



FINANCIAL MICROTIMES



Power to the People

Many people relish the idea of running their own business. But even if it's only a small shop, the problems associated with such a venture can be formidable. And nowhere is this more so than when dealing with your company's finances. However, this article is not about practical business software, but is dedicated to a selection of games software that simulates some of the problems and challenges of big business. The best-known of such games is Monopoly, which is adapted from the board game of property wheeling and dealing. Business games are ideally suited to computers, since there are no tokens or paper

money to lose and the computer handles all the calculations.

The range of companies that you can run is quite diverse: breweries, airlines, car firms and farms are just a few examples. Each type of concern obviously has its own problems. The price of oil is very important to an airline, and there are problems common to all, such as inflation or high loan rates.

No matter what type of company you choose, business simulation programs work in much the same way. You are invariably manager of a particular company and you have an initial amount of cash at the beginning of the game. In the Corn Cropper

program, in which you are running a farm, this is just £50,000, but if you are in charge of an oil company, as in the Dallas game, you need \$100 million just to get off the ground.

You then invest some of this capital in what are called 'fixed assets' — aeroplanes, car factories, land, etc. Using these, you can then start producing your goods or services — flights, cars, wheat — and earn some income. Obviously, it's not quite as simple as that and your success or failure as a company depends on many other factors.

The degree of realism varies from program to program. Some, like Dallas, are obviously intended mainly for amusement. Others can be very realistic: the Corn Cropper program has data on sunshine and rainfall, ideal conditions for growing wheat, salaries of hired labourers

and running costs for tractors — just a few of the factors that modern farmers must consider.

There will inevitably be some people who are not satisfied with merely running a company — not even a \$100 million oil corporation. For these people, the obvious answer is to try running a country! 1984 is a game that simulates the economy of Great Britain, with you as the Prime Minister.

To simulate the national economy, economists use a 'model' — not a physical model, but rather a complex diagram showing how all the parts of the economy interact with each other. The model in the 1984 program is very simple, containing just five sections — the Government, the banks, the population, industry and the rest of the world. Even so, there are at least 30

inter-connections in this model — government grants to industry, income tax paid by the population to the Government, and so on.

The Treasury also has an economic model, which the British Government uses to make various predictions about the national economy. As can be imagined, this model is a little more complicated. The simulation program, which contains the model, is called AMODEL and runs on a Sperry 1100 mainframe computer. To make its predictions it uses 1,100 different economic variables — inflation rate, unemployment, etc., collected over the past 10 years. This data alone occupies about 250 Kbytes of memory, but when the program is running at full capacity nearly eight Mbytes are used.

Typically the model can be used to predict unemployment figures, the level of imports and exports, the exchange rate for the dollar and many other economic indicators. To give you an idea of how complex the model is, the task of forecasting next year's inflation rate would take two or three minutes of actual processor time. Not long you might think, until you bear in mind that the processor handles about 10 million machine code instructions in just one second. Printing out the forecast takes another 15 or 20 minutes.

Computer simulation games offer you the chance to run your own business — or even to run a whole nation's economy — without the risk of losing your life savings if the company goes bankrupt. Unfortunately you don't enjoy the profits either!