

Intellectual Property and Prosperity

Technology transfer can power long-term economic growth in world and help build global understanding

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Your conference theme — “How To Make Licensing Work” — is appropriate to a meeting of professionals such as yourselves. The title has a “hands-on” flavor to it, and it indicates that you have come here to work at being even better professionals.

I heartily endorse that, although I think licensing is working reasonably well, but mainly in, and between, the advanced nations of the Organization for Economic Cooperation and Development, the OECD.

And the reason it is working is the dedication of many of the people and the companies represented in this room. It is your actions that make it work.

As a businessman, I am impressed by the role that the licensing executive plays on the world's economic stage. And I shall provide a few thoughts on the why and how business people and licensing executives can better work to promote economic growth. In a nutshell, it is to bring about greater exploitation of knowledge, or in the terms of your profession, intellectual property, by transferring it to where it would have the most favorable impact on prosperity — the less-developed countries of LDCS.

Engines for Growth

My motive for this is not entirely altruistic, although success would provide help to those who most need it. The facts are that the world economy has been level in real terms for the past several years. It is certainly undergoing rapid change, which tends to confuse the reality that real global GNP per capita is stagnating. We need new engines for growth on a global scale. The development of a strong private sector within poor countries can be one of these engines.

The potential markets are there for all to see. Of the world's 4.8 billion people, many millions go to bed hungry each night due to such things as inadequate population control, limited food production, or ineffective distribution. One-third of the world population has no access to medical care. One-fourth does not have adequate housing. Crime is widespread, and so on, all because of the lack of progress in applying current knowledge to these problems.

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The example of what has been accomplished by technology transfer and foreign investment, plus all the other ingredients of development in just the 40 years since World War II, should illustrate what can be accomplished.

The OECD countries led the climb up the economic ladder, followed by many countries in Asia and a few in Latin America where there previously was not much hope for economic development. As a result, the world GNP today is at \$14 trillion, up from just \$3.5 trillion in 1969 when we first were able to obtain reliable data. World trade is at about \$1.8 trillion, up from \$246 billion in 1969. It has been a major factor in stimulating the GNP growth.

Advanced communications and transportation systems have been built on every continent, but we have only scratched the surface.

The development and transfer of antibiotics throughout the world has resulted in significant reductions of infectious diseases. Additionally, improvements in diagnostic techniques and other medical advances have been major factors in allowing people to live longer and better lives.

Incentives

So something good has been happening — technology has been transferred. There have been incentives for innovation, and where there have been incentives for the distribution of knowledge, transfer has occurred.

The evidence of past success in global development is impressive, but so is the evidence of current need in poorer countries. This, combined with our current slow-growth world economy, spells opportunity to me. An opportunity where all involved can benefit.

What stands in the way? Why isn't development proceeding at a quicker pace? Why can't we transfer more intellectual property across national borders?

The list of barriers is long, but I think it can all be summed up in the statement that too few people understand that individual property rights are the foundation of an economic system that constantly regenerates to create wealth at all levels of society.

You, the licensing executives, understand property rights and the dynamic impact of transferring intellectual property. You are the brokers of technology transfer and you work with all the principal participants, including business people and government.

You work within the system and you know the system better than anybody else. You are the prime witnesses to how our system of innovation actually benefits people. In fact, your profession has the task of anticipating the benefits.

It is part of your job and part of mine to speak out in public, in high schools, colleges, and at gatherings of international bureaucrats and national leaders. All these peo-

ple need to know the broad scope of technology and the impact of transfer with easy-to-understand examples.

The difficulty that we face is educating those outside of your profession on the cost, the value and the benefits of property rights, and particularly intellectual property. This boils down to eliminating misconceptions and using layman's terms to avoid obfuscation.

Misconceptions

The first set of misconceptions we need to address are those held by a wide array of the general public in the advanced OECD countries. Too many people have an almost infinite faith in technology solving all mankind's problems.

There is little appreciation of the investment and effort it takes to make it work. Technology is not seen as a technical method of achieving a practical purpose, but rather as a "quick-fix" for almost everything ranging from AIDS to our inadequate defenses against satellite-based missiles.

This naive thinking is further confused by the fact that a large segment of the public is also uncomfortable or wary of the scientific progress that builds new technology.

Ordinary citizens have a difficult time coming to grips with what is meant by the word "technology," even more when they think of transfer. And the labels that are employed to describe levels of technological development — such terms as "high-tech" and "low-tech" and "smokestack industry" — are probably impediments rather than a help to understanding.

All this makes it difficult for people to grasp the full scope of technology transfer and the wealth it can create. They need to hear of examples that deal with the business and not just the science. To illustrate, 3M brings its intellectual property to a country in the form of our inventions and our production methods, but an equally important contribution we make to that country's economy is the other knowledge, including management expertise and its attendant breakdown into the many disciplines and special skills such as accounting, administration, marketing, technical service and operating know-how required to maintain a going business — all of which bundled with our products also gets transplanted to the soil of the receiving country.

Transfer of technology into a country is, in reality, an infusion of knowledge.

In a broad sense, technology transfer is really human resource development. An economy is developed because its human resources are developed.

Central Planning

The second set of misconceptions to be addressed is held primarily by socialists and advocates of central planning. They think that the specialized knowledge in the private sector can be transferred with token payment or without fee. I suspect some believe it is in tidy, easily-assimilated packages, particularly if it is covered by patents.

They may even think that experience can be acquired by reading books in the public domain. We need to explain in straight-forward terms why intellectual property has value to those who own it.

We need to make them aware that property owners have

invested a lot of time and effort in invention and development and they have acquired a great deal of non-patented knowledge in the process — that owners expect to receive a tangible return for this effort from the marketplaces that benefit from it. If they didn't have this expectation, they would not and will not pursue the task of developing their property to the point of commercial reality, and this is what the system is all about.

Furthermore, transfer of this property involves a lot of additional time, effort and money on the part of the owners, particularly to the environments of other countries. Adaptations, modifications and even improvements need to be provided and, most of all, the know-how to make the property productive in a commercial sense in the new environment.

In my 40 years of experience in international business, mainly at 3M, I have yet to find a single example where this add-on value has not been required. It has a cost and involves a risk. It deserves a reward.

We all can summarize the position of most owners of intellectual property in one sentence. If there is inadequate incentive for introducing invention into another country the owners of intellectual property simply will not do it. Potential recipients have to understand all involved need to benefit.

Another Misconception

And this brings me to my third set of misconceptions held primarily by the leaders of LDCs. These leaders have most often lived their lives in autocratic or centrally-planned economies, so it is difficult for them to comprehend the wealth-creating capability of private property owners in a free-market economy. This requires an exposure on their part to the fundamentals of how it works. Please indulge me, as I know this isn't new to you, but it is what we need to sell to get understanding.

And it is a tough sell, as many LDCs think they are doing us a favor by allowing us to participate in their markets. They don't make the connection that the market isn't there until it is built.

Economic development initially begins with bringing technology and resources together with the objective of creating additional and new resources.

With new technology and experience in making it work, in terms of producing goods or services, most countries only see the product output as the benefit instead of seeing this element as just the tip of the iceberg.

The newly-trained people are the major benefit as they move outside the boundaries of the original investment as it becomes a going concern in the economy. They apply their knowledge elsewhere, which serves a number of useful purposes, including teaching others such as vendors to the new business.

Additionally, the skills and experience that result from this process produces a people who create additional technology. They become managers and businessmen and they enlarge the middle class of property owners so essential for social stability.

Many become entrepreneurs who create and tap local savings or attract additional capital from abroad.

Repeated over and over again with a variety of innovations and capital being introduced, this leads to real economic growth.

If done on a massive enough scale, countries then no

longer classify as developing countries. They become developed countries. There are many examples of these who are now wealthy nations because they understood technology transfer was a good buy, because they were willing to commit to paying technical fees or making other commitments to get what they needed. Japan is the classic case of a country that was desperately poor after World War II, but committed to buying technology for the future benefits it produced. They recognized that technology was the yeast essential to make the bread. Now they are selling the bread to us in the form of TVs, VCRs and autos. American consumers think it's great.

Now, to touch on a few of the obstacles that we face in our attempts to build global prosperity.

Many businesses and government people including some of you, may well ask: Why should we transfer technology and set up competitors, considering the beating Japan is giving us in trade as a result of the industrial property resources we gave or sold them in earlier years. My response is this:

Competition is the spice of life, it is what drives the free-enterprise system, the only system in the world where people enjoy freedom. We should promote it with other countries, not deny it.

We should sell our technology if the price or trade-off is right, if we use good judgment in what we sell and where we sell it.

Where the Japanese have excelled us it has, to a large degree, been their success in using our technical methods to serve more effectively than we have. We haven't kept ahead as we should have in the past and must in the future.

It is also worth noting there are few LDC nations who have the potential to perform half as well as Japan. Their background, climate, and social structures are not as receptive.

Another obstacle is the social systems in many LDCs. The Continent of Africa presents the greatest drawback in this respect. Few nations there are homogenous, and most are both illiterate and racist. There are also special problems in dealing with countries subjected to Islamic law and countries with strong socialist governments where public property takes precedence over private property. We need more public awareness of the power of private property ownership to foster change and create wealth.

Need Support

Speaking of change, we also need to have better support for private sector initiatives from world leaders, such as the World Bank and the IMF, plus our own political representatives, government officials, international bankers and development experts. If the people we taxpayers finance aren't with us, we cannot expect Third World leaders to be.

This raises the question of investment risk. Why should private enterprises go to the expense of transferring technology to nations who would need to pay in IOUs? Surely we should learn a lesson from the nonpayment of international loans made by the bankers. My response to this is:

The bulk of prior international loans were made to governments to manage. They were used, to a major degree for essential infrastructure projects such as energy

generation, highways, dams and bridges, etc. However, too much of the money has been used for consumption or low-productive government industrial and agricultural enterprises, all in the name of development. With this type of investment there is little hope of effective repayment unless it is coupled with private-enterprise investments.

At the recent annual World Bank and IMF conference in Seoul, new loan packages in the order of \$29 billion were proposed subject to comprehensive economic planning and restructuring by debtor countries. At the moment I don't know what this means, but I surely hope all involved have learned the lesson that governments are expert at taking money but not making it.

An investment can be pretty good if it is in a private productive enterprise where it creates wealth. When transfers are made between those who are in business and those who wish to be in business, appropriate disciplines inherent in the transfer of property rights can be built into the deal. Transfer to and between governments cannot have these disciplines, as nobody has the rose pinned on them, no one is responsible. They redistribute wealth, versus private enterprises, which creates it.

A number of LDCs are beginning to take a new look at their policies toward foreign investors and some are even moving away from the straightjacket of central-economic planning and encouraging individual initiative and creativity. The Peoples Republic of China is a good example of this.

Self-interest dictates that we take some risk because the potential gains are enormous. I have already touched on the economic and trade aspects, but not the strong linkage with world peace. Let me finish with a practical example of this.

International Understanding

I am a businessman who has spent his career working in a global marketplace for a multinational company. My own experience convinces me that probably there is more international understanding gained when people of different nations trade together than in any other endeavor.

The degree to which nations are mutually dependent through trade introduces a major element of self-interest in maintaining friendly relations.

Trade promotes better understanding by bringing people together in a mutual search for a better quality of life. Trade demonstrates that nations need each other to meet their basic economic goals through the exchange of goods and services. The pollsters — Yankelovich, Skelley and White — understood this when they wrote about the world becoming a global village.

My own experiences as a member of this global village date back to 1947, when I made my first international business trip. In those days I was frequently reduced to drawing little diagrams on note pads to try to make myself understood to people of a different language. Despite this fundamental barrier of language, we communicated because it was in our best interest to make ourselves understood. They had business problems, and I had some answers to those problems. What I found true earlier remains true today. Language or cultural barriers melt away when people with a need — and a means to meet that need — get together over shared concerns.

Today, 3M Company's international business amounts to more than a third of our annual sales of over \$7.5 billion.

3M's International Operations have grown to where we now have subsidiary companies in 50 countries and a payroll outside the United States of more than 39,000 employees, among whom fewer than 100 are U.S. citizens.

Tremendous amounts of travel are generated by our presence in many locations around the globe. In 1984, for example: 3M employees from overseas made nearly 2000 trips to 3M headquarters in St. Paul. U.S. employees made more than 3000 trips from the United States to other countries. Countless thousands of overseas employees visited back and forth between their countries. With all this diversity, 3M promotes a considerable cultural exchange.

Some people call 3M headquarters a mixture of nations. For example, it is not unusual to hear Spanish, Danish,

Japanese and Italian being spoken in our hallways, or on the elevator a Vietnamese talking in French to a Belgian. As a result of this interchange within our global company, there is probably a far better understanding, at a practical level, of world affairs and relations than exists in many international bodies. We have to understand each other in order to work together and to conduct trade together.

In closing, let me repeat: This world needs new, long-term driving forces for economic growth. The potential markets of less-fortunate countries can provide such a force if we can transfer the right technologies to stimulate their productive development. It is the job of businessmen and people like yourselves to make this happen. If enough of us work on it, I'm sure we can succeed.