How "Intelligent" Manufacturing Firms Build Social, Economic and Shareholder Value

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INTRODUCTION

The enthusiasm for so called "new economy" enterprises has scarcely waned in today's share markets, despite the experiences from the "dotcom bust" that welcomed in the new millennium. In 1993, Peter Drucker forecast that "the traditional factors of production - land, labor, and capital are becoming restraints rather than driving forces" and that "Knowledge is becoming the one critical factor of production". This basis for manufacture has continued to play out on the world's stock markets. Some manufacturing industry companies, the archetype for the past industrial age, have become unfashionable to share investors, who have moved their attention to "knowledge based" stocks.

So how are manufacturers responding? Rather than fighting against the onset of the knowledge based economy, some manufacturers are welcoming its progress by demonstrating their credentials in leveraging their knowledge and social capital. As well as maximising the returns to shareholders, they are also contributing benefits to the economy, environment and the community at large.

Many of the concepts that are instrumental in achieving this change have been explored through the Intelligent Manufacturing Systems (IMS) global research and development consortia, which claim membership organisations drawn from Japan, USA, Korea, Australia, Canada, the European Union, Norway and Switzerland. Specifically, this article draws on two sub-programs, the concept of "Holonic Manufacturing Systems" and "Globman21" (Global Manufacturing in the 21st Century) to illustrate how the manufacturing industry is currently adapting, and in some cases leading, in capturing the opportunities offered to companies and executives in the new knowledge based economy.

WHAT IS THE "NEW ECONOMY"?

Discussions on the "New Economy" involve acceptance of the following observations and activities since the 1970's.

The ratio of market valuations to tangible asset valuations have risen from 1 to between 4 to 5 times. i.e. less than 25% of a firm's market valuation can be attributed to its tangible assets. The gap is commonly attributed to the effect of "intangible assets".

- Shareholder returns have shifted from being largely dividend based, to one of capital gain i.e. a focus on capital growth returns over annuity returns.
- The large, vertically integrated firm is becoming the exception, rather than the rule, as global competition, particularly in labour cost within supply chains, is forcing firms to concentrate on their core competencies and to "buy in" products or services that they can't internally provide competitively.
- The growth in alliance, joint venture and merger/acquisition activity is resulting in a market place which is increasingly networked and therefore highly interdependent.
- Product life cycles are becoming shorter, with customers now expecting faster and more innovative product offerings.

The above marketplace changes substantially define the evolution of the new economy. What part the manufacturing industry plays in the new economy will now be explored.

MANUFACTURING COMPANY SHARE MARKET VALUES RELATIVE TO TANGIBLE ASSET VALUES

Some traditional industrial stocks, heavily reliant on tangible physical assets, are now being replaced by low tangible asset stocks, at the top of stock market valuation lists. It is the author's view that the gap between market and tangible asset values is often attributed to the growth in importance of intangible assets. The analysis below, which compares the performance of S&P500 stocks from both the Information Technology and Telecommunications sectors on the one hand and the Materials and Industrials sectors on the other, indicates that many industrial companies are far from being left behind in the new economy stakes. From a point in the

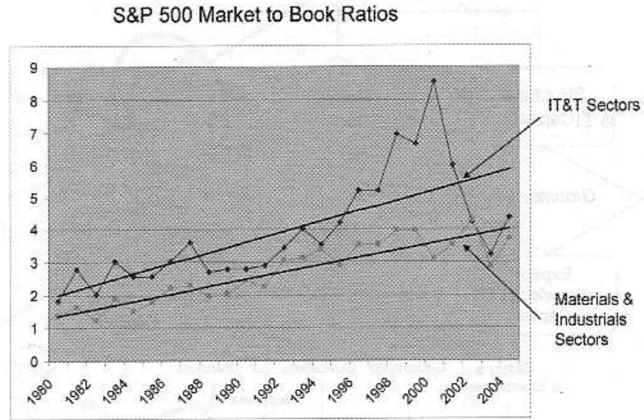

Figure 1 – S&P500 Ratio of Market to Book Values based on Assets

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