). Over time they found markets for the region's grain and animal products in the West Indies, Southern Europe, and other North American colonies.

Merchants in Philadelphia and New York actively sought markets for these products and took an increasingly active role in organizing regional trading patterns. As the century progressed regional markets expanded in response to growing demand in for grain in Southern Europe and Great Britain, and merchants located in Philadelphia and New York expanded their role in managing regional trade, forging a complex and dynamic mercantile sector (McCusker and Menard 1984, pp. 194-97).

Although the Middle Colonies produced and exported a diverse array of products, grain production dominated the region's exports. Table 3, derived from data in the American Inspector General's Reports lists the leading exports of the region's two dominant colonies—Pennsylvania and New York—in the years 1768-1772. Bread and flour together with wheat made up nearly two-thirds of the value of regional exports, but Indian corn, flaxseed, and beef and pork also made a significant contribution to regional exports. In addition to agricultural products the region also exported significant amounts of manufactures, including pig and bar iron as well as a variety of wood products, such as staves, headings and shingles. Together the ten enumerated products account for close to 90 percent of all exports from these two colonies.

Table 4 provides a more detailed picture of the sources and destinations of regional exports in the years 1768-1772. The dominance of New York and Pennsylvania as the sources of regional exports is immediately evident in this table, which shows that together they accounted for more than 96 percent of the value of regional exports. It is also apparent that the region sent relatively few exports Great Britain. By contrast, more than three quarters of regional exports went either to the West Indies or Southern Europe.

Clearly for these colonies data on exports to Great Britain are likely to provide a poor guide to overall trade.

Despite a wealth of material on the Middle Colonies there has been no comprehensive overview of the region's economic history. A number of studies have explored aspects of Philadelphia's trading relationships, but less work has been done on New York.⁶ Discussions of the extent and growth of regional trade remain sketchy and impressionistic.

Although a number of scholars have been able to piece together data on the quantities of exports of specific commodities from Philadelphia for scattered years, these data are too sparse and inconsistent to allow a reconstruction of the volume of trade earlier in the century. Klopfer's (1936) dissertation assembled data on exports of wheat, flour, bread, and corn for most years after 1760, but before that she was able to obtain only scattered observations for a few years. Lyden (1967) reports data for a few years in the early 1730s, but these are not entirely consistent with those found in Klopfer's work. Shephed and Williamson (1972, p. 170) summarized what can be gleaned about exports of bread and flour from New York from the Naval Officers lists analyzed by Louis Harper. Their tables indicate that with the exception of data for 1733-1735, there are only a few scattered years with usable data.

As a result most of the analysis of trading patterns in the region's major ports have relied instead on information on the tonnage of ships clearing for different

⁶ McCusker and Menard, p. 191, note 4. They did find a number of studies that traced the history of trade through Philadelphia, but reported that the literature on New York's trade was distinctly more limited. Indeed they concluded that Virginia Harrington, *The New York Merchant on the Eve of the Revolution* (New York, 1935) remained the best work on the subject of New York's trade. See p. 192-93.

destinations, which are available for a greater number of years.⁷ Much of this data is summarized in John McCusker's recent compilation of colonial trade statistics in *Historical Statistics of the United States* (2006). But this source does not report data for all the years for which they are available.

In Table 5 we report tonnage clearing Philadelphia and New York in all of the years for which we could find data. As this table makes clear, tonnage data are available for a number of years near the beginning of the century and for a long stretch toward the end of the colonial period. Coverage in the middle years is somewhat more sparse, but there are observations for scattered years. These data illustrate both the rapid growth in the volume of trade from the region and the shifting importance of different trading regions. Trade with the West Indies was the single largest element of ship clearances throughout the period, but its importance was diminishing in both New York and Philadelphia, while coastal trade with other mainland colonies, and shipments to Southern Europe were increasingly important.

Below we describe how we have used these tonnage data in conjunction with evidence about trade patterns at the end of the colonial period and data on Middle Colony exports to Britain to construct a new series of regional exports. We are not, however, the first scholars to make use of these tonnage data (or the closely related data on the numbers of ships entering and clearing) for Middle Colony ports. But all the previous work has used these data in a casual and impressionistic way to sketch patterns of trade. One consequence has been the persistence of different and sometimes contradictory interpretations of regional trade. Nonetheless there seems to be general agreement that with

⁷ See in particular, Jensen (1962), Lyden (1967), McCusker and Menard (1984), Egnal (1998).

the theme that the growth of exports was an important factor regulating the pace of regional economic growth.

In his analysis of Philadelphia's commerce Arthur Jensen (1963, p. 5), noted that total tonnage clearing Philadelphia increased from an annual average of 4,188 tons in the 1720s to 42,808 from 1768 to 1772 to argue that a number of contemporary observations about the rapid growth of Philadelphia's trade, were more than local boosterism and "...can be soundly documented by statistics. James Lyden (1967) subjected tonnage data from the 1720s and 1730s to much more careful analysis, but focused mainly on the shifting sources and destinations of Philadelphia's trade, rather than on the overall growth in the volume of trade, though he did argue (p. 401), that these data support "...the thesis that the period after 1720 was one of very marked economic growth, at least for Pennsylvania."

In their summary of regional economic trends for the Middle Colonies John J. McCusker and Russell R. Menard (1984, pp. 193-97) also relied heavily on tonnage data, using shifts in the relative shares of tonnage bound for different destinations to support illustrate differences in the development of the commercial communities in Philadelphia and other northern ports after 1750. Although they noted the substantial increase in tonnage clearing New York, Boston and Philadelphia after 1750, what they emphasized was that while the majority of the growth in Boston and New York was in coastal trade, much of the increased tonnage clearing Philadelphia was destined for the British Isles or other European ports.

Marc Egnal's (1998) account of economic trends in the northern colonies—encompassing both the Middle Colonies and New England—draws on a broad range of

quantitative indicators. Among these, however, are time series of tonnage clearing for the West Indies and Southern Europe from Philadelphia (p. 49), northern exports to England, and per capita exports of flour from Pennsylvania.

The conclusions drawn by different scholars from these data are surprisingly divergent. Egnal (1998, pp. 47-50) offers a pessimistic assessment of the region's economic fortunes in the first half of the eighteenth century. "Lackluster sales of flour, bread, and other exports [before 1745]," he argued, "slowed northern growth. At the heart of the problem was the downturn in the British West Indies."⁸ In contrast, McCusker and Menard (1984, pp. 204-5) concluded that "the export sector showed significantly more life after 1720, particularly toward the end of the decade. Initially the gains owed little to the West Indian trade, then the largest Philadelphia market... Rather they were achieved in the sale of wheat, flour, and bread to southern Europe and Ireland, and through a strengthening coastal trade. These advances were considerable, and Philadelphia's external commerce, *however measured*, nearly tripled in size between 1720 and 1740."⁹ (McCusker and Menard 1984, p.1204). They go on to argue that export growth continued through the end of the colonial period. In their view the region's lackluster performance before 1720 and more rapid growth thereafter "...seems a clear case of the export sector regulating the performance of the economy as a whole"

⁸ It should be noted that not all of the data Egnal (1998) presents appears consistent with this conclusion. Per capita shipments of flour from Philadelphia did fall between 1728-32 and 1733-42. But tonnage clearing for the West Indies rose relatively steadily from the 1720s forward, dropping only briefly in the mid-1730s.

⁹ Emphasis added. McCusker and Menard do not make clear the basis for these conclusions. The only source cited in this paragraph is for a 1741 quotation from John Reynall concerning the diverse destinations of Philadelphia's exports. Nonetheless, it would appear that their argument rests on a reading of the ship clearance data for the 1720-1739 period, as their conclusions about this period closely mirror those of Lyden (1967).

As these disparate assessments make clear, the lack of a comprehensive and continuous measure of its performance has contributed to a lack of consensus about the influence of trade on the development of the Middle Colonies.

To address this issue we have sought to employ the available data on regional exports to construct a set of estimates of export performance for the region spanning the years from 1700 to 1774. We begin by using data from the American Inspector-General's ledger tabulated by Shepherd (1969) to establish the annual average value of exports in the years 1768-1772 from New York and Philadelphia to each of the five destination regions enumerated in Table 2.¹⁰ Because our goal is to integrate export estimates with estimates of regional income more generally, and to link these estimates to estimates for the nineteenth century, we value regional exports in 1840 prices.¹¹ We use these base year values to calculate the average value per ton to each destination, and then we use the time series data on tonnage to extrapolate exports for each region backward in time.

Because the tonnage data are not available continuously we are obliged to interpolate tonnage values for those years in which data are missing. To do this we first calculate the share of tonnage clearing each port for each destination, and interpolate linearly between the available years to fill in missing observations.¹² Then we use the

¹⁰ To construct the base year values we used prices from Cole (1938) for eight of the region's leading exports—all those listed in Table 2 except flaxseed—for which there was no data. After aggregating these values we inflated the resulting total to reflect the share of unenumerated exports

¹¹ Because the relative prices of different commodities affect their weight in the overall calculation shifts in relative prices could have an impact on the size of regional exports. In practice, however, relative commodity prices in 1840 were highly correlated with those in the 1770s, so the choice of base year prices has little impact on our estimates.

¹² For the years prior to the earliest tonnage observations we assume that regional export shares were constant and equal to their average for the first 5 years of tonnage data for each port.

time series data on the official value of exports from each colony to Britain to calculate total tonnage for years when the tonnage data are missing. Since the export data to Britain are in value terms we derive tonnage by assuming that the value per ton was constant and equal to its value in the base years, 1768-1772.¹³ Total tonnage then is equal to tonnage bound for Britain divided by the interpolated share of total tonnage clearing for Britain.

To obtain the regional total value of exports in each year we sum the values clearing for each destination, then we combine the values for New York and Philadelphia, and inflate this total to account for exports from New Jersey and Delaware, on the assumption that the share of regional exports from these two colonies was constant and equal to its value in the base years.

Table 6 reports our estimates of the value of regional exports and exports per capita in 1840 prices. Figure 2 compares the time series behavior of total exports, exports to Great Britain and the growth of the region's population. Over the entire colonial period the growth of total exports is similar to the expansion in exports to Great Britain, but the timing of this growth is quite different. While exports to Great Britain grew slowly until the 1750s and then surged dramatically, total foreign exports grew strongly from the early 1720s through the mid-1750s, and then fluctuated without any long term trend over the next two decades.

As the comparison with regional population in Figure 2 also makes clear, regional exports failed to keep pace with the growth of population. This is true consistently for

¹³ The assumption of a constant value per ton appears reasonable based on data for the years when tonnage and the value of exports to Britain are both available. If anything the value per ton appears to have fallen slightly over time. If this were the case then the assumption of a constant value per ton would tend to impart an upward bias to the growth of exports.

exports to Great Britain, but total exports grew at roughly the same pace as population until the mid-1750s before falling behind population growth. The relationship between exports and population is documented explicitly in Figure 3, which shows the evolution of exports per capita from 1700 to 1774. After fluctuating between \$4 and \$6 per person from 1700 to 1730, they rose into the \$6 to \$10 per person range in the 1740s and 1750s before falling back to less than \$6 per person from the mid-1750s to the end of the colonial period. Thus in the long-run, there is no evidence that exports became a more important source of regional income.

Exports from the Lower South

The economy of the Lower South emerged during the eighteenth century as one of the best examples of staple export driven economic growth outside the West Indies, or so traditional accounts would have it.¹⁴ By focusing on the rapid growth of the rice and indigo trades of the Lower South, most scholars have concluded that standards of living for colonists in the region must have been rising rapidly. Writing in 1998, for example, Marc Egnal suggested that per capita incomes in the Lower South increased at an annual average rate of 0.9 percent per year from 1713 to 1775, implying that per capita incomes grew by more than 70 percent over the entire period. This finding fits a consensus that the mainland colonies as a whole grew as rapidly as 0.6 percent per year between 1720

¹⁴ See for example, McCusker and Menard, *The Economy of British America, 1607-1789*, ch. 8, and Egnal, *New World Economies*, pp. 4-5.

and 1774, the figure found in the recently published *Historical Statistics of the United States*.¹⁵

The conventional view of the region's economic growth is flawed, however, in at least two important ways.¹⁶ First, by focusing on the dominant exports at the end of the period, scholars have overstated the growth of regional exports. To some extent the rapid expansion of rice and indigo production in the colonial era was achieved by the transfer of resources from the production of other, less profitable, goods, including naval stores and deerskins. As we show below, taking account of a broader range of export crops reduces the rate of growth of regional exports. But, perhaps more importantly, most accounts have simply failed to note that the growth of exports was paralleled by an even faster growth of regional population. As a result, per capita export figures for the region fell over the colonial period rather than increasing.

In contrast to the dearth of export data for the Middle Colonies, data on the quantities of the Lower South's main exports are readily available for most of the eighteenth century, and have been analyzed to some extent by a number of previous scholars.¹⁷ Our contribution is to assemble these data into a comprehensive index of export output, and to set the resulting index in the context of regional population data.

Table 7 summarizes data on the quantity and value of exports of rice, indigo, naval stores, and deerskin along with evidence on the value of all other exports for 1768-1772, drawn from the American Inspector-General's ledgers. At the end of the colonial

¹⁵ Egnal, *New World Economies*, 43; McCusker (2006, 5: 631).

¹⁶ We develop this point in greater detail in Mancall, Rosenbloom and Weiss (2006).

¹⁷ See in particular R.C. Nash (1992), who analyzes the growth of rice, indigo and naval stores exports from South Carolina. We build on his work, adding data on deerskin exports, and extending the estimates to include data from Georgia and North Carolina.

period these four items accounted for 80 percent of all exports from the Lower South. No other comprehensive export data are available, but, according to Coclanis (1989, p. 81), in 1746-47 these same four items accounted for 83.9 percent of exports from Charleston, the region's preeminent port. Thus broadening the scope of export data beyond rice and indigo to include deerskins and naval stores appears to do be sufficient to account for regional export performance.¹⁸

Table 8 assembles data on the exports of these four commodities at benchmark dates between 1712 and the end of the colonial period. Comparison of these different series indicates just how much more quickly rice and indigo grew than other regional exports. The success of rice exports in the colonial period has given a distorted picture about the role of exports more generally, suggesting that the economy of the Lower South was more successful than implied by the behavior of total exports.¹⁹

Figures 4 and 5 depict the growth rate of total regional exports valued in 1840 prices.²⁰ In Figure 4, we again compare total export performance with the behavior of exports to Great Britain, and to the growth rate of regional population. In Figure 5 we plot the growth of exports per capita. Even after taking into account the slower growth of naval stores and deerskin exports, over the period 1712-1774, regional exports grew at an annual average rate of 4.4 percent. But this was only slightly faster than the growth rate

¹⁸ If deerskins were excluded the remaining three items would not proxy the movement of total exports as well. The share comprised by rice, indigo and naval stores rose from 67.3 to 82.5 percent.

¹⁹ Export growth is even slower if one takes into account the quantity of agricultural products shipped to other colonies. Shipments to other colonies grew at an average annual rate of just 3.2 percent between 1720 and 1770. As a result the combined value of all external shipments in the colonial period grew at a rate of just 4.1 percent per year.

²⁰ In Mancall, Rosenbloom, and Weiss (2006) we discuss in more detail the effect of valuing exports in 1840 prices, and show that this does not impart any significant bias to the growth rate of exports.

of population. And as Figure 5 makes clear, after the mid-1720s the growth rate of population was more rapid than regional exports. Thus after the initial burst of commercial expansion triggered by the widespread cultivation of rice early in the century, exports from the Lower South grew more slowly than regional population. Moreover, even the success of the rice industry pales when population growth is taken into account, with the volume of rice exports *per capita* having risen at only 0.3 percent per year between 1720 and 1770.

To be sure, most of the region's production of exports was concentrated in the low country surrounding Charleston, while much of the population growth was taking place in the interior of the region. But this contrast is entirely consistent with our point that the focus on the aggregate volume of exports serves to distort our perspective on the colonial growth process. Even in a successful export-oriented region like the Lower South, the dominant feature of the economy appears to be its extensive growth rather than an increasing focus on the production of a few export staples that drove economic growth through regional multipliers.

Conclusions

Colonial economic historians have given considerable weight to the role of exports as a stimulus for economic growth. In part this reflects the pragmatic fact that exports are one of the few areas of the colonial economy for which reasonably sound and extensive quantitative data are available. Yet, efforts to make use of these data have been handicapped by the way in which they have been used in previous research. Scholars

have tended to focus on the behavior of one or two key commodities, taking them as indicators of broader changes without placing them in the context of the export sector as a whole or comparing them to changes in the overall scale of the colonial economy.

In this paper we have integrated the available evidence for two colonial regions to construct comprehensive export measures and have compared them to the overall growth of population. We find that aggregate exports did grow quickly in both regions. But this growth failed to keep pace with population growth during much of the period under consideration. This finding seems inconsistent with the emphasis in the export staples model on the role of foreign demand as a stimulus for economic growth. At a minimum one would expect exports per capita to grow if such a model were applicable. It would seem that rather than focusing on the role of external demand as the chief factor in colonial economic growth, greater emphasis must be placed on the supply-side. This directs attention back to the Malthusian approach, which emphasizes the impact of resource abundance and labor and capital scarcity as the defining characteristics of colonial economic growth.

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Table 1:

Value of Imports into England and Scotland by Source at Benchmark Dates, 1700-1790

Year	Total	New England	New York	Pennsylvania	Virginia and Maryland	Carolina	Georgia
1700	395,070	41,486	17,567	4,608	317,351	14,058	0
1710	256,505	31,113	8,203	1,277	195,120	20,793	0
1720	575,824	49,269	16,836	7,929	439,054	62,736	0
1730	760,454	55,135	8,740	10,813	534,018	151,748	0
1740	770,562	74,690	21,498	15,643	390,032	267,775	924
1750	975,565	51,660	35,634	29,087	663,989	193,253	1,942
1760	1,150,493	39,808	34,366	22,846	859,038	182,237	12,198
1770	1,497,741	157,443	98,997	31,065	847,997	306,181	56,058
1780	98,247	2,232	67,840	8,699	15,296	1,929	2,251
1790	1,191,071	100,864	119,971	51,731	566,774	286,332	65,399
Average Annual Rates of Change							
1700-1770	1.92	1.92	2.50	2.76	1.41	4.50	
1700-1790	1.23	0.99	2.16	2.72	0.65	3.41	

Notes and Sources: McCusker (2006, series EG 429-42, 443-60). For 1740 and later the figures are the sum of separate figures for England and Wales and Scotland. Prior to that imports to Scotland are imputed on the assumption that they grew at the same rate as imports to England and Wales.

Table 2:

Value of Exports and Exports per Capita by Source and Destination, 1768-1772

Source	Exports To			Population	
	Great Britain	Elsewhere	Total	Free Whites	Total
New England	£76,975	£362,126	£439,101	565.7	581.1
Middle Colonies	£68,369	£458,176	£526,545	521	555.9
Chesapeake	£827,052	£219,831	£1,046,883	398.2	649.6
Lower South	£394,030	£157,919	£551,949	189.4	344.8

	Per Free White			Per person		
	Great Britain	Elsewhere	Total	Great Britain	Elsewhere	Total
New England	£0.14	£0.64	£0.78	£0.13	£0.62	£0.76
Middle Colonies	£0.13	£0.88	£1.01	£0.12	£0.82	£0.95
Chesapeake	£2.08	£0.55	£2.63	£1.27	£0.34	£1.61
Lower South	£2.08	£0.83	£2.91	£1.14	£0.46	£1.60

Source: McCusker and Menard (1984).

Table 3:
Annual Average Value of Exports of Specified Commodities from
New York and Pennsylvania valued at Current and 1840 Prices, 1768-1772

Commodity	Units	Quantity	New York		Philadelphia			Share of regional Exports
			Current Value	1840 Value	Quantity	Current value	1840 Value	
Bread and Flour	tons	1,329	£14,385	\$78,696	4,413	£46,690	\$261,249	60.1%
Beef and Pork	bbl	583	£1,222	\$8,450	825	£1,711	\$11,965	2.9%
Flaxseed	bu	23,710	£4,275	NA	15,870	£2,917	NA	7.1%
Grain—Indian corn	bu	13,541	£1,404	\$7,386	20,772	£2,040	\$11,330	3.4%
Grain—Wheat	bu	13,042	£2,534	\$13,890	24,872	£4,801	\$26,489	7.2%
Iron, bar	tons	153	£2,308	\$11,978	65	£952	\$5,068	3.2%
Iron, pig	tons	184	£918	\$6,029	204	£1,012	\$6,664	1.9%
Potash	tons	89	£2,283	\$9,922	7	£169	\$750	2.4%
Wood Products, Staves and headings	1000s	484	£1,450	\$15,802	1,010	£2,999	\$32,976	4.4%
Rum, American	gal	2,230	£152	\$602	879	£294	\$237	0.4%
Value of enumerated products			£30,778	\$152,754		£63,289	\$356,727	92.6%
Total All products			£34,724	\$200,134		£66,861	\$395,062	100.0%

Sources: Shepherd (1969); Cole (1938).

Table 4:
Average Annual Value in Current Prices of Middle Colony Exports by Source and Destination, 1768-1772

From	Great Britain	Ireland	Southern Europe and Wine Islands	West Indies	Africa	Row Total
New York	42,867.0	25,953.0	35,642.2	68,374.6	782.8	173,619.6
New Jersey	68.4	25.0	210.2	1,940.6		2,244.2
Pennsylvania	19,994.4	25,751.8	143,362.2	140,805.6	294.4	330,208.4
Delaware		3,589.8	12,489.2			16,079.0
Column Total	62,929.8	55,319.6	191,703.8	211,120.8	1,077.2	522,151.2
<i>Percentage of Exports Originating in Each Colony (column percentages)</i>						
New York	68.1	46.9	18.6	32.4	72.7	33.3
New Jersey	0.1	0.0	0.1	0.9	0.0	0.4
Pennsylvania	31.8	46.6	74.8	66.7	27.3	63.2
Delaware	0.0	6.5	6.5	0.0	0.0	3.1
	100.0	100.0	100.0	100.0	100.0	100.0
<i>Percentage of Exports Going to Each Destination (row percentages)</i>						
New York	24.7	14.9	20.5	39.4	0.5	100.0
New Jersey	3.0	1.1	9.4	86.5	0.0	100.0
Pennsylvania	6.1	7.8	43.4	42.6	0.1	100.0
Delaware	0.0	22.3	77.7	0.0	0.0	100.0
Total	12.1	10.6	36.7	40.4	0.2	100.0

Source: Shepherd (1969).

Table 5:
Tonnage Clearing From Philadelphia and New York, by Destination, 1715-1772

DATE	From Philadelphia						From New York					
	Great Britain	Ireland	Southern Europe & Wine Islands	West Indies	Africa	Coastal	Great Britain	Ireland	Southern Europe & Wine Islands	West Indies	Africa	Coastal
1715							1,461		630	3,790	40	1,406
1720	520		270	2,190		1,210						
1721	650		480	1,680		910						
1722	560		420	1,770		930						
1723	450		420	1,870		600						
1724	290	140	660	2,300		650						
1725	690		740	2,410		910						
1726	990		1,110	3,570		610	988		515	3,468		2,761
1727	730	50	470	3,120		760	1,030		465	4,309		2,138
1728	1,150		790	2,480		1,130						
1729	1,580		1,300	3,230		1,190						
1730	1,170		790	4,280		1,410						
1731	1,310	240	1,450	4,170		1,430						
1732	620	620	830	2,930		1,140						
1733	890	1,440	950	5,070		1,820	690	160	275	3,937		2,349
1734	1,400	1,460	2,130	4,160		1,880	645	160	475	2,881	60	1,959
1735	1,090	1,180	2,420	3,240		1,830	838	200	904	2,941		2,321
1736	790	1,690	2,100	2,750		1,630						
1737	1,110	870	2,740	3,430		2,090						
1738	780	1,060	1,690	3,590		2,460						
1739	570	1,450	3,580	3,450		1,660	795	820	1,040	4,431		2,451
1750	1,136	2,491	1,739	12,682		7,204						
1754							2,085	1,615	725	6,486	130	2,076
1763							2,079	1,460	1,000	7,657	70	2,450
1764							2,952	1,882	1,087	8,221	140	1,495

DATE	From Philadelphia						From New York					
	Great Britain	Ireland	Southern Europe & Wine Islands	West Indies	Africa	Coastal	Great Britain	Ireland	Southern Europe & Wine Islands	West Indies	Africa	Coastal
1765	5,161		3,345	12,340		17,004	5,165		1,592	7,825		2,988
1766	1,830	4,830	4,455	14,053	300	10,834	4,907		3,480	8,385		3,090
1767	8,263		6,408	13,371		13,061	5,588		3,820	6,697		3,770
1768	4,134	3,482	7,255	12,119	0	8,116	5,130	2,522	2,360	7,220	35	3,754
1769	4,049	3,170	12,040	11,114	30	9,085	3,955	2,515	3,278	5,628	205	9,068
1770	3,208	4,791	10,940	14,043	0	12,370	4,665	2,692	2,920	7,244	98	5,655
1771	3,222	3,470	7,110	13,757	90	13,655	4,830	2,476	2,029	7,996	115	4,968
1772	3,123	2,491	8,415	16,081	20	12,872	4,280	1,610	2,449	8,249	260	8,859

Source: McCusker (2006); Lyden (1967).

Table 6:
Exports from the Middle Colonies, 1700-1772
In Prices of 1840

Year	Exports (1840 Prices)			Population		
	New York	Philadelphia	Middle Colonies	New York	Pennsylvania	Middle Colonies
1700	\$257,348	\$172,997	\$445,954	19,107	17,950	53,537
1701	\$271,705	\$195,973	\$484,640	19,344	18,483	54,960
1702	\$116,684	\$155,615	\$282,174	19,584	19,037	56,420
1703	\$109,447	\$193,721	\$314,163	19,827	19,614	57,920
1704	\$154,406	\$91,229	\$254,544	20,074	20,215	59,459
1705	\$108,304	\$49,143	\$163,158	20,324	20,842	61,039
1706	\$41,737	\$158,055	\$207,038	20,577	21,497	62,661
1707	\$209,239	\$29,509	\$247,407	20,834	22,183	64,326
1708	\$158,903	\$79,591	\$247,144	21,094	22,902	66,036
1709	\$179,589	\$23,164	\$210,106	21,358	23,656	67,790
1710	\$120,170	\$47,942	\$174,210	21,625	24,450	69,592
1711	\$178,622	\$1,427	\$186,579	22,808	25,034	72,381
1712	\$182,621	\$55,225	\$246,473	24,057	25,632	75,281
1713	\$211,363	\$6,683	\$225,954	25,375	26,245	78,298
1714	\$436,703	\$99,976	\$556,144	26,767	26,872	81,435
1715	\$290,527	\$205,021	\$513,522	28,237	27,514	84,698
1716	\$303,846	\$194,959	\$516,897	29,789	28,171	88,092
1717	\$344,538	\$168,905	\$532,065	31,428	28,845	91,622
1718	\$390,085	\$209,789	\$621,631	33,159	29,534	95,294
1719	\$284,518	\$246,431	\$550,206	34,988	30,239	99,112
1720	\$248,920	\$312,952	\$582,251	36,919	30,962	103,084
1721	\$236,350	\$243,909	\$497,678	37,945	32,523	106,807
1722	\$309,497	\$237,531	\$566,869	39,001	34,182	110,664
1723	\$440,128	\$361,805	\$831,019	40,086	35,945	114,660
1724	\$341,048	\$350,549	\$716,681	41,202	37,818	118,801
1725	\$412,119	\$481,973	\$926,520	42,350	39,806	123,091
1726	\$649,250	\$247,549	\$929,325	43,530	41,916	127,536
1727	\$594,087	\$532,906	\$1,167,868	44,743	44,154	132,142
1728	\$415,017	\$408,193	\$853,067	45,991	46,526	136,914
1729	\$325,821	\$203,976	\$549,012	47,274	49,042	141,858
1730	\$189,265	\$393,901	\$604,317	48,594	51,707	146,981
1731	\$475,070	\$502,777	\$1,013,314	49,925	54,383	153,068
1732	\$228,833	\$482,729	\$737,370	51,291	57,197	159,407
1733	\$269,338	\$940,714	\$1,253,939	52,696	60,157	166,009
1734	\$338,930	\$938,880	\$1,324,155	54,139	63,269	172,884
1735	\$289,497	\$1,183,004	\$1,525,908	55,621	66,543	180,044
1736	\$404,005	\$1,400,345	\$1,869,793	57,144	69,987	187,501
1737	\$419,447	\$849,893	\$1,315,378	58,709	73,608	195,266
1738	\$450,391	\$789,287	\$1,284,641	60,317	77,417	203,353
1739	\$575,007	\$1,020,162	\$1,653,024	61,968	81,424	211,774
1740	\$635,472	\$1,868,950	\$2,595,256	63,665	85,637	220,545

Year	Exports			Population		
	New York	Philadelphia	Middle Colonies	New York	Pennsylvania	Middle Colonies
1741	\$594,943	\$2,109,468	\$2,802,498	64,862	88,551	227,166
1742	\$363,663	\$1,037,320	\$1,451,796	66,081	91,564	233,986
1743	\$387,469	\$1,154,594	\$1,597,992	67,323	94,679	241,011
1744	\$358,427	\$885,695	\$1,289,246	68,588	97,901	248,247
1745	\$334,085	\$1,190,637	\$1,580,023	69,877	101,232	255,700
1746	\$202,041	\$1,831,600	\$2,107,399	71,190	104,676	263,377
1747	\$330,630	\$439,050	\$797,596	72,529	108,238	271,284
1748	\$263,440	\$1,397,298	\$1,720,972	73,892	111,920	279,429
1749	\$483,160	\$1,665,056	\$2,226,131	75,281	115,728	287,818
1750	\$712,856	\$3,094,341	\$3,945,282	76,696	119,666	296,459
1751	\$822,593	\$2,272,888	\$3,207,752	80,013	124,907	307,541
1752	\$767,039	\$2,511,397	\$3,397,342	83,474	130,377	319,037
1753	\$928,085	\$2,871,566	\$3,937,463	87,085	136,086	330,963
1754	\$476,721	\$2,050,918	\$2,619,315	90,852	142,046	343,334
1755	\$508,356	\$1,957,261	\$2,555,043	94,782	148,267	356,168
1756	\$442,188	\$1,107,149	\$1,605,531	98,883	154,760	369,482
1757	\$356,982	\$715,432	\$1,111,310	103,161	161,537	383,294
1758	\$269,323	\$991,067	\$1,306,103	107,624	168,611	397,622
1759	\$415,404	\$958,341	\$1,423,570	112,280	175,996	412,485
1760	\$410,585	\$901,366	\$1,359,535	117,138	183,703	427,904
1761	\$959,501	\$1,441,283	\$2,487,859	121,042	188,684	439,250
1762	\$1,178,800	\$1,305,316	\$2,574,214	125,083	193,801	450,897
1763	\$1,080,844	\$1,222,879	\$2,387,277	129,264	199,056	462,852
1764	\$879,717	\$1,084,947	\$2,035,921	133,591	204,454	475,125
1765	\$619,491	\$705,186	\$1,372,723	138,069	209,998	487,723
1766	\$945,161	\$2,635,026	\$3,710,038	142,704	215,693	500,655
1767	\$742,486	\$1,022,003	\$1,828,486	147,500	221,541	513,930
1768	\$1,023,841	\$2,828,649	\$3,992,218	152,464	227,549	527,557
1769	\$1,039,921	\$1,536,416	\$2,669,779	157,602	233,719	541,545
1770	\$932,570	\$2,202,410	\$3,248,684	162,920	240,057	555,904
1771	\$1,196,084	\$1,995,186	\$3,307,015	167,128	247,616	570,696
1772	\$1,126,374	\$2,122,794	\$3,367,013	171,450	255,412	585,882

Source: Authors' estimates. See text for explanation.

Table 7:
Composition of Exports from the Lower South,
Current Prices and 1840 Prices, 1768-1772

Commodity	Unit	Quantity	Current value	1840 value	Share regional exports at 1840 Prices
Rice	bbls.	144,392	£305,533	\$2,792,541	56.2%
Indigo	lbs.	543,928	£111,886	\$832,209	16.8%
Naval Stores	bbls.	82,420	£31,707	\$174,731	3.5%
Deerskins	lbs.	303,879	£29,689	\$142,823	2.9%
Value of enumerated products			£478,815	\$3,942,305	79.4%
Total All products			£603,200	\$4,966,419	100.0%

Source: Shepherd (1969); Cole (1938).

Table 8:
 Three Year Average Quantities of Exports from
 the Lower South, Selected Commodities, at Benchmark Dates, 1712-1770

	Rice lbs	Naval Stores Barrels	Deerskins lbs.	Indigo lbs
1712	3,168,625	9,506	179,350	
1720	8,060,551	33,505	120,721	
1730	19,131,450	30,564	229,244	
1740	34,917,672	33,148	219,575	
1750	34,123,207	66,594	285,387	28,933
1760	47,080,950	46,407	242,874	389,767
1770	78,227,450	81,500	375,553	595,300
Average Annual Rates of change				
By decade				
1712-1720	12.38	17.05	-4.83	
1720-1730	9.03	-0.91	6.62	
1730-1740	6.2	0.82	-0.43	
1740-1750	-0.23	7.23	2.66	
1750-1760	3.27	-3.55	-1.6	29.7
1760-1770	5.21	5.79	4.45	4.33
By Sub-Period				
1720-1740	7.61	-0.05	3.04	
1740-1770	2.73	3.04	1.81	7.49
1712-1770	5.68	3.77	1.28	

Source: Mancall, Rosenbloom and Weiss (2006). Growth rates for Indigo refers to the period 1746-1770.

Figure 1: Five Year Moving Average Value of Exports to Great Britain, by Colonial Region, 1700-1790

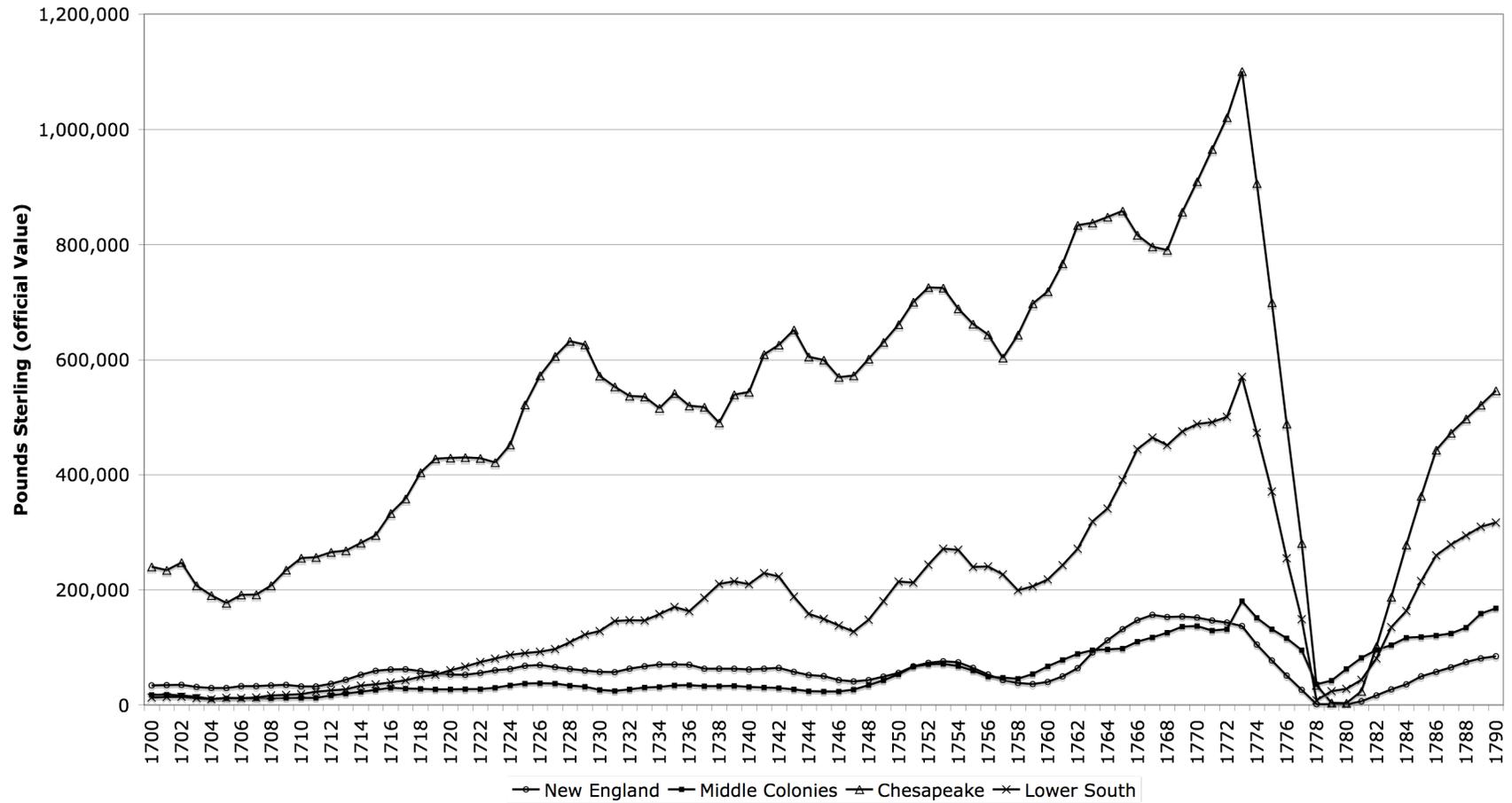


Figure 2: Index Values of Middle Colony Exports, Exports to Great Britain, and Population, 1700-1772

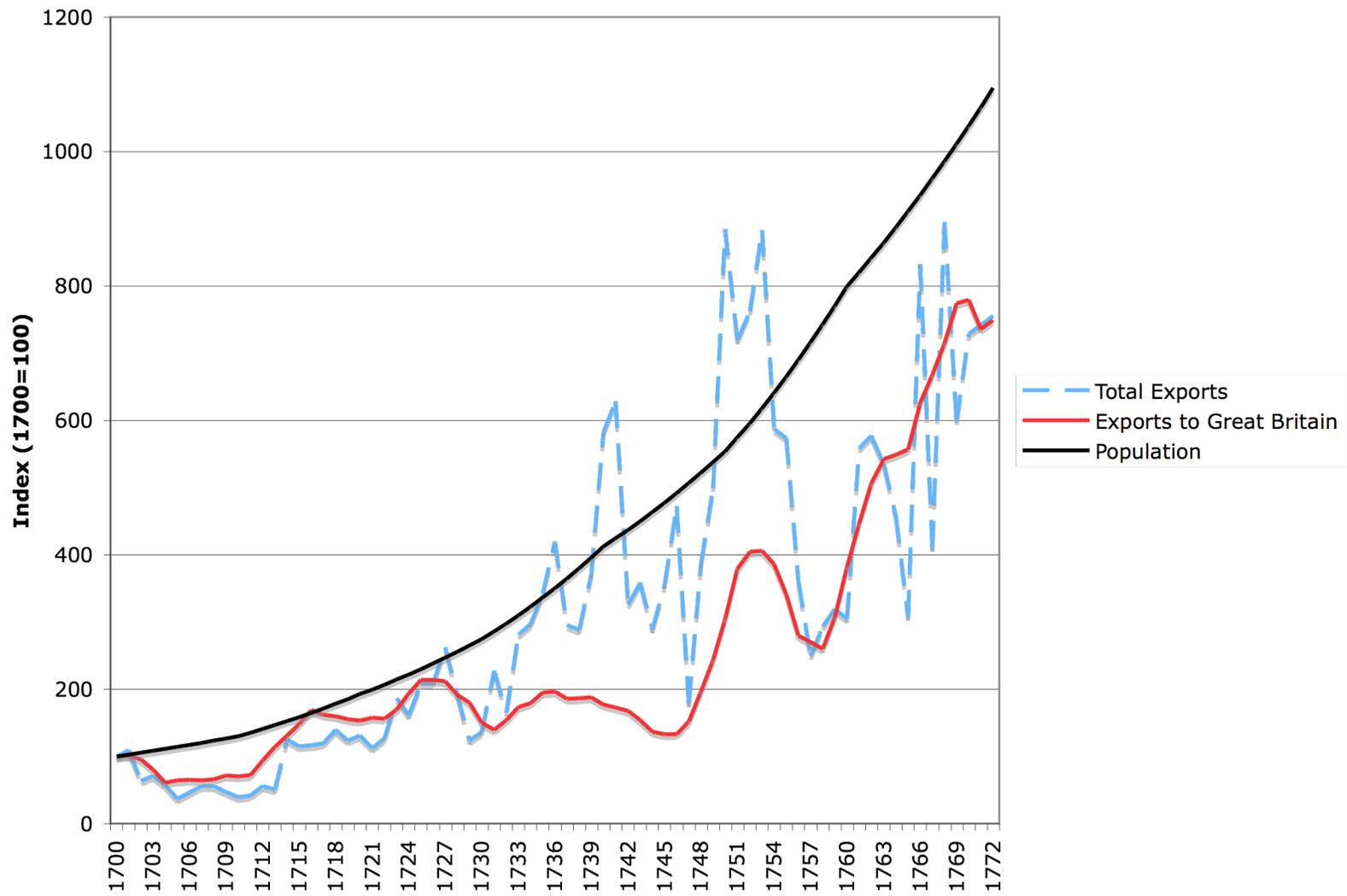


Figure 3: Exports per Capita from the Middle Colonies valued in Prices of 1840, 1700-1772

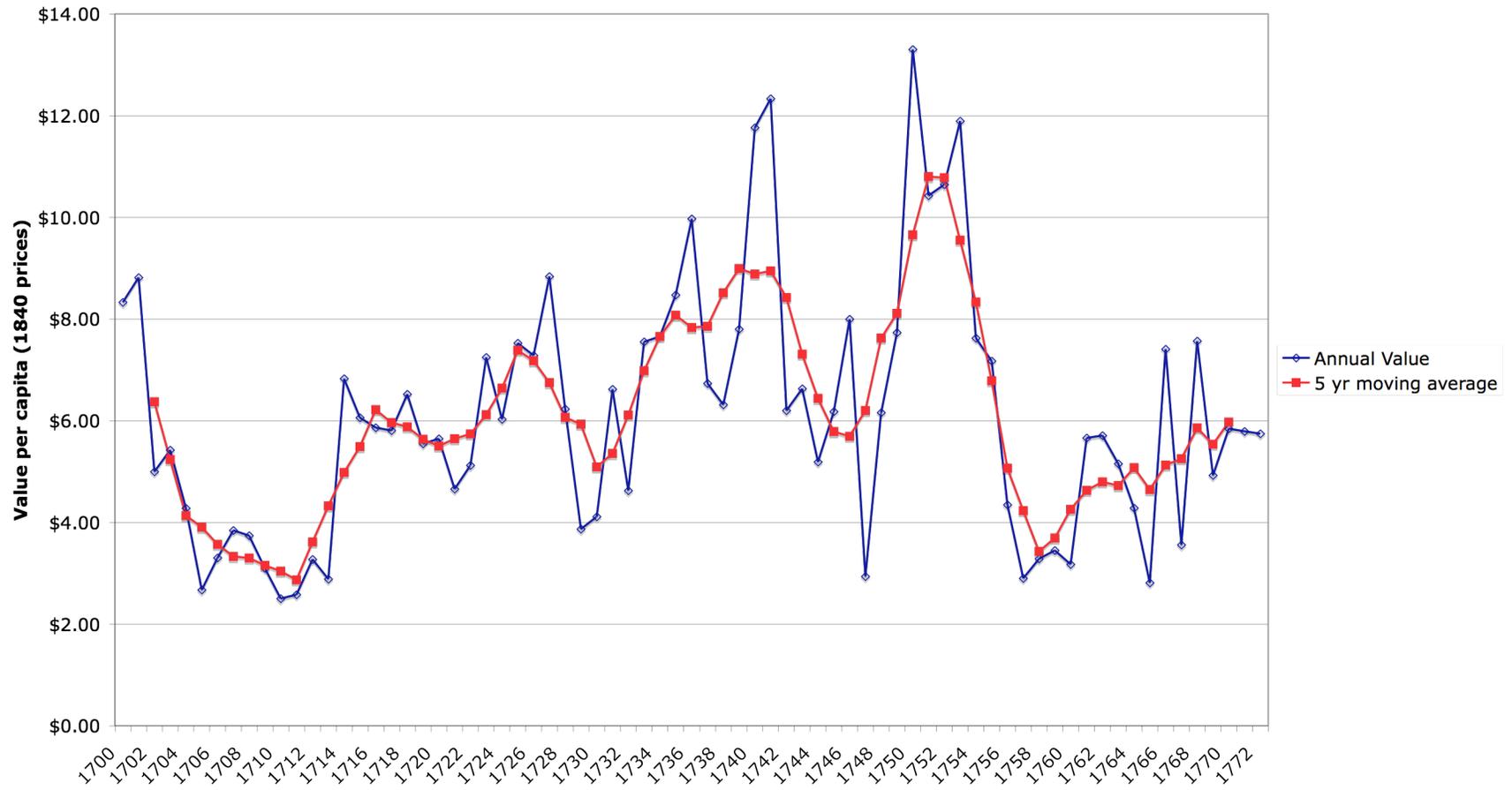


Figure 4: Index Values of Lower South Exports, Exports to Great Britain, and Population, 1700-1772

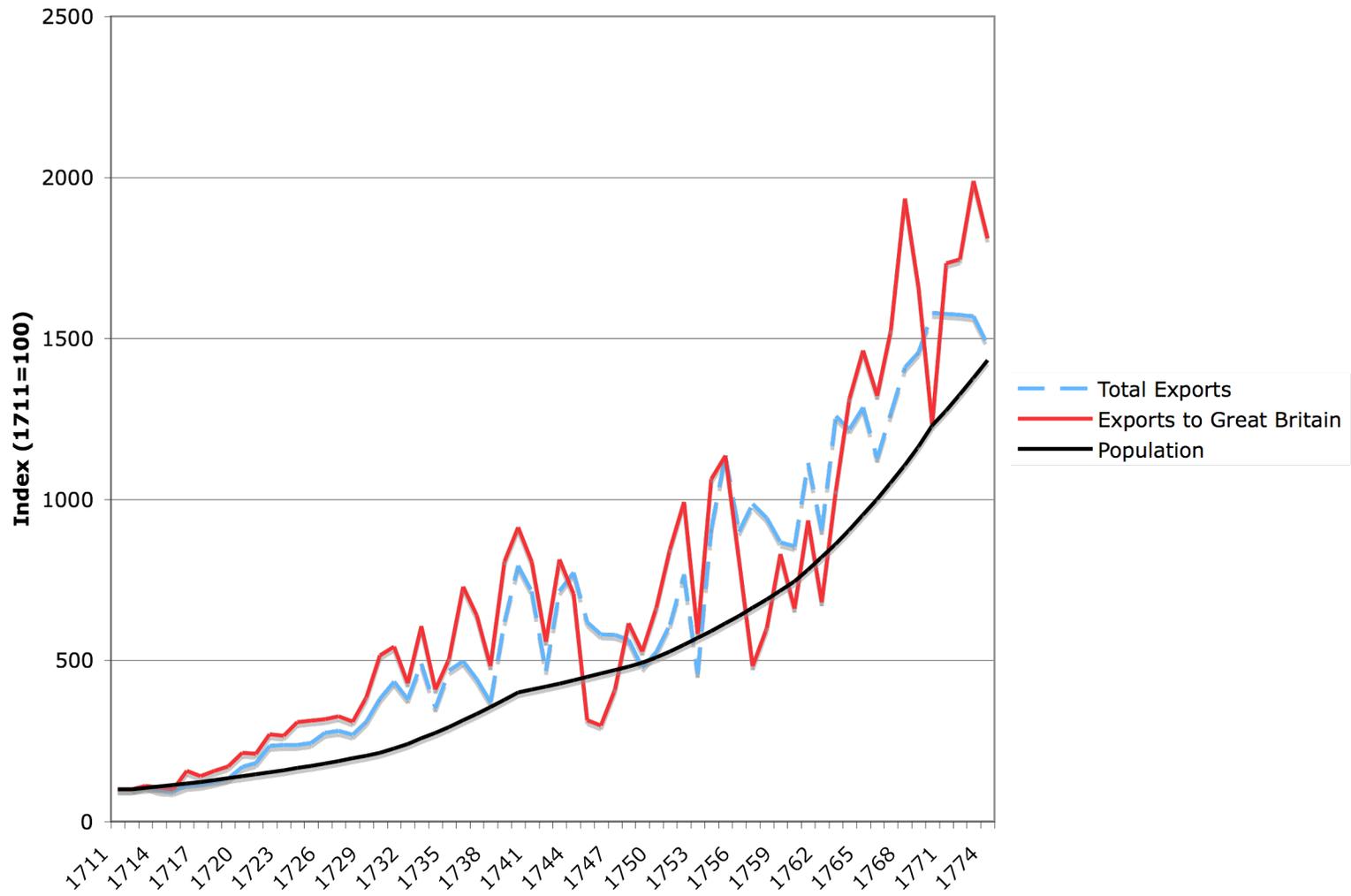


Figure 5: Per Capita Exports from the Lower South valued in Prices of 1840, 1712-1774

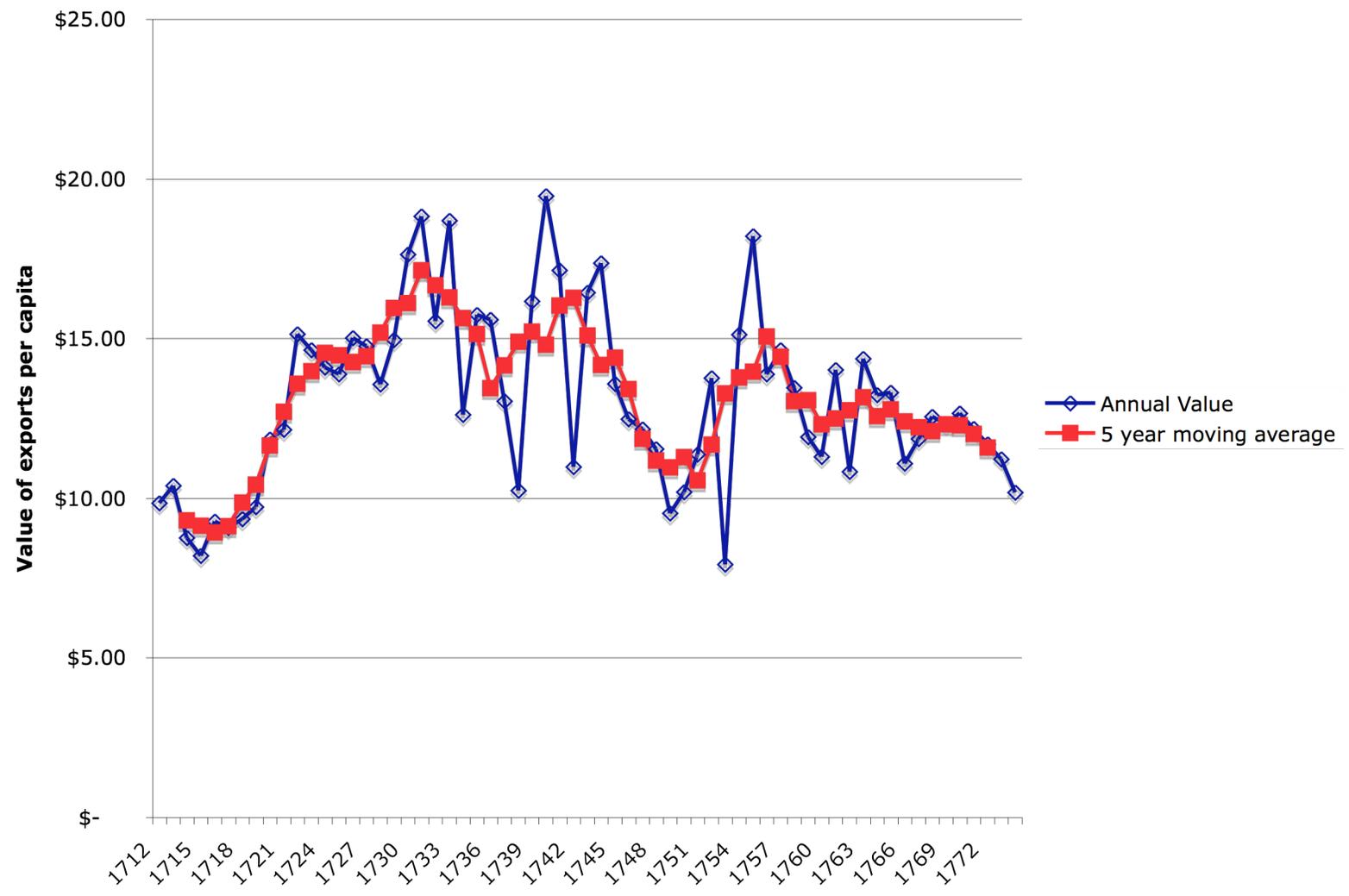


Figure 6: Value of Exports in 1840 Prices from the Lower South and the Middle Colonies, 1700-1774

