In studying the history of industry one can learn many lessons applicable to modern business. It can provide insight into which ventures and methods have succeeded, which have failed, and why. By examining the origin and development of specific business practices one can better maintain focus on the proper goals, essential elements, and benefits of these practices.

A prime period for study is the British Industrial Revolution (1750-1830) as it marks the beginning of the factory system and mechanized production. Within this era, Josiah Wedgwood (1730-1795) stands out as an icon of ingenuity, efficiency, and productivity. Wedgwood has long been recognized as an inventor and founder of Wedgwood Potteries, but during the past few decades it has come to light that he was one of the first to develop and apply a system of cost-accounting. Though costing was but one element of his quest for efficiency, it was vital to his success as a businessman; indeed, it was vital to determining which ventures were successful.

During the recession of 1772, many producers attempted to weather the storm, often unsuccessfully, by slashing prices and/or borrowing heavily. Wedgwood, on the other hand, chose not to risk bankruptcy through loss-making sales and mounting debts; instead he relied on cost-cutting and marketing strategies. He figured that reducing production costs would not only improve his profit margin but it would also allow him to lower prices and, thereby, increase sales. However, before he could accomplish these goals, he had to ascertain exact unit production costs.

Prior to 1772, Wedgwood had kept track of total expenses and revenue (usually on a weekly basis), labored to use materials in the most efficient way, plus worked to increase employee productivity and
satisfaction. What he had not attempted to do was to determine the cost of production of individual articles as he was unaware of the unit cost of his raw materials let alone the proper allocation of overhead expenses. Thus, he had little knowledge of the actual profitability of particular product lines.

At this point in time, cost-accounting was a crude and little-known practice. There were few, if any, formal principles or methods and what was known was not taught (this period was four years prior to the publishing of Adam Smith’s *The Wealth of Nations*). A self-employed craftsman producing a single product might have known his unit costs; Wedgwood, though, was producing a wide variety of pottery on an unprecedented scale and employing hundreds of craftsmen, workmen, and apprentices in a large factory.

On other business matters he had consulted Matthew Boulton, whose Soho Manufactory was the only other enterprise of the same scale and product range. Unfortunately, due to differences between their industries and financial priorities, Boulton was of limited help on the matter of cost-accounting. It was up to Wedgwood to develop the field as he went, a task that he had already proven himself capable of in other fields.

During the latter months of 1772, Wedgwood made precise measurements of his wares and what was required to produce them. He weighed and measured the clay before it was molded into the vase and the vase before and after firing; from these measurements he calculated loss of material during production. Wedgwood measured the glazes and decorations applied to the vase, determined the amount of coal necessary to fire each vase, noted how many times a mold could be used before needing replacement, project wear and tear on equipment, calculated ratios between workers’ wages and productivity, etc… To these figures he added cost of transportation, loss from breakage, sales expenses, interest payments, etc. By the end of the year, Wedgwood had formulated a Commonplace Book detailing precisely the unit cost of each type and size of vase produced.

Prior to the slump of 1772, Wedgwood had observed that inventory turnover and revenues were high yet his disposable income was lower than expected. His Commonplace Book gave him the explanation: with many products, especially one-of-a-kind orders, his profit margins were extremely small. On the other hand, some products had profit margins slightly higher than expected. As a result, Wedgwood made changes in his marketing strategies and product lines. Later he would abandon research projects after estimating that the profit would be minimal or nonexistent.

Wedgwood also considered possible changes in his pricing and their effect on sales. As he examined fixed and variable costs of production, he realized that, by increasing production he would lower unit costs. Wedgwood had gained an insight into economies of scale. He reasoned that lower prices could lead to increased demand and, thus, a larger total profit. He was even able to convince his idle workers that their accepting lower piece-wages would lead to increased sales that meant more work and, thus, higher incomes—a claim that the facts bore out in the months and years to follow. By cutting costs and (when feasible) lowering prices, Wedgwood increased both his sales and his total profits. In fact, with lower prices he was able to start selling pottery, both useful and ornamental, to the middle class, thereby capturing an entirely new market.

"Wedgwood gained an insight into economies of scale."
Dinnerware & Cost Accounting? continued

company. He also concluded that he could improve the motivation, discipline, and efficiency of his sales staff by changing the method of their compensation. This change also lowered sales costs, raised inventory turnover, and lowered storage costs.

His cost-cutting and financial strategies worked. While numerous businesses failed, Wedgwood Potteries not only survived the recession but emerged a stronger and more competitive company than it had been previously. It is important to note that while Wedgwood’s initial use of cost allocation was motivated by an economic downturn, he did not abandon its practice as his business and the economy improved. In fact, even without a recession, it would have been only a matter of time before he turned to cost-accounting. He had always been committed to improving his products, increasing efficiency, and making his business more profitable. It was this pursuit of productivity and excellence that led him to build a great business empire, a business that still exists today.

Daniel Drake teaches Philosophy at the college level and lectures on Economics and the Industrial Revolution.

Bibliography


HQ Financial Views’ Comments regarding Career Implications:

We agree completely with Drake that through studying history, one can learn many lessons applicable today, which is why we’re including a historical perspective in each of our quarterly newsletters.

So what are the career implications that we can learn from this cameo bio? Namely,

- If what you need doesn’t exist, invent it.
- The answer to surviving downturns is cutting costs but not cutting services.
- Isn’t it amazing how long business existed previously without the capability of one of its major tools, cost accounting (invented by Wedgwood in 1772)? So in spite of you not having all the tools when you start, there’s no reason why your efforts can’t result in positive success even during your refinement and discovery phase.