shortly after President Echeverría took office at the end of 1970.

The government's most compelling incentive to galvanize the nation's research system, however, appears to have come not so much from any infirmities in science itself as from Echeverría's conviction that science and technology offered at least partial solutions to a host of disturbing social and economic problems that confronted Mexico at the end of the 1960's. While it was true that Mexico possessed one of the world's most successful developing economies, gross measures of achievement masked a markedly uneven quality to this development. "Looking only at the overall figures," Echeverría noted in his inaugural address 2 years ago, "one might think that we have surmounted underdevelopment. But when we regard the reality that surrounds us, we have reason to be deeply concerned."

One major problem is that, while manufacturing and commerce have been expanding rapidly, the primary sector of the economy—including forestry, fishing, and agriculture—have been showing signs of serious stagnation.

In large areas of the arid central plateau and the humid flatlands of the south, areas where a fifth or more of Mexico's 50 million people eke out a subsistence living, the agricultural economy is in a touch-and-go race with the birthrate. Agricultural output grew by less than 2 percent a year in these

Computer for Watergate Probe

Congressional investigators are resorting to a computer to keep track of the complexities of the Watergate affair. The committee chaired by Senator Sam J. Ervin, Jr., (D–N.C.) decided on the use of the computer because "there was just too much to handle with the old ways of record keeping."

The full title of the Ervin committee is the Senate Select Committee to Investigate the 1972 Presidential Campaign Activities, and the committee's intention is to perform a broad information gathering function. In addition to testimony in the current Senate hearings, the panel plans to take into account "inputs" from the Watergate bugging trial, other criminal and civil suits, and the confirmation hearings for L. Patrick Gray, former nominee for the FBI directorship.

For its automatic data processing, the committee plans an essentially in-house operation utilizing a Library of Congress computer. The computer link is still undergoing tests but is expected to reach the functional stage fairly soon.

The computer operation is under the general charge of a committee assistant counsel, C. Eugene Boyce, a Raleigh, North Carolina, attorney with considerable trial experience on both the prosecution and defense sides in criminal cases. Boyce had worked in the congressional campaign of Congressman Ike F. Andrews (D–N.C.) and was serving as the first-term congressman's administrative assistant when he was recruited to the staff of the select committee.

The Senate resolution creating the investigative committee provided that other congressional committees and agencies should cooperate to the extent that resources were available; in the case of data processing this meant drawing mainly on the Library of Congress and its Congressional Research Service for technical advice and on the Senate Rules Committee's subcommittee on computer services.

According to Boyce, discussions began 6 to 8 weeks ago, and less than a month ago a decision was made that using the computer was the only way to handle the mass of information with which the committee had to deal.

The computer being used is an IBM 370-155, which the Library of Congress employs for cataloging and administrative chores and also to serve congressional committees with data processing demands.

Committee staff members believe there is no precedent for the full-scale use of a computer in investigative hearings but are satisfied that it will be possible to retrieve information "alphabetically, chronologically and by name and topic."

Outsiders knowledgeable about computers say the computer in question is a very fast machine capable of dealing with a massive data base, and there should be no state-of-the-art problems in developing software to meet the committee's need to keep tabs on who said what, to whom, when, and where.

Boyce says that, ordinarily, in extensive hearings or court cases when a number of attorneys are involved, there are information retrieval problems. Usually an alphabetical filing system is set up, but it is "a horse and buggy system" he says, and mainly it's "a case of relying on attorneys' memories."

The Ervin committee has no computer people as such on the staff, but there has been good collaboration with the computer specialists, "with each group telling the other what they need to know." Provision had been made for a group of research assistants whose job is to go through material, analyze it, index it, and put it in the filing system. A card index system has been started and information from it will be transferred to computer input sheets.

During the test period, most of the work in the Watergate computer project has been done at night to avoid interfering with the regular library computer tasks. The plan, however, is to use the computer in "real time" during committee hearings, so that it will even be possible to have telephone queries answered in a short period.

The committee, however, is looking beyond the hearings to the ultimate use of the computer record to fulfill its mandate of writing a report to Congress within a year of the findings of its investigation.

The Ervin committee is acutely security conscious, and this extends to its data processing activities. Provisions are being made for the committee to maintain physical control of the computer record. Committee staff members decline to be specific, but presumably precautionary measures will include standard procedures such as duplicating the data base and using codes to control access.

As for the more conventional record of the hearings, Ervin is pressing for rapid action and expects the first volume of the printed hearings to be available by the beginning of July.—JOHN WALSH