

# **Credit Prevalence and the Payments System in Colonial New England\***

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## **Abstract**

Credit in colonial New England, including the credit practices used by merchants, requires study beyond that in the existing literature. The existing scholarship falls short on several grounds. The complexity and sophistication of transactions in the colonies, as well as the overall sophistication of the economy, is understated. Merchants and consumers engaged in extensive and involved relationships. Some authors use data from colonial times to test the quantity theory of money. Credit ubiquity makes these colonies poor subjects for such tests. Credit is aboriginal, a more basic method of transacting than cash. My results show credit, in the form of merchant account book entries, to be ubiquitous and in amounts making credit highly important. Merchants filled the lending role of the financial intermediaries the colonies lacked by issuing loans in the form of account book entries. The system of repayments is also discussed with results provided for the major categories of repayment. Cash repayment and repayment in goods are the two most significant forms of payment, both in frequency and amount.

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## **Introduction**

Credit in colonial New England, including the credit practices used by merchants, requires study beyond that in the existing literature. The existing scholarship falls short on several grounds. The complexity and sophistication of transactions in the colonies, as well as the overall sophistication of the economy, is understated. Merchants and consumers engaged in extensive and involved relationships. Some authors use data from colonial times to test the quantity theory of money. Credit ubiquity makes these colonies poor subjects for such tests. Credit is aboriginal, a more basic method of transacting than cash. The superiority of cash as a means of payment for goods and services has always seemed a foregone conclusion to economists. Despite the presence of early paper money issues, the account books of merchants show that credit performed a significant number of transactions. Merchants filled the lending role of the financial intermediaries the colonies lacked by issuing loans in the form of account book entries. Indeed, the frequency and amount of loans in the merchant's account book make them look more like dealers in debt and credit, a definition used to describe a banker.<sup>1</sup>

I demonstrate the importance of credit using a sample of merchant account books from eighteenth century New England. The account books also demonstrate some general business practices and reveal the sophistication of the economy.

## **Definition of Merchant and Credit**

What does it mean to be a merchant? A merchant is any individual engaged in the selling of goods as their primary occupation. An additional condition is the existence of a shop or central selling location. These are some common characteristics to most definitions and fit those merchants in my data set. However, most colonial New England merchants did not devote all their time to their business. The number of transactions per day was quite small. Merchants owned fields and livestock that required attention. Some of the payments listed in account books give us an indication of this. Merchants also

acted in place of financial intermediaries that were non-existent in colonial New England. The merchant's account book allowed for loans, transfers of value and possibly saving. I do not focus on the merchant elite as Bailyn (1979) did in his classic work, but include a broad spectrum of merchants.<sup>2</sup> Many authors make a distinction between wholesale merchants and retail merchants. I do not make such a distinction since classifications of this sort did not prevent a merchant who generally sold wholesale from breaking up an entire shipload of goods for retail sale in smaller units.<sup>3</sup> Likewise a retailer would not hesitate to sell a large amount of inventory to one individual. The account books themselves do not provide clear evidence on this score, as the activities are not mutually exclusive. A larger statement of accounts, such as the statement provided in the account book of Ebenezer Storer, is needed to provide some insight into this distinction.

#### **The Case of Ebenezer Storer<sup>4</sup>**

The account book of Ebenezer Storer is not actually an account book. It is a written statement of the position of the business of Ebenezer Storer & Son at the time of the elder Storer's death. The purpose was to settle the estate for distribution among the heirs. The information contained in the book is quite detailed, though sometimes addition mistakes are made. Three local merchants valued the inventory of the business at £16,189.52 lawful money, a very large sum indeed. Added to this was £30,660.90 in debt owed the company, less the £32,317.79 the company owed. Finally there were the bad debts, that is debts determined to be uncollectable, some £2,516.34 in all, very similar to non-performing loans for a bank. Bad debts were roughly 8% of debts owed the company, an interesting figure and one of possible use in later research. As you can see, at the time of Storer's death the company had debt of £1656.89, which subtracted from the inventory left a value of £14532.63 to be divided among the heirs. The problem facing the heirs was that the inventory was unsold and few people would want to take possession of their inheritance in the form of goods. Even from this account book, we are not able to make a determination about wholesale versus retail. While the scale of operations clearly imply a wholesale operation, the goods sold were easily divisible into small sale units.<sup>5</sup>

## A Definition of Credit

A paper discussing credit ubiquity needs a concise definition of credit. While there were both private and public bills of credit circulating at this time, I am looking specifically at credit resulting from merchant-consumer exchanges.<sup>6</sup> Credit results when the consumer acquires goods without providing the merchant with something in simultaneous exchange. I interpret this as the provision of a loan to the customer simultaneously with the goods. These loans are the focus of my work. The study of credit or loans should also discuss the interest charged, which I do in a later section. Examples of this type of credit are shown in Figures 1 and 2.<sup>7</sup>

Figure 1 is a reproduction of the account between Samuel Swan, the consumer and Jonathan Parker, a Massachusetts merchant. The table is fashioned to display the account much the same way it appeared in the original account book. Debits and credits were recorded on two facing pages, the debts on the left leaf and the credits on the right. Several individuals may be recorded on those two pages. The account book, methods and practices of merchants will be discussed in more detail later.

Swan made a purchase of cheese and two purchases of sugar on the dates shown in Figure 1. Each of these is interpreted as a separate loan, the total of all three being equal to £3 16s. 1d. No payment was offered until five months after the third loan. Swan repaid his loans by “wiggs and shaving”, suggesting something about Swan’s profession, likely a wigmaker. The payment amount exceeded the total of the three loans, leaving Swan with a balance to draw down as he made further purchases, as recorded in Figure 1. Two observations are in order here. First, the display of information in the form “£ s. d.” is no longer conventional, even in England.<sup>8</sup> Figures 1 and 2 are reproduced in this fashion to provide the reader with an accurate representation of the account books. The standard presentation technique now is to use decimal pounds, for example, £1 10s. becomes £1.5.<sup>9</sup> From this point forward values will be reported in this fashion. Second, these are nominal quantities as recorded by the merchant. Readers familiar with the colonial finance will know that the standard of value fluctuated throughout the eighteenth century. This issue will be addressed later in the section discussing the data sources.

Figure 2 provides similar information to the first. No payment was offered at the time when the consumer Davins received one thousand staves from Parker. Parker made an entry in the account book for a debt of £4, that is, Parker made a loan of £4 to Davins. The next event is a partial payment by Davins, comprised of chocolate to a third party, for 4 s. 9d. From this point on the picture is less clear because of Parker did not record the dates of the later payments, a common omission discussed later. Clearly Parker received two further payments and made two further loans. Note that Davins ended up paying back more than he borrowed, but there is no mention of interest in the accounts.

Why do merchants extend these loans? Economists assume that firms are profit maximizers. Anyone examining these account books will agree that modern definitions of profit are not easy to assess with the available information. Still, it is difficult to believe merchants undertook such action unless they stood to benefit. By extending purchasing power to the customer the merchant moves more of his goods and increases the accounts receivable. Bridenbaugh (1990) gives us a start on an answer when he says, “From an economic point of view the use of credit was indispensable because of the shortage of circulating medium and it undeniably encouraged productive activity.”<sup>10</sup> In *Currency and Credit* (1950), Hawtrey makes similar comments in the context of what he terms the pure credit economy.<sup>11</sup> These observations suggest that credit is efficient. Personal credit, these one-to-one loan extensions, was the best financing system available.

## Literature Review

Credit is frequently mentioned in the colonial history literature, where it is often called book credit or book debt. The wider economics literature also discusses this form of credit, calling it trade credit. When the focus of research is a fundamental part of economic life such as a transaction, literature abounds. Baxter (1945), Rothenberg (1992) McCusker and Menard (1990), Kulikoff (1989), Mutch (1977) and Martin (1939) all make reference to credit during my time period. Other authors undertake similar studies for different regions as in Thorp (1991). As a whole the literature provides detailed

descriptions of credit mechanisms in the thirteen colonies but not much in the way of quantitative research. Credit research is important for the general literature on the colonial economy and for the colonial monetary literature, which focuses primarily on tests of the quantity theory of money. The primary use of credit directly affects such tests.

The literature discusses an extensive network of credit. The network starts with English merchants shipping goods to the colonies. Such shipments were invariably done on credit, with a generally accepted term estimated at one year.<sup>12</sup> The time limit required the receiving colonial merchant to move the goods quickly. One way to insure this was through liberal use of credit. In *Connecticut River Valley Merchants, 1750-1820*, Martin ably documents the dependence of Connecticut River valley merchants on credits from those in coastal cities, who in turn relied on credits from Boston and London.<sup>13</sup> Baxter's *The House of Hancock* also illustrates the dependence of Thomas Hancock on the credit, and good will, of suppliers in England. Entire chapters describe the hardship of trade, sometimes in Thomas's own letters. Part of the difficulties faced by New England merchants owed to the fact that New England lacked a staple crop desired by England.<sup>14</sup> International credit is also an area requiring research. Information on the merchant's outstanding debts is very important to understanding their overall pattern of behavior, particularly their own lending practices. Once this research is in place appropriate consideration can be made in works, such as mine, dealing with merchant-consumer relations.

The extensive literature is narrowed somewhat when the discussion centers on the ubiquity of credit. According to Bridenbaugh, "it is evident that very little cash changed hands in his [craftsman] shop. Money, particularly small change, was always scarce,..."<sup>15</sup> He further states, "Credit rather than cash was the rule everywhere."<sup>16</sup> Baxter's *House of Hancock*, again illustrates Thomas Hancock's use of credit, "...although he valued what he bought and sold in terms of money, [he] seems to have handled money itself remarkably seldom."<sup>17</sup>

This is not to say that cash transactions never occurred, rather it says they were rare. After credit and cash the remaining option was barter. The problem of satisfying the double coincidence of wants is

well known in economics. The ability to practice primitive bookkeeping, simply recording debts and credits, allowed merchants to bypass the difficulties associated with barter. Baxter coined the term “bookkeeping barter” for the system practiced in the colonies, an unfortunate term that masks the use of credit as a special form of barter.<sup>18</sup> Both goods and cash appear in the account books, but usually in the fashion described by Baxter: “...the accounts over and over again tell of the creditor’s weary efforts to get his dues by accepting a tardy and halting series of odds and ends.”<sup>19</sup>

Some economists use data from the colonial era to empirically verify or refute the quantity theory of money. Smith (1985), Wicker (1985), Michener (1987) and McCallum (1992) are all an integral part of the colonial monetary literature. Michener and McCallum stand as supporters of the quantity theory, while Smith and Wicker argue that the theory does not hold. My work directly affects these authors’ conclusions because it assesses the level of money usage in the New England economy. The colonies issued paper currency that functioned, for the most part, as paper money. As legislatures issued bills they also levied taxes, for which the bills were an acceptable form of payment. Two detailed studies in this area are Brock’s *The Currency of the American Colonies* (1975) and Davis’s *Currency and Banking in the Province of the Massachusetts Bay* (1970).<sup>20</sup> Both sources provide specifics on amounts issued, the timing of issues and the success or failure of the paper notes.

A consistent theme across the authors centers on the specification of media of exchange. Significant problems arise due to a lack of data on possibly significant elements such as specie amounts and commodity notes. Smith also points out that book credit is excluded from the analysis.<sup>21</sup> In justifying book credit’s exclusion Smith misrepresents book credit as a credit card. As Figures 1 and 2 illustrated, book credit did not function as a credit card, but was a more individual form of credit. Smith also ignores the trading of credits between merchant accounts books, something that I argue adds to the importance of including credit in the analysis. My research adds a quantitative element to the argument and shows it to be too important to exclude. Credit should be included in these empirical models to ensure accuracy.

Smith finds that movements in the rate of money growth do not correspond or cause movements in the rate of inflation. Massachusetts is a colony common to both Smith's work and my own. Smith does point out that the quantity theory as a whole fares better when Massachusetts' price levels are contrasted with the stock of money throughout all of New England.<sup>22</sup> Wicker discusses the currency schemes of different colonies during and after the Seven Years War. He fails to find any differences in performance attributable to the alternative monetary arrangements.

Michener adopts an exchange rate approach to testing the quantity theory, arguing that fixed rates of exchange between England and the colonies would result in specie outflows when paper currency production increased. Michener also tackles the issue of defining money but does not arrive at an answer. McCallum echoes this uncertainty, specifically mentioning the commodity notes that circulated in colonies such as Virginia and North Carolina.<sup>23</sup> The data set I construct adds other potential candidates to this list.

The colonial monetary literature reached few definite conclusions. The work I present here does not solidify their answers any further but adds new complications. The prevalence of credit as a means of payment adds a new variable requiring attention. The variety of repayment options will also complicate matters for the colonial monetary literature.

## **Business Practices**

In the everyday course of business merchants and customers undertook complex transactions, far more involved than is acknowledged in the literature. Merchants and consumers utilized a variety of methods for the exchange of goods. In order to accurately assess credit practices, they must be placed in the appropriate context of overall business. One source of great importance in this respect is the *Journal of Madam Knight*.

The journal is a record of the events witnessed by Sarah Knight on a trip from Brockton, Massachusetts to New Haven, Connecticut in the early eighteenth century. As part of her writing she

describes several aspects of business practices. She provides two very detailed accounts of merchant-consumer exchanges:

Now, when the buyer comes to ask for a commodity, sometimes before the merchant answers that he has it, he says, *is Your pay redy?* Perhaps the Chap reply's Yes: what do You pay in? say's the merchant. The buyer having answered, then the price is set.<sup>24</sup>

Before setting the price, the parties discussed two factors: the timing and type of payment. The merchant asks whether he is to receive payment immediately and receiving an answer inquires as to the type of payment. A situation where pay is not "redy" is a loan, or payment by credit. Madam Knight's second example focuses on a country buyer and the merchant:

They [country fellows] Generally stand after they come in a great while speechless, and sometimes don't say a word till they are askt what they want, which I Impute to the Awe they stand in of the merchants, who they are constantly almost Indebted too; and must take what they bring without Liberty to choose for themselves; but they serve them was well, making the merchants stay long enough for their pay.<sup>25</sup>

The implication that merchants choose what someone can buy is almost unbelievable. I interpret the activities described in this passage as a form of rationing employed by the merchant. Only certain goods are allowed for those who are currently in debt to the merchant, or are likely to require time for repayment. Madam Knight also makes the comment that these were long term loans, another characteristic that needs to be studied.

Discussing credit and loans leads logically to a second discussion, that of the forms of repayment. Merchants accepted many things as payment for their loans. Martin puts payments into three categories-- money, goods and work-- but her categories are too broad.<sup>26</sup> "Money" is a vague term like cash, that can mean many different things and the definitions of goods and work, while clearer, may be too broad as well, as seen in my data. More will be said about Martin's payment analysis later when statistical results are presented. In addition to the three categories above, Baxter lists several others including bills of exchange, commodity money, and triangular transfers of credit. Bills of exchange were very formal notes that were usually drawn on an English institution or individual for a certain amount in pounds sterling.

The bills proved very desirable for overseas settlement and were in great demand. The triangular transfers of credit are very interesting and draw up images of the pure credit economy as described in Hawtrey.<sup>27</sup> Transfers of credit required a merchant's account book to list both of the interested parties. The merchant acted as an intermediary in this situation, debiting one person's account and crediting another's. Hawtrey describes the situation as a type of clearinghouse, where at the end of the day everyone can gather to assess debits and credits accordingly.

Madam Knight also discusses how consumers paid for goods and services.

*Pay* is Grain, Pork, Beef, &tc. at the prices sett by the General Court that Year; *mony* is pieces of Eight, Ryalls, or Boston or Bay shillings (as they call them) or Good hard money, as sometimes silver coin is termed by them; also Wampom viz<sup>t</sup> Indian beads w<sup>ch</sup> serves for change. *Pay as mony* is provisions, as afores<sup>d</sup> one Third cheaper then as the Assembly of Gene<sup>l</sup> Court sets it; and *Trust* as they and the merch<sup>t</sup> agree for time.<sup>28</sup>

“Pay” is also called “country pay” in other sources and is similar to the goods category mentioned earlier. Weiss speculates that the distinction between “pay” and “pay as mony” arose when the prices set by the General Court were not in line with market prices, but they both clearly involve the merchant accepting goods as payment. Knight's “mony” category is limited to minted coins, foreign and domestic, and indian beads. Trust is recognizable as a loan, the type of credit in my research.

I divide my categories for purchases into forms similar to each of the previous authors. There are two aspects considered to distinguish between types of purchases- when payment was offered and what was offered as payment? My research includes three methods of purchase: credit, cash and barter. If no payment was offered currently, that is, at the time of purchase, a purchase was made on credit. The above passages from Madam Knight detail such an exchange. The description provided by Madam Knight provides some insights into the way prices were set. Presumably interest was charged upfront, that is, was added to the price of the goods. A current payment was either cash or barter, depending on what was offered in exchange. Cash is a broad term including government paper notes, personal paper notes and specie, barter transactions obviously involve goods offered as payment.

Credit transactions require repayments. I have seven distinct repayment categories. Repayment can be made in cash, goods, personal notes, third party notes, reckoning, labor and bond. The notes are a swap of one form of credit for another. Cash includes government issued paper notes and specie, though imprecise bookkeeping means some personal and third party notes may be included in this category. Payment in goods may be mistaken for barter, but the goods were not offered in exchange until later, requiring the extension of a loan. The personal and third party IOUs were really another form of credit and are explained together. The note was written out explaining the amount to be paid, the date after which payment would be made and the signature of the debtor. Many notes are pressed between the leaves of the account books, leading to the presumption that they were never redeemed. The substitution of one form of credit for another was probably allowed because of the ease of using third party notes in payment. The merchant could simply endorse the note to someone else and present it to them. The new individual was entitled to the payment described in the note.<sup>29</sup> Reckoning was described earlier and payment by bond was exactly that, a listing in the account book describing an individual as paying by their bond, and may bear little difference from an IOU. I keep them separate due to the specific nature of the listing. Labor is a category describing general labor listings.

With the formal definitions and general business practices in place, I next describe my data set and the manipulations required to provide results about credit ubiquity.

## **Data Sources and Issues**

In gathering my quantitative data, I sample fifty-six merchant account books in New England. All but one are from Massachusetts and Connecticut, the two larger colonies in colonial New England.<sup>30</sup> Figures 1 and 2 introduce the type of data provided by these sources. Concerning the sources themselves, the books are generally in disrepair and appear to be quite fragile, though well-crafted books are very resilient and will appear in good shape. The pages, darkened by age, are very sturdy and the smell of stale air and dust rises up when they are turned. The character of the merchant can often be assessed from

his account book. For example, the style of penmanship gives researchers an idea of the merchant's, or his bookkeeper's, education.

Generally, the account books provide dates for transactions as well as a listing of what took place. The listing can be very specific, listing quantity of goods and per unit prices as well as the method of repayment, or it can be vague, simply saying "credit" or nothing at all. While cash may not have been prominent in the economy the colonists recognized the efficiency of converting goods sales into currency units. The merchant then recorded the amount of the purchase or payment, assessed in colony specific pounds, shillings and pence. Each colony had its own version of the pound that fluctuated against sterling. The colonies were monetized in the sense that each used its own standard of value. Massachusetts, as the largest and most developed economy, set the pace for the rest of the region in terms of exchange in New England. Occasionally merchants would perform a summation of the account. Called "reckoning", it provides insight into more than just what the account book records. If the customer was another merchant the reckoning would take into account anything listed in the other's account book. Very often the merchant's own book recorded less than half of the business between them.

The account books studied generally used different recording procedures. Most were ledgers but some were cashbooks. Figures 1 and 2 are from the ledger type of account book. Cashbooks were chronological listings of events, not sorted by consumer. Frequently, the merchant used the cashbook to record events as they happened for later transference to a ledger-style book. Figure 3 is an example of a cashbook taken from the accounts of George Shove, a Massachusetts merchant.<sup>31</sup> The account shown lists one year's transactions. Note that the amounts in Figure 3 are provided in terms of decimalized pounds. The merchant recorded amounts in the traditional pound, shilling and pence form, however, I change it to the easier to read form. The conversion is made by totaling the amount into pence and dividing by 240, the number of pence in a pound. Entries in the book offer no explanation of the six-month gap in recorded accounts and many possible reasons exist. Other occupations may have taken his time, he could have been sick, using another book and the list goes on. What is noticeable is the lack of

any recorded payments. I record loans as negative values while payments to the merchant are recorded as positive values to distinguish between them. Only three repayments exist, both denoted by the listing, credit. Another cashbook type account, that of Edward Marrett<sup>32</sup>, also a Massachusetts merchant, had forty-five payments entered for the 5 months from January 1, 1751 to May 24, 1751 out of 280 records. Only seven of these payments were cash, two were third party IOUs and one was a personal IOU. Out of 235 purchases made by customers, 234 were made on loan, the sole remaining one being made on barter. These numbers seem to confirm the cash scarcity described by Baxter and others. Other cashbook style accounts in the data set concur, leading me to be fairly certain that the data accurately reflect the way business was conducted. The account books likely understate the cash use in the economy, however, the credit characteristics shown later detail credit's importance.

Using a two-step process, I adjust the quantitative data contained into lawful money with a standard year of 1770. New England went through several standards of value throughout the seventy years of my data set, called old, middle and new tenor. Generally, merchants only used old tenor or lawful money as their standard of value when recording debts. Lawful money was a standard that existed throughout, essentially a proclamation rate of £133.33 Massachusetts to £100 sterling. Old tenor currency values fluctuated against sterling throughout the period. Massachusetts went back to the lawful money standard after March of 1750 and Connecticut returned after November of 1756.<sup>33</sup> The data set includes values in old tenor and lawful money. In order to compare values against one another, a common standard must be adopted, for which I chose lawful money. My reasons for using this as the standard are ease of comparison as well as the fact that merchants also made these conversions. It seems the reasonable standard of value to adopt for its consistency throughout the period.

To convert values from old tenor to lawful money is not an easy task. It requires first assessing which values need adjustment, a task made difficult by inconsistent merchant record keeping. One must then find conversion rates. Fortunately a source for these rates exists in McCusker's *Money and Exchange in Europe and America, 1600-1775: A Handbook* (1978).<sup>34</sup> Table 3.1 in this book lists the

monthly exchange rate between Massachusetts' old tenor and sterling. The rates in Table 3.1 are converted to old tenor-to-lawful money rates by dividing the values by 133.33. At this point it is possible to convert all values in Massachusetts into lawful money. The same table can be used for the Connecticut data except for the six years from March 1770 to November 1766, new rates must be calculated due to the persistence of old tenor in Connecticut. Though not perfect, Table 3.4 provides us with an approximation, using the metallic rate of exchange for the years 1750 to 1760. Armed with these rates all values can be converted into lawful money.

The second step is to get it all into one base year. I chose 1770 as my base year. The choice of a base year is somewhat arbitrary and this one seemed reasonable being close to the end date for my data. To convert lawful money values I used McCusker's Table A-2 in his article "How Much is that in Real Money?".<sup>35</sup>

Conversions are a controversial topic. While some merchants made conversions from old tenor into lawful money, they did not explicitly take into account price changes over time in their account books. Whether they did so implicitly is still an open question, but they do not tell us such in the account books. When they mark an account as cleared or settled should these conversions be used if they tell us something different? For accounts that cover a relatively short span of time, a few months or even a few years, the error introduced is less serious, but many accounts span several years and sometimes decades. There is some error introduced into the amounts by this process. However, the ability to directly compare values outweighs the error introduced. All values, the nominal amount and the 1770 lawful money amount are reported in the tables. Figures 4 and 5 show the conversion into a standardized base year amount.

Figure 4 shows the records of Catherine Coss and Isaac Huntington, a Connecticut merchant.<sup>36</sup> Coss made one purchase from Huntington and required a loan. She made three payments on the loan, the first being the next day after receiving the goods. The decimalized pound column shows the nominal value of each entry, and as you can see the account balanced at the end. Examining the different columns

provides the reader with a sense of the magnitude of the error. Figure 5, the accounts of Dorothy Mix and Isaac Huntington, is offered as another example.<sup>37</sup>

The data set is composed of over 9,600 purchases along with 4,340 payments made by the consumers. Of the 9,600 purchases 9,499 are made by credit, that is required a loan, 100 were cash transactions and 38 were barter. As mentioned before, I divide repayments into seven categories: cash payment, payment in goods, payment in personal IOU, payment by reckoning, payment by third party IOU, payment by bond and payment by labor. All these repayments are the results of loans extended. The number of instances for each is provided in Table 1.

I provide the following wealth estimates from Jones's *Wealth of a Nation to Be* (1980)<sup>38</sup> to ease the interpretation of the results and to provide some scale.<sup>39</sup> Mean total physical wealth in lawful money for 1770 was £124.95, median wealth was £57.35 and mean income was £8.14. These numbers will serve as a comparison value for the results of the following sections.

## **Purchases**

I use the data sample described in the previous section to answer questions concerning how merchants sold goods. Table 1 presents the number of times each category was observed as well as the total number of purchases. Table 2 uses the numbers from Table 1 to calculate percentages.<sup>40</sup> As Table 2 illustrates, roughly seventy percent of all observations are purchases. Almost all of these purchases, 98.6% in Connecticut and 98.5% in Massachusetts, were financed by loans. Payment at the time of purchase by cash and barter combine for less than 2% of purchases. The work of Baxter and Bridenbaugh mentioned earlier supports my research. It is interesting that two colonies quite different in financial development would be so similar in the way goods were sold. Basic differences will be noted later. While important, the numbers in Table 2 are incomplete.

The account books supply more information about the relative importance of methods of purchase than frequency of occurrence. While cash and barter transactions accounted for less than 2% of

purchases their importance may be understated if they were twice the value of loan purchases. I present both average and median amounts valued in £ lawful money, 1770. Table 3 presents the average amounts for each purchase method.<sup>41</sup> Table 4 presents the medians. The means and medians are reported to somewhat counter the skewed distribution of values across merchants shown in tables 6-9.

Tables 3 and 4 show the large differences between the scale of business in the two colonies. Average loans in Massachusetts were usually more than ten times greater than those in Connecticut (£13.9 compared to £1.1). The median loan amount in each colony also shows this difference. The median loan amount in Massachusetts was £0.84 and in Connecticut was £0.149, more than five times greater. As similar as the two colonies appeared to be in their choice of sales method, the scale of credit sales are dramatically different. Cash purchases in Massachusetts are less than barter, £4.64 compared with £5.92, whereas in Connecticut cash purchases exceed barter (£3.25 v. £2). Median cash purchase values in both colonies are larger than barter values. Massachusetts cash purchases are roughly five times Connecticut values (£2.24 v. £0.526) and barter values are between seven and eight times greater in Massachusetts (£1.44 v. £0.185). Compared to the numbers that Jones and Perkins provide, the size of average transactions values in both colonies is impressive. While much smaller, the median amounts are also large compared to income and wealth. The average Massachusetts loan of £13.9 lawful money is well above the mean income estimate and almost one fourth of median wealth, for only an average credit transaction. Connecticut's average loan of £1.10 lawful money is also quite a large share of mean income. The average credit transaction was quite large. Median credit purchases in Connecticut were almost two percent of mean annual income and in Massachusetts were almost ten percent of mean annual income. Cash transactions of £3.25 for Connecticut and £4.64 for Massachusetts are also large compared to the wealth and income estimates. The same holds true for barter transactions. In Massachusetts purchases requiring a loan were on average greater than those using cash or barter. The reverse situation holds in Connecticut with cash purchases equal to some three times the value of credit purchases. Parts of

the Massachusetts sample are clearly more developed and handling larger exchanges than rural Connecticut.

To further assess the frequency of each category, I calculated their share of the total amount of purchases or payments, and present them in Table 5. Credit was the major method for purchasing goods in both colonies with well over 96% of the total value of purchases in each, though it declines by around 2% for Connecticut. Credit purchases in Massachusetts were 99.5% of the total value of purchases. Cash purchases in Connecticut were around 3% of value, about ten times the Massachusetts percentage. The barter percentage in Connecticut is almost three to four times the Massachusetts value. Credit was an vital way to make purchases in both colonies, in amounts that make claims of credit's ubiquity valid.

## **Loan Repayments**

Tables 10 and 11 provide the instances and the frequency for each repayment category. Goods were the most frequent form of repayment, over 45% in both colonies. Cash payments were around 25% of all repayments in each colony. My data seems to confirm Baxter's earlier statement about receipt of "odds and ends" as payment. Reckoning accounted for more than 7% in each colony and IOUs were roughly 3% each. Merchants in Connecticut received no bond repayments while those in Massachusetts were less than 1% of the total number of payments. Third party IOUs were more common than first party IOUs in each colony though a far greater frequency occurred in Massachusetts, over 13%. The final category, labor, exhibited a large disparity between the colonies with almost 9% in Connecticut and less than 2.5% in Massachusetts.

Martin makes a similar analysis using one merchant.<sup>42</sup> Using the accounts of Josiah Dwight from two separate periods, 1757 to 1765 and 1821 to 1823, she provides the percentage of payments made according to her three categories: money, goods and labor. Her results are provided in Table 12. There are some surprising differences between our numbers. Her estimates of the amount of money payment are quite high. "Money", as I mentioned earlier, is a very broad term. Personal and third party IOUs

were used and called money at points in time. Among the items she specifically lists as money were minted coins from various countries, paper money of various issues and origins and personal notes.<sup>43</sup> When all these items are combined from my account data the percentage of payments in money for Connecticut is 37.66%, still far short of her estimate of 59.1%. The Massachusetts estimate is 40.73%. The estimates for payment in goods are closer, 31% to my estimate of around 45%. Her estimate of payment in labor, 9.1%, is remarkably close to mine of 8.9%. Martin's second set of estimates falls outside the time range for my study, but they do depict an interesting trend, a movement to increased payment in goods at the expense of the other two categories. The difference in our estimates could be a matter of sample size or the span of time my data covers.

The same logic applied to purchases can be applied to payments. Payment size is an important aspect that needs to be considered. The same difficulty arises from the conversions made earlier. Tables 13 and 14 present the average and median amounts for payments in £ lawful money for 1770.

Average payments in Massachusetts were far greater than those in Connecticut confirming the differences in development. The average cash payment in Massachusetts was seventeen times larger than in Connecticut, £51 compared to £3. The amounts decrease and so does the disparity when we consider the median values for Massachusetts and Connecticut, £4.598 v. £0.477. The average cash transaction from the Massachusetts sample was almost as large as median New England wealth, and the median value was over half of mean New England income. Most Massachusetts repayment categories, mean or median, are enormous given the numbers provided for wealth and income. Only payment in labor fails to approach or exceed one fourth of median income. On the payment side for Connecticut the average personal IOU value is almost four times the average for the third party IOUs, while they are almost five times as great in the median values. While customers paid more often with third party IOUs the value of the personal IOUs was higher. While not as dramatic as the Massachusetts numbers the Connecticut numbers are large as well. It is not easy to envisage a payment being equal to one quarter of mean income.

Several factors likely influence the size of payment. The length of time the merchant awaited payment should have a positive effect on the size of payment. The merchant likely will insist on a larger payment and the consumer has the ability of save over a longer period. The individual will also affect the size of payment. Merchants dealing with other merchants may routinely receive larger payment, and make larger loans, based on the length and type (e.g. retailer to retailer or wholesaler to retailer) of relationship. These and other distinguishing characteristics have yet to be used in an analysis of the size of payments.

Table 15 presents the percentage of total payments each category represented. Some of the more notable results include the differences between the two colonies in the use of IOUs. In Connecticut the personal note accounts for 11.8% of all payments and the third party note only 5.9%. Massachusetts is the opposite with personal notes equal to 3.5% and third party notes equal to 19.22% of the total value of payments. Using the definitions of Martin's category of money the percentage of total value is 54.2%, much closer to her estimate of 59.1%. Our estimates, while different, are not inconsistent and describe a similar story. In fact, our estimates combine to illustrate the increasing use of money in Connecticut. Massachusetts's payments are fully two-thirds made in money using Martin's categories, showing a higher degree of money usage than Connecticut. Massachusetts uses credit more frequently than Connecticut and repays a higher percentage in cash. Cash is the largest payment category for Massachusetts at more than 44% while it is only 36.5% for Connecticut and ranks behind goods. Goods accounted for 39.95% of the total value of payments for Connecticut and 23.6% for Massachusetts. Reckoning take on increased significance in Massachusetts, 9% of the total value of payments while it was only 7% of payment observations, and diminished importance in Connecticut, 3% of the total value of payments from 7% of payments in Connecticut.

## Conclusions

Combined, these numbers illustrate some significant features of business practices. The amount per transaction or payment is much higher for the Massachusetts data than Connecticut. The strong influence of Boston and the more rural nature of Connecticut throughout this time period are likely sources of this difference. While each colony used third party notes more frequently than first party notes, the percent of total payment value represented by first party notes is much higher in Connecticut than in Massachusetts, even higher than third party notes. Despite the differences in scale of operations and payment preferences both colonies made credit the preferred method of purchase, over 95% of the time for average amounts of £1.1 in Connecticut and £13 in Massachusetts and median amounts of £0.15 and £0.84.

The size of the purchases and payments are quite large, particularly for Massachusetts. When compared to Jones's estimates of wealth the numbers take on an increased significance. Average credit purchases in Connecticut were one eighth of mean annual income and in Massachusetts they were roughly 2.4 times mean income.

Taken together the size of the average credit transaction and the frequency of credit use demonstrate both credit's ubiquity and the importance of credit to the economy. The average repayment values show goods and cash playing important roles in the payment system. Even taking into account a systematic understatement of cash use, credit played an important role in the economy. Credit use and private notes also cast the methodology of the colonial monetary literature into doubt. The use of credit for payment and the variety of repayments displays a more complex picture of the eighteenth century New England economy than previously believed.

Credit use was frequent enough and in sufficiently large amounts that tests of the quantity theory using colonial data are inappropriate. The wide variety of methods of repayment, including goods, cash and personal notes, further calls into question the view of government issued paper notes as the primary

medium of exchange. The colonial economy is exceedingly complex and its payments system was sophisticated. It needs to be treated accordingly.

## **Extensions and Future Work**

So far I have described only one aspect of the data. Purchase and payment amounts are very important to know, but they do not tell the entire story. The amount of time to repayment is an important characteristic. If merchants in Massachusetts waited five years for repayment of loans then a £51 cash repayment seems a little less unreasonable. Unfortunately, the incomplete record keeping of merchants leads to many missing dates and thus the absence of vital data. However, these calculations remain important and attempts to calculate the period of repayment must be made.

Referring back to Figure 4 we see that four payments were made.<sup>44</sup> The first payment was made the day after Catherine Coss was charged for weaving, the next occurred roughly five months later and the debt was finally extinguished some five years after it began. Similar information is provided in Figure 1 where the large payment made in July 1750 extinguished three loans of eight, six and five months. Two problems confront the estimation of time to repayment of loans: incomplete date information and censoring. Each of these problems can be corrected, but such correction requires intensive amounts of research. The standard time for repayment established in the literature ranges from a low of three months to a high of one year.<sup>45</sup> The numbers already presented cast some doubt on this estimate. Preliminary estimates, unfortunately not taking into account the censoring problem, put the estimate of average length of loan for my data set at over five hundred days. Once censoring and missing data problems are corrected, both a life table and Cox regression model can be estimated. With this information a more complete picture of the practices surrounding merchant lending practices and transactions in colonial new England in general can be formed.

The pattern of buying and selling displayed by the accounts is an important consideration. Did consumers run up large amounts of loans and pay them off all at once or in installments? Such factors

can have important consequences for credit use and the overall payment system. More work in the area of payments and credit needs to be done before a complete picture is formed. This paper represents the first step in the process, a demonstration of credit ubiquity and a description of the payment system.

The role of merchants as financial intermediaries also needs to be developed. As time passed merchants took on more intermediary functions. Customers were given acceptances to use in distant towns. Statements were sent to the merchant who paid the creditor to the customer. The merchant added corresponding amounts to the debt of the customer on his books. Lending practices evolved over the eighteenth century and account books provide insight into these practices.

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<sup>1</sup> Hawtrey, R.G. Currency and Credit. Longmans, Green and Co.:London, 1950, p. 4.

<sup>2</sup> Bailyn, Bernard. New England Merchants in the Seventeenth Century. Harvard University Press: Cambridge, Massachusetts. 1979.

<sup>3</sup> Martin, Margaret. Merchants and Trade of the Connecticut River Valley, 1750-1820. *Smith College Studies in History*. Department of History, Smith College: Northampton, Mass., p. 139.

<sup>4</sup> Storer, Ebenezer. Account Book. Harvard Business School, Baker Library.

<sup>5</sup> As an aside, Storer's account book provides new information for four Massachusetts and two Connecticut merchants from the larger data set. They are listed as owing Storer money. From Connecticut Ebenezer Plummer owes £1892.66 and John Smith owes £535. The Massachusetts merchants were Benjamin Eustis, £2.53, Samuel Grant, £24.04, Edward Marret, £37.13, and Daniel Rea, £5.16. Storer is also mentioned in the accounts of other merchants in the data set. The combined information from these account books helps show the links between merchants.

<sup>6</sup> Forms of payment will be discussed later in the paper but a few definitions should be provided. Public bills of credit were paper currency issued by the colonial governments usually to overcome revenue shortfalls. These bills were thought to circulate like money. Private bills of credit are described later, but they are a form of IOU.

<sup>7</sup> Parker, Jonathan. Account Book. Harvard Business School, Baker Library.

<sup>8</sup> This is the traditional "pounds shillings pence" form with twelve pence equaling one shilling and twenty shillings equal to one pound.

<sup>9</sup> To make such a conversion simply divide the pence amount by 240, the number of pence in £1.

<sup>10</sup> Bridenbaugh, Carl. The Colonial Craftsman. Dover Publications: New York. 1990. p. 154.

<sup>11</sup> Hawtrey, Chapter 1.

<sup>12</sup> Martin, p.122 is a good example. Other authors that discuss this include McCusker and Perkins.

<sup>13</sup> Martin, p.19.

<sup>14</sup> Baxter, W.T. The House of Hancock. Russell & Russell, New York: 1965, p.46.

<sup>15</sup> Bridenbaugh, p. 153.

<sup>16</sup> Bridenbaugh, p. 154.

<sup>17</sup> Baxter, p.14.

<sup>18</sup> Baxter, p. 20. As will be seen, repayments of credit took many forms, not just goods.

<sup>19</sup> Baxter, p. 21.

<sup>20</sup> Brock, Leslie V. The Currency of the American Colonies, 1700-1764. A study in Colonial Finance and Imperial Relations. *Dissertations in American Economic History*. New York: Arno Press. 1975.

Davis, Andrew McFarland. Currency and Banking in the Province of the Massachusetts Bay, Volume I: Currency. New York: Augustus M. Kelley Publishers. 1970.

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- <sup>21</sup> Smith, Bruce D. "American Colonial Monetary Regimes: The Failure of the Quantity Theory and Some Evidence in Favor of an Alternate View." *Canadian Journal of Economics* 18 (1985): p. 538.
- <sup>22</sup> Smith, p. 543.
- <sup>23</sup> McCallum, Bennet T. "Money and Prices in Colonial America: A New Test of Competing Theories." *Journal of Political Economy* 100 (1992): p.157.
- <sup>24</sup> Knight, Sara. The Journal of Madam Knight. Boston: David R. Godine. 1972, p. 23. Credit is due to Roger Weiss. His article in the *Journal of Economic History*, volume 40, December 1970, alerted me to this valuable source.
- <sup>25</sup> Knight, pp.22-23.
- <sup>26</sup> Martin, p.149.
- <sup>27</sup> Hawtrey, R.G. Currency and Credit. Longmans, Green and Co.:London, 1950. Chapter 1.
- <sup>28</sup> Knight, p. 24.
- <sup>29</sup> Other authors presume the notes were discounted as they passed from hand to hand to reflect risk or transactions costs. I have seen little in the way of convincing research on this topic.
- <sup>30</sup> One account is listed as an Anonymous New Hampshire merchant. His account book is in the Massachusetts Historical Society manuscript collections. He is included in Massachusetts for this analysis.
- <sup>31</sup> Shove, George. Account Book. Harvard Business School, Baker Library.
- <sup>32</sup> Marrett, Edward. Account Book. Harvard Business School, Baker Library.
- <sup>33</sup> McCusker, John J. Money and Exchange in Europe and America, 1600-1775: A Handbook. University of North Carolina Press: Chapel Hill. 1978. 2<sup>nd</sup> edition. p. 135.
- <sup>34</sup> McCusker, Money and Exchange, Chapter 3. I suggest using the second edition as the author informed me of some inaccuracies in this chapter in the first edition.
- <sup>35</sup> McCusker, John J. How Much Is That in Real Money? A Historical Price Index for Use as a Deflator of Money Values in the Economy of the United States. *Proceedings of the American Antiquarian Society*, Volume 101, Part 2. October, 1991. pp.323-325.
- <sup>36</sup> Huntington, Isaac. Account Book. Connecticut Historical Society.
- <sup>37</sup> Huntington, Isaac. Account Book. Connecticut Historical Society.
- <sup>38</sup> Jones, Alice Hanson. Wealth of a Nation to Be: The American Colonies on the Eve of the Revolution. Columbia University Press: New York, 1980. Table 7.5 and 9.1. Perkins, Edwin. The Economy of Colonial America. Columbia University Press: New York, 1988. p.218 also provides these numbers in one paragraph.
- <sup>39</sup> I use McCusker's *Money and Exchange* to convert Jones's 1774 values to 1770. Jones's numbers are in pounds sterling and must therefore be divided by 1.33 to arrive at the lawful money amount.
- <sup>40</sup> The percentages for purchases and payments are out of total observations. Specific category percentages are obtained by dividing the instances from Table 1 by the appropriate classification.
- <sup>41</sup> I should remind readers that purchases are entered in tables as a negative to distinguish the values from payments. In the text all amounts are reported without minus signs.
- <sup>42</sup> Martin, pp.149-150.
- <sup>43</sup> Martin, pp.150-152.
- <sup>44</sup> Figure 4 is obviously easy to figure due to the complete information.
- <sup>45</sup> Perkins, p. 123.

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