

Formulating Licensing Policy

Factors to be considered when a company decides whether to license; licensing-in and licensing-out

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WHAT ARE THE DETERMINING FACTORS?

Profitability of the license in money terms

To many businessmen, it is axiomatic that the first duty of a business is to make a profit at least over the medium if not the short term. Certain major industrial groups in Europe have established licensees and joint ventures over the years in developing countries without any expectation of profit, but merely as a form of social duty, such activities can only be at the expense of subsidy from other parts of such groups and can only be used as a policy guideline.

Company policy may permit projects both in licensing-in and licensing-out which are unprofitable. Such policies should only be adopted with full knowledge of the economic consequences.

The need for a license

There are many reasons why a license may be needed. For instance, the company's patent advisors may have said that a product developed from internal R&D cannot be marketed without infringing the patents of a third party and that the patents are valid and should be respected. This represents a high degree of need, as in the absence of a license the company may have either to abandon the results of expensive R&D investment or face an expensive patent action.

Lesser degrees of necessity could include a preferred surface treatment for which a patent and know-how license might be needed as an alternative to subcontracting the surface treatment to an existing licensee of the process.

The achievement of adequate output in a new product line may require the use of a patented process or machine of a third party and, although the manufacturers of production machines normally sell them with an implied license for use, there may be some third party involvement in the development which calls for licensing.

There are obviously circumstances in which licensing is part of the policy *ab initio* as for instance when a

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company decides to go into a new product line in its own local territory which is already established by another company elsewhere, and makes approaches to the originating company for an arrangement.

INFORMATION REQUIRED FOR POLICY DECISIONS ON LICENSING

If a company or group of companies applies the same label of business judgment to licensing as to its other activities, the policy makers of the company or group will require answers to similar questions to those posed by any other business decision. Broadly, the questions are:

- What will be the return?
- What will it cost?
- How will it affect our other activities?

These questions should be raised whether licensing-in or licensing-out is being considered and whatever the activities of the firm.

Licensing-in

The initiative for licensing-in may come from several alternative sources, some of which are:

- A general management directive to diversify the firm's product line.
- The identification of a specific product already marketed elsewhere.
- The economic need for rights in an especially good or cost-saving manufacturing process.
- The legal need for a license to avoid infringement of third-party patents.
- The unsought offer of a license from a third party based either on an established product or perhaps on unwanted spinoff from R&D.

Licensing-out

This policy may be initiated internally or may be the result of approaches from interested third parties. Typical are:

- A general directive for licensing-out (this is rare, except in organizations developing products and processes only for licensing. Most businesses having R&D departments are primarily interested in their own manufacture and sale, except as part of company diversification strategy.
- A recommendation from export that certain territories are suitable for licensing because they are closed to export by currency restrictions, quotas and the like.
- A recommendation against further investment in manufacture (perhaps because more profitable products require the capital available) so that export markets cannot be supplied.
- A license deal as part of the licensor's contribu-

tion to a joint venture overseas.

— The licensing of R&D spinoff which is not in the licensor's direct line of products

— A request for a license from an overseas company which may have seen literature or patent specifications.

HOW DOES THE FORMATION OF POLICY DIFFER BETWEEN LICENSING-IN AND LICENSING-OUT STRUCTURES?

Licensing-in strategy

The type of licensing-in strategic decisions that may confront companies is discussed in an interesting paper entitled "Acquisition of new technologies as an alternative to carrying out expensive own research," which was presented by Dr. D. Altenpohl, Director, Swiss Aluminium Ltd., at the EIRMA Conference in Paris on March 13-14, 1972 (Volume XI in the EIRMA Series "Conference Papers").

Dr. Altenpohl's paper is concerned with R&D strategy relating to company investment policy on business diversification and discusses the advantages and disadvantages of the following three investment/R&D strategic options.

The first option is the situation where investment is based on company's own research. The advantages of this strategic decision lie in acquiring full control of company's own proprietary know-how and rights for future investments and in training company personnel as specialists.

The disadvantages are large R&D expenditures associated with the long time scale required for developing the technology (which can extend on the average over 6-10 years, although small R&D projects may be shorter) until large investments are possible, and the relatively high risk of placing all R&D allocated funds into the company's own research.

Second Option

The second option is the situation where investment is based on the acquisition of new technologies (licensing-in). A big advantage of this option is that expenditure is incurred only in cases where the risk can be calculated (i.e. after the technology has reached a certain maturity.) A second advantage is the rapid availability of new technology with relatively low R&D expenditure. The disadvantages are the payments of license royalties, the problem of evaluating the technology provided by the licensor, the searching for available opportunities and the absence of exclusivity.

The third option is investment into a conventional plant based on known technologies. This has the advantage of reducing the consumption of time and money to clearly defined projects so that R&D expenditure is relatively low. It is typical of large capital projects, e.g. the construction of a new refinery or steel mill. There is usually very little R&D involved in this sort of investment although in-house R&D may have contributed to process manufacturing and engineering improvements. The disadvantage is that this type of investment offers no technological advantage over

competitors and investment is endangered by new developments.

The acquisition of new technologies from others has therefore several advantages to offer; low probability of failure if it is based on proven technology, cooperation with or financing by third parties are easier to obtain, R&D expenditure is rather low by reason of "leverage" since R&D effort has to be applied only to the extent of demonstrating that the acquired technology meets the licensee's requirements. Technology acquisition, i.e. licensing-in, can be the ideal tool for diversification in a monolithic company with a single main product where the expertise, management capacity, research capacity, and so on, have hitherto been concentrated on the single product line.

Companies with more complex organizational structures, with more substantial capital and technical resources and a sophisticated R&D function adequately funded by their board, constitute dynamic systems in which such companies operate processes and manufacture products by well-known technologies, but also develop their own new and proprietary technologies and also acquire new technologies from others. The licensing-in strategy of such companies will also depend on whether these companies are more development- than research-oriented. The acquisition of new technologies is probably less applicable to industries that are very research dependent (such as pharmaceuticals) than to industries that are more development intensive, such as engineering, oil refining and petrochemicals and so on.

Licensing-out strategy

We have found a wide spectrum of licensing-out strategies and have identified in a qualitative manner some of the factors which determine licensing-out strategies. It will, however, be noted that many of these factors are interactive and are related to the strategies adopted by the companies in at least a two-dimensional if not multidimensional matrix. The following factors are considered to be of significance:

a) Factors associated with the organizational structure of the company. The size of the company, its capital, technical, managerial and personnel resources, whether it is a multinational or a national company, all these factors will determine or affect licensing policies.

One of the major factors in the organizational structure of the company which determine licensing-out strategy is whether the R&D function is a service or a profit center. Also, whether R&D is done primarily for licensing or to provide investment opportunities. These are obviously critical factors which will determine the competing and marketing character of the licensing-out activity and whether it is integrated or not with R&D. They will also dictate the attitude of management toward licensing in deciding whether it ought to be of an entrepreneurial nature or a low-profile activity. In a group of companies, they will also determine the inter-licensing relationships between the associates with respect to the transfer of technology within the group.

b) Factors associated with the size and the type of market of company products. Licensing-out strategy will depend on whether the company's product market is a national or an international market, export-oriented and whether this market is supplied from a home base or through multinational companies utilizing national manufacturing facilities or through local agents.

c) Factors associated with the character of the licensed

technology. Two major such factors have been identified which influence licensing-out strategy. One is related to the innovation/inventiveness content of the technology, its patent strength, and the willingness of management to enter into litigation to defend the patents. The other is related to the type of products marketed, whether they are long-life, high-capital-cost goods, or short-life consumer goods, but requiring a high capital investment to support marketing (e.g. petroleum products require the installation of refineries, marketing distribution networks and service stations), or short-life low-cost consumer goods, or main line products, or products of diversification ventures into new lines of business.

d) Factors associated with the political, economic, legal and fiscal environment of the host country.

Industrial companies with the necessary resources will, whenever they recognize a profitable market abroad, attempt to enter this market through investment into subsidiary companies with the dual objective of making profits for the parent company and of creating capital assets. The deci-

sion, however, to make such investments and to transfer technology will depend upon the political, economic, legal, and fiscal environment of the host country governing investment, transfer of profits, and the protection of industrial property rights. Punitive tax on royalties will, in many cases, constitute a deterrent to licensing.

In developing countries with large capital resources, but with no enforceable system of protecting industrial property, licensing may not always be the most suitable vehicle for transferring technology which can be best achieved by the sale of a complete package of technical, engineering and general consultancy services.

In developing countries with few capital resources, licensing is sometimes carried out for social considerations with the objective of acquiring goodwill for the benefit of long-term investments.

In countries with state-controlled economies, where marketing by foreign companies is not allowed, transfer of technology through licensing may be the sole method of doing business.