

parable and defective? Granting finally that both the construction and automobile industries have reached the end of their rope and can make no further progress in technology or management during the next several years, we must then depend for an accelerated pace of industry upon the performance of some unknown new industry or upon technical revolutions in the old, established ones.

Cost, in itself, is not the issue. In a profit economy, such as ours, much hangs upon the relation between levels of cost and of prices. Levels of falling or stationary prices need cause no alarm while industrial costs are being reduced or, at any rate, stabilized; but if prices fall or lag in the face of an upward tendency in costs, or if the steady movement of falling costs is stopped, then a downward wholesale price level may indeed produce those consequences in shrinking profits that are often associated with the existence of industrial depression. Under such circumstances, the only way out is finally a rising price level and a business situation quite unlike that which prevailed in the past decade.

The state of a nation's credit, and its bearing on the past and future course of business, is not easy to summarize and to assess. There is first, of course, the question of the effects of new types of credit. The well-known uses of variants of consumers' credit in the development of such industries as the automobile and the radio may or may not constitute a species of slow, but effective, inflation. On this matter, we must wait for a further gathering of the facts and for their satisfactory interpretation. A like gap in our knowledge and understanding exists with regard to the financing of building construction during the boom years 1925 to 1928 when responsible factors in the industry detected the signs of inflationary practices. That this condition corrected itself during the past year by restrictions on the issue of mortgages and the placing of building loans does not make the history of the episode any the less interesting and instructing. Such specific observations on credit are tangible and, to some extent, measurable. But whether it is possible to come to similar generalizations regarding our credit structure as a whole, or to subject it to some like process of analysis, is very doubtful indeed. Here again there are obvious factors, like the recent easing of money rates and the stiffening of bond prices, that suggest the

existence of a fundamentally sound credit position. But how far this conclusion is tenable and what forces may already be at work to bring about a radical change for the worse in our credit position (significant items for the forecast of the future course of American business) are matters on which it now appears very hard to obtain light.

In spite of the high costs of American salesmanship and advertising, it would seem reasonably certain that the increase in total production, here and elsewhere, is a direct function of the growth of the market. Mass production, the manufacture of standardized products, depends for its effective use on large sales. To the extent to which an industry makes use of these devices of distribution and resorts in consequence to methods of mass and large-scale production, it is able to reduce costs, lower prices, increase its business and to employ an increasing labor force. It makes its contribution in this manner to the cumulative process of business and industrial expansion. Sooner or later the accelerated pace of such a group of related industries slackens and the existing economy must look elsewhere for a new stimulus. The creation of this type of incentive to business is the purpose of the conferences now being held in Washington and it may very well happen, within the next months, that the spur to business will come either out of the deliberations in Washington or from the discovery by a single industry of a new product or a variant of an old one that possesses the qualities which have just been described.

If this brief paper has appeared to deal with abstractions, it is because I have wished to indicate that area for the exercise of economic policy which, in a measure, lies beyond the control of the individual business man. It is an area that should increasingly enlist the interest of the leaders of industry because it is here that the next steps in the social control of business are most likely to be taken. It is where the fixing of economic policy seems to be everybody's concern that our conceptions of the problem remain vague and uncertain. With the further accumulation of data, bearing on the kind of questions that have been here discussed, and with further refinements in the instruments of economic analysis, we may be more sanguine over the future of that control of industry which rests upon our understanding of the processes and sequences of competitive business.

Discussion

Stuart Chase.¹ The problem that the Taylor Society is discussing this evening is, in my mind, the most important problem that the modern world is facing. Perhaps it might be journalistically summarized in the statement that we are challenged to control a billion horses, all more or less wild. Since James Watt took his famous walk on Glasgow Green, and smiled because the answer to the problem of a vacuum in a steam chamber had come to him, we have loosed upon the world at least a billion horse power. The problem is whether they are going to control us or we them. I have been devoting my time lately to trying to find out where they are helping and where they are harming. At the end of my analysis I come solidly against the question of whether we have the intelligence collectively to control this enormous flood of power that we have loosed upon the world. Like Mr. Mitchell, I am forced to throw the problem back to you, the engineers. It seems to me that a mechanistic society should be controlled primarily by those of an engineering turn of mind. They presented this society to us and it is up to them to see that it does not destroy us.

The idea of co-ordinated industrial control is conceivable under a dictatorship. In such countries as Russia and Italy it is possible to think of central economic staffs which possibly can co-ordinate industry, but in the United States the problem is immensely complicated. Here free competition, somewhat diluted by mergers, to be sure, is the rule. But it is profoundly interesting, it seems to me, to look across the sea to Russia to see what they are doing there. There may or may not be lessons for us; I suspect that there are some.

I was in Moscow two years ago, and while my fellow travelers were discoursing with politicians, statesmen and educators, I headed straight for the Gosplan. It was a great barracks of a building, housing about five hundred engineers, statisticians and economists at that time. The clang of adding machines and calculators was abroad in the corridors. As a C. P. A. it was music to my ears and there I stayed, talking directly with those who talked English and through an interpreter with those who talked only Russian. I was trying to find out what these gentlemen were up to. They were up

¹Labor Bureau, New York.

against an enormous problem and had gone straight to the heart of it; that is, they had realized that the way to co-ordinate industry is to allocate capital. Capital investment is the controlling factor; where would they place their surplus? Should it go into oil wells, coal mines, shoe factories, textile mills, highways, schools? That was their problem, a great jigsaw puzzle of working out what factors in their economic scheme should have the limited supply of rubles which were available. In Russia one says "rubles" but what is meant, of course, are labor and raw materials and technical skill. These are the things that are building Russian industry.

The first objective of the Gosplan was to bring Russian industry by the year 1927 up to the pre-war level of production. They had nearly accomplished their objective when I was there. When I got back the figures that came in showed that the goal had been accomplished. Whereupon these courageous gentlemen immediately began on a plan for the next five years. They said, "We will double the production of industry during the next five years."

Horace Liveright has recently published an English account of the Gosplan so that any who wish may study it. Here are some of the aims which it contemplates. The first is a total capital investment during the five years from 1928 to 1933 of \$31,000,000,000 or sixty-two billion rubles. The accent is very strongly on producers' goods, the chief being electrical power and steel. They plan to release just enough consumers' goods to keep the population from complaining too loudly, just enough to feed and clothe and keep them warm. They are planning first to build up their underlying industrial structure so that a flow of consumers' goods may come in due time. You will agree with me that this is a sensible program, but at the same time a rather heroic one, because the planners will be continually under pressure by the population to release more and more consumers' goods.

In 1933 there will be 33 per cent more workers in large-scale industry, an increase in output per worker of 110 per cent, a 70 per cent increase in real wages and a 35 per cent decline in unit costs. The last figure is a crucial one. Can they bring unit costs down? It is there that they will need their best engineering and technical brains.