

▶ EYEBROW: HEADLINE, P. XX
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VALUING KNOWLEDGE

Putting a Price on Brainpower

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For the past 100 years, economists have waged an ongoing debate about the causes of economic growth. Classical economic theory has rested on the assumption that if one invests in factories, tools and improved transportation, economic growth is sure to follow.

Under that theory, labor productivity gains will be realized from mechanization and new production processes or innovative technologies.

As a result, elaborate procedures for reviewing capital asset budgets consumed most of the attention of corporate boards of directors. These were based on the assumption that a company was bound to prosper if it could show a high return from capital investments.

Problem is, this assumption increasingly did not explain economic worth. The 2004 net value of financial assets (book value) for 7,241 listed U.S. corporations totaled \$9.2 trillion while investors were willing to pay \$22.7 trillion for these firms, putting the value of “knowledge”—the difference between a company’s market and book values—at \$13.5 trillion.

No doubt, any discussion about “knowledge capital” or “knowledge assets” will quickly regress into debates about definitions and interpretations of these terms.

The purpose of the worksheet on this page is to define knowledge capital as a calculable financial metric, in dollar terms.

To measure knowledge in this sense requires metrics that are repeatable and quantitatively definable. Such metrics must be also independently verifiable.

▶ TOOL: Calculating the Value of Knowledge Management

How do you begin to measure the value of the information in your employees’ heads and the worth of your company’s trademarks and accumulated software? Here is a simple tool that can help you calculate that metric. This example is based on a real-life company: Johnson & Johnson. **NOTE:** Because the formula relies on a particular company’s market capitalization, first be sure that a company’s stock price isn’t affected by “irrational exuberance,” thus skewing the analysis.

INSTRUCTIONS: Get your company’s market capitalization and shareholder equity, for the most recent fiscal year, and do the calculations described at left. For further analysis, compare your company with up-and-coming rivals. An interactive version of this worksheet is available at go.baselinemag.com/Nov05.

COSTS OF PLANNING		EXAMPLE	YOUR COMPANY
A	Market Value (market capitalization, year-end)	\$188,213,188	
B	Financial Value (shareholder equity)	\$31,813,000	
C	Knowledge Value (A - B)	\$156,400,188	
D	Importance of Knowledge (C ÷ B) This percentage equals the Knowledge Value divided by the Financial Value. The example shows that people are worth almost five times more than all plants, buildings and other equipment. The higher the percentage, the higher the value put on knowledge workers.	492%	
E	Number of employees (in 000s)	109.9	
F	KNOWLEDGE VALUE/EMPLOYEE (C ÷ E)	\$1,423,114	

SOURCE: STRASSMANN INC.

Admittedly, this approach overlooks matters related to aesthetics, motivation or psychology. What you will find here concentrates entirely on analysis of assets that are becoming the essential capabilities for any organization that wishes to compete in the 21st century.

Unfortunately, the \$13.5 trillion valuation must be seen as a simplification. The sum of knowledge values includes a number of firms that delivered negative results. Also, high-value management tends to be concentrated in a few firms.

Consider the following insights on how one should view the importance of knowledge:

▶ The top 100 firms by book value, out of the total corporate population of 7,241 firms (1.4%), accumulated \$6.5 trillion of knowledge

value, or 71% of the total for the U.S. economy. This contradicts a popular theory that it is the small firms that account for the creation of new knowledge in the “new economy.”

That is just not so. Bigness still rules wherever one looks.

▶ There were 662 firms whose knowledge was negative, meaning that they were worth less on the market than their financial valuations. They were worth \$300 billion more than if they were sold off at book value.

This condition offers an argument against the proposition that the U.S. economy—during a year of prosperity—may be approaching its full capacity for generating wealth. A number of corporations appear to be searching for the bonanza within the new economy without a lot of success in finding it. ◀