ECONOMICS

Economics Machine-Wise

➤ THE economic goals of a free democracy are determined by its citizens. If they are to choose intelligently, they have to know what alternatives they have. Giant calculating machines may be able to analyze all of the main alternatives and determine what economic policies are required to reach them Dr. Frederick V. Waugh, economist of the President's Council of Economic Advisers in Washington, reported to the Symposium on Large Scale Digital Calculating Machinery in Cambridge, Mass.

These "electronic brains" are needed because our economy is complicated and constantly changing. Taxes, farm-support, social security programs all involve a large number of factors and all of them affect each other. The need of throughgoing studies of the economy as a whole, recognized during the industrial mobilization for World War II, was brought into focus by the Employment Act of 1946 which called upon the Federal Government to promote maximum employment, production and purchasing power.

It is not enough to know the total income or production of the nation. Information about thousands of kinds of goods produced and sold must also be analyzed to find out how they affect the economy.

Much of this information is already being gathered but is not being fully used because analyzing it is too complicated to be done by ordinary statistical methods using small computing machines. When the giant calculating machines are put to work, economists hope to be able to learn much more about our economic problems and what we can do to solve them in different ways.

If economic research can do this, Dr. Waugh stated, Congress and the general public will have a scientific basis for deciding the best solution.

Science News Letter, September 24, 1949

ENGINEERING

Tunnel Gets Gas Detector

➤ THE 2,000-foot West Rock highway tunnel near New Haven, Conn., on the Wilbur Cross Parkway, U. S. Route 1, will be freed of poisonous carbon monoxide gases from automobile exhausts before they reach harmful concentrations by means of an automatic device now being installed.

The carbon monoxide detecting device, which can detect as little as one part of the deadly, odorless, colorless carbon monoxide gas in 1,000,000 parts of air, is to control the tunnel's ventilating system. It will continuously sample the air from near the tunnel's entrance and, if dangerous amounts of the poison gas are found, turn on ventilating fans to deliver fresh air into the tunnel.

In addition, four less elaborate carbon monoxide ventilation controls have been provided, two located along each of the two one-way tunnels, to detect any accumulation of exhaust gases during traffic stoppages or other conditions. They also are capable of starting ventilating fans.

All the instruments operate on the same basic principle. Air to be analyzed is drawn through a cell containing a substance known as "Hopcalite." With this substance acting as a catalyst, the carbon monoxide in the air is burned. Heat liberated is measured with a sensitive thermopile. The circuit develops electric energy that actuates recording and indicating meters.

The carbon monoxide detecting device is a product of Mine Safety Appliances Company, Pittsburgh. It is similar to those used in the Holland Tunnel under the Hudson River, between New York City and New Jersey, and all the tunnels on the Pennsylvania Turnpike, the state's principal east-west highway.

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