

(11) Knowledge: its economics and its productivity

- o The economics of knowledge
 - s ... in the knowledge economy, imperfect competition seems to be inherent in the economy itself
 - ï Initial advantages gained through early application and exploitation of knowledge (that is, through what has come to be known as the "learning curve") become permanent and irreversible.
 - ï What this implies is that neither free trade economics nor protectionism will by themselves work as economic policies.
 - H The knowledge economy seems to require both in balance.
 - s Another of the economists' basic assumptions is that an economy is determined either by consumption or by investment.
 - ï In the knowledge economy, neither seems to be in control.
 - ï There is no shred of evidence that increased consumption in the economy leads to greater production of knowledge.
 - ï But there is also no shred of evidence that greater investment in the economy leads to greater production of knowledge.
 - s When it comes to new knowledge, there are three kinds (as already discussed in Chapter 4 above).
 - ï There is first the continuing improvement of process, product, service; the Japanese, who do it best, call this Kaizen.
 - ï Then there is exploitation: the continuous exploitation of existing knowledge to develop new and different products, processes, and services.
 - ï Finally, there is genuine innovation.
 - s These three ways of applying knowledge to produce change in the economy (and in society as well) need to be worked at together and at the same time.
 - ï They are all equally necessary.
- ï But their economic characteristics-their costs as well as their economic impacts-are qualitatively different.
- ï So far, at least, it is not possible to quantify knowledge.
- o The productivity of knowledge
 - s Knowledge does not come cheap.
 - s **Knowledge formation** is thus already the **largest investment** in every developed country.
 - s Surely, the return which a country or a company gets on knowledge must increasingly be a determining factor in its competitiveness.
 - s Increasingly, productivity of knowledge will be decisive in its economic and social success, and in its entire economic performance.
 - s And we know that there are tremendous differences in the productivity of knowledge between countries, between industries, between individual organizations.
- o The management requirements
 - s We do not have an economic theory of the productivity of knowledge investment; we may never have one.
 - s But we have management precepts.
 - ï We know above all that making knowledge productive is a management responsibility.
 - ï It requires systematic, organized application of knowledge to knowledge.
 - ï The first rule may well be that knowledge has to aim high to produce results.
 - H The steps may be small and incremental but the goal must be ambitious.
 - H If you have results (and it's a big 'if'), you'd better have them where they'll make a difference.
 - ï To make knowledge productive further requires that it be clearly focused.
 - H It has to be highly concentrated.
 - H Whether done by an individual or by a team, the knowledge effort requires purpose and organization.
 - H It is not "flash of genius."
 - H It is hard work.
 - ï To make knowledge productive also requires the systematic exploitation of opportunities for change what in an

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earlier book I called the "Seven Windows of Innovation." (Innovation and Entrepreneurship).

management's performance in making knowledge productive.

- H These opportunities have to be matched with the competences and strengths of the knowledge worker and the knowledge team.
- ï To make knowledge productive finally requires managing time.
 - H High knowledge productivity—whether in improvement, in exploitation, or in innovation—comes at the end of a long gestation period.
 - H Yet productivity of knowledge also requires a constant stream of short-term results.
 - H It thus requires the most difficult of all management achievements: balancing the long term with the short term.
- s Our experience in making knowledge productive has so far been gained mainly in the economy and technology.
- o Only connect ...
 - s The productivity of knowledge requires increasing the yield from what is known—whether by the individual or by the group.
 - s The main reason is that we do not mobilize the multiple knowledges we possess.
 - ï We do not use knowledges as part of one toolbox.
 - ï Instead of asking: "What do I know, what have I learned, that might apply to this task?"
 - ï We tend to classify tasks in terms of specialized knowledge areas.
 - ï In usage, we have to focus on the end result, on the task, on the work.
 - s "Only connect" was the constant admonition of a great English novelist, E.M. Forster.
- o The productivity of knowledge is going to be the determining factor in the competitive position of a company, an industry, an entire country.
 - s No country, industry, or company has any "natural" advantage or disadvantage.
 - s The only advantage it can possess is the ability to exploit universally available knowledge.
 - s The only thing that increasingly will matter in national as in international economics is