

The Value of Intellectual Capital

Perceptions of Value

Consider the evolution of economic business models, from the Agricultural Age, to the Industrial Age, to the Information Age, and the definitions of “working assets” in each case. What were the essential elements of these businesses? What were key measures of productivity, i.e., value?

In the Agricultural Age, the major asset for a business was raw land, which humans developed into farms, raising livestock and vegetables. Apart from developing tools, humans could only contribute their physical effort and hope that Nature would benevolently provide (“manufacture”) sustenance in the form of healthy harvests which could be sold. Theoretically, one could always eat what one could not sell. The land asset was tangible (“fixed”) and could appreciate, in response to increasing demand. Simplistically, one key measure of productivity value in this nature-based economic structure is “return on assets (land)”. The value of one farmer’s property could be compared to another’s by the amount of revenue it could generate per acre or per square mile.

In the Industrial Age, humans introduced a new class of major assets for a business, manufacturing facilities, created by investment. Now, with the land, and other natural resources, humans could control the manufacture of goods and services which could be sold. These man-made assets, however, depreciated with time, and had to be renewed with additional investment. Using the same simplistic train of thought, the key measure of productivity value in this manufacturing-based economic structure is “return on equity (facilities + land)”. One measure of the value of one carmaker relative to another, for example, would be to compare the number of cars produced per square foot of manufacturing capacity.

In the Information Age, we have created yet another new class of asset, scientific/technical knowledge, which is intangible, is constantly changing and is self-perpetuating, in that knowledge naturally tends to create more knowledge, with further investment of effort. In this case, human creativity drives and integrates (human) resources and capital to create “Intellectual Capital”, which results in goods and services which can be sold. The key measure of productivity value in this economic structure, then, is “return on investment (effort and creativity)”.

Knowledge, intelligence, creativity and effort are not new, of course. Humans have used these abilities to differentiate themselves from others since the beginning of time, in all economic structures and endeavors. What is new now is the reduced importance of the older classes of assets in determining value. Does anyone know or care how many square feet of office space Microsoft owns? What bearing would that statistic have on the value of Microsoft stock? The investment in R&D, though, and the quality of its engineers, are

extremely important aspects of value for the company. What is an appropriate way to measure the value of its combined corporate “intellectual capital”? This is a major challenge to existing economic models and accounting principles, which are based largely on the older, manufacturing and even agricultural business structures.

In this context, “Intellectual Capital” is a fundamental and new concept of a major class of asset in the Information Economy. This asset is intangible (mostly), but it can be embodied in various descriptions, e.g., patent documents or physical inventions. Unlike other physical assets, it contains the seeds and primal energy to “renew” itself, through extensions of creativity, through human curiosity and exploration. New discoveries, new inventions, stimulate human imagination, motivate creativity. Human ambition and competitiveness quite naturally will find ways to build business opportunities on those thoughts.

Over time, the value of natural resource assets, e.g., land for agriculture, typically declines with depletion, but the value can increase as demand for new applications of that land increases. Human-created “hard assets”, e.g., buildings, or equipment, begin to depreciate once they are fabricated. Human-created “soft assets” are fundamentally different. Their value follows a cycle of human interest and motivation, from low to high, and back down again, and the cycle can repeat itself, just as fashion trends tend to repeat every so many years.

This is a new concept of “productive asset”. Intellectual Capital is a living, dynamic entity, not a “fixed asset” at all. The value is constantly changing, as it reflects changes in human understanding, acceptance and use. Intellectual capital includes objective knowledge in science and technology, plus elements of perceived value by and for humans, i.e., “marketing savvy” which recognizes the benefits to human needs and human society. Usefulness as a measure of value is defined as the extent to which knowledge/intellectual capital is perceived to address human needs or concerns.

Purely academic research is perceived to have little direct and short-term value to society because it is understood by only a relatively small number of highly trained individuals. Its “target market” is very narrowly focused, so the general public has no clear perceptions of the content or value. Unfortunately, the public at large has a tendency to discount the value of what they do not understand.

Market value is, by definition, social value, value to people in their everyday lives. Market value is created by a feedback loop process by which the creators of knowledge must interact with the public directly and indirectly to communicate and share their understandings of (future) value and of what is being created.

Branding of consumer goods is even an example of intellectual capital. The power of this approach is validated in the hundreds of millions of dollars a major consumer products company, like Coca-Cola, invests every year, to influence and shape public opinion and choices. There are people who literally cannot live without their daily dose of Coca-Cola.

Question: How is market value created out of innovation?

Scientific or technical knowledge typically benefits only the community that created it, those who understand and can use that knowledge. To move in the direction of the general public, knowledge must become “intellectual capital”, which now can benefit investors because the applications are relevant to a broader segment of society. Only when intellectual capital is reduced to everyday practice, to applications involving products and services, can end-users directly benefit from the process of innovation.

Answer: To direct and manage this process, an effective approach is to use special human resource teams.

The teams will include multiple points of view from a cross-section of human society, to assess common needs and expectations. Representatives from the following areas are encouraged to participate actively in the process:

- a) “Public relations” people, who deal with issues of visibility, credibility, desirability
- b) “Creative translators”, who can translate innovation to different venues, environments
- c) “Business people”, who can only make money when people/customers acknowledge some benefit to them. Their commitment to invest determines “value”.
- d) “Legal experts”, who protect the value of the innovation
- e) “Government agencies”, who may regulate or promote certain kinds of innovation

The successful articulation and communication of a business concept that integrates all of these points of view will be the basis of a humanistic approach to building a business with long-term value.