

CONVERSATION □ NSDB Chairman Melcio Magno

'We need labor-intensive technologies'

Prior to his chairmanship of the National Science Development Board (NSDB), Dr. Melcio Magno was vice-president for academic affairs of the University of the Philippines. In the following interview with The Republic, Dr. Magno discusses his role as NSDB Chairman, and his plans and programs for the agency and, in general, the development of science and technology in the country.

What do you seek to accomplish as NSDB Chairman?

We hope to be able to see to it that all the objectives of the NSDB will be implemented. The main thrust of any agency is to contribute to the improvement of "the quality of life of the people." Surely, the NSDB could not veer away from this. It is charged with seeing to it that science and technology resources are utilized to the maximum for the attainment of this objective.

My success will of course depend on a strong base of accurate data and information. To be able to fully utilize scientific manpower, we must have accurate information. At this moment, the NSDB doesn't have updated data on the researches taking place in the government. However, as part of our programs, the NSDB will update surveys and data, and complete data-gathering on resources, equipment, laboratory and manpower.

What are the programs of the NSDB under your leadership?

There is an apparent need for the restructuring of the NSDB, so at the moment, we are involved in the reorganization plan. In the present set-up, the NSDB is composed of seven organized agencies and five attached agencies. Probably, in the future, some of these agencies have to be transferred to other offices because of the creation of other units in the government. For instance, the Pollution Commission might be attached to the newly-created Environmental Planning Center.

The reorganization scheme calls for the involvement of the private sector in NSDB projects, that's why representatives from this sector will be appointed in the board. There must be coordination and cooperation between the private and government sectors for more relevant and more meaningful researches.

Likewise, the NSDB is embarking on the production of low-cost housing materials, such as the ongoing research on treating nipa to make it a more durable material for housing, and the use of clay and soil for housing needs. There is also a research on bio-gas which is produced by using certain bacteria and injecting it to hog manure. Bio-gas can be used for cooking, and in this experiment, I am glad to report that we are much ahead of India.

What incentives are being extended by the government to Filipino scientists and researchers?

The NSDB is looking into the science policy of the country, as well as the methods of supporting and evaluating researches. As of now, support to scientists comes from the NSDB itself and sometimes through outright grants.

For the University of the Philippines, for instance, the NSDB grants P7 million, and the practice each year is to give cash awards and rewards to the best researchers. Recently, the NSDB gave P5,000 each to five researchers from UP Baguio because of their outstanding works.

On the other hand, the Philippine Inventors Commission also gives monetary awards every year, and protection is being extended to inventors through the securing of patents for their inventions. Every year, the NSDB holds a contest whereby Filipino ingenuity is featured in a weeklong exhibit.

Do you think we have enough scientific manpower in the country?

We have enough of them, as evidenced by the number of scientists and technologists who have gone abroad.



Dr. Magno: "We are reorganizing."

There are also scientists from the academic community, but they prefer to work on research projects, the result of which they can publish in foreign journals and be judged by peers abroad.

Possession of graduate degrees is a must for scientists; however, for researchers, it is not quite important, but they must at least take up advanced courses.

How much is the annual budget of the NSDB, and where does the biggest share of this amount go to?

Our 1976 budget is P85 billion, and half of this goes to support research and self-reliance projects. This is not enough. For one, salaries of personnel are low compared to other agencies. Even our scientists get low salary, causing dissatisfaction and an internal brain drain, but only on a minimal scale. Where before scientists used to transfer from the UP to the NSDB, now it's the other way around, from the NSDB to the UP. UP scientists are more highly paid than NSDB scientists.

In line with the policy to attract Filipinos abroad to visit their homeland,

the government has also launched the Balik-Scientist program. What is the current status of this program?

Of late, 30 scientists have come back to the country; half of this are still shopping around, visiting universities, laboratories, to find out where they could fit. Half have decided to stay for a longer period.

One difficulty of scientists coming back to the Philippines is the lack of facilities to which they have become accustomed to in their stay abroad. There are the lack of library and laboratory facilities, hard to acquire equipment and the isolation of scientists. The latter is probably the result of the training and expertise they acquired in foreign lands.

How do you assess the development of science and technology in the country?

I will not speak of development only in the Philippines because science is something universal. Efforts of science and technology in a developing country are not sufficient. We need support from other developing countries, but more from the developed countries. Efforts of more advanced countries in science and technology tend to affect the development of science and technology in developing countries. For example: technologies developed in advanced countries are more capital-intensive than labor-intensive because of the shortage of labor in developed countries. In a developing country like ours, there are many unemployed, so what we need are labor-intensive technologies rather than capital-intensive ones.

Another instance is that developed countries have inventions which are substitutes for products being exported by developing countries. Take abaca. Before, we used to export abaca, but developed countries have learned to produce nylon which eventually substituted for abaca.

There is a need for an international agreement, probably a scientific order, on this. In this regard, science and technological efforts must be coordinated so that the developing countries will not suffer. □

GOVERNMENT

CASH operations of the national government resulted in a deficit of P354 million, in contrast to a surplus of P1,040 million attained in January-June last year. At P11,409 million, receipts indicated a moderate rise of 6.7 percent while disbursements rose at a faster rate of 21.9 percent to P11,763 million. The growth in the latter was the offshoot of the government's continued implementation of infrastructure development and other national high priority projects.

The deficit was fully financed through net borrowings of P707 million. The remaining portion of the inflow served to boost the cash balance by 5.0 percent from the beginning of 1976 to P7,458 million by the end of June.

EMPLOYMENT AND WAGES

PRODUCTION indices of the country's major economic sectors showed sizeable improvement during the period. The combined index of agriculture, fisheries and forestry (1972=100) rose by 6.3 percent in crop year 1976, compared to 4.6 percent in 1975. Leading the favorable trend in output were food crops, particularly palay, corn, banana and pineapple.

Meanwhile, the index of physical volume of manufacturing production (1972=100) recovered from a negative growth rate (-6.9 percent) in January-June 1975 to an advance of 2.2 percent in the first semester this year. Major increases were noted in the manufacture of food, beverages and footwear. This could indicate the start of recovery in this principal sector.

The overall employment index for the first six months of 1976 reflected

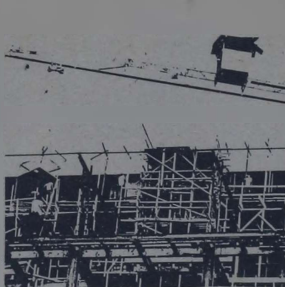
the favorable trends observed in many productive sectors. At 115.2 (1972=100), the employment index showed an increase of 4.3 percent, in contrast to a decline of 9.1 percent a year earlier. The construction sector exhibited the greatest rise in employment with the electricity, gas, and water, wholesale and retail trade as well as manufacturing sectors showing major contributions to the increase in jobs.

The money wage rate index (1972=100) in Manila and suburbs exhibited increases both for skilled and unskilled laborers. The former rose by 5.3 percent compared to 4.0 percent in the year previous but in the case of unskilled laborers, the rate of increase was lower at 5.2 percent as against 9.6 percent in 1975. Meanwhile, real wage rates remained at approximately the same levels as in the first semester last year.

CONSUMER PRICES

INFLATION rates in January-June 1976 were generally lower than in the comparable period in 1975. However, after fluctuating between 2.8 percent and 4.7 percent in January-April this year, the rise in the cost of living in Manila increased to 6.7 percent in May and further to 9.3 percent in June. Steeper price increases during these months were traced to a higher food index as the aftermath of two major typhoons made itself felt on food crops, particularly vegetables. Non-food items actually showed a decline in June. Also contributing to the rise in prices was the 25 percent hike in land transport fares which was allowed early in May, the authorized increase in the minimum wage and the upward adjustment in the controlled prices of rice and corn.

Nevertheless, the average inflation



rate for the semester was only 5.3 percent, compared to 13.6 percent in the same period last year. In June 1976, prices in Manila rose at the rate of 9.3 percent as against 8.0 percent a year earlier.

PROSPECTS

THE Philippine economy showed a generally favorable performance during the first six months of 1976. Promising developments, reflected in improved agricultural and manufacturing production and in higher employment and relative stability of the peso, indicated a basis for optimistic expectations in the near future.

However, imbalances persisted in the country's foreign exchange transactions, largely because of a weak trade position as exports declined, notably sugar. Certainly, the rising trend in export receipts observed in March-June provided hope for the possible re-establishment of propitious market conditions overseas. This optimism on potentially higher exports gained added support with the long-term sugar contracts recently signed with foreign buyers.

improvement in world metal prices and the favorable response of new commodity outlets.

In view of the continued high level of imports, however, the overall external position might not quickly recover and would therefore require surveillance and appropriate measures to moderate foreign exchange shortfalls. Toward this end, the Central Bank will sustain its efforts to improve the external position and provide for a more favorable foreign exchange situation ahead.

A more recent development during the semester was the upward pressure felt on price levels. Clearly, the main cause of this development was the adverse effect on food supply wrought by the typhoons in May and June. To assist in the repair work now under way in typhoon-ravaged regions as well as to help contain further price rises, the Central Bank will continue to provide credit resources for the rehabilitation of these areas.

Other sectors of the economy, particularly the monetary area, will also remain of major consideration for Central Bank action. In view of the need for speedier recovery and higher domestic output, monetary policy will continue to be drawn toward the extension of credit to priority productive endeavors with short gestation periods to intensify national savings mobilization, thus providing the private sector with a non-inflationary source of financing and to sustain the CBCI program and of fund mobilization for priority area financing.

Thus, the monetary authorities, working on current observations on economy and monetary developments and trends, will go on drawing up the needed policy mix for promoting growth under stable conditions. □