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**OECD/IBRD SEMINAR ON INDUSTRIAL PROGRAMMING**  
15-19 March 1976, Portoroz, Yugoslavia

**Organised jointly by:**

- The Organisation for Economic Co-operation and Development (Technical Co-operation Service);
- The International Bank for Reconstruction and Development (Development Research Centre); and
- The Yugoslav authorities (Federal and Slovenian Administrations for International Scientific, Technical, Educational and Cultural Co-operation).

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A Note on the IBRD-OECD Industrial Programming Seminar  
15-19 March 1976, Portoroz, Yugoslavia

The Seminar

The major area of discussion at this Seminar was generally the application of computer-linked mathematical/economic models to industrial programming, and more particularly to the area between the macro-economic plan and the individual project. It can be shown that on large projects "lumpiness" causes the more or less orthodox project appraisal techniques using social cost-benefit analysis, shadow prices, etc. to give possibly inaccurate results, since these techniques find their basis in marginal analysis; feedback effects, economies of scale, indivisibilities and/or learning effects may require significant modification to the standard analysis: Large projects can themselves have major impact on the shadow prices of inputs and outputs. Where this is likely, it may be worthwhile to combine project economic appraisal with interindustry modelling. It is also clear that "lumpiness" is relative: A clearly lumpy project in Jamaica may not be lumpy in Mexico; the less industrial or the smaller the economy is, the more serious the shortcoming of "orthodox" social cost-benefit analysis. However, it is precisely in the less industrial economies that the difficulty of applying modelling techniques may be greatest, in terms of skills and data necessary for computer-based models.

These considerations comprised the stuff of discussion at this Seminar with notable contributions from the IBRD group on the methodology of programming models and from the large Portuguese delegation on both the methodology and the problems encountered in applying the methodology. While there may have been a tendency during one or two sessions to take off into a rather elevated level of economic/mathematical abstraction, it was also clear that certain real world problems may demand a sophisticated approach. Consider the problem (ably described by David Kendrick of IBRD/University of Texas) of how one can perform the task of project

identification in the steel industry: there is selecting the scale of major plant components, location, onstream date, product mix, energy type/source, raw materials, etc. These aspects of project identification are not self-evident, for they depend upon what choices are being made elsewhere in the sector: For these reasons, sectoral programming may be needed: The number of parameters may quickly rise to 30, 40 or more. Only programming techniques provide optimal solutions to such problems.

Despite the problems, are the solutions proposed, given the various limitations in data, etc. feasible? It is my view that the Kendrick/Stoutjesdijk methodology for Industrial Investment Planning in the Process Industries is sufficiently well developed and seem practical enough to deserve serious consideration in perhaps ten of the "more developed" of the developing countries, i.e. India, Brazil, Mexico, Yugoslavia, etc. On the other hand, the methodology for the non-process industries appears not sufficiently developed as yet for practical consideration.

An omission at this Seminar was the absence of a Group of Senior Planners/Economists from a Centrally-planned Economy. In the concluding session of the conference, all the speakers alluded to this; and there was the suggestion that a follow-up seminar should be held by UNIDO with strong participation from this group.

The titles of papers presented are shown in the list attached. Also attached is the preliminary list of non Yugoslav participants.

PROGRAMME

Monday, 15 March 1976

Morning

- Opening address  
Mr. Z. Dragan, Vice-President of the Executive Council  
of Slovenia
- The role of industrial programming: an overview  
Alan Manne, Harvard University, IBRD Consultant

Afternoon

- A note on major research and methodological work in  
industrial programming at UNIDO  
Victor A. Richardson, Global and Conceptual Studies  
Section, International Centre for Industrial Studies,  
UNIDO, Vienna
- Improved methodologies for industrial project planning:  
the underlying rationale  
Ardy Stoutjesdijk, IBRD
- Industrial project planning and programming: examples  
of experiences in the private sector  
J.W. Dangel, Hoffmann-La Roche  
R.J. Andersen, Atkins and Partners

Tuesday, 16 March 1976

Morning and afternoon

- Industrial planning and programming: individual  
approaches of governmental services (Part I)  
Presentation by participating countries and  
discussion

Wednesday, 17 March 1976

Morning

- Industrial investment planning in the process industries: the methodology

David Kendrick, Texas University, IBRD Consultant

Afternoon

- Industrial investment planning in the non-process industries: the methodology

Larry Westphal, IBRD

Thursday, 18 March 1976

Morning and afternoon

- Industrial planning and programming: individual approaches of governmental services (Part II)

Presentation by participating countries and discussion

- The link between project planning, sectoral planning and economy-wide and regional planning

Joao Cravinho, OECD Consultant

Friday, 19 March 1976

- Review of experience and possible future action: general discussion

LIST OF PARTICIPANTS

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Denmark	Mr. Torben Iskjaer, M.Sc. Technical Adviser Danish International Development Agency
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**Turkey**  
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**Yugoslavia**  
Federal and local representatives

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**Switzerland**  
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**III. International Organizations**

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Mr. Larry Westphal  
Mr. David Kendrick  
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Mr. Alan Manne  
Harvard University, IBRD Consultant

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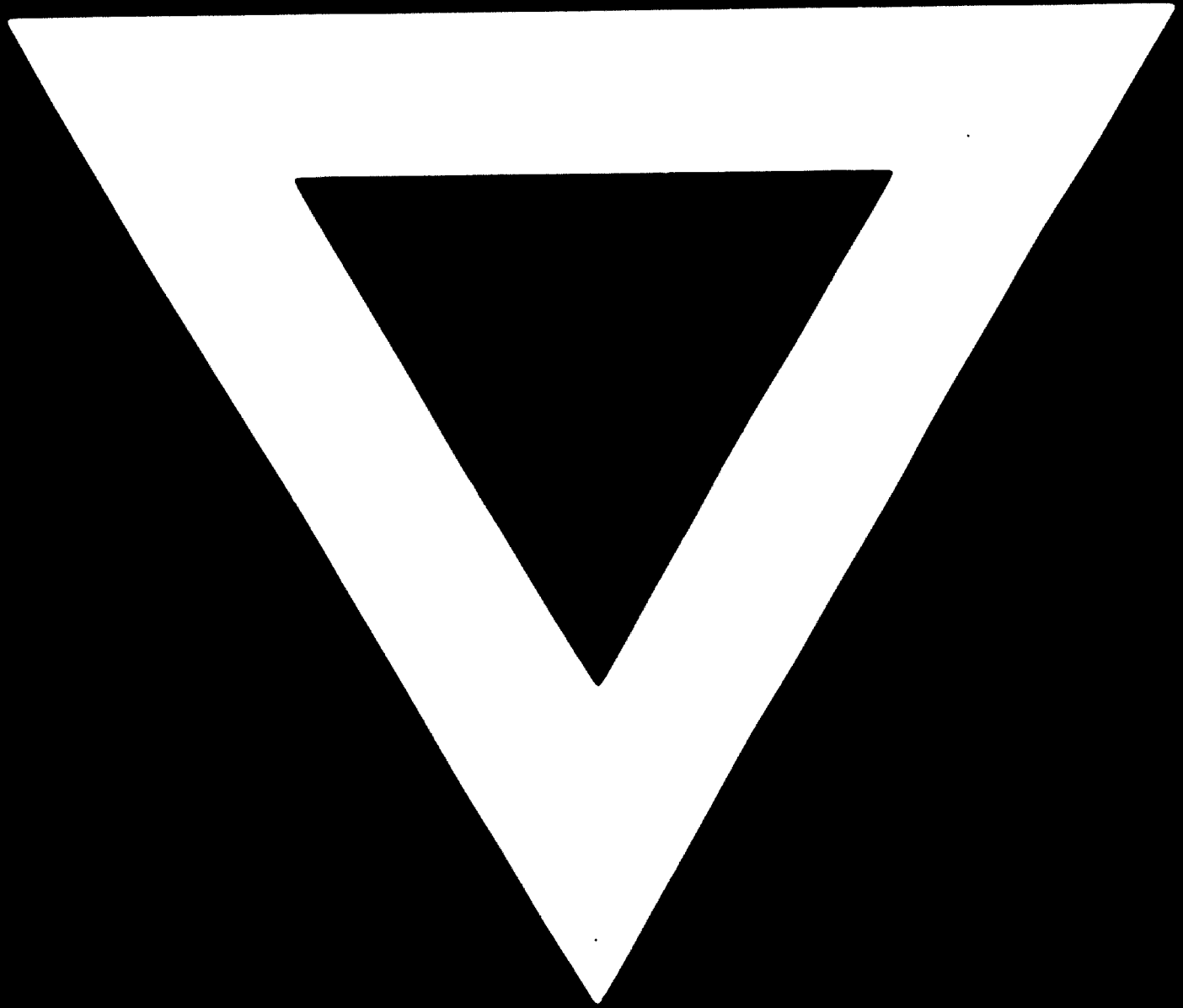
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