

'cutting-edge' ideas, thus eliciting a diversity of ideas. This could be a good start for the conference. It would be followed by a second part, the 'how to' part, which is the main scope of the conference, and which is the most serious question faced today by people in futures studies. It is a question which indeed they must face, if we are still to believe that futures studies can be useful in this depressing period in our planet's life, which offers few sparks on which we can operate.

In the third phase of the conference, the focus would be on only a few of the problems, and this is where I believe Igor Bestuzhev-Lada's suggestions and ideas would be beneficial. There are of course ideas which have

also to be discussed with our colleagues in Hungary. We all know that the major burden in organizing world conferences ends up being borne by the hosts.

One thing which can be said about past WFSF conferences is that they have somehow managed to be held right at the time of important change in the host country. This was the case of Costa Rica, of China, and I think we can say it of Hungary. I hope on the whole this brings them luck!

Eleonora Masini
President
World Futures Studies Federation
Roma-Prati
Italy

CONFERENCE REPORT

Ups and downs—the long wave debate

Bart Verspagen

A conference entitled 'The long wave debate' took place in Brussels on 12–14 January 1989. It was organized by the Vrije Universiteit Brussel, the Universiteit van Amsterdam, The Fernand Braudel Center and the Maison des Sciences de l'Homme. This article reports on the debates conducted and conclusions reached at the conference.

Long waves have proved to be a controversial item in both economic theory and statistical analysis of historical time series. The notion of long waves, or Kondratiev cycles, has generally been used to refer to movements in economic variables of 40–60 years, in which periods of rise and decline alternate. In 1913, the Dutch Marxist Van Gelderen was the first to put forward the hypothesis of these long-term cyclical movements in economic variables. In the pre-Second World War period, Schumpeter and Kondratiev became the most

well-known authors on long waves. During the last two decades of economic recession, the debate on the existence and explanation of long waves has revived. In the 1980s, conferences on the subject were held in Siena, Italy (1983, 1986), Paris (1983), Weimar, GDR (1985), Montpellier, France (1987), Novosibirsk, USSR (1988).

During the three days of the Brussels long waves conference, five more or less distinct issues were addressed. These were:

- the statistical testing of the existence of long waves;
- the role of innovation as a driving force behind long waves;
- the role of profit rates in long waves;

Bart Verspagen is a PhD fellow with MERIT, PO Box 616, NL-6200 MD Maastricht, The Netherlands.

- exogenous v endogenous explanations of long waves; and
- the interaction between long waves and the labour movement.

Statistical testing

In the session on the statistical testing of long waves Rainer Metz (Cologne) and Hans Gerster (Bonn) presented an application of a new filtering technique developed by W. Stier (St Gallen), which allows cyclical movements to be distinguished from trends in a 'neutral' way. These papers, and the contribution by Jan Reijnders (Utrecht), the latter dealing with the problem of 'perspective distortion', concluded that the hypothesis of the existence of long waves cannot be falsified. There was an intensive discussion with Solomos Solomou, who presented a paper that criticized the existence of long waves.

One criticism made from several sides was that the discussion suffered from a tendency towards 'measurement without theory'. The theoretical side of the long wave hypothesis was discussed in the next three sessions.

Theoretical approaches

Since Schumpeter, major technological breakthroughs have played an important role in long wave theory. According to Schumpeter 'basic innovations' would cluster in the depression and early up-swing phases of the Kondratiev cycle. Recently, a number of authors (for example, Kleinknecht, Freeman) have discussed Schumpeter's theory. During the conference, the role of innovations was addressed by Pierre Dockes and Bernard Rosier (Marseille), Nebojša Nakićenović and Arnulf Grübler (IIASA), and Chris Freeman (Sussex/Maastricht). All three papers stressed the role of *diffusion* of major technological breakthroughs in the stimulation of renewed economic growth, and the exhaustion of older technological systems as the main force behind the upper turning point of the long wave.

The third session was on the role of profit rates in long wave theory. Marxism has always stressed the role of the profit rate in economics. Marx himself formu-

lated his theory of the inevitable long run decline of the capitalist system in his well-known 'law of the tendential fall of the profit rate'. Kondratiev, the Soviet economist after whom long waves are named, fell victim to the Stalinist regime in the 1930s, and has recently been rehabilitated in the USSR. *Perestroika* seems to favour innovation in Soviet-Marxist theory in general and interest in long waves in particular. Andre Poletayev (Moscow) presented empirical evidence on long waves in profit rates, and his colleague Stanislav Menshikov (Prague) presented an endogenous model of long waves in which the profit rate is the 'motor' behind the up- and downswing of the Kondratiev. That the profit rate plays a vital role in long waves was also concluded in papers by Anwar Sheikh (New York) and Louis Fontvieille (Montpellier). This profit rate explanation of long waves is a more or less new item in the long wave debate, and provides an original interpretation of the famous Marxian 'law'.

The most lively debate of the conference was on the issue of whether the long wave can be explained by an endogenous economic mechanism, or whether exogenous shocks from outside the economic system are needed to explain (partially) the turning points of the wave. Papers by Menshikov (Prague) and Thomas Kuczynski (Berlin, GDR) clearly pointed to innovation, capital accumulation and the profit rate as endogenous mechanisms in the Kondratiev movement. The paper by David Gordon (New York) was somewhat critical with regard to a purely endogenous theory of long waves. In the discussion there was agreement that while a purely endogenous theory of the long wave may be useful from a theoretical point of view, there will always be a need to consider exogenous shocks in order to explain concrete historical situations. Furthermore, it became clear that a 'narrow' economic theory, ie, a theory that does not take into account political, sociological and technological factors, cannot deal adequately with the problem.

The paper by Joshua Goldstein (Los Angeles), presented during the last session of the conference, was a good illustration of this point. Goldstein pre-

sented a theory in which long waves are explained by the discontinuous appearance of wars. The other two papers presented in the last session were on the interaction of the labour movement and the long wave. Giorgio Gattei (Bologna) and Beverly Silver (New York) showed that while labour (un)rest seems to be influenced by Kondratiev movements, there is a need for a more general theory explaining the exact interplay between long waves and the labour movement.

Conclusion

In the concluding afternoon session of the last day of the conference, Ernest Mandel (Brussels), Immanuel Wallerstein (New York) and Alfred Kleinknecht (Amsterdam) tried to put things together. All three concluded that the Brussels conference had brought some important progress in the long wave debate, notably in statistical testing, profit rates, and the endogenous-exogenous discussion. However, Mandel concluded that consensus has still not been reached on a few basic issues,

such as the precise variables involved in the long wave, the geographical framework to be used (the world as a whole, core capitalist countries or separate countries), and the nature of the theoretical explanation of the phenomenon. Wallerstein pointed to a number of issues that the conference had not addressed, such as pre-industrial long waves and the consequences of the existence of long waves for peripheral countries. Kleinknecht stressed that a fruitful synthesis between profit rate explanations and innovation theories might be made in the future.

'The intermediate balance sheet' of the long wave debate (as Ernest Mandel called it) shows that progress is still being made in both statistical testing and theory of long waves, but that an ultimate unified theory of long waves has not yet been formulated. In this sense, the Brussels conference was a good conference, although it will certainly not be the last in the sequence of long waves conferences. The organizers have already made plans for a follow-up conference in Amsterdam in 1992.

BOOK REVIEWS

Modelling the labour market

Amin Rajan

Employment Forecasting: The Employment Problem in Industrialised Countries

M. J. D. Hopkins (editor)

257 pages, £25.00 (London, Pinter, 1988)

This book is based on papers produced specifically for a workshop held in Geneva in September 1983, under the auspices of the International Labour

Office. Between them the papers have two principal objectives: to analyse feasible alternatives to unemployment which can be implemented within 10 years; and to assess the methodologies for medium- to long-term employment forecasting in the industrialized market economies.

The book's emphasis is on model building in an international context, covering as it does the UK, France, Belgium, The Netherlands, and the countries covered in the OECD's Project Link. There is also a separate chapter on Mexico, where some of the methodolo-

Amin Rajan is Director of the Centre for the Research in Employment and Technology in Europe, 2 Holly Hill, Vauxhall Lane, Southborough, Tunbridge Wells, Kent TN4 0XD, UK.