

# Emerging Policies In Colombia

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*A thoughtful look at the recent past, present and probable future trends for Colombia and The Andean Pact*

**T**he history of industrial development of Colombia is of interest for those who would like to explore the reasons for a lack of technological development in Colombia.

In the colonial times, trade was the basis of the economy, together with mining. When the country became independent, trade stopped and the economy came to a recession. Only agriculture and cattle-raising activities prospered until the beginning of the 20th century, when finally industrialization became a necessity after the recession in the U.S. in the 1930s.

At that time, the country started to think of technology, many steps were taken, but the major changes came around 1970 when most of the efforts to foster technological developments were made.

It was only then that the elements of a policy on science and technology emerged.

1. A number of entities were created or reformulated to handle certain fields:

—COLCIENCIAS for financing R&D.

—The Institute of Technological Research for the basic research for industry.

—IICA for agriculture-related R&D.

—ICONTIC for technical standards, under the supervision of the Council on Science and Technology.

2. A policy on acquisition of technology was set up.

3. Industrial Property legislation was changed in 1978.

—Patents for pharmaceutical products were bettered.

—The term of patents was re-

duced to 17 years.

—Tariff protection for industry was maintained, in what I believe was a contradiction in terms of economic policy.

The policy that resulted came to be almost entirely replicated in the Andean Group.

Recent developments indicate that trends in economic policies have started to generate changes in regulations in Colombia and in the Andean Group.

—Decision 208 of the AG permitted payments for technology between related companies.

—Decree 1611 of 1987 restricted somewhat this previous limiting the payments among related companies to those for "new technologies and for technologies for use in export-related activities."

—Law 81 of 1988 introduced changes in the members of the Royalties Committee, which is the approving entity in Colombia, and expressly recognized that software licenses can be approved by the Committee. Further, the basis for a new and free industrial policy was established.

—Resolution 7 of 1989 introduced an expedition system for approval of contracts for movies and videos.

—Resolution 9 of 1989 introduced a semi-automatic system for approval of transfer of technology agreements including software licenses.

These two resolutions are of significant importance because they give the message that the government is not interested in hampering the transfer of technology to the country. However, the levels of royalties are 10%–4% on net sales for manufacturing technology and 60% of the license value for software licenses.

The process of change has continued with:

1. The mission on science and technology, charged with preparing a report, due precisely this week, regarding the Colombian overall policy on science and technology and the government's plan on R&D.

2. A statement of policy, for agriculture and cattle-raising sectors of the economy, mainly based on development of technology at home through R&D efforts made within the country; education of technicians inside the country (the policy contemplates grants for studying) and free technology for the small- and medium-sized farmer, based on the direct assistance provided by knowledge to individual families. Education is the main component of the policy, and it is worth noting that there are no provisions on acquisition of technology made from the general provision of the law.

3. The introduction of changes in oil exploration and exploitation agreements, aimed at ensuring that there will be training of Colombians (employees of the Colombian Oil Company, ECOPETROL); this was also a consequence of experience developed at the Oil Technology Institute, a research center of the government. The significance of this measure is that again, the government is placing more emphasis on education than on acquisition of technology.

4. Finally, Law 20 of 1988, mainly established that the state is responsible for the promotion and direction of scientific and technological activities and for the

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establishment of the conditions conducive to the creation of technology; the formulation of a policy to selectively acquire technology; the strengthening of R&D; and the consolidation of research institutions.

Emphasis was again put on how the government must help rather than on how the private enterprise may make a contribution. The policies implicit in the law also seem to run against the proposed economic policies of the new president César Gaviria, inclined toward internationalization of the economy, a drive for exports and decreasing state intervention.

#### Acquisition of Technology

The policy on acquisition of technology has changed dramatically in recent months. The changes came first within the Andean Group; those already outlined in Decision 259 and the legal provisions enacted in Colombia.

However, the question of agreements remains. Will the agreements that are not within the limits of Resolutions 7 and 9 be approved? This question is applicable also to agreements among related companies. My own view is that this will be approved, provided the 1% and 50% limits are not exceeded and provided also technology is new or for export related production. Even this restriction is likely to disappear before long.

But bear in mind that all agreements falling outside the limits of Resolutions 7 and 9 will be subject to a cost-benefit analysis, weighing the value of the technology and the intrinsic quality of the technology. The next two points indicate that there are contradictions yet to be solved within this policy of acquisition of technology.

—The taxes applicable to technology transfer may be seen as an incentive for Colombian suppliers of technology, since there is an 8% difference in tax burdens. The position is more unfavorable in the case of related companies, since the Colombian subsidiary is not allowed to claim deductions for payments of royalties to related companies.

—The policy on protection of industrial property is also derived at

a tool for the development of national industry, particularly regarding patents for pharmaceuticals, foodstuff, pesticides and herbicides. This policy will also change if the Andean Group decides to amend the rules on industrial property. The trends in economic policies indicating the AG's drive for increasing exports, should bring about a change in the policies regarding industrial property protection in order to make room for the requirements of national researchers and also for the needs of Colombian farmers manufacturing for the international markets.

#### THE POLICY OF THE ANDEAN GROUP

I shall focus now on the most salient features of the policy of the Andean Group on science and technology. In my view, the AG's policies have established the foundations of a long-term policy on technology, resulting from the influences of each of the countries in the AG's Commission and Intergovernmental Council.

The Cartagena Agreement (the official name of the Andean Group) intends to establish a common union while several measures leading to formation of a common market are implemented. Examples are harmonization of legislation, a social policy, an agricultural policy, and an economic policy. Within the context of economic policies is the industrial policy covering certain aspects such as foreign investment, transfer of technology and industrial property.

At the time the Andean Group was formed, the prevailing economic theory prescribed for the Latin American countries was policy of substitution of imports. This was accomplished in a certain extent for consumer goods and light industry through government mechanisms such as high tariff barriers protecting infant industry and through rules on protection of industrial property. Now the AG has viewed that the aim is to increase the ability of the member countries to direct their efforts toward the international markets. The goals to be used are lower tariffs for imports,

while protection for light industry is maintained by individual member countries and through a Common External Tariff. Incentives for exports are encouraged by maintaining an adequate rate of devaluation, rather than subsidies. A set of policies such as elimination of barriers to trade within the AG is another goal. These changes will bring about pressure on the AG to amend Decisions 83 and give more effective and adequate protection to industrial property.

In pursuance of its policies, the Commission of the AG issued initially (1970) the infamous Decision 24, which became almost synonymous of the AG. Decision 24 was well known because its rules regarding lack out of foreign investments and transfer of technology were extremely disruptive of a status quo, which was considered to be unfair to the AG's countries.

There came the changes in Chile in 1973, Chile pulled out of the AG, thus permitting the continuation of policies that led to approval of Decisions 84 and 85 of 1975 on technology. Decision 229 of 1983, substituting Decision 24, came only too late as a shy step taken in order to avoid the disintegration of the Group.

However, Decision 84 remained and it still is the policy on science and technology of the AG. A description follows:

It is the basis for Andean policy on technology and such policy is again based on four goals:

1. Imports of technology; that is, the policy on acquisition of technology.
2. Socialization of technology.
3. Recovery of regional technology and adaptation and creation of technology.
4. A system of information.

The specific actions to which the countries as members of the Group committed themselves were:

- Programming scientific and technological activities.
- Creation and protection of sub-regional technology.

The measures proposed were:

1. To increase the capacity for generation of technology.
2. To grant preference in generat-

ment contracts to undertakings with subregional capital.

3. To establish the services for foreign entities to the state must be made with participation of subregional entities.

4. To establish financing schemes for supply of consulting, research and related services by subregional entities.

5. Emphasis was given to the Andean Projects of Technological Development.

6. The evaluation, selection and control of imported technologies, which should be made according to the following criteria:

a. Effects of technology on development, both in process of demand for scientific and technological activities, engineering and consulting services.

b. Effects of technology on employment.

c. Contribution to specific development plans for the region, its effects on the balance of payments of the country.

e. Effects on the environment.

7. Activities related to searching, obtaining and disseminating information on available technologies.

8. To establish adequate mechanisms of standardization, technical norms, quality controls, metrology and certification.

9. To search for technologies for small- and medium-sized industry.

The implementation of these policies was made gradually:

Decision 46: Established the first project of technological development as copper followed by other programs on tropical forestry, food and rural areas.

Decision 146: Creation of the Andean System of Technological Information, SATE.

Decision 179: Creation of the Andean Council of Science and Technology.

Decision 263: Casanay Program for Cooperation in Research and in Scientific and Technical Education for the Andean Countries.

Then, the Group also established three sets of policies in the industrial, agricultural and commercial services:

Policy on technology for industry: Decision 25: On industrial special taxes, the Sectorial Industrial Development Programs were established. Manufacture, petrochemical

industry, steel and motor vehicles.

These programs were a failure and had to be completely re-modeled.

Decision 49: Tried to avoid mistakes in the road to development.

It was part of the industrial policy of the AG consistent with the aims of substitution of imports and it will have to be revised.

Decision 158: Creation of the Council on Industrial Policies.

Followed by Decision 203 establishing structure, objectives and functioning.

It is an effort toward harmonization of national policies.

Decision 216: Creation of the Andean system for coordination of the activities of technical standardization, quality certification and metrology.

This was followed by technical standards for foods, tools for vegetal materials, cattle meat, and origin of goods.

This set of Decisions was a necessity in countries without sufficient rules on these matters.

Decision 209: Creation of the Andean System of coordination of small- and medium-sized industry.

This was another step toward implementing similar policies for the five countries of the Group.

Policy on technology for agriculture:

Decision 142: Creation of the Andean System on agriculture, food security and preservation of the environment "Inca-Orizaba-Milpa."

Decision 152: Information and decision system for food security, SIFOD.

Decision 254: Andean program for technological training, cooperation and exchange for the laboratories of animal health and control of epidemics.

Decision 166: Andean program of rural development.

Commercial Policy:

Decision 45: A customs union requires perfect competition, this statute on the matter was followed by Decision 200 establishing the rules on unfair competition and subsidies.

Decision 49: Harmonizing legislation on industrial subsidies, which was followed by Decision 221.

Decision 232: Andean program for development of exports.

## INTERNATIONAL POLICY OF COLOMBIA

The policy of Colombia in the international arena has not been as active as required to establish more accelerated economic growth.

Multilateral Conventions: Trade, Intellectual Property and Technology

1. ALADI and the Andean Group: These are the main conventions on economic and commercial integration of Latin America.

2. There has been a long history of protection of copyrights; however, an industrial property, the admission of Colombia in the Paris Convention was started, Colombia is not a member of PCT.

3. Colombia is a member of the Washington Convention (Panamerican Convention) of 1929, on industrial property.

4. It is also, since recently, a member of GATT.

5. There are also a good number of conventions on international cooperation for development.

6. Colombia is also a member of the New York Convention on arbitration.

### Bilateral Conventions

There are more than eight conventions on technology and cooperation in scientific activities. The list of countries include: Netherlands in direct or Switzerland, Barbados, Japan and Guatemala.

The bilateral cooperation has been effective only to a limited degree. The National Planning Department has the role of coordinating the efforts of the country vis-a-vis the other countries.

## CONCLUSIONS

### On the National Policy

A policy of science and technology is emerging.

The policy will have to be made consistent with the new trends of free-market economic policies.

The national policy will include increased investment in research and development.

More technology will be acquired and approvals will be easier to obtain.

The government will not abandon immediately attitudes aimed at protecting national industry, national supplies of technology and hard currencies.

The policy of Colombia is tied to that of the Andean Group.

#### On the Andean Group's Policies

We are reviewing the construction of the foundations of a policy on science and technology.

The limits of that policy are:  
Information.

R&D.

Education.

Elimination of barriers to trade. Using competitive advantages of member countries.

Acquisition of technology not available in the Group.

#### On the International Policy

More realistic attitudes are required.

More sophisticated use of the net of multilateral conventions is advisable.

Coordination of activities between national and international entities in charge of technology and science will become a necessity.

Efficient use of international and bilateral aid for development must be attained.

#### GENERAL CONCLUSIONS

1. The country is moving toward a market-oriented policy on acquisition of technology.

2. A policy for technology for industrial development is arising.

3. Development of rural areas and agriculture is established on such lines as:

a. The preparation of a policy on food technology.

b. The use of technology to protect the environment.

4. A policy on technical education is emerging, including a policy on research and development.

5. Information is considered essential for technological change.