Developing Country View of Licensing

Philippine Government approach to technology transfer discussed; finds flexible, pragmatic policy

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The creation of the Technology Transfer Board (TTB) in 1978 exemplified recognition by the Philippine Government of the need to minimize the costs of importing technology, both direct and indirect, while maintaining adequate technology flow and selection of technologies which will best contribute to Philippine economic development.

The Board has since directed its policies toward these objectives, undertaking evaluation of technology transfer arrangements as to their technological contribution, assessing technology costs vis-a-vis technical and economic considerations, looking into explicit as well as implicit restrictive provisions that could have the effect of hindering trade and development.

Clearly measurable of the above activities is that concerning the direct cost of technology transfer as manifested in royalties, licensing and technical assistance fees. The Philippine experience is such that technology fees can be further reduced through renegotiation. The TTB reported total actual foreign exchange savings realized from reduction of what are deemed as excessive payments for technology of $91 million as of year end 1984. The average royalty of 5% to 10% in the early 1970s has to date, been reduced to not more than 3%.

Table 1 presents the going industry rates from late 1978 to the first half of 1986 covering the period of the TTB's existence so far, which reflects a heavy concentration of approved rates, i.e. 94% in the level of less than 1% to 3%. This 94% of the agreements surveyed represents 591 out of 625 agreements. Again, it will be noted that 30% of the agreements have approved royalties of 2%, 20% at 3% royalty and 19% at 1% royalty.

Table 2, on the other hand, presents the prevailing rates prior to the TTB covering the period 1950-1970 based on a study by a team of Philippine researchers on the experience of the Philippines in foreign technical collaboration. The table shows heavy concentration of approved rates in the range of 5% to 10%.

APPROVED ROYALTY RATES
(October 1978 - June 1986)

	TOTAL
A. (Less) 1%	46
B. 1.0%	120
C. 1.01 - 1.5%	53
D. 1.51 - 1.59%	27
E. 2.0%	185
F. 2.01 - 2.5%	32
G. 2.51 - 2.59%	5
H. 3.0%	123
I. 3.01 - 3.50%	7
J. 3.51 - 3.99%	2
K. 4.0%	11
L. 4.01 - 4.5%	3
M. 4.51 - 4.99%	1
N. 5.0%	10
TOTAL	625

* Table does not include registered agreements with lump-sum payments nor the royalty-free agreements.

Table 1

PREVAILING ROYALTY RATES
(1950 - 1970)

	Total
Nominal/no royalty	49
Up to 4.9	26
5 - 10	66
Over 10	2
Straight fee/Specific amount based on units sold	21
Not available	90
	254

SOURCE: "Restrictions on exports in foreign collaboration agreements in the Republic of the Philippines" by a team of Philippine researchers, United Nations, New York, 1972.

Table 2

As far as restrictive business provisions are concerned, the TTB has declared the following as being unacceptable, as a matter of policy:

— Provisions restricting exports in any way.
— Post-termination restrictions on use of know-how.
— Restrictions on access to improvements.
— Tied-in purchase of raw materials, components and equipment.
— Restrictions on scope, volume of production, pricing and research activities.

The measure of success of these policies consist not so much of the number of unfair provisions that have been deleted but more on the increasing awareness of the prospective recipients on the detrimental effects of such provisions to their own interests as well as a better understanding by the suppliers on the government's

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rationale behind such policies that is manifesting itself in the quality of contracts now being submitted to the Board. More and more, agreements submitted require less and less of renegotiations as far as these business provisions are concerned.

Clearly, the TTB has its share of value in protecting local recipients of technology and in a grander scale, in maximizing contributions of such transactions to national development goals and objectives.

THE MAKING OF A TECHNOLOGY POLICY

Similar to the demand for capital, goods and labor, the demand for technology is a derived demand. A technology is required for the production of other goods and is never demanded per se. Therefore, the demand for technology is a function of the industrial production that is taking place which in turn is a function of the pace of development being targeted by the economy. Thus, economic policies affecting resource allocation, fiscal and monetary matters, and industrial relations are also policies that generally govern policy toward technology importation.

Today, there is increasing consciousness among the developing countries on the need to clearly define their technology transfer policies vis-a-vis national economic policies. This is evident in the case of the Philippines, which for the first time is incorporating issues on technology transfer in its current exercise of formulating the Philippine Development Plan for 1987-1992. This is clearly an attempt at defining the Philippine technology transfer policy in the context of science and technology planning and further, in the broader context of national development planning.

The application of the appropriate mix of imported and locally generated technologies has been spelled out as one of the major objectives of the science and technology plan to meet the country's requirements for economic recovery and growth. Toward this end, the adoption of a more purposive process of selection and adaptation of imported technologies has been proposed to promote technological self-reliance.

Such linkages, i.e. between and among technology transfer policy, science policy and national economic policy, among others, has long been recognized when the Technology Transfer Board was created and which, in fact served, as the rationale for the creation of a policy and decision-making Board. It has the participation of various government agencies such as the Board of Investments (BOI), Central Bank of the Philippines (CBP), National Science & Technology Authority (NSTA), Technology Resource Center (TRC), Philippine Patent office (PPO), National Economic Development Authority (NEDA) and the Ministry of Trade & Industry (MTI).

With this Board, coordination between general economic and technology policy is aimed to be achieved with technology transfer policies formulated within the context of prevailing macroeconomic strategies. Policies are being aligned and guidelines made consistent with the goals and directions that have been formulated on a national level. At the same time, maximum coordination between and among technology policy, foreign exchange policy, investment policy and science and research policy is likewise sought to be achieved.

THE PHILIPPINE FOREIGN EXCHANGE CRISIS

One clear manifestation of such coordination occurred during the Philippine foreign exchange crisis in late 1983, which witnessed a number of adverse external and domestic developments causing severe strain on the Philippine economy. The drastic reduction and virtual cessation of foreign credit inflows necessary to finance the current account deficit and to service maturing foreign obligations; the depressed international commodity prices; the rising protectionism in the developed countries; high interest rates and major currency appreciation coupled with the socioeconomic-political upheavels in the domestic front all contributed to the severe crisis that gripped the Philippine economy beginning late 1983. The overall balance of payments deficit jumped from $560 million in 1982 to $2 billion in 1983.[1] In addition, the level of international reserves hit a low of $484 million at end October 1983.

Emergency actions were subsequently taken to contain the situation. These measures entailed varying degrees of sacrifice for many sectors and included a combination of fiscal, monetary and foreign exchange policy adjustments, e.g. direct exchange and trade controls, major adjustments of the peso vis-a-vis the dollar, budgetary stringency and generation of new revenues, and the tightening of money and credit. An economic recovery program was later put into place to bring down the current account deficit to sustainable levels and to achieve a prompt and enduring decline in the rate of domestic inflation. The first objective was to be achieved partly through improved export performance and a sharp compression in imports.

REACTION BY THE TTB TO THE CRISIS

The TTB had its share of realignment of policies to respond to these developments. In the past, the Board has granted approvals of financial terms of technology transfer agreements with bonus royalties or fees based on the recipient's net foreign exchange earnings. This bonus royalty, which could range from 1% to 2% of net sales and is on top of a basic fee or royalty, was adopted with the aim of encouraging local firms to undertake export of their licensed product. It also sought to encourage the foreign suppliers to assist recipients in finding markets outside of the Philippines for the licensed products. Because the base of the bonus royalty is net foreign exchange earnings, which is exports minus imports of raw materials and intermediate components of the exported licensed products, there is the incentive for foreign suppliers to assist in local sourcing as much as possible in order to increase their income from the technology.

It is evident therefore that as early as 1980 when this bonus royalty scheme was adopted, the TTB has been addressing such national concerns as export promotion, greater value-added and greater utilization of locally available raw materials in its policy formulation. In certain other cases where the perceived potential for exports is quite high such as in garments manufacture, the bonus takes the form of a higher level of royalty

1. Central Bank of the Philippines Annual Report 1984, Statistical Bulletin, Central Bank of the Philippines, Manila.

for export sales as compared to domestic sales.

In responding to the foreign exchange crisis of 1983, the Board took more serious steps. There was an urgent need to promote exports and at the same time curb imports in the face of scarce foreign exchange resources and the TTB continued to play a supportive role. Approvals of financial provisions particularly royalties, licensing and technical assistance fees were subjected to the condition that the recipient is able to generate sufficient net foreign exchange earnings (NFEE) to cover its royalty or fee obligations. NFEE for this purpose is defined as: "Total foreign exchange inflow from export of licensed products minus total foreign exchange outflow from raw material and intermediate component imports in connection with the manufacture of the licensed products."

This definition is different from the previous definition in that it requires the deduction of the entire imported raw material component from foreign exchange inflow instead of limiting the same only to that corresponding to the exported portion. All importation of raw materials used in the manufacture of the licensed products shall be offset against the total foreign exchange inflow figure regardless of whether the products are sold to the export market or distributed locally. Thus, at the same time that there is stronger pressure to export and earn foreign exchange, there is also the pressure to minimize imports. The NFEE condition meant that the local recipients had to have a positive net balance of exports over imports sufficient to cover its foreign exchange requirements for technology fees before any remittance of such fees could be made. Otherwise, only that portion of the fees that can be so serviced may be remitted.

Consistent Decision

The Board's decision to require local firms to earn foreign exchange enough to cover its technology payment obligations is consistent with the move to control transactions involving and causing movements in the foreign reserve account. It will be noted, however, that this requirement was not made to apply to agreements involving the manufacture of products or the rendering of services deemed as essential by the Board.

It also needs to be clarified that the condition on the remittability of technology payments being subject to the firm's ability to generate sufficient net foreign exchange earnings to cover the same implies that the fees and royalties at the level approved by the Board can be accumulated in Philippine pesos. Failure to earn foreign exchange enough to cover fee obligations for a particular year or payment period does not mean that the obligation to pay the licensor or technology supplier does not exist. Remittance shall, however, be effected only if the local firm earns sufficient net foreign exchange to cover payment of the fees and royalty obligations. Accumulation may be allowed but only for the duration of the contract. Royalties and fees may be covered only by foreign exchange generated during the effectivity of the agreement.

Blocked royalties may be used by the supplier for its future operations in the Philippines or may be treated as infusion of new capital or equity into a subsidiary. This may be effected on the condition that foreign exchange had indeed been earned by the licensee during the contract term for the new capital to qualify as remittable and thus, as foreign investment for which profits and earnings may be repatriated.

To a developing country that is foreign-exchange short, the adoption of these new policies is justified. Since government policies in all developing countries, including the Philippines, aim at the promotion of industrial development and economic growth, while recognizing the existence of financial constraints, the formulation of appropriate policies based on specific economic conditions is of vital importance.

Now that the weather is clearing up, these measures continue to be relevant as the Philippines finds itself still in the process of strengthening its economic foundation to prevent the recurrence of another crisis. A more liberal approach has been adopted.

As the government has called for a diversification of manufactures to tap the potentials of the export market in line with its policy of export expansion, the TTB has likewise moved to allow crediting of export receipts of the recipient of nontraditional manufactures other than the licensed products in arriving at net foreign exchange earnings, provided only that these are incremental exports sold to new markets. This flexibility is viewed as a pragmatic approach particularly useful in the case of franchise agreements where the licensed products and/or activities, by their nature cannot be exported and in the case of manufacturing contracts where the licensed products are geared primarily for the domestic market.

For instance, in the case of one service chain, net foreign exchange earnings based on export receipts from sale of furniture, garments and bags to similar chains in other countries was allowed. Likewise, in another case of a cigarette manufacturing license, export receipts of promotional materials for use by the licensor were credited to the licensee in computing NFEE. In both cases, it may be said that the same effort to generate foreign exchange may not have taken place if the NFEE condition was not applied.

For the purpose of this flexibility in the NFEE condition, the following definitions apply:

1. Nontraditional manufactures are those products the 1968 export figures of which did not exceed $5 million. A list of these products has already been prepared by the BOI.

2. Incremental exports is defined as export sales for the current year minus the average export sales in the last preceding three years or in the immediately preceding year, whichever is higher.

3. New markets shall refer to those companies to which no export in commercial quantities has been made in the past.

To date, this policy has been applied with a high degree of selectivity. A sampling of the firms to which this condition was applied shows very positive signs. One agreement involving the manufacture of leather products and sportswear registered an overwhelming nine-fold increase in export earnings from $5,428 to $49,851 between 1983 and 1984. In 1985, when export receipts from other nontraditional manufactures was allowed to be credited, export earnings registed a three-fold increase to $159,914 from 1984 figures. Again, in the case of paper and sanitary products manufacture, what would have been historically zero export earnings produced export earnings starting from the year the NFEE condition was applied. For another agreement involving the manufacture of automotive leaf springs, export earnings nearly doubled from $100,690 to $191,760 as an immediate reaction to the condition.

EFFECTS OF THE CRISIS

The foreign exchange crisis had its telling effect on the country's total output of goods and services as measured by real Gross Domestic Product (GDP) which declined in 1984 from 1983.[2] After adjusting for factor income flows from abroad, the resulting Gross National Product (GNP) posted a decline in real terms of 5.5%, a major reversal from the preceding year's growth of 1.3%.

The industrial sector, which accounted for 34% of real GDP, was the hardest hit, suffering a decline in industrial output by 8.9% compared to 40.7% growth in 1983. Manufacturing production, which comprised nearly three-fourths of the sectoral output, fell by 5.5% with double-digit declines posted in import-intensive operations such as transportation equipment, tobacco manufacturing, textile manufacturing, chemical, petroleum and metal industries.

All told, the 1983-84 crisis led to a somewhat abrupt disruption in industrial production. Similar manifestations are the lower employment rate in relation to total labor force and the apparent slowdown in new investments.

The effects on technology importations is a similar downward trend that is understandable, technology being a function of production and investments as well. Table 3 shows the trend in technology transfers based on a total of 825 officially accepted applications by the TTB covering the period October 1978 to September 1986. It will be noted that between 1983 and 1984 the decline in applications involving new agreements, presumably representing new inflow of technology, registered a steep decline of 177%. Similarly, remittances declined by as much as 435% between the same period as may be seen in Table 4, i.e. from $22.71 million in 1983 to $.51 million in 1984.

CLASSIFICATION OF AGREEMENTS AS TO NEW/RENEWAL
(1978 - September 1986)

		New	Renewal	Total	% Increase (Decrease)
4th Qty.	1978	17	9	26	—
	1979	77	58	135	—
	1980	82	64	146	8.15%
	1981	49	26	75	(48.63)%
	1982	69	55	124	65.33%
	1983	61	46	107	(13.71)%
	1984	22	65	87	(18.69)%
	1985	19	49	68	(16.05)%
	1986	14	43	57	(16.18)%
	TOTAL	410	415	825	

Table 3

2. Central Bank of the Philippines Annual Report 1984.
3. *Ibid.*

PERCENTAGE OF ROYALTIES & COPYRIGHTS TO TOTAL OUTFLOW
(In US$ Million)

	1970	1971	1972	1973	1974	1975	1976	1977	1978
Copyrights & patent royalties	3.14	2.14	2.61	5.13	9.81	11.45	11.34	16.13	17.40
Total Outflow	660.00	765.07	732.54	995.44	1,219.13	1,229.91	1.236.40	1,430.48	2,449.23
% of Total	.04	.036	.035	.05	.08	.09	.09	.01	.07

	1979	1980	1981	1982	1983	1984	1985	1986 (Jan.-Aug.)
Copyrights & patents royalties	18.06	19.37	23.56	23.32	22.71	.51	26.24	13.60
Total Outflow	2,745.28	4,756.65	5,727.94	9,449.57	9,674.48	3,269.04	5,282.42	2,617.98
% of Total	.06	.04	.04	.024	.02	.001	.05	.05

Table 4

CONCLUSION

The experience of the Philippines in the recent years reveals the flexibility and pragmatic approach of the concerned authorities in respect of policies relating to technology transfer. It has always been recognized that policies concerning technology transfer must, like the economy, be dynamic and flexible. Most importantly, it must be responsive to the rapid changes in the international and national environments. Needless to say, technology transfer policies can be effective no other way.