Condensed report on the saving to society resulting from the use of the Comptometer

Lybrand, Ross Bros. & Montgomery

Dorr E. Felt

Felt & Tarrant Manufacturing Co.

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Condensed Report on the Saving to Society resulting from the use of

THE COMPTOMETER

LYBRAND, ROSS BROS. & MONTGOMERY
ACCOUNTANTS AND AUDITORS

NEW YORK    PHILADELPHIA    CHICAGO
PITTSBURGH    BOSTON         WASHINGTON
November 6, 1920

Mr. Dorr E. Felt, President,

Felt & Tarrant Manufacturing Co.,

Chicago, Illinois.

Dear Sir:

In accordance with your wishes we have made an investigation to determine the annual amount of saving to society which results from the use of the Comptometer, an instrument designed to make accurate and rapid arithmetical calculations under the manipulation of a skilled operator.

While we recognize the many shades of meaning applicable to both of the words "saving"
and "society," and are well aware of the possibility of savings from which society may receive no benefit, we have so confined the use of these words in this connection that a "saving to society" shall be understood to mean the avoidance of spending or losing, or the prevention of waste, which make possible, at the same total cost as formerly, greater production, or broader distribution, or which reduce the cost of such activities, or in other ways benefit mankind as a whole.

A list of them would include actual saving in time; savings due to greater accuracy; savings in stationery; savings made possible as the result of the more prompt receipt by executives of reports of one kind and another; savings in space and savings due to the lower salaries demanded by Comptometer operators, as compared with mental calculators. It should be borne in mind, however, that savings for which the use of Comptometers appear to be responsible
are many times largely attributable to a superior organization, without which the value of the instruments themselves would not be so evident.

The impossibility of determining an amount which would even approximately represent the saving to society from all of these sources compelled us to limit our research to a discovery of the value of time saved, — the cost of labor released for other productive effort through the introduction of the Comptometer.

Our conclusions were reached after interviewing numerous owners; after examining your files for customers' comments; and after comparing the results of a test in which Comptometer operators and clerks were engaged.

The results of our interviews with forty-nine employers of 719 machines are tabulated as follows:
<table>
<thead>
<tr>
<th>Estimated saving for each Comptometer</th>
<th>Number of owners</th>
<th>Number of Comptometers</th>
<th>Annual saving at an assumed salary of $1,200 per clerk</th>
</tr>
</thead>
<tbody>
<tr>
<td>No clerks</td>
<td>3</td>
<td>9</td>
<td>-</td>
</tr>
<tr>
<td>1/2 of a clerk</td>
<td>2</td>
<td>4</td>
<td>$2,400.00</td>
</tr>
<tr>
<td>5/6 of a clerk</td>
<td>1</td>
<td>18</td>
<td>18,000.00</td>
</tr>
<tr>
<td>1 clerk</td>
<td>15</td>
<td>212</td>
<td>254,400.00</td>
</tr>
<tr>
<td>1 1/2 clerks</td>
<td>5</td>
<td>75</td>
<td>135,000.00</td>
</tr>
<tr>
<td>1 2/3 clerks</td>
<td>1</td>
<td>3</td>
<td>6,000.00</td>
</tr>
<tr>
<td>2 clerks</td>
<td>10</td>
<td>167</td>
<td>400,800.00</td>
</tr>
<tr>
<td>2 1/3 clerks</td>
<td>1</td>
<td>3</td>
<td>8,400.00</td>
</tr>
<tr>
<td>2 1/2 clerks</td>
<td>2</td>
<td>49</td>
<td>147,000.00</td>
</tr>
<tr>
<td></td>
<td>40</td>
<td>540</td>
<td>$972,000.00</td>
</tr>
<tr>
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<td>9</td>
<td>179</td>
<td></td>
</tr>
<tr>
<td></td>
<td>49</td>
<td>719</td>
<td></td>
</tr>
</tbody>
</table>

Average saving per Comptometer $1,800.00

Of the 42 customers whose written testimonials show any attempt at an estimate of the saving consequent upon the use of the Comptometer, 22 consider the saving to be one clerk for each machine used; 4 admit no definite saving in clerks, though they consider the machine invaluable for other reasons; 4 believe the saving in clerks to be less than one per machine; 12 feel that to them the saving in clerks is more than one per Comptometer.
The test conducted by us consisted of work of the sort that occurs in every day routine of commercial accounting, including such as the computation in connection with the preparation of a production and stock-on-hand report; the calculation of percentages; figuring tonnage, inventory items and discount; verification of freight way bills; footing and cross footing. The schedule was planned to keep an average clerk busy for a week. Neither clerks nor operators understood that they were doing anything but some regular work.

In this test, the average time required by clerks was 43 hours, 34 minutes; by Comptometer operators, 16 hours, 7 minutes, - a net saving of nearly 1 3/4 clerks for each Comptometer. In addition, it should be noted that compared with 64 errors made by the operators, the clerks were guilty of 587 errors.

There are about 53,000 Comptometers of the duplex type in use in the United States.
Of these, 32 per cent are in the hands of owners with only one machine, and another 32 per cent are used by concerns with from two to five Comptometers. Under these circumstances, the saving per Comptometer is likely to fall considerably below the average. In fact, as the result of our inquiries we believe that it should be computed at not more than one clerk per Comptometer for 64 per cent of the Comptometers in this country, and that a saving of 1 1/2 clerks per machine can be properly credited to the remainder.

On this basis the annual saving in labor to the United States from the use of the Comptometer is as follows:

Number of Comptometers in service about 53,000.

Assuming the present average cost of a clerk to be $1,200 a year, 36 per cent affect a saving of $1,800 annually

64% affect a saving of $1,200 annually 40,704,000

Total 75,048,000

Yours very truly,

[Signature]