Trends Toward Total Involvement

Nations are requiring more from manufacturers, but accepting challenge benefits both parties

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International Harvester is a capital goods manufacturing company that has been actively engaged in international trade since 1851 when the inventor of the reaper, Cyrus McCormick, first showed his machine at the Crystal Palace Exhibition in London.

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Since then, manufacturing operations have been established in 18 countries with a total worldwide employment of more than 100,000 and sales in excess of $5 billion this year. The company produces highway trucks and recreational vehicles, agricultural tractors and equipment, construction equipment both rubber-tired and crawler, industrial equipment, and gas turbines and diesel engines. IH markets its products in more than 160 countries.

During the first three quarters of this year, IH Overseas Division sold more than $1 billion worth of goods manufactured by the company, its subsidiaries, joint ventures, and licensees.

Our major manufacturing subsidiaries are in Great Britain, Germany, France, Mexico and Australia. We have joint ventures in Japan, India, Turkey, and Venezuela.

We have technology transfer experience in all product areas except turbines. IH's basic objective in the transfer of technology is, of course, to generate new revenues for the corporation. There are six ways in which this can be accomplished. In some cases, we are able to realize revenues from all six. However, in most cases we have to settle for as few as three. The six are:

1. *Fees* — Disclosure fees for the initial transfer of documentation and right to use it and royalty fees payable on the units of production.
2. *Technical Assistance* — Payment for the assistance of IH technical and management personnel assigned to the project.
3. *Sale of Components* —IH components required by the licensee to complete units of production.
4. *Sale of Complete Machines* — IH products not made locally, but in demand. In several cases, orders for good under this category have far exceeded our original estimates.
5. *Purchase of Components* — Purchases of components from the licensee at a competitive advantage to IH.
6. *Purchase of Complete Machines* — IH purchases of complete machines for resale by IH to its traditional market areas.

From LES U.S.A. Annual Meeting

These latter two can be major profit generators.

In the development of major projects for the transfer or exchange of technology, a substantial amount of work can be involved. It may include original design and engineering to accomodate a client's local requirements. In these cases we try to negotiate sufficient "front money" to assure a positive cash flow. This can be done either by arranging a prior sale of goods, payment of disclosure fees, or the balancing of the proceeds from one project against the anticipated costs of a second one. So far, we have been quite successful in doing this.

This, then, is essentially the framework from which we look at technology transfer. It is a specialized approach peculiar to our industry and no doubt distinct from the approach of such diverse industries as chemicals, consumer goods, food processing, petrochemicals, pharmaceuticals, etc.

Case History

Let me now review a specific case history. In 1972, IH concluded a Cooperation Agreement with Poland's BUMAR Foreign Trade Enterprise covering four models of crawler tractors. These tractors were to be manufactured in Poland to existing IH designs. Note the terminology; though in fact a conventional license contract, the words were very carefully avoided. In their place we used "Cooperation Agreement," which definitely implied that more was to be expected from IH than the traditional arms'-length technology transfer.

This was immediately apparent in our guarantee that BUMAR required. IH had to post a letter of credit against the disclosure fee that insured a refund of the disclosure fee if BUMAR was unable to manufacture the tractors to IH specifications, using the technology transferred by IH. Thus, BUMAR successfully involved IH in their production process.

For those of you who may not be familiar with the commercial structure of Polish business, BUMAR is officially the "Union of Construction Machinery Industry" and is responsible for all the manufacture and sale in Poland of this class of equipment. The union employs about 45,000. BUMAR, along with 17 other unions, reports to the Ministry of Machine Industry. The Ministry controls virtually all manufacturing in Poland and

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employs about 800,000 people.

I mention this because it is quite significant in doing business in Poland. During the years of negotiation and the subsequent three years of actual commercial experience, a number of very close interpersonal relationships have developed which have continued to draw people from both sides closer together, and to increase the involvement of IH personnel in all aspects "Polish." Our Chief Executive Officer, Mr. McCormick, as an example, is the co-chairman of the Polish-U.S. Economic Council and this year was awarded the Commander with Star of the Polish People's Republic. Their highest nonpolitical award, for his efforts in behalf of expanded trade between the U.S. and Poland.

Management Involvement

He met with President Ford during the recent official visit of First Secretary Gierek to Washington and has been received by the First Secretary in Warsaw. This type of overall involvement has been extremely significant in our total relationship with Poland.

The initial agreement concluded in 1972 is now three years old and going forward successfully.

This agreement with BUMAR has enabled IH to initiate the assembly of a line of crawler tractors and loaders in Great Britain. Using BUMAR as a source of skidded units, which are now being received on a regular schedule, the British Company assembles complete tractors by combining these skids with British made components and IH diesel engines received from the United States. This combination of sourcing, which depends heavily on the Polish supply, has enabled IH to introduce a product line that is fully competitive in the EEC. They are truly "International" machines in every sense.

BUMAR is also building complete crawler tractors in Poland, under this Agreement, for sale not only in Poland, but to other CMEA countries. In this case virtually 100 percent Polish content is achieved including a Polish engine.

In 1975, IH concluded an expanded agreement with BUMAR called, "Cooperation Agreement on Development, Manufacturing and Marketing of New Products." This new agreement was, or course, a direct result of the mutual benefits both BUMAR and IH enjoyed from the 1972 Agreement. The objective of the latter agreement is the joint development of new products from design through production. This new agreement is true cooperation not just words.

New Approach

During these later negotiations, the Poles made it very clear that they were no longer interested in buying the conventional transfer of technology. They felt this involved too many restrictions, implied a lack of expertise on their part, placed them in an inferior relationship position, and required a substantial expenditure of hard currency. Their new approach was to match the legitimate self interests of both sides, taking full advantage of the assets of each, thereby developing a completely joint and co-equal partnership.

The new program will be implemented in the following manner:

1. IH to design and engineer the new product
2. BUMAR to produce prototype units according to the IH design
3. IH to then test and evaluate the prototypes and issue final approval for production
4. BUMAR to tool and manufacture the product
5. BUMAR to remain the exclusive source for the product for an agreed period.
6. Both IH and BUMAR to share marketing responsibility

Through this arrangement BUMAR becomes, in fact, an integral part of the IH worldwide manufacturing capability. IH is, therefore, totally involved with BUMAR's production to the same degree it would be with one of its own subsidiaries, and we are dependent on BUMAR as the sole source of one of IH's major products.

It might be interesting to make special note at this point of the great importance BUMAR placed on the fact it would be the source of complete machines to IH and IH's western markets. BUMAR expects to train its marketing and service personnel in the sophistication of western marketing techniques in the same manner as it trains its technical personnel. This arrangement can also be used by BUMAR to upgrade its supplier industry to specifications of western markets. An example of this would be Polish tires or other specialty vendor items. Thus, IH involvement has expanded not only to marketing but to secondary supplier industries.

Major Advantages

The major advantages of this new agreement to Poland include:

1. No disclosure fee
2. The prestige of being a co-equal partner
3. BUMAR is the sole source of a major IH product
4. Improved level of skills of technical and marketing personnel
5. Ownership technology

The major advantages to IH:

1. Shared development expense of a major product
2. No capital investment
3. Sales revenue of major product line
4. Engineering fees
5. Competitive component source

The program has been successfully negotiated and is up for ratification by both sides. I am convinced that this concept of total involvement by the manufacturer in all aspects of the client's manufacturing and marketing programs is the way in which programs of this type will be carried out in the future.

The next example of total involvement that I report on concerns a program for the construction of a complete Construction Equipment manufacturing complex in Constantine, Algeria.

This program was for the development of a manufacturing facility to produce about 2,000 units of construction equipment annually with a level of national integration approximately 70 percent. This is a very ambitious program. It was absolutely essential that this be executed within the concept of *"Produit en Main"* or "Product in Hand." This is the ultimate guarantee by the manufacturer, requiring total involvement. Because, in fact, the manufacturer performs all the work in the same manner as he would if he were the client.

So far this appears to be strictly an Algerian concept conceived by the Minister of Industry. However, other countries who are long on hard currency, but relatively short on technical expertise, may well try to follow suit. With this approach the manufacturer is expected to agree to the following:

1. Transfer the technology and rights
2. Design and lay out the manufacturing plant
3. Construct the facility
4. Select and purchase all machine tools and equipment
5. Install and try out machine tools, etc.
6. Provide technical assistance in residence
7. Train local labor and management both in Algeria and the U.S.
8. Manage the facility until production to agreed specifications and volume is achieved
9. Establish the after-sales and service installations and train the personnel
10. Bid the entire above package at a firm global price

"Product in Hand" goes far beyond the traditional concepts of technology transfer. It places the burden of success entirely within the responsibility of the manufacturer. Bear in mind this means successful production using Algerian labor and ultimately Algerian management which the manufacturer has had the responsibility of training. The essential criteria in the Algerian's evaluation of competitive projects was the confidence they had in the ability of the manufacturer to deliver the complete program. Money never appeared to be a real issue. They continued to indicate that ample funds were available and they expected the manufacturer to realize a sufficiently high return to assure this continued interest.

This total concept outlined above its obviously way beyond the scope of IH's day-to-day business activity. As a result, it was necessary to negotiate with subcontractors to cover those areas where IH was lacking in expertise. This we were able to accomplish in all areas except the final responsibility for the project's success. Ultimately this, of course, had to be the guarantee of the International Harvester Company. It was on this item that our negotiations with the Algerians finally broke down. We could not accept what, in fact, was the owner's responsibility when we did not have the owner's decision power.

IH Refuses

We are being asked to assume the owner's responsibility using untrained Algerian labor. The success of the project would ultimately rest on the ability of the Algerian labor force to operate effectively under IH leadership. But, the labor force would be under the direction and ultimate supervision of SONACOME. In spite of SONACOME's assurances that the details of this rather unusual relationship could be worked out satisfactorily, IH was unwilling to have its performance on the job be directly dependent on the performance of an untrained and unknown Algerian labor force.

The IH position on this final crucial point may suggest a lack of imagination because others have accepted projects with similar Product-in-Hand requirements. There is a school of thought that believes all levels of risk have a price and that this situation represents an unusual profit opportunity.

The latter approach becomes somewhat more plausible if you consider a project of this magnitude to be made up of a number of small risk factors that can be addressed and handled separately, all of which can't fail, rather than one large cumulative risk factor that can place the entire project in jeopardy in cases of failure.

This example of total involvement has obvious attractions to the newly rich developing countries as it places the entire burden on the manufacturer. Though IH did not succeed in its negotiations, I feel that the Product-in-Hand concept presents opportunities for substantial financial gain to the true entrepreneur.

Both the examples that I have used are Socialist countries. You may also be aware of the Agreement on Scientific and Technical Cooperation concluded between IH and the State Committee of the Council of Ministers of the USSR last month. This is an umbrella agreement that provides, in principal, for scientific and technical cooperation involved in the field of research, development, design and manufacture of agricultural tractors and equipment, trucks and construction equipment. It provides the general framework for the subsequent negotiation of specific agreements, in these areas.

In summary, I shall repeat a few comments that were made recently to the IH delegation in Poland by a seasoned and experienced Polish business executive about the significance of these agreements within the Socialist system.

The projects that are finally developed have a far broader significance and exposure than those in western countries, for they are ultimately country-to-country agreements and a relationship that is acknowledged by heads of state. These projects will have a major impact on the national industrialization of the host country and will be of international political importance in our continued peaceful coexistance.

Whether the countries that buy technology from us are rich in resources, such as Algeria, or limited in foreign exchange, such as Poland, they are learning to require from the manufacturer a greater level of involvement and commitment.

By accepting the challenge of providing more and thereby making the transfer of technology more valuable to the client we as manufacturers can also claim higher revenues, especially by emphasizing the nonfee-related areas, such as:

- Technical services
- use of resources
- profit on sales
- cost reduction

Fuller utilization of these areas can substantially increase the overall revenue potential of any agreements for the transfer or exchange of technology and thereby increase the contribution that our activity can make toward enhancing the worldwide corporate vitality.