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The economic activity of a grain mill located in Bald Eagle Valley, Pennsylvania 1868 to 1872

Abstract: In 1831, a grain mill was constructed along Bald Eagle Creek in Unionville, Pennsylvania. The author examines accounting records of this mill from 1868 to 1872 while under the proprietorship of William D. Smith. The economic activities and accounting procedures revealed in this study provide insight into the economic events as perceived and recorded by this proprietorship in immediate post-Civil War times.

Ownership of the Mill 1864-1981

For 128 years (1831-1959) a grain mill along Bald Eagle Creek in Unionville, Pennsylvania performed a vital service to members of the surrounding agricultural community. This paper examines the accounting records of this mill from 1868 to 1872 while under the proprietorship of William D. Smith. A history of the ownership of the mill is presented to enrich the historical perspective of the reader. The deed search was not extended beyond 1864 due to the complexity of property divisions and unavailability of information. The surnames “Smith” and “Buck” appear often in the discussion of ownership. William D. Smith’s first wife (name unknown) gave birth to Mary Smith who married Daniel Buck. This is the sole relationship that the author was able to establish between the two families.

Names frequently appearing in the ownership transfers are William D. Smith and his second wife, Sarah; their son Francis W. and grandson Clair M.; additionally, Christian Buck and his children Joseph, Daniel, Harriet, and Katharine.

Grantees¹

The mill property consisted of ten acres of land upon which the mill and the owner’s house were located. On April 20, 1863, Sheriff Richard Conley conducted a sale of the mill property to settle a claim against the deceased owner, Jephaniah Underwood, who died...
intestate. The property was sold for $6,000 to satisfy a $5,293 debt. Subsequent selling prices are not disclosed as property divisions would render a comparison of such prices meaningless.

Joseph Underwood owned the property from April 20, 1864, to May 1, 1867. When he sold the property to William D. Smith, he reserved the right to mine iron ore on the property. Smith would receive $60 "for each and every acre necessarily and permanently occupied."

William D. Smith owned the property from May 1, 1867, until the land was conveyed to Christian Buck by Sarah Smith et al. in October 1892. William D. Smith died intestate. The property was then conveyed to the four children of Christian Buck upon his death in November 1909. In March 1914, Daniel Buck purchased the interests of his brother and sisters.

On September 7, 1923, Francis W. Smith acquired the mill from Daniel Buck for $1. As previously noted, a brothers-in-law relationship existed between these two parties through the marriage of Daniel Buck and Mary Smith.

The mill was conveyed by Francis W. Smith to his children in August 1946; his children are represented on the deed by "Clair M. Smith." Clair M. Smith still lives only miles from the mill site and shared his recollections of the mill with the author in 1981.

In December 1976, Gene and Roselyn Brandt bought and currently occupy the property.

Overview of the Milling Operation

William D. Smith acquired his milling expertise from his father and brothers who were millers engaged in a similar operation in Clearfield County, Pennsylvania.

The mill was built along a race about one-half mile below a dam in Bald Eagle Creek. Two sixteen-horsepower metal turbine water wheels normally provided power. When the water level was too low to turn the wheels, usually in the summer or when the race was frozen, the mill was powered by a steam engine using a coal-fed boiler.

Farmers brought various grains to be ground, with the miller keeping a portion of the grain as remuneration for the grinding services provided. The miller kept one-tenth (1/10) of all grains ground, except ears of corn, of which one-eight (1/8) was retained as compensation. The miller would then sell his portion for cash or barter. The amount of the miller's compensation was determined by market forces, i.e., competition with other millers in the region.
The mill was not a seasonal operation but provided activity throughout the year to the preclusion of other economic activities such as farming. However, the owners kept a limited number of stock animals for domestic consumption.

Clair Smith estimated that there had been about five other milling operations in Bald Eagle Valley and two in Bellefonte, though he did not view the business environment as particularly competitive. He could not recall the existence of trade associations or granges, but he remembered that his father had subscribed to the "American Miller," a monthly trade publication that operated under several titles from 1873 to 1968.

The Accounting System

To a contemporary observer of accounting procedures, the most unorthodox characteristic of this system is the use of the single entry method of accounting. The accounting records consist of a "daybook" and an accounts receivable subsidiary ledger (A/R-sub). (The records were purchased at an auction by William J. Schrader, a member of the Department of Accounting and Management Information Systems at The Pennsylvania State University and are available for inspection at the University.)

The daybook is the book of original entry, i.e., a chronological record of transactions, consisting of 575 pages with dimensions 7" x 16½". The transactions comprising the daybook relate almost exclusively to credit sales and the receipt of cash associated with these credit sales. Entries in the daybook are posted to the A/R-sub, an 8" x 13½", 360-page tome, prefaced with a customer index to facilitate the location of the desired customer accounts.

The system appears to have been designed primarily to determine balances of accounts receivable, since cash receipts for cash sales to "cash-only" customers (if needed there were "cash-only" customers) and cash disbursements are conspicuously absent.

The following is a typical credit sale entered in the daybook:

(A)  (B)  (C)  (D)

70  Benjamin Rich  Dr.  11.10

to 370 lbs. chop at 3

(A) This reference number indicates the page in the A/R-sub where the entry is posted.
The customer's name and the nature of the transaction is described. Benjamin Rich purchased 370 pounds of chop grain at 3 cents per pound.

The A/R-sub account for Benjamin Rich is debited "Dr."

The extension or the total dollar value of the transaction, i.e., $11.10 (the amount posted to the A/R-sub).

Accounts Receivable Subsidiary Accounts

An examination of the account of a major customer, Henry W. Hoover, provides a comprehensive study of the transactions included in the A/R-sub accounts and includes the following items:

Debits to the Hoover Account

The first entry (Debit of $65.30, on 3/30/1868) records the purchase of Hoover's account by William D. Smith from the previous mill owner (the ledger notes, "by assumption," and is dated on the first day of operations, May 30, 1868).

The majority of debits result from the purchase of various grains from the mill by Hoover. However, Hoover's account is debited several times for purchases made by other customers. Example: Wm. Idings purchased ½ barrel of flour for $7 and the charge was made to Henry W. Hoover's account. One might surmise from this transaction that Hoover was indebted to Idings and was reducing his balance to Idings by $7, or was lending Idings $7, or perhaps Idings worked for Hoover.

A similar transaction is noted: Henry W. Hoover instructed the bookkeeper to debit his account for $10.80 and to credit Harvey Hoover's account $10.80. Again, it appears that Henry W. Hoover was settling a debt owed to another customer of the mill. However, in this instance it was accomplished by a transfer of balances on the books of the mill, which was a creditor, common to both parties.

Credits to the Hoover Account

Hoover reduced his balance by the use of both monetary and non-monetary assets. The monetary assets included cash, checks, and notes. The checks were drawn on the First National Bank of Bellefonte.

A note for $120.68 credited to Hoover's account deserves some discussion. The author's interpretation of this transaction dated December 31, 1868, is presented in the following scenario: Prior to December 31, 1868, Henry W. Hoover accepted a note from "Rey-
nolds and Co.” On December 31, 1868, Hoover endorsed the note, and delivered it to the miller for credit. The miller then credited Hoover’s account for the present value of the note. The miller may have taken the note to be discounted at the “Bellefonte Bank” or received cash payment from Reynolds and Co. at maturity. Since a complete cash receipts record is not available, the author could not determine exactly, the disposition of the note. A discount rate was not ascertainable due to lack of both a maturity value and the dates of issue and maturity.

Nonmonetary assets such as bushels of wheat and rye were given by Hoover to reduce the balance. He also performed the labor of “hoeing” to reduce the balance. An examination of other customer accounts revealed that a myriad of services and assets were exchanged for credit. The following is a sample of such services and assets:

<table>
<thead>
<tr>
<th>Assets and Services Exchanged for Credit</th>
<th>Amount of Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 bbl cider</td>
<td>$10.00</td>
</tr>
<tr>
<td>By two turkeys</td>
<td>3.00</td>
</tr>
<tr>
<td>By boarding</td>
<td>10.40</td>
</tr>
<tr>
<td>(By boarding 52 meals)</td>
<td></td>
</tr>
<tr>
<td>By 10½ lbs. of mutton</td>
<td>1.37½*</td>
</tr>
<tr>
<td>By 350 ft. rails</td>
<td>4.37½</td>
</tr>
<tr>
<td>By one day’s work</td>
<td>1.75</td>
</tr>
<tr>
<td>By 1 pair boots</td>
<td>9.00</td>
</tr>
<tr>
<td>By 3 jugs</td>
<td>7.50</td>
</tr>
<tr>
<td>By cow pasture</td>
<td>1.00</td>
</tr>
</tbody>
</table>

*Note the use of the “½ cent.”

In preparing the preceding schedule, the author detected a significant differential in the value of labor relative to the value of certain commodities when compared to current relationships. After a review of the accounts and the preceding schedule, a laborer’s wage was estimated to be $1.75 per day; this rate is assumed in the following table:

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Days of Labor Required for Purchases</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 pair of boots ($9.00)</td>
<td>5.1</td>
</tr>
<tr>
<td>1 barrel of cider ($10.00)</td>
<td>5.7</td>
</tr>
<tr>
<td>1 turkey ($1.50)</td>
<td>.85</td>
</tr>
</tbody>
</table>
If these values are representative of the values existing in 1868, the contrast with today's values is pronounced. However, the above table is constructed with *prima facie* evidence only and has not been researched; it is presented as a point of interest.

**Payroll Accounting**

Since cash disbursements were not entered in the daybook, the magnitude of employee activity is obscured; however, there is evidence of cash advances to part-time employees (again, credit transactions). In such an instance, the employee's A/R-sub account was debited for the amount received, with the corresponding notation "to cash." As the employee labored, his account was credited with the notation "for work."

**Banking Functions**

In addition to the conventional services provided by the mill, some equally important but not so obvious services were provided; namely, financial services. The following services previously mentioned deserve repetition in a different context.

The mill routinely transferred balances from one customer's account to another thereby simultaneously facilitating the credit function and the exchange process. Banks currently provide these services in the form of consumer credit vehicles (e.g., VISA, Mastercharge, unsecured loans) and checking accounts. Cash advances (loans) were frequently made to employees who repaid the loans in labor. Abundant evidence suggests that notes were a common form of payment and were discounted routinely.

**Concluding Remarks**

As research on this paper progressed, the author viewed with increasing appreciation, the magnitude and intimacy of economic dependency within the local community. The extended use and acceptance of barter as a means of exchange attests to the dependency. The study of these antiquated records and the related economic activity leaves the author a bit envious of those rather simple and humanistic times which have all but vanished in the contemporary world of business.

**FOOTNOTES**

1The deed search was conducted at the Centre County Court House located in Bellefonte, Pennsylvania.
Based on conversation with Clair M. Smith, employee of the mill from 1915 to 1925 and grandson of William D. Smith.

On January 1, 1960, the First National Bank of Bellefonte and the Bellefonte Trust Company merged under the amended Charter of the Bellefonte Trust Company as the First Bellefonte Bank and Trust Company. On January 1, 1966, the Altoona Central Bank and the First Bellefonte Bank and Trust Company merged to form what is currently, the Mid-State Bank and Trust Company.

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____________. Accounts Receivable Subsidiary Ledger, 1868-1872.