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Washington, D.C.

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Washington DC 20433
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INDUSTRIAL DEVELOPMENT & TRADE PANEL
Meetings - July 1978, October 1978



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WBG Archives

The World Bank Group
Archives
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A1990-041 Other #: 2 Box # 213033B
Meeting July 1978/October 1978 - Industrial Development and Trade Panel

ID&T

OFFICE MEMORANDUM

TO: Those Listed Below

DATE: June 13, 1978

FROM: Bela Balassa, VPD

SUBJECT: Evaluation of Research Projects on
Industrial Development and Trade

I enclose a list of research projects which are to be evaluated by the external panel reviewing Bank research into industrial development and trade. Attached is a list (lists) of reports cited in abstracts and status reports of those projects for which you have responsibility.

Please forward me five copies of each of these reports, excluding those starred, and all subsequent reports produced by the project.

Please send all materials to F1233 not later than c.o.b. Friday, June 16.

Distribution:

Messrs. L. Westphal
R. Gulhati
G. Pursell
Y. Rhee
A. Stoutjesdijk
F. Moore
P. Hasan
A. Choksi
V. Prakash
D. Greene
S. Robinson
D. Keesing
D. Anderson
V. Bhatt
S. Singh
A. Meeraus

AGelb:lt

Research Projects on Industrial Development
and Trade

<u>Project No.</u>	<u>Project Title</u>	<u>Responsibility</u>	<u>Date of Approval</u>	<u>Date of <u>1</u>/ Completion</u>	<u>Date of Evaluation</u>
670-01	Development Strategies in Semi-Industrial Countries	B. Balassa	6/71	4/6/76	
7	International Model	B. Balassa	6/72		
19	Expansion in Manufacturing for Exports in Developing Countries	L. Westphal	3/71	10/1/75	10/2/75
20	Industrialization & Trade Policies for the 1970s	R. Gulhati		12/18/74	
21	Export Promotion & Preferences: India	L. Westphal	3/72	3/2/73	10/2/75
22	Economies of Scale & Tariff Levels	G. Pursell	11/71	No date	
23	Scope for Capital-Labor Substitution in the Mechanical Engineering Industry	Yung W. Rhee	11/71		
24	Programming in the Manufacturing Sector	A. Stoutjesdijk	2/69		
25	Industrial Capacity Utilization in Selected Latin American Countries	F. T. Moore	6/74		

<u>Project No.</u>	<u>Project Title</u>	<u>Responsibility</u>	<u>Date of Approval</u>	<u>Date of ¹/_{Completion}</u>	<u>Date of Evaluation</u>
670-54	Employment & Capital-Labor Substitution	A. Stoutjesdijk	3/72	12/19/74	N/E
77	Financing of Small Scale Industry	L. Westphal	4/73	8/27/74	9/30/75
79	Economic Development of East & Southeast Asia	P. Hasan	6/73	2/17/78	
87	Industrial Policies & Economic Integration in West Africa	B. Balassa	6/73		
95	Industrial Capacity Utilization	A. Choksi	7/9/73	6/30/77	
671-05	Patterns of Industrial Development	V. Prakash	6/75		
10	Promotion of non-Traditional Exports	D. Greene	6/74		
32	A Comparative Study of the Sources of Industrial Growth & Structural Change	S. Robinson	5/75		
35	Export Incentives in Developing Countries	B. Balassa	7/75		
51	Appropriate Industrial Technology	L. Westphal	5/20/77		
56	Marketing Manufactured Exports	D. Keesing	6/24/77		

<u>Project No.</u>	<u>Project Title</u>	<u>Responsibility</u>	<u>Date of Approval</u>	<u>Date of ^{1/}Completion</u>	<u>Date of Evaluation</u>
671-59	Small-Scale Enterprise Development	D. Anderson	10/77		
65	Small Enterprise Financing: Role of Informal Credit Market	V. Bhatt	12/77		
67	Effects of Increased Imports of Manufactured Goods from Developing Countries	S. Singh	12/77		
68	Key Institutions and Expansion of Manufactured Exports	D. Keesing	12/77		
69	Capital Market Imperfections and Economic Development	V. Bhatt	12/77		

OFFICE MEMORANDUM

TO: Members of the Industrial Development and Trade
Steering Group

DATE: June 14, 1978

FROM: Bela Balassa, DRC *MB*

SUBJECT: Research in Industrial Development and Trade

I enclose copies of the two lists prepared for the external panel on Industrial Development and Trade. The first of the two includes completed and ongoing research projects (RPO's); the second provides a partial listing of non-RPO papers. Please indicate any items you would like to add to the latter list, the purpose being to provide an indication of the policy and operational applications of Bank research for the external panel. The present list includes only items suggested by Larry Westphal and myself.

Enclosures
BBalassa:nc

Research Projects on Industrial Development
and Trade

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For Industrial Development & Trade Panel

Non RPO Papers

Industrial Programming

Choi, H. and Westphal, L.E., "Outline of the Mexican Plant Equipment Planning Study," November, 19, 1976.

Westphal, L.E., "UNDP Proposal - Mexico Plant Equipment Complex Design Study," March 14, 1978.

Small-Scale Industry

O'Mara, G., "An Econometric Analysis of the Role of Small-Scale Industry in Brazilian Industrialization, 1949-1970," June 1976.

_____, "The Role of Small-Scale Industry in Recent Brazilian Industrialization," April 1978.

Trade - Empirical

Keesing, D. and Plesch, P., "Recent Trends in Manufactured and Total Exports from Developing Countries," June 6, 1977.

Plesch, P., "Developing Countries' Exports of Electronics and Electrical Engineering Products," February 14, 1978.

Keesing, D., Plesch, P., and Triner, G., "Developing Countries' Exports of Textiles and Clothing: Perspective and Policy Choices," May 31, 1978 (first draft).

Trade Policy

Balassa, Bela, "Tariffs and Trade Policy in the Andean Common Market", Journal of Common Market Studies, December 1973, pp. 176-195. Spanish translation in Revista de la Integracion, May, 1974, pp.7-34

_____, "Types of Economic Integration", in Economic Integration, Worldwide, Regional Sectoral (Fritz Machlup, ed.) Proceedings of the 4th Congress of the International Economic Association held in Budapest, Hungary in August 1974, London, Macmillan, 1976, pp. 17-31.

_____, "Effects of Commercial Policy on International Trade, the Location of Production, and Factor Movements" and "Reply to Comments" by Tibor Scitovsky and Melwyn

B. Krauss in The International Allocation of Economic Activity, pp. 230-58, 270-74. (Bertil Ohlin, Per-Ove Hesselborn, and Per Magnus Wijkman, ed.) Proceedings of a Nobel Symposium held at Stockholm in June 1976. Macmillan, London, 1977.

Balassa, Bela, "A 'Stages' Approach to Comparative Advantage," (forthcoming).

_____, "World Trade and the International Economy: Trends, Prospects and Policy", World Bank Staff Working Paper No.

_____, Policy Reform in Developing Countries, Oxford, Pergamon Press, 1977.

S. Bay.

OFFICE MEMORANDUM

TO: Those Listed Below

FROM: Bela Balassa, VPD *B. Balassa*

SUBJECT: Arrangements for July 17-21 Meetings

DATE: July 7, 1978

Please come to my office (1850 K St., N.W. at the corner of K and 19th Streets, N.W., Room K-3411) between 9 and 9:30 a.m. on July 17. The meetings will begin at 9:30 a.m. on the same day.

I enclose a copy of a note entitled, "A Medium Term Work Program in the Trade and Commodity Area", to be discussed on July 17. A similar note on research in industry will be available on your arrival.

Distribution

Messrs. A. Lindbeck
J. Donges
E. Bacha
K. Parikh
R. Nelson
Jae-Ik Kim
G. Bueno

BBalassa:lt

OFFICE MEMORANDUM

TO: Members of the Trade Steering Group

FROM: Bela Balassa, VP *DKB*

SUBJECT: Assignments for External Review Panel

DATE: July 10, 1978

1. I attach various items pertaining to your meeting with the Research Advisory Panel on Industrial Development and Trade. These include the bio-data of the panel members, draft terms of reference governing the panel's operations, and lists of the research output to be reviewed by the Panel.

2. As you will see, the research output lists indicate the reports produced by projects in the area of industrial development and trade under the external research program. Beside each title are two sets of initials; these indicate the two panel members assigned to review that project:

EB	-	Edmar Bacha
GB	-	Gerardo Bueno
JD	-	Juergen Donges
KJI	-	Jae-Ik Kim
RN	-	Richard Nelson
KP	-	Kirit Parikh

The lists also indicate non-RPO output to be reviewed, and the assignment of such output to panel members.

3. Unstarred items have been sent, or will be provided to the appropriate panel members, and the chairman. In addition, small folders containing information on the evolution of each project (proposal, status or completion report, abstract, etc.) have been sent.

4. Please note that the meeting will now be held on Tuesday, July 18th at 9:15 a.m. instead of 9:30 a.m. and will be in the DRC Conference Room (K3700) instead of D958.

Distribution:

Messrs. I. Frank, D. Keesing, P. Streeten, H. Hughes,
S. Singh

cc: Messrs. S. Bery, A. Gelb

OFFICE MEMORANDUM

TO: Those Listed Below

DATE: July 11, 1978

FROM: Suman Bery, VPD *AKB*SUBJECT: Meeting with External Research
Advisory Panel

This is to confirm the meeting arranged between you and members of the External Research Advisory Panel on Industrial Development and Trade on Monday, July 17th at 9:30 a.m. in the DRC Conference Room (K3700). The purpose of the meeting is to welcome members of the panel and to discuss the program with them.

For information I attach the bio-data of the panel members and a copy of the draft terms of reference governing their operations.

Attachments:

Distribution:

Messrs. B. Balassa, L. Westphal, J. Wood, B. Waide,
S. Bery, A. Gelb

SKBery:lt

World Bank

Industrial Development and Trade Research Advisory Panel

- Chairman: Assar Lindbeck (Sweden): Professor Lindbeck was born in 1930 and educated at the University of Stockholm, Yale, and the University of Michigan. He is currently Director of the Institute of International Economic Studies at the University of Stockholm, a member of the Swedish Prime-Minister's Economic Council and a member of the Nobel Prize Committee on Political Economy. He has written extensively in macro-economics, on fiscal and monetary economic policies in Sweden and on exchange rates and stabilization policy. He has also served with the Swedish Government, as an Economist at the Ministry of Finance as well as at the Central Bank of Sweden. He is currently a member of the Royal Society of Sweden's Academy of Applied Sciences and the Econometric Society.
- Juergen B. Donges (Germany): Currently Head of the Development Economics Department at the Institut für Weltwirtschaft, Kiel, Juergen Donges was previously chief of the Institute's Development Planning Division. He is a member of the Scientific Advisory Board to the German Ministry of Economic Cooperation. He has directed research projects on less developed and semi-industrial countries. His publications deal with a wide variety of economic issues.
- Kirit S. Parikh (India): Currently Professor of Economics and Joint Secretary at the Indian Statistical Institute, Kirit Parikh previously directed the Program Analysis Group in the Department of Atomic Energy. He is a member of several National Planning Committees. His publications concern, mostly, science and technology policies in developing countries and Indian fuel requirements. Professor Parikh holds a doctorate in Civil Engineering from Massachusetts Institute of Technology.
- Richard R. Nelson (U.S.): Professor Richard Nelson studied at Oberlin College and Yale University. He is currently Professor of Economics at Yale. Prior to that he worked for the RAND corporation. He has also served on the U.S. Council of Economic Advisors. His research and publications range over a wide variety of economic issues, including growth theory, technological change and economic organisation.
- Edmar Lisboa Bacha (Brazil): Currently Professor of Economics at the University of Brasilia, Edmar Bacha received his doctorate from Yale. He has worked with the Brazilian Ministry of Planning, and in conjunction with the Chilean National Planning Office. His published works deal mainly with industrialization and trade policies, shadow exchange rates and Brazilian economic growth.

Jae Ik Kim (Korea): Currently Director of the Economic Planning Bureau, Economic Planning Board, Korea, Jae Ik Kim previously worked in the Research Department of the Bank of Korea. He obtained his doctorate from Stanford University in Econometric theory. Dr. Kim has been involved in Korean economic policy and planning and has contributed particularly towards directing the development of the electronics industry.

Gerardo M. Bueno (Mexico): Gerardo Bueno studied in Mexico then at Yale. He is currently the Mexican Ambassador to the EEC. Prior to that, he was Director General, CONACYT (Mexican Agency of Technology, Trade and Development Planning) and directed research at the Nacional Financiera. His major involvement has been with trade, technology and development policy.

Draft Terms of Reference for Specialized
Research Advisory Panels

The panel has been established to review the research program of the Bank in the field of Industrial Development and Trade. This review should be conducted in the light of the objectives of the Bank's research program as they relate to research in the specific field. These objectives have been defined as follows:

- to support all aspects of Bank operations, including the assessment of development progress in member countries,
- to broaden our understanding of the development process,
- to improve the Bank's capacity to give policy advice to its members,
- to assist in developing indigenous research capacity in member countries.

Given these objectives, the primary task of this panel would be to assess the character, quality and size of the research program in this field and to make recommendations to the management of the Bank regarding priorities for the next five years.

The panel should consider the question of whether the research conducted addresses an important gap in the understanding of the issues and whether the research design and methodologies employed are well formulated. In addition, the

panel should consider the relevance of Bank research to its operations and policy formulations as well as to the process of dissemination by the producers and assimilation by the consumers of research.

Finally, the panel may also wish to consider aspects of cost effectiveness and efficiency in the conduct of the research program.

Membership of ~~Advisory~~ Trade Steering Group (DPS only)

Bela Balassa

Isaiah Fank

Don. Keesing

Paul Steeler

Helen Hughes

Shamsher Singh

Membership of Steering Group on Industrial Development + Trade.

Gordon

Balassa

Sulbati

Waide

Richardson

Fuchs

Westphal

Moore

9:30 am
17/7

Indus Meeting

Present:

BB, AL, SW, K-JE, Donges, Parikh, Lord
Sachin, Westphal, Self. Not present: Nelson

Dalassa: Indus comments on Bank, Org. Chart.

20% of budget on Economic work.

^{HEQ}
\$10 mm. Spent on research = 4% of \$250 mm

\$2.5 mm. ext. res. budget.

- ① To review the done since Res. Comm.
founded
- ② Suggest further directions

Overall Ctee

November
Final

Staff
March

| Sp. Panels.

- W: ① Synopsis of work on industry in Bank
② Producers
③
④ Managing Research

Demanders of Research.

LW

Work on Trade better org than an industry
map for industrial work diffuse.

Locus of demand - County Economics Reports

IDF ~~septs~~ Divisions

Central Projects Staff.

- ① Industrial Projects
Large Scale lending
- ② Industrial Dev. + Finance septs.
Financial Guidance
- ③ Science + Technology transfer - Appropriate Tech.
- ④ Urban Projects: Poverty focus
Producers

2 different kinds of producers output

- | | | |
|-----------------|---|------------------------------|
| ① R/o - Normal | } | ① Info Reporting + Synthesis |
| ② Discretionary | | ② Analytically processed. |

IDF

ECB = Ecs. of Industry
Resource Allocation
→ Trade.

Employment + Rural dev. - Small Se. Ent. Research Project

Pub. Finance Dev. - Public Enterprises / Financial Dev.

ORC - Trade Incentives / Industrial Strategy (?)

- Investment Analysis

Bevan Guide

- ① Use of Research - Another set of users is countries via Programs Dept. In S Asia have continuous dialogue on policy issues. Occasionally have concerted. Esp. use of comparative analysis.
- ② More stress on projects staff dealing with individual projects. esp. depth.
- ③ Region responsible for some applied research, incl.

The Word

with another user / other policy papers - several Annual Speech

Balassa P

- ① What contrib. has research made to knowledge
- ② How responsive to needs of LDCs or of operators

- ③ Adequacy of awareness of work occurring elsewhere. Need for digests of such research. Has our research been duplicative
- ④ Dissemination procedures.
- ⑤ Constraints to Research: Staff, Budget, ~~Ex~~ Appropriate size of Research Program. What criteria
- ⑥ Appropriate Mix of Staff and Foundation Researchers,
- ⑦ Institutional Building in Developing Countries.
- ⑧ Basic Research
- ⑨ Is Research used properly by users, ~~how~~
- ⑩ Focus on Issue of Comparative Advantage.

Lindbeck

Among these 10 or 11 questions
Some easier than others

Easiest are quality, relevance analytically.

Most difficult are bank-oriented questions.

Donger Can interview

Lindbeck

Sample of users currently in Washington
for next set of meetings.

Some 5 people who could

Assignments

Lindbeck: July 6 memo

Easiest way of finding labor is in terms of final output
March 1979 trial
Mid - November

Reasonable size of report 50 - 100 pp.

Six separate fields:

At least 2 people on each field: Primary/Secondary

Primary drafts; Secondary comments.

6 fields

- I. Incentive policies including
Chiefly ^{JD} ~~by~~ ^{KJI} ~~second~~
- II. Trade patterns and economic growth; ^{EB} ~~by~~ ^{JD} ~~Lin~~
- III. Export Promotion and Access
Lin / Bruno
- IV. Institutional Policies
Bruno / Nelson
- V. Industrial Programming for Process Industries
Bankh / Backe

13

VI: Ind. Programming for Non-Process Industries
Nelson / Parkh.

6x Chapters - 10 pages each double spaced.
Send to Lindbeck. Synthesize

Goals:

Lindbeck: Ind. we try to agree on format of chapters
Issues covered? Otherwise wd. get lost.

Use questions raised by Balassa.

Link circulate all chapters to everybody.

Lindbeck

Need list w. work projects also assigned.

Schedule. Meeting before Nov. 15
To conform to schedule finish part of November.

- ① Report ready Mar 79
- ② ~~Atto~~ Material divided into 6 fields
- ③ Chief resp. / Substantively responsible.
- ④ Six chapters with intro chapters.
- ⑤ Scheduling.

Questions to be answered.

- ① To what extent has research increased scientific knowledge
- ② How responsive has this been to LSE, IBRD needs.
- ③ Has there been enough consideration given to work outside the bank or has duplication occurred
- ④ How (well) has research been disseminated within the bank.
Has it been well used
- ⑤ What are the main constraints on research
- ⑥ Size of research program. How close to zero is marginal return

- 7) Mix of insiders & outsiders - reasonable.
- 8) Shd. research concentrate on fostering research contacts
- 9) Composition of research in various dimensions:
 Basic / Applied
 Data / Methodology
 & other dichotomies.
- 10) Has research been used appropriately enough
- 11) Shd. allow chairs or topics to be altered.

Need to interview people in the Bank. Perhaps people in LOCs as well.

Internal Group meeting - Tuesday

Nelson worry about intellectual dropping up.

Chapter on how things dev. proceeds. know that it's a process which defies pred. for studies. Tech. change + innovation v. important. + inherently unpredictable.

Widdell: Knowledge about time and place vs. scientific knowledge.

Org. of chapters:

(i) What has been learnt - what are externalities

General Equilibrium

(ii) Has there been sufficient awareness of existing knowledge as evidenced by reports & proposals.
Relevance to any duplication.

(iii) Bank's operational interest:

① ¹⁹ Money guidance; ¹⁹ lending

② Disseminate knowledge + paradigms

③ Developing country interests

~~④ Is basic basic enough. That bank has engaged in basic + methodological research, and why.~~

Descriptive question! do they pursue basic research.

(v) Assimilation question: ^{and willingness} ability of operations people to use research

Wednesday

2:30.

(iv)

Wednesday: Internal Discussion 2:30. research

(vi) To what extent have LDC institutions been used -

- (i) Initiation
- (ii) Participation
- (iii) Training effects.

(vii) Use of insiders and outsiders in research

~~(viii) What are the constraints to research~~

(viii) Allocation of Composition of research

- (a) Methodology vs. Applied/Empirical
- (b) Degree of policy orientation
- (c) Mix on topics
- (d) Academic Research / Intelligence or Info. Gathering

(ix) Criteria & Constraints determining research

NORMATIVE

- (i) Size of research
- (ii) Composition of research
- (iii) .

(x) Dissemination

Nelson: (i) One thing Bank needs is more mechanisms
— for talking about priorities.

(ii) Regions, operating depts. Suspicious

Nelson: (iii) Going to stress awareness

Hell of a lot less programming work w/ ext. bank.

Boatman: Money is less valuable to us than policy

Kim:

Nelson: One we missing the ~~pt~~ middle. How detailed
shd. we be

wd. propose. Each divide into 3 categories

① General commentary

② Trade & industry

③ Homework responsibility

④ Implications for future research

Meeting with HBC

①
HBC

1971 pulled together pieces of research from pt
of view of bank as a whole

Users: Combia

Res. Ctr. functions:
 $\frac{1}{2}$ DTS $\frac{1}{3}$ CPS

Lindbeck

PARIKH

NELSON

Overbureaucratization
risk.

DONGES

LINDBECK

KIM

CHENERY

AK

BACHA

HBC

BERY

Have moved away
from funding small projects.

Lindbeck

Decentralized

Do you feel that admin takes out too much
of researchers time.

HBC: You shd. ask people if its too bureaucratic

Last for yo. spending pretty stable. Arbitrarily
stable

Objectives of review is to chalk out next 5 yr,
Strategy.

HSC1st panel: RATIONALE: More or less what we want.

General panel: Address cross-sectoral issues.

Sector specific questions.

① A list of research - try to identify IBD
any advantages. Place in perspective
of world researchLindbeckWhat "philosophy" of the development process
are we expected to operate within,
IBD research so farHSC I don't think Bank should have a monetary
policy. Pluralist. Revealed preference
(i) Strong neo-classical trends
(ii) Programming of investments.Lindbeck: Institutional planning not represented.Currency: State of the ArtLindbeck: Bottleneck may have moved to market
access & adjustment in Sec.[WDR + Prospects] Prospects to Bureau

HBC Main ~~1980s~~ users of work on industry different from trade. Trade work more oriented to country report. Diagnosis based on research

Discussion of relationship between Country ^{models} ~~analysts~~ & research:
Turkey, Korea, Malaysia

Paink Country Economists why skeptical

Overworked; physical sensitivity not attuned to technology.

Cherry Try to be selective in perusing materials rather than comprehensive.

1 D+T Steering Group

2:30 HSE (1)

Present: Gordon, Balassa, Moore, Sulhat, Westphal, Nelson, Sely, Fuchs, Richardson, Selt, Bacha, Kim, Dinges, Lindbeck (Paink - late)

Lindbeck : New themes in Gordon note
① Country typologies

2:30 Monday
1271 St. S. (2)

Gulhati: Relevance of existing research for mix of countries served by Bank.

Lindbeck: Current stress East Asia / more advanced.

Song: What

Gulhati: ① Smaller size countries
② Absence of indigenous entrepreneurship.

What new research components can address these issues.

Where did entrepreneurs come from in existing "successes" Important issue!

Sordan: Agree importance of entrepreneurship
Doubt whether Bank best place.
Wd. like to develop a program to identify entrepreneurs.

Richardson: IFC constrained by absence of entrepreneurial class. Yet

Parikh: Researchability amenable to "development" by throwing money at methodology.

Nelson: Cd. examine why research into entrepreneurship fizzled out.

Fuchs: Are entrepreneurs allowed to ach is the important issue.

Paikh: Obstruction to entrepreneurship more researchable

~~How~~:
Westphal: Role of external panel (i) Objective view of ops/buss tension
(ii)

Balassa: Beran waide feels mismatch between supply and demand.

Gulhati: Lindbeck

Any empirical information on mission support given by researchers.

Gulhati
Morawetz piece useful. Survey articles useful.

Are we larger than MIT in research program.

- Qordon
- ① What do we need to know about dev.
 - ② " does Bank ~
 - ③ What is " Gordon

H Gordon

de Vries: Gordon's paper comes close to identifying

①

Demand generated

Jan Little - small industry designed to address
specific operational needs.

Stem - ^{employment} operational implications

"Practical" supply of ~~generated~~ generated

②

Morawetz / Keesing
Mkng of textiles

671050 Key Issues for Mkng Exports
Baldwin project.

Supply initiated.

③ Metinological - does it belong here or in a
University

①

By Cheney + Serquin

②

Balassa. Indebly applied in sector work

Gone too far.

Lindbeck: Academic interest pushed too far

de Vries: Yes. Need shortcuts.

Ger figures on % of Ext research
which gets spent on consultants. (2) 18f
→ foreign research instr.

deVries Too publication minded. Howard back closely
integrated.

In industry less has

Fred Moore Fertilize in Egypt. Is it research, is it
successful research

deVries: Is programming work understood by operating
economists.
Problems.

Employment; Structure of trade; mix between
many slight.

Lindbeck: Does the methodology have the power to
capture general equilibrium.

Shadani Need for more concerted thinking about
resource mobilization internally.
Also how are yr. concerns translated into projects

deVries: Too much focus on individual programs.
No thinking about strategy of program.

Need to develop a world view of prospects
for major industries.

Lindbeck: Many investment mistakes arise because
people aren't aware of what's happening
elsewhere

1/DF
4:00/11am

Moore: Ansatz. We form a view on global distribution of certain industries.

Luidke: Consensus to think of research as mapping prospects for world. But have to establish why consensus.

Nelson: Two problems
(i) If too closely linked to operations then turned down
(ii)

Steinberg Institutional Experience not being explicitly and systematically synthesized.

Luidke Collectively the Bank is acquiring comparative info from a no. of countries. This is special to the bank.

Present: HH, Steeten, BS, AS, Selt
KI, KP, JD, AL, EB, RN

Trade Steering Group Meeting

TSG ①
18/7

Balassa: Trade aide memoire

- ① Underdeveloped countries
- ② Can't have too much work or mkt. access.
 - (i) Various industries
 - (ii) Mkt access
- ③ States approach to comparative advantage
- ④ Intra loc trade what to do?
- ⑤ Need for consistency framework - but formal programming

Helen: Inhouse vs. Outhouse

Research Clerk or Staff

As head of a service dept get involved

Conflict between service activities + "RPO" activities

Outhouse: best to consultants or institution
Bldg.

L'lees

Why conflict between in-house + out-house

HH

Can't get similar staff for service - more manual.
Difficult to get projects prepared for RC.
∴ ops. staff don't formulate RC projects.

AH Some duplication of resource, process work in SRC, EPD

RN How is "service" accounted.

AH A small part of service is included as research
But fuzzy. Cf. David Wall. Work done
was research & was used. But factors prohibited
publication

Lindbeck Information needed is mkt. research in various
aspects. In individual countries esp. developed
detailed by consulting firms. Govts. haven't got into
act in past. Afraid of official forecasts. Should we
take this resp. → wd. it could out similar
priv. activities

- AH
1. LDCs do do mkt. research
 2. Not talking of product identification.
But need a framework
 3. We are a large bank. i. internalize
Externalities. Textiles now a similar case.
Least dev. countries do want to know
broad trends.

Keating Can improve advice on mktg, design
Also some realism needed in focusing down
regional optimism on individual projects.

Could research
lead to project
identification-

TSE ③

Lindbeck Danger I see is that IBRS forecasts may be too authoritative.

HH Just one of many. Need to educate smaller countries in forecasting

BB Distinguish between information flows and forecasts.
(Mkt. intelligence and mkt. research).

Lindbeck Can plan an environment + an institutional framework to liberate innovation

[Need to define boundaries
between service and research
work]

"What constitutes operational relevance".

- Stetter:
- ① 3 areas in trade
Area of common / mutual interest
(positive sum games) - strongest in world of
same.
 - ② Biases in trade / exploitation. What measures
wd. be required to correct biases. Not v.
addressed. Now work at UNCTAD.
(i) Processing (ii) Tariffs
 - ③ Within LDC issues "Get on with it".
Self reliance for LDC group as a whole.

- Requirements within developing countries for restructuring
- " " " developed
- " " " world order

What is importance for Bank policy

What is the reference group.

Collaboration issue. Strengthen local institutions
Research imperialism.

CATS: Have attempted to strengthen in terms of Research
Office.

AS (1)

Arday Shantjesdijk Meeting Tuesday

AS 46 professionals. Pooled res. group in bank. 5 divisions.
Some overlap.

(i) PPFD - Efficiency / innovations in fin. instns.

(ii) Capital Mkt. Imperfections

(iii) Public Enterprises - is it researchable.

Employment & Rural Dev. - lesson

Small scale Enterprises - India; Philippines, Colombia, Argentina

Constraints

Urban Dev - City Study; Decentralization policies.
To what extent is availability of public services a determinant of location of industry.

Answers

AS: Major headache is to get cross disciplinary synergy.

L'beak Institutional Shift / Industrial Programming

Emphasis on latter - is this a reasonable distribution of resources.

(i) Entrepreneur decisions an important part of development. Rent seeking vs. investment and growth. Can policy help.

Fit

AS

How to translate that question into researchable project. to

Have transfer decision making power to Locs.

At. sugg. firm using rules of thumb.

Lack of balance between project design and project appraisal.

Present this methodology as one among many.

~~Major emphasis on progs~~

Now reached stage of testing various techniques
Turns out to be transferable

(3)
AS 18/7.

As. To whom being transferred
How being transferred; How being used.

Bank work - Sector, or proj. Not industry
V. little being done on industrial projects from within.

~~title~~ Chapter or

Hilton, Walstedt, Jewey, Kohli, Fuchs.

11 PD (1)
18/7/78.

Industrial Projects Dept.

Fuchs: Broad area: Operating dept. Direct Lending
Medium + Large scale. Contrast with Ind.

Concerned by existing procedures programs.

Results seem too theoretical than it needs to be.

Remiss in conveying our own views. Sensitizes us
to direction in which thoughts are going

In past ^{research has} set policy framework.

Lundbeck ~~why~~ How do you get information for specific
decisions?

Fuchs: Price, market forecasting already used

~~and~~ Cd see payoff in:

(a) Interrelationship between investments
by Ind. Proj, Ind.

(b) Spread effects of a project's.

Agree that much depends on definition of research.

Also agree that sackdrop is useful.

Agree that adjustment of ~~some~~ distortions
"based" on Balassa, other research.

Pankh: Screening procedure?

Kohli: Some w/ 'bundle' rate of return.

Built steel model ourselves.

Have people in our dept who worked on fertilizer model.

Fuchs: Initial model idea came from DKS.

Klein: Anton: Question models geared to answer

① esp. financial models.

V. dependent on country economists for parameters.

Can affect

Project specific modelling - ISP
DKS wider scope.

Parikh
Project models
n reports

Fuchs: Lack Lit. Studies provide general orientation

Dewey: May be practical considerations which militate against

Fuchs: Information transmission not working very well.

Fuchs: To the extent that work is done within Bank more likely to be read.

Singer / Libeck: ~~More~~ DKS's help?

Yes

Kshli

Helps to have personal contact with researchers.
2 way street Researchers benefiting
from experience of operations.

Dewey: Bank unique in using this information
resource.

How much interchange of staff
Not much

Walsh: ~~Interchange of staff~~ Sabbatical.

Parikh: Data Bank?

Fuchs: Better to monitor what is going on, digesting,
abstracting & relaying to the operators.

Meeting w. Gestral & Staff.

(1)

Cotton Textile Project - Standoff. ^{research} project on choice
of technique in textile industry. Regional Staff
Catalyst.

Industrial programming. 2 side - dissemination
and assimilation.

Having been asking IPD to evaluate research
Get no response.

Have been able to communicate with Consultants
Log structure in research makes for mismatch

between interests of operators & current portfolio of researchers

Work on methodology - try to work at frontier of methodology. But also make an effort to propagate meth. as a way of thinking intuitively.

LW: Absorption of meth. research. Good people all over the Bank.

Consolidated work around: trade policy; resource allocation issues.

LW: Bank should have at its command the best techniques available. Question of actual use that secondary of Balassa Effective Protection work. 8 or 9 yr. diffusion process.

Westphal Often asked for 'methods' of sector analysis. Programming work provides skeleton of sector analysis.

Any method is given to use to teach him something. Methods are not to provide answers.

- ID probably worst case
- Country Programs best clients
- ID still embryonic

Lundbeck: Emphasis on own research vs. communicating research results

LW Can't change methodology at arms length.

18/2
HH 1 18/7

LW

Basic problem is hot topics

Managerial issue - operations, information, synthesis

No firm principles about responsibility for research managers.

Only get directions from a high level only at 6 months lead time.

HH + Staffs.

Rolling forecasts. Tactical tools.

HH Main customers are Regions.

Also service top management, financial parts of the Bank.

Shamsheer: Present forecasts are till 1990 - 2000 for commodities.

Bob: forecasts both current, constant prices.

9 commodities formal models, elasticities

HH Main purpose is consistency

Questions for Panel: is inhouse more cost effective and relevant than outhouse

RFP/DSE h Parikh Lance Taylor & others
Alan: Materials Panel members.
Lindbeck - Assignments
Check Addresses

HH

Regard research funds as an extension to the budget.

In principle R.C. funding / work R.C. similar
 In practice R.C. priorities are important
 R.C. have tried to evolve a research strategy

Underbacky

HH

Back more of data. collection. FTO
 Shd. put more resources into data.

It data + common sense more imp't. than methodology
 ↳ bad data.

Where should Bank put its money in this spectrum.
 Go to speculative end + do yourself or go to universities.

DB vs inhouse models.
~~DB vs inhouse models.~~

Report work: in Industry Dept some sector programming
 Some doubt - doesn't get enough use^{like} in the Bank.
 Bank short of staff working on particular industries.

Nellon

2 separate issues

① What shd. people at Bank be doing

② Shd. something be called research.

Helen

To what extent has research on F+I
 added to body of knowledge.

W. Africa Region

- ① Both projects and programs (country) staff present
- ② Could ask

Meeting w. W. Africa Region

WAI

Wed 19/7.

Membership: Bacha, Bayson, Parikh, Gels, Lindbeck, Liff, Douges, Shepherd, Bob Myers.

de Azcarate: Region not particularly interested in IDG.
Projections of commodity prices; these are useful

Rely on IMF for short term commodities forecasting
Need up to 15 years data

Need to do some work

Explore differences between "average" quoted prices and prices facing actual countries
High price

Significance of prices much greater than Commodities people seem to

Are there systematic differences

Price relations between products at various stages
of processing - 83. Groundnuts
Why is world value of value added at the
first stage of processing so low.

Still a hypothesis about why this is so: technology,
scale

Balassa / Cameroons projects. Difficult, in communicating
research results.

Have done some own work on efficiency. Balassa
study also useful, + starting point
v. demanding in data.

Perhaps some shortcuts useful.

Geoffrey: Advance in thinking over long haul.
v. data intensive. Leery of shortcuts.

Doing more eff. prob. not v. useful for Bank ed.
But worth doing for Educating country. Addressed
to academic or administrator

Risk going too far with micro efficiency. Dynamic
factors, strategy considerations v. imp.

Entrepreneurial development - is it researchable.
Have tried to industrialize

Business Economics approach fruitful.

Programming: Not v. useful. Too abstract. Poor
dissemination

Azcarate Croffey: Currently countries too small to use programming

Technological Transfer
Financial Developments
Small-scale bias
9
Latter Intensity

Azcarate: App. tech. issue is of interest.

Shepherd: Chief Westphal good research. But difficult to apply in specific country contexts.

Azcarate: wd. like to know

EMENA meeting

EMENA
19/7
11:00 am

Dubey, Namikis Francois — , Salah El Serfy.

Visid Dubey

Region has felt "under-researched". Have made that point quite often. Res. Pgm. excessively reflects interests of professors in Br. and Am. Univ. professors. An of EMENA less than Colombia, Korea. East Africa also favored. Data base so much better. Coop immediate. Middle East countries not so. Much more difficult to build up

"research infrastructure".

Nelson: Does IBRD give grants for data base development.

Dubey: ① In a number of loans we do have a monitoring aspect.

② Finance some studies in loans

Mainatis Question of what to do with data is a problem. We don't have capacity in IBRD for industrial sector planning.

③ Technical assistance for statistical services

Ex. Iran - study of state system

UNDP project - financed Eony

Afghanistan - Statistical system

Linkage Is highest priority data.

D Over longer haul yes. But shouldn't hold up other research. Need/scope for qualitative analysis.

Ex. Egypt could do a lot on public enterprises with financial data already available.

Salah: ① Running after data per se. Wasteful. Need to be selective. Need to motivate data collection with right questions.

② In EMENA many middle income countries. Prefront in industrial development

Dubey: Tried to steer Klesing to EMENA countries.

Ansley: Keesing had ideas. Wanted to look at "successes".

Kind of R.P. Work is useful is when using standardized approach on multiple countries.

- Normal pressures on country Cos. v. Substantial.
- Constant budget committed to ~~regions~~ shorter term needs.

Nelson: Regional offices to be given budgets. How do you feel.

Ansley: Fragmented research generation, no strategy.

T'beets

4 Research Areas

- ① Incentives
- ② Institutional: Mkts / Credit
- ③ Programming
- ④ Sources of growth / Patterns of D'

Mainatic: Identification of export mkts
Dev. of SME, Complementarity

Lindbeck: What do you feel Egypt fertilizer study was useful.

Ansley: Framework was useful. But do Egyptians use it / has it influenced anything?

Elserafy Balassa work links up sectors & useful for country parameters.

③ "Replicability"
ant. expect
Balassa

① Why
has
regional contact
been

② led. you
expect
research
results

EMENA 3

19/5

to get with
CDPs
+ design
to
study

Duby: Balassa work has been found useful
Info collection by ss, Kessing has been useful.
Robinson Davis. Helped us get over some preconceptions

Jonze: Many countries in region of interest. Egypt -
Sud Hanan could do. Can't believe that Cameroon
has better data base. What wd. you need to do to
get research community to do your work.

Duby: Usefulness of low brow research by OECD,
Migration.

Kim: Get govt. to request that research from Bank.
(il Korea: link between analysis &
data collection.

Duby: Dissemination with Bank.
Much greater devotion of resources
to internal dissemination.
Functionally oriented. ~~long~~ Intensive exposure.
And pay v. much more ^{instead attention to} involvement of local
research institutes.

Kim: Financed development of programming
in transport from loans.

(LAC I)

Paul: how cd. res. be
worked into
cd.

AGels also
present.

Meeting with LAC Region: Melo, Jurgenson
Parker, Bascha, Kim, Lindbeck (Bueno, Domes, Nelson absent).

Melo: How research is used in Programs

Utility is country specific. Difficult to discuss
theory with national ministers.

Research into trade too unspecific
Cannot read all research. What have read
could not help Guatemalans Export buses.

Like country oriented case studies because can
see how to adapt. Mkt. info. v. specific
Specific knowledge about time and place

Few Bank staff treat research output as "required
reading".

Academic community include within Bank.

Chief advantage as is look for regional economists.

Jurgenson 33 articles relevant. What has specifically
been used.

Some effect on paradigms, theory. Moving away
from neoclassical
LSE; Capital/Labor

What is the research basis of that shift [Key Question]

Don't know anything about nationalization
Balassa work fits into framework
Strong trade v. useful. Knew where comp. adv. lies.

- ① Balassa stuff
- ② Growth paths
- ③ Ind. Prog
- ④ Instk. stuff

What is useful.

Balassa OK - wd. like more.

Programming work: Good service for client. ex. advanced LDCs. Korea, Mexico, Brazil.

Management level.

- ① Don't know studies are going on
- ② Oversophisticated. Can only summarize views
- ③ Management not interested

Kim: How can you establish suitability of industrial expansion in a country like Brazil w/o programming

Meo: Who comes first gets expansion

Lindbeck: Could distinguish between tradables and non-tradables.

Meo: Consultant firm actually does the work. We come in to keep consultant honest.

- Sector surveys now obsolete.
- LDC receptivity crucial in value of investing
- = staff resources in disseminating methodological

LAO 3 | 2017 3.00pm

Jorgensen Effective dissemination is detailing success stories.

Kim: Surprised at uniqueness of Korean experience.

Mee: Other countries really don't plan.

Kim: ~~Infrastructure~~ Even Korea not command planning.

① Tell success stories: doesn't involve in-house research. (BRU)

② Balassa type

Mee: Don't need frontier research. Don't have sufficient staff. Even applying Balassa stuff don't have resources.

[Gap between methodology and application]

Research in Bank is defined as cross country. Don't have resources for 6-12 month horizon.

Mee Many of the problems are on our side.

Offer a direct relationship between Bank researchers & ~~country~~ ~~economists~~ economists in the country bypassing region altogether.

IFC meeting: Richardson

\$150 - soon to be \$450 mn. Designed to encourage
Entrepreneurship. May not use a guarantee

Further rationalization underway. Explicit developmental
~~Equity~~ goals. 5 yr. program will increase equity lending.
Geographic / Income Distributional Criteria now introduced

Cofinanciers.

Lundbeck: Role of research.

Staff of IFC - Prof 100

Sense of public development
lending

Trying to socialize IFC ^{investment} lending officers into
developmental

In middle-income countries only have
relevant Entrepreneurial class.

Modest amt. of research we'd need wd. be about?

Dev Dept. responsible for translating sector level
analysis to specific investment projects.

Need for IFC staff to be involved in gov. sector

Surveys: However Bank mentality sees gov. sector
issue purely as gov. policy related.

Don't know how to draw on Bank staff.

Sector studies wd. be useful.

LAC4 | 20/7 3:00 pm
Country Typhoid

Crucial questions
of I.O. structure
being assumed.

ENP
SAR

~~SAAR~~

Entrepreneurial activities

Meo: Constraints are basic. Supporting Chamber of Commerce.
Distortions are so obvious that you don't need
research

① Research has to be more demand oriented

- (a) Regions
- (b) Operating central staff.

Look for B'lasia
Cameron study

②

RP(0)

3:00 Cullbert
1:30 Dellatjan
4:17 Anderson / Mazumder.

July: Individual Meeting with Researchers

Seeing Strophal / Issues

Seeing Conflict between operational support & policy support

Prospective countries

Public

2 interesting problems on trade research

① People with Bela - "only" prices right

② General results "too general".

Tainted by special mandate
→ Gordon

Trade Policy

① Major missions to major countries
well staffed.

② Smaller mission to smaller countries

Buenos / Dellalfo / Nankani

- ① Tax Structure & Public Expenditure
 - Tax Evasion in Mexico
 - Distributional Benefits
- ② Financial Structure and Development
Brazil, Sri Lanka, India
- ③ Estimating transactions cost of lending to Small
- ④ Informal Credit

Public Enterprises Project

- ① Sen
- ② Morris

Emphasis of on impact of managerial structures & environment on performance

(i) India

(ii) Yugoslavia

(iii) Egypt (iv) Italy

Engineering subsector in India & Egypt

X Efficiency approach

Steering committee approach

B/D/N

Sketch
for
Answers

- ① Commercial Bank Behavior
- ② Innovation in Bank
- ③ Transaction Cost
- ④ Financing Small-Scale Enterprises
- ⑤ ~~Small Scale~~ Theory of Financial Mkt.

Have pinpointed
(1) What causes

Panel queries:

Time Available
Requests for Cons.

- ① Search of forms with my address
- ② World Development Report
- ③ Small-scale industry policy paper
- ④ % of work done by consultants, external research instns.
- ⑤ Amount of mission support / operational work done by researchers.
- ⑥ Jansen, JAC papers.
- ⑦ Prospect to Bruno; RAPID; Westphal note

Bueno / Sukhaki

Problems of African countries need rethinking and research

16 → 17 countries - Sudan/Somalia

Specific aspects / distinguishing characteristics

(1) Small pops + small mkt's for industrial goods

(2) Regional trade maybe more important.

(3) Said that Entrepreneurial talent is ltd. What is achievable

(4) Are these issues researchable?

Two patterns of response:

(1) More / dependent foreign investments

(2) Parastatal.

Old questions - but need to be studied afresh.

What policy frameworks shd. these countries have.

Tendency for projects to beggar themselves.
Past research has had special relevance for East Asia.
Rethinking

Panel / Richardson

Gells: What
are you
doing about PPA's

Sector topics

(Notes by
Gells)

Surveys of raw material availabilities

Wd. like well developed rationale for ^{mineral} extraction projects.

Fertilizer study 3 yrs. ago was useful in
setting the stage

Fuels: Ecs. of coal vs. petroleum.

Clearly institutional research
of interest

(i) Pvt. sector instns.

(ii) Capital Mkt. instns.

IFC has not drawn on IBRD work on
investment criteria

RESEARCH PROJECTS ON INDUSTRIAL DEVELOPMENT
AND TRADE

JD / KJI

Incentive Policies; Economic Integration

<u>Project No.</u>	<u>Project Title</u>	<u>Responsibility</u>	<u>Date of Approval</u>	<u>Date of Completion</u>	<u>Date of Evaluation</u>
670-01	Development Strategies in Semi-Industrial Countries				
670-22	Economies of Scale and Tariff Levels				
670-87	Industrial Policies and Economic Integration in West Africa				
671-10	Promotion of non-Traditional Exports				
671-75	International Trade Policy for the Development of Bangladesh				
Balassa, Bela,	"Tariffs and Trade Policy in the Andean Common Market", <u>Journal of Common Market Studies</u> , December 1973, pp. 176-195.				
_____	, "Types of Economic Integration", in <u>Economic Integration, Worldwide, Regional Sectoral</u> .				
_____	, Policy Reform in Developing Countries, Oxford, Pergamon Press, 1977.				
Guisinger, S.,	Industrial Protection in IFC Projects, December 30, 1975.				

2.

ERB/JD

RESEARCH PROJECTS ON INDUSTRIAL DEVELOPMENT
AND TRADE

Comparative Advantage; Trade Patterns; Economic Growth

<u>Project No.</u>	<u>Project Title</u>	<u>Responsibility</u>	<u>Date of Approval</u>	<u>Date of Completion</u>	<u>Date of Evaluation</u>
670-07	✓ International Model				
670-19	✓ Expansion in Manufacturing For Exports in Developing Countries				
670-79	✓ Economic Development of East & Southeast Asia				
671-05	✓ Patterns of Industrial Development				
671-32	✓ A Comparative Study of the Sources of Industrial Growth & Structural Change				
671-79	Sources of Growth and Productivity Change				

Balassa, Bela, "Effects of Commercial Policy on International Trade, the Location of Production, and Factor Movements".

_____ , "A 'Stages' Approach to Comparative Advantage," World Bank Staff Working Paper, No. 256.

RESEARCH PROJECTS ON INDUSTRIAL DEVELOPMENT AND TRADE

KJI/QB

Market Access; Export Promotion Measures

<u>Project No.</u>	<u>Project Title</u>	<u>Responsibility</u>	<u>Date of Approval</u>	<u>Date of Completion</u>	<u>Date of Evaluation</u>
670-20	Industrialization and Trade Policies for the 1970s				
670-21	Export Promotion & Preferences: India				
671-35	Export Incentives in Developing Countries				
671-56	Marketing Manufactured Exports				
671-67	Effects of Increased Imports of Manufactured Goods from Developing Countries in the United States	and 671-66		Effects of Increased Imports of Manufactured Goods from Developing Countries in Western Europe.	
671-68	Key Institutions and Expansion of Manufactured Exports				
Keesing, D. and Plesch, P., "Recent Trends in Manufactured and Total Exports from Developing Countries," June 6, 1977.					
Plesch, P., "Developing Countries' Exports of Electronics and Electrical Engineering Products," February 14, 1978					
Keesing, D., Plesch, P., and Triner, G., "Developing Countries' Exports of Textiles and Clothing: Perspective and Policy Choices," May 31, 1978					
Balassa, Bela, "World Trade and the International Economy: Trends, Prospects and Policy", World Bank Staff Working Paper No. 282.					

RESEARCH PROJECTS ON INDUSTRIAL DEVELOPMENT
AND TRADE

Market Access; Export Promotion Measures

Sharpston, M., "International Subcontracting," May 1974. Bank Staff Working Paper No. 181. Published: World Development, 4, No. 4, 1976 pp. 333-337.

RESEARCH PROJECTS ON INDUSTRIAL DEVELOPMENT
AND TRADE

GB/RW

Credit Markets; Small-scale Industry; Public Enterprise

<u>Project No.</u>	<u>Project Title</u>	<u>Responsibility</u>	<u>Date of Approval</u>	<u>Date of Completion</u>	<u>Date of Evaluation</u>
670-77	Financing of Small Scale Industry				
671-59	Small-Scale Enterprise Development				
<u>671-65</u>	Small Enterprise Financing: Role of Informal Credit Market				
<u>671-69</u>		Capital Market Imperfections and Economic Development			
<u>671-71</u>	Public Manufacturing Enterprises				
O'Mara, G.,	"An Econometric Analysis of the Role of Small-Scale Industry in Brazilian Industrialization, 1949-1970," June 1976.				
_____.	"The Role of Small-Scale Industry in Recent Brazilian Industrialization," April 1978.				

RESEARCH PROJECTS ON INDUSTRIAL DEVELOPMENT
AND TRADE

KP/EB

Industrial Programming; Studies of Process Industries

<u>Project No.</u>	<u>Project Title</u>	<u>Responsibility</u>	<u>Date of Approval</u>	<u>Date of Completion</u>	<u>Date of Evaluation</u>
670-24	Programming in the Manufacturing Sector				

World Bank Fertilizer Requirements of Developing Countries, Report No. 446, May 1974.

RESEARCH PROJECTS ON INDUSTRIAL DEVELOPMENT
AND TRADE

RN/kep

Capital Utilization; Capital-Labour Substitution;
Technological Change

<u>Project No.</u>	<u>Project Title</u>	<u>Responsibility</u>	<u>Date of Approval</u>	<u>Date of Completion</u>	<u>Date of Evaluation</u>
670-23	Scope for Capital-Labor Substitution in the Mechanical Engineering Industry				
670-25	Industrial Capacity Utilization in Selected Latin American Countries				
670-54	Employment & Capital-Labor Substitution				
670-95	Industrial Capacity Utilization				
671-51	Appropriate Industrial Technology				

Choi, H. and Westphal, L.E., "Outline of the Mexican Plant Equipment Planning Study," November, 19, 1976.

Westphal, L.E., "UNDP Proposal - Mexico Plant Equipment Complex Design Study," March 14, 1978.

Amselem, Michel, "Technological Choice in Developing Countries: The Impact of Differences in Feder Crops.

Cremer, J., "Planning Interdependent Production Processes with Increasing Returns to Scale: Some Theory and an Algorithm." December 1976. Ecole Polytechnique, Laboratoire d'Econometrie.

Cooper, G., "Policy Interventions for Technological Innovation in Less Developed Countries," June 1976.

Bery.

OFFICE MEMORANDUM

TO: Members of the Industrial Development and
Trade Panel

DATE: July 21, 1978

FROM: Assar Lindbeck *Assar Lindbeck*SUBJECT: Schedule for the Next Meeting

1. The time schedule that we agreed about is:

October 26: First draft sent to all members
(including Bery)

November 15: "Second man" sends revision of draft (made
by "first man") to all members

Obs.: Only section 3 of the first draft (dealing
with specific projects) and recommendations
in connection with this has to be revised

November 30, December 1 and possibly half of December 2:
Meeting in Washington, D.C.

2. Members of the panel are recommended to arrange, in cooperation
with Bery, private meetings with people at the Bank - either in connection
with meetings in Washington or at any other time, or both.

Suggested organization of the papers
for the next meeting by each participant

- (1) General comments on the research problems of the Bank.
- (2) Comments on research on trade and industry within the Bank.
- (3) Comments on the specific projects studied by each of the panel members --
organized in some systematic way.
- (4) Implications of points (1) - (3) for future research and research
organization of the Bank

Division of labor among panel
members in the scrutinization of specific projects

A.L.	0	General points	(20 pp)
JD/KJI	I	Incentive policies (incl. integration)	(10 pp)
EB/JD	II	Patterns of growth and trade and comparative advantage	(10 pp)
KJI/GB	III	Export promotion and access to markets	(10 pp)
GB/RN	IV	Institutional reforms -- credit markets, small scale industry, and public enterprise	(10 pp)
KP/EB	V	Industrial programming for process industries	(10 pp)
RN/KP	VI	Industrial programming for non-process industries -- capacity utilization, capital-labor substitution, technological change	(10 pp)

CHECKLIST FOR WRITERS

- (1) What has been learnt from the research in the Bank? Direct as well as indirect effects on the stock of knowledge (via influence on scholars outside the Bank as well).
- (2) Is there in the material that we have studied an indication that the knowledge outside the Bank has been transmitted to the Bank, and adopted for dissemination by various members of the Bank. Duplications?
- (3) The relevance of the research in the Bank
 - a) for Bank operations/(i) lending, (ii) policy advising/
 - b) for developing and disseminating knowledge and paradigms about the development process.
 - c) for the need of the LDCs in their national policies
- (4) Has the Bank been engaged in "basic research"?
- (5) Willingness and ability of "operating people" of Bank to absorb and use research ("assimilation problem")
- (6) Involvement of LDCs in Bank research
 - a) in initiating research of Bank
 - b) in participating in Bank research
 - c) in organizing research in the LDCs and/or in the training of researchers in the LDCs
- (7) The use of "outsiders" (non-Bank people) in Bank research; the use of consultants
- (8) The composition of research
 - a) development of theory and methods vs. empirical research
 - b) the degree of policy orientation of research
 - c) choice (mix) of topics (problems)
 - d) "academic" research vs "information gathering", assessments and forecasting

- (9) Criteria used by the Bank when choosing projects. Constraints on research in Bank.
- (10) Recommendations on the basis of analysis above, for instance about
- a) size of research by Bank
 - b) composition of research on fields, problems and methods
 - c) procedures of hiring researchers
 - d) dissemination and assimilation of research
 - e) how to use "outside" knowledge and resources better
 - f) how to make research more "relevant" - for what?
 - (i) for instance, should the Bank be a "knowledge Bank" and not only a financial Bank?
 - (ii) to what extent should the research of the Bank be subordinate to operation activities within the Bank
 - (iii) should the Bank engage itself in "basic research" - to what extent?
 - g) how much and how should LDCs be involved in Bank research? How?
 - h) how much and how shall outsiders be used?

OFFICE MEMORANDUM

TO: Those Listed Below

DATE: July 27, 1978

FROM: Alan Gelb, VPD *AG*SUBJECT: Industrial Development and Trade Reports

1. You are currently being sent numbered envelopes containing documents relating to Bank research into Industrial Development and Trade. The numbers of envelopes sent are as follows:

Assar Lindbeck	- 6
Edmar Bacha	- 8 (includes material left at DRC)
Gerardo Bueno	- 5
Jurgen Donges	- 6
Jae Ik Kim	- 5
Richard Nelson	- 4
Kirit Parikh	- 15 (includes material left at DRC)

2. These documents combined with those in the previous package, cover almost all reports relating to Industrial Development and Trade, taking into account the revised project allocation among panel members. In one or two cases RPO output differs slightly from that indicated on the project folders and a few papers still need to be provided.

3. The final-numbered envelopes mainly contain miscellaneous papers relating to the panel and to Bank research, some of which you may already have. They may arrive shortly after the others. Certain panel members have requested additional material which will be sent when available.

4. Please note that folders on projects 671-66, 671-71, 671-75, and 671-79 are included where appropriate. These projects were not on the list of RPO projects previously sent to panel members.

5. If an envelope fails to arrive or if you do not have access to those in the previous package, please inform me.

6. A few informal remarks on the contents of the RPO project folders may be helpful. The Abstracts are prepared by project supervisors to inform an external and Bank audience of an ongoing project's aims and objectives. Abstracts are only included in folders on unfinished projects. A more complete statement of the objectives, as envisaged when funding was requested from the Research Committee, is provided in the Research Proposal. While projects are underway, project

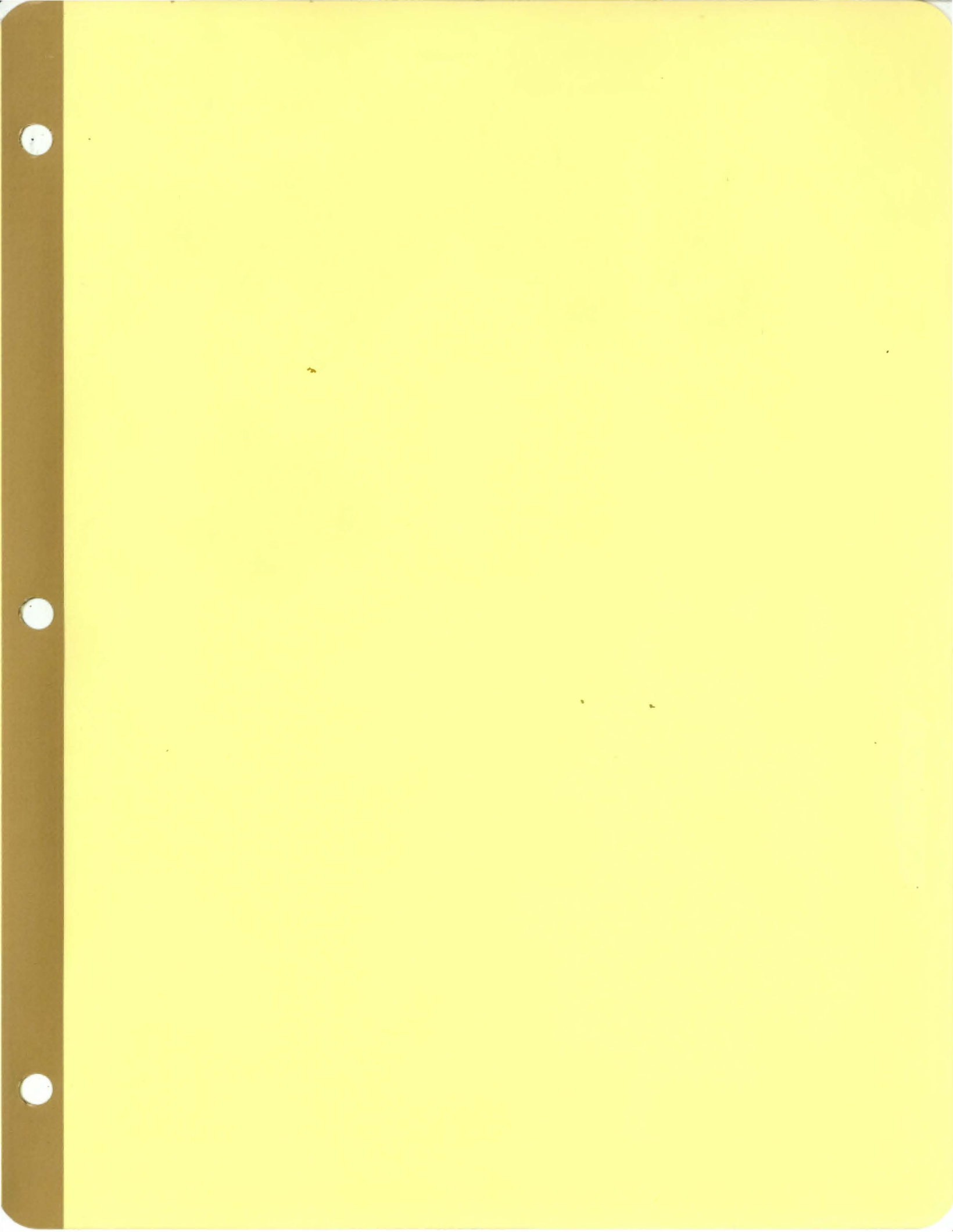
supervisors are required to submit quarterly Status Reports to the office of the Research Adviser; these are a means of tracking the evolution of the project.

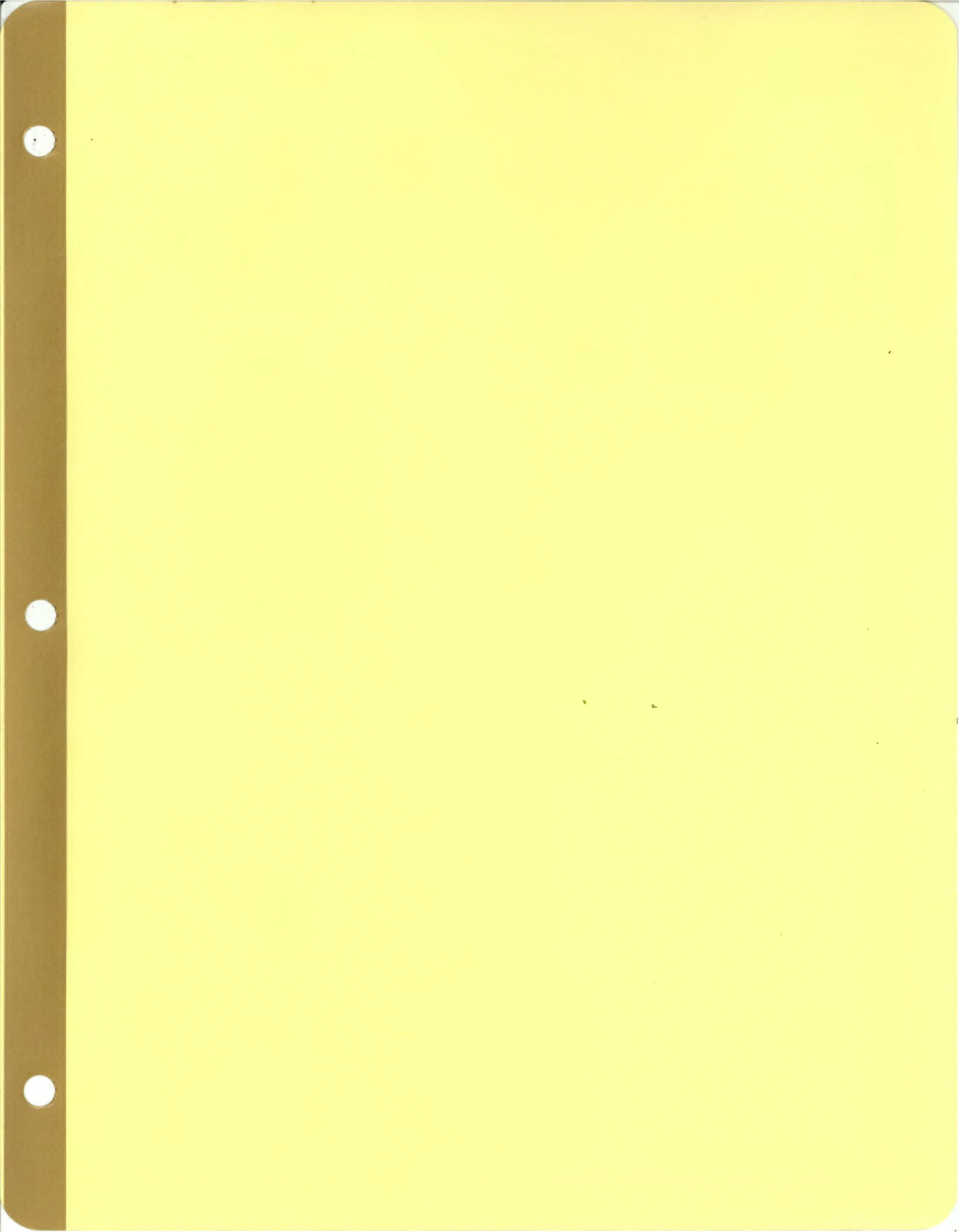
When, in the supervisor's judgement, the project is considered complete, he is required to submit a Completion Report to the Research Committee. This document is intended to provide a dispassionate view of the extent to which the project fulfilled its objectives and to highlight aspects of its administration (e.g. relationship with consultants) which proved to be intractable or delayed its execution.

Since 1975, at the request of the Bank's Board of Directors, completed projects have been required to be evaluated within one year of completion by panels internal to the Bank. Primarily, the project's output is evaluated, but evaluation attempts to also draw lessons on project administration and organisation for future reference. Normally, Research Committee members sit on the review panel but as the Committee's composition changes, these members generally differ from those involved in the original review of the Research Proposal. Evaluation Reports are included in the folders of projects which have been evaluated.

AGelb:lt

cc: S. Bery
B. Balassa







Assar Lindbeck
Professor of International
Economics

September 13, 1978
AL/US

To the Members of the Panel on Industrial Development and Trade

Hello!

Enclosed is a very preliminary draft of the first sections of Chapter I in our report (about "General points"). I would be most grateful for your comments. In fact, some of you might prefer to make detailed comments and suggestions concerning my draft as a substitute (partly or wholly) for your own writings on points 1 and 2 on the suggested organization of your own paper (i.e. "General comments on the research problem of the Bank" and "Comments on research on trade and industry within the Bank).

Best regards.

1978.09.13

CHAPTER I

GENERAL POINTS ABOUT RESEARCH ON INDUSTRY AND TRADE OF THE BANK

*quality
use
type.*

The general quality of research in the field of industry and trade in the World Bank is, in our view, very high - compared both to university research and to research activities of non-university organizations, including organizations connected with the U.N. system. Thus, the basic problem of research within the Bank in this field is usually not the quality of research, but rather the use of research within the Bank and the type of research produced by the Bank.

When surveying the use and production of research within the Bank in the field of industry and trade, we have found it useful to classify research into five main fields:

- (1) Incentive policies (for firms) and economic integration.
- (2) Patterns of growth and trade, including changes in comparative advantages.
- (3) Export promotion policies in the LDCs and access to markets in the DCs.
- (4) Institutional conditions and institutional reforms.
- (5) Industrial planning and programming, subdivided into
 - (a) process industries
 - (b) non-process industries,

including the problem of capacity utilization, capital-labor substitution and technological choice.

It is probably correct to say that the emphasis of the research of the Bank, quantitatively and qualitatively, has been on the fields 1, 2 and 5. Before trying to evaluate whether this has been a good choice of fields, and whether the research within these fields has been successful, it is useful to discuss two broader issues concerning Bank research, namely

I. What "visions" of the development process in the LDCs underlie, and should underlie, the use and accumulation of research knowledge concerning industry and trade in the Bank?

II. What principles should guide the division between import and production of research knowledge of the Bank?

I. Consequences of alternative visions of the development process

It is really impossible to say what type of research knowledge that is important for the activities of the Bank without having an opinion, or a "vision", on what the crucial factors are for economic development. When approaching this issue, it may be useful, by way of introduction, to distinguish between two alternative (extreme) visions of the development process of industry and trade: (a) a centrally planned process, either "physical" production planning (of Gosplan type) or central planning by way of central price fixing (Oscar Lange type planning); and (b) a decentralized "search and allocation process", largely based on private entrepreneurship, but possibly also with a number of rather independent state firms.

*Presumption
is this the answer?*

The adherence to the first vision would make knowledge and application of large planning models for entire national economies a top priority. Obviously the Bank has not put much resources into acquiring research knowledge in this field - probably because most member nations do not follow this strategy of economic development, though elements of central planning exist everywhere.

A more modest version of central planning would be sectorial planning for certain sectors, for instance where there are large returns to scale and/or large externalities, such as in the case of infrastructure investment. With this approach to development, sectorial industrial planning and programming (field 5 above) would be of high priority, which it has in fact been in Bank research.

The adherence to a "decentralized" vision of economic development does not imply the absence of central policies and planning, but rather an emphasis on policies that concentrate on institutional reforms and improvements of the system of incentives. On the basis of this vision of economic development, it would be logical to emphasize comparative studies of institutions and incentive systems, for the purpose of finding out inter alia how conducive alternative arrangements are for releasing decentralized initiatives. While research on incentives for firms (field 1 above) has been given a high priority, the same cannot be said about research on incentives for households (employees); and even less so research on institutional arrangements (field 4 above).

Research knowledge on patterns of growth and trade (field 2 above), by contrast, is probably of considerable importance -

in particular perhaps for a broad understanding of the development process and for policy-making - in the case of both centralized and decentralized strategies to economic development.

As the economic systems of most LDCs are based on various combinations of decentralized and centralized approaches to economic development, it is probably important that the Bank acquires research knowledge that is relevant for both types of strategies to economic development. As considerable research efforts have already been made, or are under way, in the Bank on investment planning, growth patterns and incentives for firms, it is probably reasonable to recommend that the Bank in the future should give higher priority to the acquiring of research knowledge on problems of institutional issues and the system of incentives for employees.

The dichotomy between centralized and decentralized strategies to economic development is, of course, not the only relevant one in the present context. The distinction between "outward" and "inward"-looking strategies is of course also crucial. As a great number of countries do follow an outward-looking strategy at the present time, research knowledge on "export promotion policies in the LDCs and access to markets in the DCs" (field 3 above) is certainly also important for the World Bank. In fact, it is our judgement that difficulties of market access in the development countries may be a severe obstacle to industrialization in the outward-looking LDCs during the coming years. This makes research on access to markets, and adjustment capabilities in the DCs a crucial

*Institutional issues -
what
issues?
How to transform
with stylized
facts.*

Sheter, Baldwin

issue in the future. Considering these problems, the possibilities of expanding trade in manufacturing between the LDCs also become a central issue.

We shall later turn to the question how such new emphases on institutional issues, incentives for employees, access to markets and trade among the LDCs, should be implemented. At this point only a short list of conceivable topics within these fields will be mentioned.

Org theory?
Planning
function

For countries with strong elements of central planning, important fields of institutional research are probably studies of (1) how central planning in fact is pursued in various countries (rather than asserted to be pursued); (2) how alternative types of organizations of the planning and implementation procedures seem to perform in practice, such as how different degrees of centralization within such organizations seem to work; (3) how central planning can be combined with decentralized initiatives and innovation; (4) how state enterprises perform and how they can be reorganized, etc.

Sociology

For countries following a more decentralized, private enterprise-oriented strategy, relevant issues include the questions: (1) where individual entrepreneurs came from, and may come from in the future; (2) to what extent, and how, entrepreneurs are restrained in their activities by various institutional constraints, such as constraints emerging from the political and administrative process; (3) how the markets for commodities, labor and credit in fact function, and could function - including issues such as the role of wage differentials and the supply

? Why?

of, and reward to, risk capital; (4) how labor could be mobilized more effectively; (5) what the opportunities and obstacles are for the entry of firms and for the possibilities of small and medium-sized firms to flourish and grow; and (6) how the processes of innovation function.

For outward-looking countries, whether they emphasize central planning or decentralized market processes, access to markets in the DCs, including the issue of reallocation and adjustment abilities of these countries, and the possibilities and mechanisms of trade between the LDCs become important topics as well.

In fact, we have in discussions with operating officers in the Bank got a strong impression that more information on such institutional and incentive issues is potentially very important for their work - as policy advisers, lenders and writers of country and sector reports.

II. Production vs import of research results

The next question is what criteria should be used when deciding what research to be imported and produced by the Bank, respectively.

It is tempting to try decide this issue on the basis of the comparative advantage of the Bank as a research unit, and hence construct a "ranking list" of research areas in terms of falling comparative advantage - a list to be "cut off" at the point where the research budget of the Bank is used up. According to this approach, the choice of research fields of the Bank should be based on an assessment of the (relative) ability of the Bank to produce research - and hence of its ability to increase the total research knowledge in the world in the

Out on

ep

See

V. General

Criteria for research

Comparative Advantage
view

fields under consideration - rather than of its internal demand for (use of) research. On the basis of this approach, two general conclusions probably follow:

(i) that the research of the Bank, in the short run, should be concentrated on fields where competent researchers are available within the Bank;

(ii) that the Bank should try to standardize and publish statistical data and other information that is more easily available to the Bank than to other research organizations - covering both individual countries and world markets (for instance information about prices and volumes in world trade); and

(iii) that the Bank should exploit its competence and information to make comparative studies of incentives, entrepreneurship and industrial organization in various countries with different institutions and different levels and types of development.

Conclusion (i) would suggest that the Bank continues with about the same kind of research as it has successfully pursued so far, while conclusions (ii) and (iii) would suggest a shift of emphasis to data compilation and comparative studies of institutions and the implications of these for development patterns. Other types of research knowledge of importance for the Bank should then - with such a "comparative advantage approach" - be imported.

Endogenous

*How is this
Comp. adv.*

However, a "comparative-advantage" approach of this type to research is certainly not sufficient.

Firstly, the need of (demand for) knowledge in Bank operations cannot always be satisfied by importing research results (in the fields where the Bank has not a comparative advantage in the production of research knowledge), both because of the specificity of required knowledge, and because of the lack of interest outside the Bank for certain types of research knowledge that the Bank (needs) demands. Thus, in order to satisfy its own needs for research knowledge, the Bank has to perform a role as residual supplier of research in some fields.

An application of this principle ("residual supplier of research) probably motivates, for instance, further studies within the Bank of effective protection and domestic resource costs, which seem to have been of considerable use, and interest, among operating officers within the Bank. The same holds to some extent also for research on investment programming of specific investment projects, particularly when these are related to Bank lending activities. However, the "residual supplier" approach to research also points to more emphasis on "institutional research", because of the involvement of Bank people in "practical matters" in individual countries.

Secondly, there are important "externalities" of research within an organization. The general level of sophistication of an organization, for instance in the field of policy advising and economic surveys, depends partly on the general quality of the

*Residual
Supplier
of research*

researchers within the organization. Moreover, the presence of good researchers, like competent people in general, help to set standards of performance within an organization, which is particularly important in an organization that performs policy advising. In other words, the research of the Bank should not be subordinate only to the immediate demands of the operating units of the Bank, but also to long-run considerations about the general competence of the Bank in various respects. An application of this principle suggests that the Bank should build up research competence in many of the main fields where the Bank operates - regardless of what division between import and production of research that would follow from the application of the principle of "comparative advantage" or the principle of "residual supply of research".

"Internal
multiplier
effects"



Thirdly, the Bank should also be interested in the "externalities" of its research on the research potential of the LDCs. The answer to that demand is, probably to organize more joint ventures between researchers of the Bank, "outside" scholars from the DCs and scholars and research institutions in the LDCs.

External
Multiplier Effects

Question: How should these three principles - comparative advantage, residual supplier of research, and considerations to "externalities" of making research within the Bank - be combined, when the division between import and production of research is decided?

III. How to make import, production, and dissemination of research more effective and useful?

Import of research knowledge

Considering the moderate size of the research budget of the Bank (\$ 10 million for economic research, of which \$ Y for research on industry and trade), the bulk of research knowledge that is used within the Bank has, of course, to be imported - regardless of the principles that determines the division between import and production of research. We therefore suggest that the Bank strengthens its capacity to import research knowledge in a systematic way. This can be done in several different ways.

For what audience,

(1) By using more resources than earlier to summarize systematically research results and paradigms that are developed outside the Bank.

Organizational Solutions

(2) To place people with research background in positions in various units within the Bank, so that research knowledge can be imported not only via researchers of the Bank, but also "directly" by the operating officers. In fact, the biggest import of research knowledge probably occurs when a person with research background is hired by the Bank: knowledge is often most effectively imported "in the heads" of people already when they are employed, rather than by reading research documents or making research later on.

Production of research

Moreover, if the Bank in its own research activities is going to emphasize research on institutional issues, incentives for employees and access to markets in the future, it is of course important to hire leading researchers in fields relevant for such research. What this means concretely is not easy to say. However, one obvious possibility would be to hire some specialists on industrial organization, competition, entry and innovation. Specialists on "relevant aspects" of credit and capital market organization are also important if the Bank wants to put a heavier emphasis than earlier on institutional research. It is also quite likely that a broader social-science sweep has to be attempted, for instance to catch factors that influence the supply of entrepreneurship and the condition under which entrepreneurship is likely to flourish, as well as to penetrate the incentives systems for employees. Specialists on modern economic history and comparative economic systems could perhaps help to analyze time series data for individual countries and cross-country data, for instance by making country comparisons and studying "success stories" and "failure stories".

The choice of research topics of the Bank will probably always reflect the interests and background of "dominating" researchers in the Bank. This has certainly been the case in previous and current research activities in the Bank, as illustrated by the emphasis of research on effective protection and domestic resource costs (the field of Bela Balassa), the emphasis on studies of growth patterns (the field of Hollis Chenery) and the emphasis on investment programming (the field of Larry Westphal). However, if the Bank with short notice

wants to move into new fields it is probably necessary to rely quite a lot on outside specialists ("out-house research"), because of the "inflexibility" of the research competence among permanently employed people within the Bank.

Dissemination of research

If the Bank is anxious to use research knowledge - imported as well as produced - more effectively than before, it is clear that considerable improvements of the processes of "dissemination" and "assimilation" of research within the Bank is called for. In fact, one of the most striking findings of our interviews among people in the Bank is the enormous "gap" - one is tempted to say tension - between researchers and operating officers. It must be a major duty of the Bank not only to import and produce, but also to disseminate research in such a way that operating people do not regard the researchers as "an academic enclave" in the Bank, which at the present time often seems to be the case.

The gap between researchers and operating officers probably depends on several different factors. For instance, operating officers are usually concerned with a much shorter time perspective than researchers. And they are interested in very specific "knowledge about time and place" rather than generalization. Moreover, the researchers do not - and in our view should not always - do the things that are immediately relevant to operating officers. However, it is also obvious that researchers do not always communicate effectively even with operating officers that are knowledgeable and interested in research information.

Other operating officers are obviously not aware of, interested in, or able to absorb results of research or paradigms supplied by researchers.

To help solving these problems of "dissemination" and "assimilation" within the Bank, several reforms suggest themselves.

- (1) To have more circulation of people between research and operating activities.
- (2) To pursue more joint ventures between researchers and operating people, both in operating activities and in the design of research.
- (3) To write, and circulate within the Bank, popularly written reports on research - both concerning imported and domestically produced research.
- (4) To organize joint seminars between researchers and operating people - preferably at a distance from Washington (with disconnected telephones!) to make undisturbed discussions possible.
- (5) Moreover, the employment of more people with research background in operating positions would not only facilitate the import of research knowledge to the Bank, but also be a way of "disseminating" research knowledge within the Bank from researchers to the operating units.

IV. Evaluation of Bank research on industry and trade

(To be written on the basis of papers by other members of the Group.)

V. Summary of suggestions

(To be written later.)

Schedule for Mr. Assar Lindbeck

Tuesday, October 10

10:00 a.m.
[K-4209]

Meeting with Messrs. Westphal/King,
Development Economics Department

11:15 a.m.

Meeting with Mr. V.V. Bhatt, Chief Public and
Private Finance Division, Development
Economics Department

12:30 p.m.
[D Dining
Room]

Lunch with Messrs. King, Waide, Wood, Bery

2:30 p.m.
[K-5110]

Meeting with Professor R. Baldwin,
consultant

4:00 p.m.
[I-602]

Meeting with Mr. Streeten, Policy Planning
and Program Review.

V.V. Bhatt

Wednesday, October 11

10:00 a.m.
[A-613] Meeting with Mr. P. Hasan, Chief Economist
East Asia and Pacific Regional Office,
and staff.

11:30 a.m.
[A-707] Meeting with Mr. El-Darwish, Assistant
Director, Projects (Europe, Middle
East and North Africa)

1:00 p.m. Lunch with Mr. Gulhati, Chief Economist,
Eastern Africa Region

2:15 pm Meeting with Mrs. Hughes, K5100: Director, EPD

3:30 p.m.
[D-428] Meeting with Mr. Gordon, Director,
Industrial Development and Finance
Department and staff

4:30

Lesson

Thursday, October 12

9:15

E. Revan Wande

10:00 a.m.
[A-900]

Meeting with Mr. J. Holsen, Chief Economist,
Latin America and Caribbean Regional Office

cc: Mr. Bela Balassa

EXAMPLES OF QUESTIONS ABOUT WORLD BANK PANEL ON INDUSTRY AND TRADE

- (1) What are the main reasons for making research in the Bank?
 - (a) To contribute to knowledge in the world about the development process; "comparative advantage approach" then adequate.
 - (b) To get the knowledge that is needed for Bank operations - knowledge that cannot be imported at lower costs to the Bank? "Residual supply of research approach" then adequate.
 - (c) To create externalities, in the form of "sophistication" among staff of the Bank.
 - (d) To help generate research capacities in the LDCs?

- (2) What are the possibilities of importing research knowledge rather than producing research within the Bank?
 - (a) By employing people with research knowledge.
 - (b) By systematically summarizing and disseminating imported research knowledge within the Bank.

- (3) Are there overlappings with other UN organizations? Is cooperation with other UN organizations possible and useful?

- (4) Is there a case for more systematic data collection activities by the Bank? How great should the responsibility of the Bank be for the data it publishes?

- (5) Are research reports read by operating people? Could they be induced to read them more? Are they worth reading for operating people? Is there any feedback to researchers? How much?
- (6) Is it possible to study the importance of research within the Bank by going through systematically some general reports by the Banks, possibly also some country studies, to see if the quality has increased over time? Should this task be suggested to the General Panel?
- (7) To what extent is research suggested by (a) operating people, (b) researchers with operation background, (c) pure researchers, and (d) LDC representatives?
- (8) Is it possible to get some impression how LDC representatives evaluate the research done by the Bank?
- (9) Is the Bank a suitable body for "institutional research" as suggested in my draft to Chapt. I? Or are there political obstacles for the Bank to pursue such studies?
- (10) Would it be a good idea to give research grants to researchers outside the Bank to get research on issues where the Bank itself is not the ideal organization for research - for instance in the case of highly sensitive issues?
- (11) Is "circulation" between researchers and operating staff impossible because of the rapid deterioration of research capacities of people when they do other things?

- (12) Will good researchers in fact always be something of an "enclave" because of the special features and long time horizon of that type of work?
- (13) Would it be a good idea to make a small research division within each region - with good connections between these researchers both with researchers in the main research departments in the Bank and with the operating people in the regional offices? Some of these researchers in the regional divisions will then most likely move over to operating activities.
- (14) How important is it to study incentives for employees - for instance incentives to acquire skills? Are wage rates flexible enough to create incentives both to acquire skills and to reallocate labor?
- (15) Are the studies just started about access to markets in the DCs enough, or should even more resources be put into that field?
- (16) Should the roles of the multinationals and free zones be studied more carefully?
- (17) Should more studies be done about technology transfer?
- (18) Should studies of central planning, or sectorial planning, be given a higher or lower priority?

(1)

Meeting with King, Westphal, Lindbeck
Oct. 9th 10:00 am

L'beck: I am resp. for intro. Chapter
Have prepared questions

① What are main reasons for conducting research
4 principles

- ① Comp Adv.
- ② Residual Supplier of research
- ③ Create externalities within Bank
- ④ " " " outside Bank

What are possibilities for importing research knowledge

LW

① Bank has c. adv in 1 dimension

It is in research directed at ops. problems.
Have in mind following:

Lots of colleagues interested in
Applied Economics. Living in academia
difficult to get a good grasp of operational problems.
Never understood real problems of risk

~~that~~ and uncertainty in projects before Bank.
Pick up more of these dimensions.
Defines a c. adv & indicates why the
Bank ought to be doing research.

If a, b, c then have to worry about dissemination

Still looking at young research program.

A lot of difficulties associated with overprogramming of ITC research & ops. staff.

Poss. of importing research

(1) Using consultants to get research results assimilated by Bank is tough.

AD Experience much worse than Bank

Consultants' ~~own~~ research

~~is~~ less easily assimilated.

Best researchers in Bank are careful to maintain links with universities. Have to maintain work program that attracts & retains interested staff.

Key

(1) Not sure ops. know what they want

(2) If RC wished to, it could commission state-of-the-art paper.

W: But still assimilation problem.
Generate a great deal of enthusiasm
But doesn't internalize techniques.
Issues in ops. staff.

AK

King: Network of external consultants
gets building.

W

King: One mechanism is transfer of ops staff
to regions. Recruitment also a factor

AK: Can there be reverse flow.

King: Not yet tested whether there could
be reverse flow. Come with a very
rigid structure of categories, positions.
Flexibility just not there. But people
who go to regions are not likely to
stay just disseminating research.
Get administrative responsibilities.
Of mission creep.

W

Don't want to be thought of as rebranding.
Could think

Be

Mentioned Comp. adv. Another aspect
Bank gets into things because there is
a gap. Eg. Public Enterprises.

Lw

Overstating difficulty of getting universities
to do institutional work.

Cost of survey work main barrier
to have groups - eg. Sussex, Boston U.

Be

Can be reverse flow of ideas to academia
from Bank/Research.

Question 4 : Data collection

King: Own view is that this is in
the Bank shd. do everything
category. Bank has more of a
role to play in systematizing,
documenting existing data.

Question of 'responsibility' : dilemma
Contribution was to bring issue into the
area.

Shail Jain etc.

World Tables should have been done.

Institutional Research

AL : Incentive system, institutional influences on growth of enterprises, role of interventions.

W If you were to do it in Bank you'd have to do it in a context like DRG.
Need complete freedom. Need good people.

AL Industrial organization and this area.

W Don't think there are necessary on political samis
Political consideration

BL Free may be more important than W thinks.

Q13 : Regional research capacity.

Having research capability

Q14

~~Laissez~~

Labor like imperfections.

- Get involved in choice of technique area

BK

Question Board is interested in is

- How is Bank research related to Bank ops.
- What contribution

Q15 Real question whether comp adv. of Bank is bank-south, or whether really internal issues within bcs are what is important.

W Always have a problem with research resources being taken off for policy work.

Regions are very unorganized

W Colaco: trying to set up a system of reporting mkt. access as seen from exporters pt of view.

LW: Would like clear mandate for research.

You're not a successful researcher unless you get your results ~~there~~ where they're needed.

Beking: Perception of ITC as enclave depends on what you talk to.

Intra conflict between regional need for ITC manpower & ITC ~~has~~ desire to undertake research.

BID LW: Bank couldn't fully dissociate from output

BBK: High overhead.

QP: Difficult

Q5: To a surprising degree. People want to know where to file it

②

Q3 UN collaboration
Larry : ~~what~~ further ~~away~~ is better
Can stay

①
10/10/78.

Lindbeck with Bhatt

Pt 9 Institutional Research

It : If you have a decentralized view of development you have to examine decentralized incentives structure.
The other aspect is - to what extent are institutions conducive to initiative.

WD ① + ② are interrelated.

Research in Bank in 3 fields

- ① Frontiers of science
- ② Technique oriented
- ③ Problem oriented

In problem-oriented research

Bank's principle concentration ought to be problem solving

Chenery, Chenery work descriptive
Bhatt Balassa work abstracts from risk. Quotas provide more security

When it comes to problem-oriented research one is dealing with interplay of institutions and behavior of economic agents.

(2)

Concepts of rationality - is institution specific

Change in institutional framework can be much more powerful than price changes.

IRD has 2 audiences

- Operations
- LDCs.

What is the mechanism for introducing concerns of operations into research areas.

Better for research to start with problems, rather than "researchability".

Fiscal structure / financial structure - pervasive instruments.

Tax evasion - allocative effects are very powerful. $1/2$ of assessable income in India would think expenditure tax in lieu of income tax would be useful.

Tax distortions or financing problem.

Taking interest rate differentials as indicators of capital market imperfections

Constraints to Entrepreneurship.

Small firms face higher input prices and ~~less~~ ~~constrained~~ marketing problems.

Link between financial institutions and technology policy.

Technology: 2 problems

- (i) Upgrading traditional technology
- (ii) Adapting modern technology.

Labor Market Issues

Small firms less burdened by social security, minimum wages. Jobber system introduces ~~labor~~ wedge between cost to firm and reward to labor.

Meeting with P. Hasan

Questions

In region not interested in research per se.

Have a narrow concern.

Very interested in this set of issues.

Front of your concerns

Comparative analysis helpful to us - Norms useful
Korea an extreme case - Criticism that Korean
industrialization "shallow". Rejected by Westphal work

Get insufficient answers to our concerns.

What are our concerns:

① Projecting of mfg. exports from LDCs. Operational figure.

Keesing work - At more in need for such work to be done.

Talking of a dozen countries which have predominance

Before Keesing work we did not know

① Concentration of exports in small no. countries

② " " " " in product lines.

Perspective has led to different emphasis

- Emphasis on mkt. access in WDR

McNamara speeches has arisen out of it.

Problems of extrapolating from past to future.

How much shd. we read into last 25 years.
Ordinary growth

If you don't ask central questions

Not sure Bank is exploring mundane questions
enough.

Ought Korea to go into auto mobiles, into steel,
into mechanics.

Lundbeck Type of questions, ^{currently researched} are not highest priority for you.

Hasan W&R was more useful
What handle can we get on shifting comparative
advantage.
We have certain global projections. What are their
implications for trade patterns and policies.

Impression of terribly long gestation period in research.
Regions lose interest. Because of this difficult to
link with topics. This leads to concern with
methodology.

Leech

Think that

Ops. Expect too much in the way of short run concrete results. In this Bank expect short term relevance. Has to be decision on objectives of Bank.

Research has to be motivated from different rationale than short run.
Comparative advantage.

Hasan

Are we overdoing "Sources of Growth". Central concerns not being addressed.

Westphal work useful - but 1968 data.

Leech

What kind of internal ^{needed} work would be useful.

Hasan

We see industrial policy issues too much in trade policy terms. Even w. export orientation of Korea if their ICORs were like Philippines growth would be lower.

Efficiency in resource use important but side stepped

Intermediate technology

Leech

Research has concentrated too much on relative prices

Not enough on efficiency within firms.

Questions of appropriate technology
Don't have much to say.

~~Taking to the field~~

Country use of research small.

May be misdirected & misdirecting the
efforts of LDC research institutes.

Institutional Questions: best done by local
research institutes. If we do it from here
would be absurd.

Possibilities of importing research knowledge:
More systematic needs for digests.

~~Research~~

Meeting with Mr. El. Darwish

① had like Economy wide planning
to guide strategic choices

Have not seen guidance that I need.

If you can get Ministers of Industry

Don't know how to think of industrial
strategy issues.

Have less worry about Industrial finance
than industry people.

Summary

① 2 consequences

(i) Emphasis on putting research
on industry into timing
approach for investment

(ii) Microeconomic information
on individual processes

wants more business economics,

Sequencing Issue

Balassa may have given us what we need
for Strategic Guidance on comparative
Advantage

Curhat:

- ① Support of LDC research institutions has been
- ② How to analyse industrial complexes
E.g. auto:
 Linkage
 Learning by doing
 Multiplier effects
- ③ Parastatals

Mahiyat Helen Hyter.

Collaborating with UN

- Uniformly bad Experience collaborating with UNIDO.

Have no competent staff.
Political appointments.

UNCTAD slightly better

On commodities they come for basic papers.

LD better.

Trying to get handle on data maintenance.

2 types of Research

- What knowledge Bank needs - Highest priority for research
- Bank does a poor job of 'importing' existing knowledge.
- Topics
 - Adjustment assistance
 - Capacity Utilization
 - How to Operate public Enterprise in manufacturing

How do you get public manufacturing enterprises to become risk takers.

What sort of incentives do you have to offer public enterprise managers.

Move in 2 directions

① Study public enterprises to find non quantifiable

② Minimising subsidies on trade stuff.

Mkt penetration

Seen as 1(b) - knowledge for the bank to operate.

③ Trade amongst DCs.

Need an intellectual revolution to think about
with LDC trade.

Get up project with
LAC, EYENA, EAP.

Creating conditions where industry can thrive.

Meeting with Tony & Adam

Q1

Sydney from standpoint of this part
of bank (b) is predominant
but (a) would also be supported
because of its consonance with
larger Bank role.

Would assign lower weight to (c)
and (d)

Lunch
Club
Wednesday
12:30
DHG

True we are (IAF) halfway house.

Pure researchers - IRC

Pure operators - Loan Officers - pure form.

Both user & generator of research
Industrial sector reporting more specific.
Engineering industry

Take case of industrial mission to Thailand.

1st question: (1) Have they done an effective job?

Study. This gives some idea of protection and comparative advantage. \$

Wd. be nice to have a type of modelling to allow you to identify detailed locations for product types.

FCI is taking over the model. Providing assistance on algorithms.

Problems of definition of research.

Gordon Have been urging researchers to take up kinds of questions where raw materials for analysis come from Bank operations.

Have been dissatisfied that too much supply generated.

Much closer interchange now

Extending investment planning model to wood pulp and to

Shortcut methods of shadow pricing

the most common type of scientific investigation

typical of scientific investigation

the most common type of scientific investigation
the most common type of scientific investigation

Leiserson
labour Mks.

Area difficult to research

Relating to industry + trade: questions
of generalizability, ^{level of} + application

SSE project, ought to be talking about
institutional structures.

Point is not smallness but organizational
arrangements that are key.

Differences between countries -

What is crucial is specification of conditions
under which certain institutions matter.

Incentives are not on the side of the suppliers
of labour, but on the side of demand.

Process of skill acquisition

Management, deployment of labour
in modernization.

Wage structure: important to research

Wage structure linked to distribution issue,

Role of govt. as principal employer.

Minimum wage legislation

hussein skeptical about importance
except in LAC.

General problem of wage formation.

Migration in of the high-tech area

Local issues: issues important for labor markets.

Role of women: participation

Bwan Waide Thursday Morning

ELW

Tasks for IBRD - Institutional Objectives

- Task is to assist development banks

- To stay in existence | (a) - Indirectly supports
Competence | professional reputation.
Reputation | Primarily to be able to
attract good staff.

Achieve credibility as an employer -
" " as a multilateral
institution'

Income Dist
Rural Dev.
Employment

Even for mainstream operations helps.
to attract staff.

Even routine work on commodities has
helped establish Bank profile

Useful to ops.

(1) Research that enables Bank to
remain professionally up-to-date.
- Essentially digestive research

ToS a researcher to identify useful/less useful work for Bank ops.

Eg in late 1960s Issue of relevance was LM

Question - Should the Bank put more resources

Similar issue - modeling
What kind of modeling useful

Selection & dissemination of existing research is a "research"

Priority for expansion
Applied field

- Digestion of research that has been usefully applied.

Can be extremely useful to know

Do we have a comparative advantage in filling gaps - don't know.

Don't regard contribution to knowledge in the world as a primary objective.

Use of add. research funds.

Gov. like to reverse trend of concern toward income distribution

Industrialization processes study has gone out of fashion.

- Industrial Organization work
- Development of Managers - successful elites professional elites; Tend to be discouragement of elites

Little is known about what can be learned from East European industrialization.

Entry of firms, obstacles to entry, obstacles to merger; obstacles to exit of firms.

Bank. Should employ 2-3 top people in I/O.

Because of staff that Bank has Industry & Trade has been hij'

Hansen

Don't gain much from research done in
Banks:

- ① Has not been relevant to our decisions
- ② Much research is labor intensive.
Esp. true of new methodologies which
lead to better end-products
rather than save labor.

With staff that we have can't even use
existing techniques

Biggest concern is that it tends to be labor
using rather than labor saving

SAMS, PROLOG both designed to be improvements
to aid country economists. But haven't
benefited.

Limit is absorptive capacity - not making
use of what's available now.

~~Exception is~~

Found useful

→ Small + Medium Industry in Colombia.

→

Income Distribution in Mexico.

Westphal's approach to research diametrically
opposed to Hirsch.

Hirsch: descriptive. Understanding industrial
organization and structure.

Example of useful work: Helen Walmsley did
work on Industrial Park in Brazil.
Helped plan industrial program.

C'beak: People also mention State Enterprises, also
constraints on entrepreneurship.
Are private Entrepreneurship shares useful?

Hirsch: On the whole, no.
Lead basically to public sector. Pvt. sector only
through SFC.
Problems:

Export promotion
Public sector investments: their efficiency &
financing.

Or on SFC work typically concerned
in altering criteria from financial to
economic. Presumably would affect
constraints to entrepreneurship.

Main constraint ~~was~~ absorptive capacity.

Data:

See us as consumers not as producers.

See useful to coordinate definitions on expts.

Otherwise standardization

Limitation of Research

- Don't have time to dress up research proposals for Research Ctee. Submissions

Too much emphasis on innovative methodology
Not enough on interesting problems.

Hope that RC would move to 'double standard' for regular submissions vs. OPs.

Q.P. depends on who you talk to - Academics possibly, govt. probably not.

Q10 More important to exploit comp. advantage
of Bank than to fund out research.

Q11 Circulation depends on what kind
of research you intend to do.

Q12 Would hope to lessen 'enclave'
nature of researchers - But again
depends on what kind of research
you expect done.

Q13 Would endorse 'in-house' Sabbaticals.
Or small research division.

Q14 Already have evidence of importance
of this issue in Jamaica.

Q15 No strong opinion.

Q16 Asked for advice on full zones
Particular policy advice
Case studies would be useful.
- eg Brazil.
Wd. like to know much more
about multinationals.

Baloxa - Lindbeck

Impression persists

People demand more research
in industrial organization.

Free zones comparative study

Marketing arrangements of multinationals.

→ Public Enterprise Management.

Second version of chapter sent

- 1st version 1st seen 26th
- Comments
- Revised Draft.
- 1st guy makes final draft.
brings to meeting.



INSTITUTE FOR INTERNATIONAL ECONOMIC STUDIES

Assar Lindbeck
Professor of International
Economics

(1) C. C. Balassa,
fell
(2) 1A+T
(3) Copy for now.
Sweden

To the Members of the Panel on Industry and Trade

Hello!

(1) I assume that everybody has by now sent out his paper to all the other members of the panel (due October 26).

(2) On the basis of these papers, I am going to make a new version of Chapter I, which I hope can be sent out in the first half of November. If comments on that draft are received by me before November 23, I may be able to bring with me to the Washington meeting a semifinal version of that chapter.

(3) Please remember that "the Second Man" on each section should circulate a revised version of the evaluation of projects made by "the First Man" - not later than November 15.

(4) It would be excellent if each member could bring with him to the Washington meeting a semifinal version of the chapter of the report for which he is mainly responsible. (I will try to integrate all general points in Chapter I.)

Sincerely,

Meeting with B.B. King, L. Westphal of Development
Economics Department

(October 10, 1978 - 10:00 a.m.)

Question 1 & 2: Rationale of research

Westphal: Bank comparative advantage is in research directed at operational problems. Working in this environment alerts researchers to a number of practical issues which academics tend to miss. If primary justification for research is a,b,c. then dissemination has to be seriously undertaken. Problems with dissemination:

- (i) Overprogrammed research and operational staff.
- (ii) Young research program.
- (iii) Additional burden on researchers that may alienate them. Have to maintain a work program that attracts and retains interested staff.

King: Not sure operational staff can articulate needs very clearly. Research Committee could commission state of art papers.

Westphal: But still assimilation problem. Doesn't lead operational staff to internalize techniques.

King: One mechanism is transfer of DPS staff to regions.

King: Reverse flow from operations to DPS more difficult. Bank works with a rigid structure of categories, positions.

Westphal: On 'import' of knowledge, major mechanism is recruitment of research staff, done very purposively. Use of consultants dependent on adequate staff support if results are to be assimilated. What happens to some extent is that a 'network' of consultants gets build up who are familiar with Bank needs, personnel.

Question 4: Data

King: Suggestions that Bank get into data area - belongs in the 'Bank should do everything' category. Bank may have more of a role to play in systematizing and documenting existing data. Doesn't necessarily involve acceptance of 'responsibility' provided caveats are explicitly registered. Compilations are of value even if of uneven quality, to raise issues of uniform standards.

Question 9: Institutional Research

Westphal: Defining new approaches to institutional analysis time consuming and difficult. Would need to do it in a context like the DRC - freedom to define an exploratory and sustained

Westphal: work program. Don't see constraints as being political as much as financial (for survey work) and methodological.

King: On occasion, political constraints do matter.

Question 10:

Westphal: Bank cannot fully dissociate itself from research
King: results financed by it. Also, a high overhead activity.

Question 8:

Difficult to get an idea.

Question 5:

To a surprising degree, yes. Reports are initially glanced at cursorily, filed for later reference.

Question 3:

Have not found cooperation with U.N. organizations very fruitful.

Questions 12, 13:

Notion of DPS as an enclave depends on who you talk to. Innate conflict between regional need for DPS manpower and DPS desire to work out its own research program. Also have a problem with research resources being taken off for policy work.

Meeting with Robert Baldwin, October 10, 1978, 2:30 p.m.

Baldwin:

Poor referencing system for papers in Bank: hard to know what unpublished research has been done. This should be improved. Also, a tie-up with university libraries would help researchers. Computer system very slow.

There is a problem of good researchers being syphoned off into "speechwriting" and such activities as the WDR. Much time is taken up with defending research. To obtain research funds, one has to know the "insiders" and to contend with bureaucracy. Researchers need to be left alone more and shielded from everyday operations. A good model would be the Federal Reserve. Decentralisation of researchers might help to avoid their co-option into other activities.

Need outstanding visitors (like Little, Srinivasan) to stimulate ideas and more seminars and workshops to create better research environment. Bank does not exploit its situation in Washington in this respect. It has a comparative advantage for data-intensive studies.

A large organisation like the Bank should take a long view of the fruits of research and should be prepared to take some chances. Research should not all be tied to its own operations. Operating staff have unrealistic expectations of the immediate applicability of research. In this respect, the experience of multinationals in separating their (successful) research establishments from their operations should be noted.

October 11, 1978

Meeting with Mr. Bhatt, Public and Private
Finance Division (October 10, 4 p.m.)

Bhatt: Bank research currently of three sorts:

- (i) Frontiers of science
- (ii) Technique oriented
- (iii) Problem oriented

Bank's research ought to be primarily (iii), but tends to be largely (ii). Problem-oriented research involves interplay of institutions and behavior of economic agents. Change in institutional framework can be much more powerful than relative price changes. Regard fiscal and financial structure as powerful and pervasive instruments. Need to adapt developed country practices to LDC circumstances: e.g. expenditure tax instead of income tax. Need to look at technology, marketing problems of small firms. Could link financial institutions and technology policy.

Bank research ought not to be constrained by criterion of 'researchability'.

Meeting with Mr. P. Hasan, Chief Economist,
East Asia and Pacific Regional Office
(October 11th, 10:00 a.m.)

Hasan: While region not interested in research per se, work on industry and trade of great importance. Find comparative analyses useful, e.g., to assess whether Korean industrialization has been unduly 'shallow'. Have also benefitted from work on projections of manufactured exports from LDCs. Our region was instigator of Keesing work on this issue. Factual documentation has been important in revealing concentration of countries, of product lines. Has led to emphasis on market access in WDR. Need to continue and to expand. Need assessment of future prospects. Need to get a focus on issue of shifting comparative advantage. Would like somebody to think about extrapolating from past to future. How much likelihood is there that the orderly growth of the last 25 years will continue into the future. What is the implication of this for trade patterns and policies. These are our major strategic questions and we don't get much answer from existing research. We see industrial policy issues too much in terms of trade policy and don't pay enough attention to

Hasan: other determinants of internal efficiency. Have concentrated too much on importance of relative price distortions in choice of technique. Institutional analysis best done by local research institute. Absurd to do it from here. Have to worry though about getting them oriented to working on right problems. Gestation period of current research far too long. Regions lose interest. As a result researchers in their turn work primarily on methodology rather than 'central issues'. More need for digest of research results.

Meeting with Mr. El-Darwish, Assistant Director
for Projects, Europe, Middle East and North
Africa Regional Office

(October 11th, 11:30 a.m.)

El-Darwish: Do not get guidance on strategic industrial choices from research: when to go into steel, metal fabrication, machinery, etc. Feel more confident that we understand system of industrial finance than industrial structure per se. Information on individual processes would also be helpful. Balassa has given us some help in sequencing of investments through his 'stages' approach to comparative advantage.

Lunch with Mr. Ravi Gulhati, Chief Economist, East
Africa Regional Office (October 11th, 1 pm)

Support of LDC research institutions has been honoured in the breach rather than actuality. East Africa region would like to know how to analyse performance of parastatal (public-sector) enterprises.

Would also value guidance on how to analyse, in advance, the desirability of entering a whole complex of industrial investments, : e.g. car manufacture. What can one say about: linkages; learning by doing, multiplier effects.

Meeting with Mrs. Helen Hughes, Director,
Economic Analysis and Projections Department

(October 11, 2:15 p.m.)

Hughes: Question 3:

U.N. experience varies. UNIDO worst, UNCTAD slightly better, ILO better yet.

Questions 1 and 2:

The knowledge the Bank needs ought to be highest priority for research.

The Bank does a poor job in importing existing knowledge.

Topics for further research: Adjustment assistance in developed countries. Problems of entrepreneurship, especially in public enterprises. Need to move toward less quantitative, more institutional analyses. Diminishing returns to analysis of trade policies and their effects on industrialization. Need to devise a framework for thinking about intra-LDC trade.

Meeting with Mr. Bevan Waide, Chief Economist,
South Asia Regional Office

(October 12th, 9:15 a.m.)

Waide: See justification for Bank research in terms of what it does to further Bank institutional objectives. Bank's task is to assist development in LDCs. In order to do this Bank needs to stay in existence, and to build a reputation for competence. Bank research helps to build Bank's credibility as an employer and as a multi-lateral institution. Helps to attract good staff, even for mainstream operations. Helps to establish Bank profile in World.

Research that is useful to operations is, firstly, research that enables Bank to remain professionally up to-date. Essentially digestive research. Should be job of researchers to identify themes in current developments which are of interest to the Bank and to provide judgements on the relative importance of these. For example in late 1960s there was a debate on how much attention Bank should pay to emerging literature on project evaluation, how much effort it should invest in improving its own appraisal techniques. Researchers had an important role to play in convincing Bank of importance of issue. Similar example is increasing use of country modelling in Bank work. Selection and dissemination of research is an appropriate 'research' function.

Mr. Waide: By contrast don't know if Bank has a comparative advantage in filling gaps, contributing to knowledge in the world.

Would reverse trend of concern for income distribution. Has been useful, but has gone too far. Work on industry has been 'hijacked' by trade forms. Don't work enough on domestic industrialization processes, nor on industrial organization. Would like to know more about:

- Development of managerial elites, managerial culture.
- Lessons of East European industrialization.
- Obstacles to entry and exit of firms.

Meeting with Mr. John Holsen, Chief Economist,
Latin America and Caribbean Regional Office

(October 12th, 10:15 a.m.)

Questions 1, 5

Holsen: Don't gain much from current Bank research. Mostly irrelevant to our decisions. Also, techniques pioneered by research are labor intensive rather than labor saving. With current staffing find it hard even to use existing techniques. This is also true of research projects aimed at improving country analysis. Main constraint is absorptive capacity. Find descriptive rather than analytic work more helpful, e.g. surveys of industrial organization and structure. Priorities would be work on public sector investments: efficiency and financing; work on export promotion. Don't regard work on entrepreneurship as very helpful.

Question 4:

Do not see Bank as producer of data; more as consumer. Can see limited role e.g. in standardizing definitions of manufactured exports, reconciling trade and country data.

Question 7:

Don't have time to dress up research proposals for Research Committee. Too much emphasis on innovative

Holsen: methodology, not enough on problem solving. Perhaps Research Committee could move to a 'double standard' for Regional submissions compared to DPS.

Question 8:

Depends on who you talk to. LDC academics would probably be favorable; governments probably unaware.

Question 10:

More important to exploit comparative advantage of Bank than to farm out research.

Question 11:

Not 'impossible' by any means. But does depend importantly on how research is defined, what kind of research you want done.

Question 12:

Related to 11; could hope to lessen enclave nature of researchers but depends on kind of research they're set.

Question 13:

Endorse 'in-house' sabbaticals or small research division in regions.

Question 14:

Have some evidence on importance of this in Jamaica.

Question 15:

No strong opinion

Holsen: Question 16:

Case studies of free zones would be useful. Being asked to give policy advice. Would like to know more about multinationals.

Question 17:

Should find out more about what's being done elsewhere than starting our own work.

Question 18:

Would prefer more work on public sector investment planning, not on macro central planning.

Meeting with Mr. Fred Moore and Mr. David Gordon,
Industrial Development and Finance Department

Question 1:

- Gordon: From stand point of this department (b) is the primary objective of research; however (a) is also seen as important. (c) and (d) of lesser importance.
- Moore: Have used some research in past: e.g. find use for effective protection work; have been able to 'sell' fertilizer model to Fertilizer Corporation of India.
- Gordon: Research in the past has been too supply determined. But closer interchange now. Would like more work on entrepreneurship; typologies of industrial strategy; short cut approaches to shadow pricing.
- Institutional research important; currently covered ad hoc in a mission context.

Meeting with Mr. Leiserson, Chief, Employment and
Rural Development Division, Development Economics Department

Basic labor issues related to industry and trade:
process of skill acquisition. Management, deployment of labor in modernization. Role of government as principal employer. Has profound effect on wage structure, orientation of educational system.

① 3 a

(i) 1 D+T - Ask Jordan

(ii) Div Chiefs for Industry in Regions

(iv) Choose partners.

~~Friday~~

~~Saturday~~

~~2 hrs: 9:30 - 11:00~~

1 D+T div. group second day.

Lunch: { 3 wks. 1:00 - 3:00 }

Thursdays:
~~Friday~~: 1 D+T

Friday Aft. Asst. Directors

Friday - noon lunch

Lunch on Saturday

Friday dinner - Balboa: Chez Camille

Saturday: Lunch: (?)

Balessa

R.P. Members
(i) Lerdan
(ii) Bbth

✓ 1. Steering group for Migration / vdy

✓ 2. Baldeh / U'beck / Bacha

✓ 3. Kiriha

✓ 4. Feb / Trip

✓ 5. Computer Studies

6. Curran

7. Hayman

6 Papers for Trade & Industry

(i) Incentives, Subsidies
- Exp. Production

(ii) Change in
Comp. Adv. - R&D

(iii) Fiscal / Cap. Mkt's
Bhatt, P

Wednesday night.

Westphal, Waide & Wood

- (iv) S&E Nites.
- (v) Programming
- (vi) Technological transfers

Friday before they come

Panel sed. have long meeting with 3ws.
Papers for

C Balassa
Self.
C Original to
1875/20.

A Research of Bank Research on Programming in the
Manufacturing Sector

1

Introduction

The research program carried out under the heading "Programming in the Manufacturing Sector" (Ref. No. 670-24) has dealt with the problem of investment planning in industries characterised by increasing returns to scale. It focuses on improved methods for selecting investment projects from among the many alternatives in size, timing, location, technology and output mix.

A number of research reports and monographs are expected from this program. The list of reports/draft reports which were studied for this review are given in annex.

1.

We first summarize the major themes and important results of the research program and then comment on the quality and usefulness to LDCs and to Bank. Finally some suggestions are given for possible future directions.

2 The Nature of Research

The major themes focussed upon by the research program have been as follows:

- Importance of interdependence due to increasing returns
- Extent to which such interdependence affect project selection and planning for the development of a sector and offer scope for co-operation among the countries of a region.

These issues are explored within the context of specific investment planning problems in two sets of empirical studies, one set dealing with what is termed as "process industries" and the other with "non-process industries" (The terms are a bit confusing particularly as the models for both are described as process analysis models). These industries characterised by a manufacturing process stream which is more or less continuous, has a limited number of processes and where the cost of carrying mid-stream intermediate products is large are termed process industries. Examples of such industries are gas transmission, fertilizer, cement, etc. These industries also have a limited number of products which are more or less uniform.

The "mechanical engineering sector" on the other hand has a variety of products and processes and the same processing equipment can be used for manufacturing many different products. Such industries are termed "non-process industries".

The studies carried out for the planning of the fertilizer sector in Egypt and in East Africa have explored the choices of technology size, location, transport, product and trade. The East African study has in addition explored in quantitative terms the gains from co-operation in fertilizer sector development for the three countries of the region (Uganda, Kenya and Tanzania).

The study of the Korean Mechanical Engineering sector has explored the gains from planning simultaneously the supply of a large number of products (120 endogeneous items). The gains in the economics of domestic production are derived from selection of technique and scale of production taking into account possibilities of sharing capital equipment for a variety of products, as also, the possibilities of domestically producing on a large scale intermediate goods used in a number of products. The import or domestic production decisions are taken after considering the effects of such sector-wide interdependence.

Both these sets of studies have used mixed integer programming models in a fixed charge formulation to account for economies of scale. Whereas the formulations of the models for the fertilizer sector are conventional and straight forward the model for the mechanical engineering sector is not easy to formulate in the conventional way. Problems of appropriate description and specification of products and processes have to be faced. This itself poses a not an insignificant problem.

However, the major problem in these studies apart from the considerable efforts and time that usually go into data collection and organisation, has been the problem of obtaining solutions of the mixed integer programming models with a large number of integer variables. A number of procedures have been developed to eliminate through simple analysis a number of integer variables which represented uneconomical choices, to reduce the size of the programming model.

3

Important Results

Apart from the specific sector development plans that emerge from these sector studies, they have also provided some insights into the nature of technology and its consequences.

(a) Significant economies of scale are present in production activities and that there is a good deal of potential

interdependence within the system as a whole.

(b) The cost of complete neglect of interdependence in choosing between production and imports in the part of the mechanical engineering sector of Korea that was studied, increase sector-wide total supply cost by more than 3 percent of total value added for the limited number of products involved in the study.

(c) The absolute cost of neglect of interdependence is by no means trivial and is well above cost of conducting studies that account for interdependence.

(d) For particular products, the conventional benefit cost analysis which neglects interdependence, may give wrong results when the products are a part of a sector that exhibits interdependence.

(e) The use of programming models help in evaluating the consequences of alternative policies. The cost and or benefits of particular policies may be significant.

(f) Programming models provide a tool to estimate the benefits of regional co-operation to individual countries and help in designing schemes for sharing of benefits.

From a methodological point of view the most significant contribution of the research is the demonstration of the use of large mixed integer programming models.

(a) Even without obtaining globally optimum solution, programming models provide a lot of insight.

(b) Problem with a fairly large number of integer variables can be solved with reasonable costs.

(c) With a systematic exploration of break-even analysis a number of useful decision rules can be employed to eliminate significant number of integer variables.

4. Quality of Research

The research is certainly of a high calibre. Moreover, such research is hardly carried out outside the bank.

5. Usefulness

For LDCs

Large programming models and particularly economy wide programming models create an impression that the vision behind the process of development that motivates such studies is one in which an elite all knowing planning authority attain economic growth through effectively allocating resources to various sectors. Yet one need not share this vision before one considers such models to be useful. Process industries such as fertilizers, cement, etc., characterised by economies of scale and relatively a small number of plants, are the industries which are usually the

ones whose development are guided and promoted by most governments of developing countries. Starting a few large industrial projects is one of the easiest thing that governments do to promote development. The planning models developed by Bank's research has the potential to improve the rationality of government decisions in developing these sectors.

However, this potential usefulness can be realised only if adequate " extension work " follows this Bank Research. We shall return to this later.

For Bank

Clearly, the studies related to specific areas must have been carried out in collaboration with the operations staff of the Regional Department concerned. The results should have been useful in guiding Bank's lending operations, provided they were available in time. (This I would like to explore more in talks with operations staff). But clearly lot of potential is there for such work to be useful in Bank's activities.

Part of the work on the fertilizer sector plan for East Africa might have been made irrelevant by the subsequent political development in East Africa and the break up of the economic union. Even then the non-cooperation solutions could still have been useful to the policy makers in the three countries.

The Bank may have a unique comparative advantage in carrying out studies such as the fertilizer study for East Africa that identify areas for regional cooperation and which facilitate the process of realizing such cooperation. As an authority which lends money to the various countries of a region, it may have access to data and policy makers in the various countries. Moreover, as a third party its analysis may be less suspect. On the other hand Bank should also be interested in promoting such cooperation that reduces need for credit in the region.

6

Development of Research Capacity in LDC

Though country specific sector studies should involve participation of local persons, the research in this area does not seem to have involved adequate number of persons from the LDC's and it seems doubtful if even in the countries in which case studies have been carried out, there would be any capability to either update and/or improve the particular sector study or to carry out a similar study for another sector.

Creating research capability is a time consuming task and learning by doing is an essential element of development of research skills. Significant participation of researchers from the LDCs seems to be inadequate. The compulsions of time

bound research programmes, the inconvenience of communication across large distances and the convenience of access to computers and xerox machines are understandable. And yet the outcome is regrettable. An effective programme has to be designed to facilitate participation of researchers from the LDCs.

7 Suggestions for Research in Future

(a) Consequences of Interdependence for Planning

The findings of the Korean Mechanical Engineering Industry study raise a number of fundamental questions regarding appropriate policy measures for developing such non-process industries.

If economies of scale and interdependence are important the industry development ought to be centrally planned. On the other hand, effective implimentation^{and} central planning of a sector characterised by a large number of products and processes is difficult to say the least. Moreover, the study also finds that project appraisal techniques may be inappropriate and may give evoneous results as it neglects interdependence. Yet it may be argued that the impact of neglecting interdependence on the sectors/^{total}value added is small and could be neglected; the conventional project appraisal techniques are appropriate.

Nonetheless, the issues are sufficiently important for policy purposes that further exploration is called for.

(b) Extension

In order to bring the research results and the methodology developed to practitioners, planners and policy makers in the LDCs considerable amount of "extension" work should be required.

Writing manuals accessible to technical persons, even when the manuals are written to be accessible ^{to} non-specialists, is only a beginning. ~~Even~~ Short training courses, would also be inadequate. What would be required is a case study for a sector, which is carried out with an active participation of a local team or better still, a local institution. It may even be desirable that the studies be carried out by a local team. Such studies may be co-ordinated by Bank staff who are familiar with such research work, and should certainly be financed by the Bank. Even when the success rate of such research is not high, it may be considered a necessary investment in building up research capability in LDCs. Such support should also include provision of computer hardware in the case of many LDCs. A sector study based on MIP models needs convenient and substantial access to fairly large computers if the study is to be completed in reasonable time.

(c) Appropriate Technology for Rural Industrial Development.

This set of studies has viewed the problems of development in a purely technical way. The objective has been to find least cost solutions. Institutional issues in the organisation of sectors, in the difficulties of implementation, or in the realm of selection of policy instruments have been beyond the scope of these studies.

And yet, with some additional effort, one could have made these studies throw some light on issues of considerable interest in LDCs. To what extent could one develop a decentralized industrial^{structure}? What are the costs of a rural based industrial development? What is the implication for employment and income generation of development based on small scale industries? These issues need to be explored in a systematic, technical and dispassionate way. The models developed to measure the benefits of largeness should be of use to measure the costs and benefits of smallness.

In evaluating the appropriateness or otherwise of technology not only relative factor scarcities should be taken care of but also the limitations of public policy in using certain instruments. Thus if income redistribution policies are politically hard to pursue, one might lay an emphasis on income generation in selecting "appropriate" techniques.

(d) Institutional issues in Implementation and Capacity Utilization

(Industrial programming)

Though the Bank research in this area has been useful and has indicated benefit in excess of costs, one may still ask if there are the most important issues that need to be researched.

The problem of implementation of projects and the efficiency with which even large industrial projects are operated in many LDCs are perhaps of much greater consequence than the selection of an optimum set of projects. To what extent delays in installation of capacity and inefficient use of installed capacity in large industrial projects are due to improper organisation or due to inappropriate objectives of the management or due to inexperience and inadequate skills - need to be examined. The potential gains of being able to design effective organisational and institutional frameworks are enormous. Moreover the Bank would have a comparative advantage in carrying out research in this area as it would be able to pull together experience from a number of countries with range of characteristics.

Annex - 1

List of Reports/Draft Reports Studied
Programming in the Manufacturing Sector

- 1 Balassa, Bela, and Stoutjesdijk, Ardy. "Economic Integration among Developing Countries". Journal of Common Market Studies 186 (September 1974). Also World Bank Reprint Series No.30 (Catalog No. XVI/428).
- 2 Kendrick David and Stoutjesdijk, Ardy. "The Planning of Industrial Investment Programs, A Methodology. Volume 1 in The Planning of Investment Programs (edited by Alexander Meeraus & Ardy Stoutjesdijk).
- 3 Choksi, Arneane M., Meeraus Alexander & Stoutjesdijk, Ardy. "The Planning of Investment Programs in the Fertilizer Industry", Volume 2 in The Planning of Investment Programs.
- 4 Working paper No.269
- 5 Westphal, L.E. and Ehee, Y.W. "The Allocative Consequences of Economies of Scale" IBRD Development Research Center, Discussion Papers No.18, January 1976. Paper presented at Econometric Society Session titled "Comparisons of Economic Structure", 1975 ASSA Meetings, December 1975. (Note: An expanded version is to be part of Part 4 of Stoutjesdijk-Westphal monograph (7).)
- 6 Westphal, L.E. "Methodology of Investment Planning in the Non-process Industries," February 1976. Paper presented at the CECD/IBRD Joint Seminar on Industrial Programming, Yugoslavia, March 1976. (Note: This is a draft chapter of Stoutjesdijk-Westphal monograph (7), for Part 4)
- 7 Stoutjesdijk, Ardy, and Westphal, Larry, (eds.) Industrial Investment Analysis under Increasing Returns. (Available chapters).

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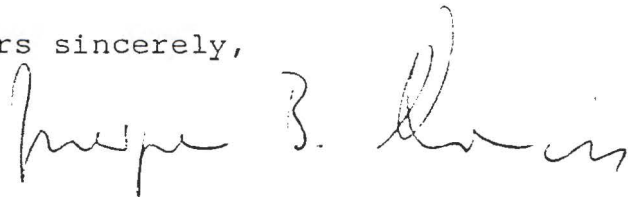
October 23, 1978

Dear friends:

Enclosed herewith is the first draft with a brief
evaluation of the research on incentive policies
and economic integration. Comments and suggestions
are highly welcome.

With best regards,

Yours sincerely,



Encl.

Evaluation of Bank Research on Industry and Trade:- Incentive Policies; Economic Integration -

1. The following discussion is based on a sample of five RPO and four non-RPO projects (as enumerated in the annex). Most of them dealt with the role of incentive systems, particularly trade policies, in economic development, from both a theoretical and an empirical standpoint. In view of the widespread belief among policy-makers in many developing countries (LDCs) that they cannot develop (i.e. industrialize) their economies without a direct interference in the market mechanism, the focus of these projects is of essential nature on the applied level. Not only could the findings, if accurately substantiated, provide the government officials of LDCs with guidelines for appraising the allocative, growth, distributional and balance-of-payments impact of the incentive regimes, and for reforming them where necessary. The studies could also strengthen the ability of the Bank's operational departments to assess both the economic feasibility of individual investment projects and the overall effects of the economic policies pursued in LDCs. Most of the studies under review meet these objectives.
2. The studies, which have been completed so far, show three distinct features: one is the high professional quality of the work. This has allowed various authors to already publish part of the research results in highly reputable journals. Second, in most of the cases the authors have made a substantial effort to improve the methodology for policy analysis and investment appraisal. The Bank's research has been insofar to a large extent creative rather than imitating. Third, the applied component of the research has been generally com-

OK
relevance

High quality

Research

plementary to the research in the field undertaken elsewhere (U.N. organizations, OECD, academic research institutions). There has been, however, some overlapping with regard to the LDCs chosen for analysis, which is perhaps a reflection of the uneven distribution of useful statistical data among LDCs.

3. From a policy analysis point of view, a major contribution is the project 670-01 on "Development Strategies in Semi-Industrial Countries" (DS), the countries being Argentina, Colombia, Israel, Korea, Singapore, and Taiwan. Argentina and Singapore are relatively new in the group of countries studied in this field, which is an important aspect in itself, because they represent the two extremes of economic policy shaping: highly interventionistic in one case, and strongly market-oriented in the other. The six country studies could no doubt also profit from prior methodological and empirical research done in and outside the Bank, and so did the comparative analysis of the experience of the Six. On the whole, the policy conclusions and recommendations rest upon firm theoretical foundations and a sound factual basis.
4. The methodological framework underlying this (and most other) project(s) is the effective protection concept. It has been extended to include export subsidies as well as credit and tax preferences, in addition to import tariffs and quotas. By doing this, fortunately of a reasonable level of sector disaggregation, the DS project has increased the knowledge inside and outside the Bank about the effects of incentive regimes. This study is a good example of how analytical tools, which have proven useful in earlier analyses, can be improved in theoretical and computational terms. It is particularly noteworthy that, unlike many other studies in this field, a

great effort has been made to collect comparative price data. Only price comparisons between domestic production and import values make it possible to calculate overall effective protection (i.e. including non-tariff measures) and to identify the degree of tariff redundancy which often exists.

5. That the analysis has been carried out in a partial equilibrium framework, does not reduce its practical relevance, provided the estimates are taken as rough orders of magnitude and their economic implications are interpreted in a comparative way rather than in isolation. General equilibrium models tend to have a rather limited explanatory power, let alone their high sensibility to the parameter specifications. What could have been wished from the user's point of view, however, is either that the country studies had been completed earlier or that the quantitative estimates had been more updated. The quantification of the incentive measures refer to the end-sixties. While this is fine to understand the past economic performance of the countries under study, most sample countries have changed these measures, especially those related to the foreign sector, significantly since then. By not including these changes in the analysis, the DS study has missed the chance to make the results even more significant. Of course, we are aware of the practical difficulties in maintaining up-to-date a comprehensive analysis as this one. On the other hand, the Bank may be, as compared to academic institutions, in a favourable position to make such an effort; it has the staff and it can collect the required information through the economic missions which regularly review the LDCs.
6. The message of the research on incentive schemes is that whenever LDCs want to industrialize their economies and think that this objective requires government assistance, they should

promote rather than protect industries. This implies, for instance, that import substitution should and could be achieved without discriminating against exports, particularly non-traditional manufactured exports, as it is so often the case in reality. Neutrality between production for domestic sales and for exports is in the interest of LDCs because, as the DS research shows, it will result in faster growth, more employment creation and higher levels of efficiency than when industrialization is aided only in relation to the home market. These are conclusions which can be used immediately by the operational staff. In fact, we were told that this work has been found quite helpful, particularly so by the country economists in the Regional Departments and by the IDF and IFC staff, whereas scepticism with regard to the usefulness of this type of research prevails within the IPD staff. We strongly feel that one of the objectives identified for the Bank's Research Program - "to improve the Bank's capacity to give policy advice to its members" - has been accomplished by this project.

7. It should also be noted that researchers from LDCs have been involved in the DS project to a large extent. This has created some problems on their own, in terms of time schedules as well as diversity in contents. But it also has contributed to stimulate policy-oriented research in the countries themselves which otherwise would not have been undertaken and, more important for Bank's purpose, it has stimulated policy discussion in these countries. Argentina is one case in point. The quantification, for the first time, of effective rates of protection (taking 1969 as the base year) has influenced significantly the current thinking of the government in the direction of decreasing the high average level of protection, of narrowing the dispersion of the effective rates of protection and of

encouraging, by means of financial incentives, those industries which have, or could develop, international competitiveness. Furthermore, one of the authors of the chapter on Argentina of the DS project has recently followed up the earlier findings, taking 1977 as the year for calculating effective rates of protection. We have also found for Colombia and Israel a growing amount of research resources devoted to the empirical analysis of trade policy issues. Thus, the DS project has contributed, directly and indirectly, to promote applied research in Bank's member countries, which is also a central objective of the Research Program.

8. Studies of this type are not only worthwhile because they may assist in shaping more rational incentive policies in the countries studied. They are also important for the lessons they can provide for many other LDCs at lower stages of economic development. As one cannot take for granted, however, that these externalities will be automatically internalized by those other countries, it should be helpful to extent the regional coverage in the research on incentives. The project on Bangladesh (RPO 671-75) which is now underway, and the one on selected West African countries (RPO 670-87), which is near to completion, are a useful extention of Bank's research in this field. Other (comparative) country studies on incentive schemes could follow. From a purely academic point of view, this may involve diminishing returns, and the DPS staff is well aware of it. One may also argue that such additional studies need not be undertaken in the Bank. But yet, many LDCs still favour policies of import substitution, maintain high levels of effective protection and prefer quantitative interventions over pricing incentives. And the Bank will presumably continue lending to them. A regular analysis of the incentive policies pursued by member countries could

increase the advisory capacity of the operational offices. Moreover, if incentive schemes are to be changed in order to make development policies in LDCs more effective in the medium and long run, the Bank has the authority to explain this forcefully to national governments, whereas individual researchers of academic institutions, including those of the LDCs themselves, frequently lack this influence. This is particularly important with regard to the question of how a transition to a more efficient incentive scheme could be made in practice. The answer to this question still requires a good amount of research anyway.

9. The internal needs of the Bank relating to incentive policies do not exhaust themselves with country reviews. As a lending institution, it has also a great interest in knowing whether the economic viability of individual investment projects financed by the Bank depends on protection. It also has to possess appropriate guidelines for appraising the significance of a protection element in such projects. In this respect, the non-RPO study on "Industrial Protection in IFC Projects", assigned to a research consultant, could be useful.
10. Basically the same conceptual framework as in the DS project was used to examine empirically the relationship between levels of protection afforded to nine individual IFC projects and their economic efficiency. But it is shown that, contrary to country analyses, conventional measures of effective rates of protection only have a limited value for making decisions at the project level. The main reason is that the judgement about the economic viability of a new investment also depends on future changes of protection (and other incentives) which can be expected to take place over the life of the project. This is an important finding to be taken into account by all

Bank staff members involving in investment project appraisal. While this is recognized in the corresponding offices (including the IFC itself), we have also to admit that, from an operational point of view, both Bank's researchers and officers would face serious data problems. The DS project referred to above shows how difficult it is to obtain adequate data for making price comparisons for past periods. It might prove even more difficult to make such comparisons for a period of years in the future, as required ideally in solid investment appraisal at the project level. On the other hand, this is a good example of research, including methodological research, which, if feasible at all, can probably be undertaken only in an institution like the Bank with a reasonable chance of success. Researchers in academic institutions frequently are reluctant in embarking on large data collection activities which are regarded as not adding much to professional reputation. And they may not work hard enough on the methodology of project appraisal because they do not perceive this issue as crucial as researchers closely connected with an operational staff might do. In fact, literature on project appraisal shows that pioneering work on investment appraisal has been done by researchers within international organizations involved in this business.

11. The project on "Promotion of Non-traditional Exports" (RPO 671-10) is, by comparison, more descriptive. Its significance for policy tasks is, however, great. It is shown that economic policies of LDCs have a substantial impact on the evolution of new manufactured exports, and in this regard this project has complemented the DS one. It is an example of how Bank's research findings relating to incentive policies can be successfully diffused, among both the Bank's operational staff and local researchers as well as government officials in LDCs.

12. All things considered, we feel that Bank's research for appraising incentive policies should not be discontinued, though shifted in emphasis if required by the Bank's needs. While there may be studies which do not provide the operational staff with ready-made solutions to pressing problems, the overall research work in this field can contribute, and in fact has contributed in the past, to sensitize the country economists in the regional offices. Particularly, this work helps them to fully understand the efficiency problem at both the macro and micro-level and to explain its implications to LDC governments. As the research in this field places high demands on the data, the Bank is an appropriate place for undertaking it, given its experience, as well as the fact that researchers from academic institutions do not have a comparable access to all information required. Furthermore, while it is always difficult to sell a research result to a government, the Bank might be - given its leverage - in a good position to induce LDC governments to draw as many benefits as possible from the flow of thinking coming from its research units. That research on incentive policies and economic integration is also undertaken by both academic research institutions and other international organizations should not be considered as an argument for not doing it at the Bank, mainly for two reasons: first, research inside and outside the Bank is complementary to a significant extent; the Bank could exploit its comparative advantage even more by doing comparative studies. Second, and more fundamentally, advances in policy-oriented research, including its methodological foundations, are normally greater, the greater competition among researchers is.

RESEARCH PROJECTS ON INDUSTRIAL DEVELOPMENT
AND TRADE

① Incentive Policies; Economic Integration

Juergen B. Donges
Jae-Ik Kim

<u>Project No.</u>	<u>Project Title</u>	<u>Responsibility</u>	<u>Date of Approval</u>	<u>Date of Completion</u>	<u>Date of Evaluation</u>
0-01	Development Strategies in Semi-Industrial Countries	B. Balassa		July 78	
0-22	Economies of Scale and Tariff Levels	G. Pursell	Nov. 71	unknown	
0-87	Industrial Policies and Economic Integration in West Africa	B. Balassa	June 73	Dec. 78	
1-10	Promotion of non-Traditional Exports	D. Greene	June 74	Nov. 76	
1-75	International Trade Policy for the Development of Bangladesh	C. Jayarajah	March 78	Nov. 79	

Balassa, Bela, "Tariffs and Trade Policy in the Andean Common Market", Journal of Common Market Studies, December 1973, pp. 176-195.

_____, "Types of Economic Integration", in Economic Integration, Worldwide, Regional Sectoral.

_____, Policy Reform in Developing Countries, Oxford, Pergamon Press, 1977.

Singer, S., Industrial Protection in IFC Projects, December 30, 1975.

Universidade de Brasilia

Balassa
Copy for me
11/7/78

Draft.

For Circulation Within the
Industry and Trade Panel only.

COMPARATIVE ADVANTAGE; TRADE PATTERNS; ECONOMIC GROWTH

Edmar L. Bacha
October 1978

There are six RPO projects under this heading plus two non-RPO papers by Bela Balassa. There follows a brief description of title, content, organization and present status of the research projects. A summary evaluation closes each sub-section. At the end of the paper a more general evaluation is provided.

670-07: International Model

This project proposes to construct an international programming model for the world economy, to study problems of interest to developing countries, such as the consequences of changes in tariff rates, varying growth rates of developed countries, and oil price increases. There are sub-models for each of the three main developing regions (Latin-America, Asia and Africa), for the developed world and for the oil producers. The model is based on the principles of general equilibrium theory, and makes extensive use of activity analysis procedures.

The model was contracted out in September 1972, with the work being carried out by Victor Ginsburgh and Jean Waelbrock, both as outside consultants (Waelbrock worked for a while at the Bank). The project is supervised by Bela Balassa. The latest completion data is set for the Autumn of 1978.

The reviewer had access to two papers of a methodological nature, the first describing the computational algorithm and the second presenting the "General Equilibrium Model of World Trade". The accomplishments of these papers are not negligible. According to the authors, "this seems to be the first successful computation of a general equilibrium for a large realistic model". The use of a GE model also "forces the model builder to incorporate only theoretically

significant - constraints, avoiding the use of the crude heuristics which play such a large role in development planning models".

But, once the theoreticians have decided to come down to the real world, they must accept its crude rule that the taste of the pudding is in the eating. From this perspective, a judgement on the project must be suspended until its empirical findings are published and its results compared with those of less sophisticated world models.

670-19: Expansion in manufacturing for exports in developing countries

This project proposes to analyze which industries are moving out of industrialized countries because of high wages and labor shortages into low-wage developing countries. It intends to survey export industries that have been transferred to Singapore, Taiwan, Korea (and possibly Mexico), as well as to sample international firms in Japan, the U.S., and Europe, on their outlook for further shifts of export manufacturing operations to LDCs.

The objective is to provide developing countries with information for planning export industries. Knowledge should be added on (a) segments of industry that have already moved to developing countries, (b) manpower and ancillary industrial requirements, (c) dependence on foreign partners for technology and marketing, and (d) outlook for access to foreign markets in Japan, the U.S., and Europe.

Jack Baranson was the staff member responsible for the project, the first contract for which was drawn late in 1971. Two papers were written by outside consultants. Terutono Osawa wrote one piece on the migration of Japanese industries to Taiwan and South Korea, and Y.S. Chang wrote a paper on the offshore activities of the Japanese electronics industry. The project was cut short by Baranson's departure from the Bank.

An internal evaluation report is available on the two papers, concluding that while they produced some useful information, they are not of good quality. Both papers are in fact very descriptive. But Mr. Osawa at least delivers his message in a readable format, while Mr. Chang's paper is a poorly written dossier, with interest only to market research analysts in the electronics industry. The project was a failure from its inception. In view of its poor design, most probably

It would lead nowhere even if Jack Baranson had stayed in the Bank.

670-79: Economic Development of East and Southeast Asia

As the previous project, the objective of this one is to identify and analyze the industries most likely to find it advantageous to shift all or part of their processing activities from Japan to East and Southeast Asian countries.

The study was divided into two parts. The first was macroeconomic in nature, involving projections of the Japanese economy and of the structure of trade between Japan and other main regions through 1985. In the second part, selected industries, such as textiles, electrical machinery, steel and miscellaneous manufactures, were studied in more detail to identify their changing comparative advantage within the Japanese economy.

The project was supervised by Parvez Hasan, and carried out by the staff of the International Development Center of Japan. It lasted from June 1973 to August 1974, when a draft final report was completed.

This draft was not made available to the reviewer. However, a completion report by Mr. Hasan says that the draft was disappointing because it did not provide a comprehensive or cohesive view of Japan's economic relationship with East and Southeast Asia in the coming decade, which was the main objective of the study. Apparently, the Bank requested a revised version of the paper, but the I.D.C.J. was unable to provide it.

This project, although producing some useful information, also can be considered a failure. Much was promised but only a few projection exercises without much interest were delivered.

671-05: Patterns of Industrial Development

As far as this reviewer could understand, the purpose of this project is to provide a consistent data set for the following two projects on sources of industrial growth. More specifically, the objective is the organization of macroeconomic industry and trade data banks at the World Bank. The economic analysis is limited to updating the Chenery-Taylor regressions on patterns of industrial

growth, with some marginal methodological improvements.

The project was started in early 1976 under the responsibility of Vinod Prakash of the Development Economics Department. Completion was expected for October 1978.

This reader had access to two papers by Vinod Prakash, with the second, on the measurement of industrial exports, being an improved version of part of the first one, on statistical indicators of industrial development. Alternative definitions of industrial exports, commonly used by U.N. agencies and economic researchers, are tested. The conclusion is that these definitions are not interchangeable as commonly believed. Hence, there is an urgent need for a standard definition of industrial exports if the data base for country comparative studies is to be improved. Adoption by all countries of SITC (Rev.2) would permit such uniformization.

This project seems most useful, not only for the sources of growth studies, but for the World Bank work on industry and trade more generally. Its conclusions should be discussed with the operations staff of the Bank, for apparently some statistical pitfalls are related to specific country procedures which country specialists may clarify. For example, the discrepancy pointed out by Prakash in industrial value added as between the National Accounts and the Census in Brazil is only apparent. The problem is that the Brazilian Census Bureau uses the concept of "value of industrial production" which is an intermediate concept between value of production and value added.

Users Guides to the data bank have been written and it would be interesting to learn if the operations staff of the Bank are effectively using these files in their country and sector analyses.

671-32 : A Comparative Study of the Sources of Industrial Growth and Structural Change

This project is designed to contribute to an empirically based theory of industrialization, that Hollis Chenery and associates have been building for the last 19 years.

For each of eight countries, the sources of industrial growth and structural change are determined using input-output data. Determination of these sources start from the accounting identity:

$$X_{it} = D_{it} + W_{it} + E_{it} - M_{it} \quad (1)$$

where: X , domestic production; D , domestic final demand; W , domestic intermediate demand; E , exports; i , sector; t , year.

Observed changes in the X_{it} 's through time are attributed to changes in each of the "sources" on the RHS, and "growth contributions" are computed for each of these demand components.

Deviations of the X_{it} 's from a proportional expansion path (where the factor of proportionality is the growth factor of domestic income or aggregate value added) are also calculated. Such deviations from homogeneous growth are designed as "structural change". Application of formulae derived from (1) permits the calculation of the "contributions to structural change" of each of the demand components in the RHS of the equation.

Emphasis of the analysis is placed on the terms E_{it} and M_{it} . The purpose is an evaluation of import substitution and export promotion strategies from a long-term, sector-by-sector perspective, stressing questions of sequencing as well as problems of transition to a flexible, viable industrial structure.

Parallel to the country studies, simulation exercises are developed to assess the relative importance of universal and country specific influences in industrial structure and growth. "Normal" patterns for the relative contributions of each demand component to industrial growth and structural change are estimated from cross-country regressions. These "normal" or universal patterns are assumed to vary with per capita income, population size, and factor endowment of the country. Deviations from "normality" are country specific and hopefully may be explained by the development strategy and associated government policies of the country under consideration.

The project started in early 1976 and completion is expected for late 1978. People responsible for the project include Sherman Robinson, Yuji Kubo, Hollis Chenery, Larry Westphal and Moyses Syrquin.

Only part of one country study (on Norway, by Bela Balassa) was made available to the reviewer. Three other papers were read, on the cross-country simulation study, authored by Chenery and Syrquin.

This project may be considered as the end-product of a formidable enterprise to establish an empirically based paradigm for modern industrial growth. It demonstrates once again the power that simple ideas may have for the development of economic knowledge. Chenery's

seminal 1960 paper consisted of little more than the numerical estimation of an accounting identity. However, as his papers for the Nobel Symposium and for the Tokyo IEA Congress (the later co-authored by Syrquin) demonstrate, such simple exercises within an 18-year period allowed the organization of a most impressive body of knowledge regarding the nature of modern industrial growth.

It is disputable whether or not this project will achieve its ambitious initial aim, to develop an analytical framework to articulate the connections between individual policy instruments, changes in industrial structure, and economic performance. We must wait for the project final report to see how close Chenery and associates have come towards this goal. However, the papers reviewed are indicative of the high quality of the work done, including the important methodological contributions by Balassa and Syrquin to the measure of import substitution.

671-79 : Sources of Growth and Productivity Change

This project is a follow-on to the previous one (RPO 671-32) with specific focus on Korea, Turkey and Yugoslavia.

Three levels of study are contemplated: (1) linking the demand oriented analysis of the previous project to the study of sources of growth from the supply side; (2) constructing price-endogenous programming models for the three countries, aiming at a "consistent, comparable and rigorous" analysis of different policy packages, and (3) complementing the previous analysis with a micro-focussed study of two common industrial sectors in the three countries.

The project started last summer and completion is expected for late 1980. Sherman Robinson directs this research project, with Kemal Dervis, Larry Westphal and Yuji Kubo being involved in planning or carrying on the work.

The reviewer had access to the research proposal, that contains two appendices, one on the Turkey model and the other on the decomposition of sources of growth according to factor inputs and technical change.

The study of sources of growth from the supply side seems harmless enough. It is a useful way of organizing relevant economic data, which the demand-oriented view of the previous project leaves relatively untouched. However, after the Cambridge controversy on

capital theory and the methodological and empirical criticisms of this type of work by Frank Fisher and Griliches and Jorgenson, one perhaps should approach the study of production function decomposition with more modesty than is apparent in Appendix A to the research proposal.

The micro-focussed analysis of two sub-sectors seems to be the most promising part of the research. Unfortunately, the proposal is somewhat opaque not only on the choice of the sectors but also on the methodological approach to be adopted.

The price-endogenous multi-sector programming models are presented in the proposal as a superior way of looking at industrialization processes. They would overcome the partiality of the "sources of growth" studies, and provide an integrated approach to the problem of industrial expansion. Experience says differently. Accumulated knowledge on the development of such models indicate that their main merit is as organizing devices for the collection of relevant data for economic policy making. The empirical results that they produce, if they make sense (which is not often) can as well be obtained much more inexpensively from simple macroeconomic formulations.

In view of this experience, the reviewer feels that it is wrong to say that multi-sector models are a step ahead of demand oriented sources of growth studies. Theory is simply not firm enough to allow a reasonable complete specification of the most relevant socio-economic interactions in the process of industrial growth. It seems more appropriate to accept with scientific modesty the enormous size of our ignorance, use simple tools and proceed bit by bit. The answer lies not in implementing programming models, but in devising simple ways of approaching critical socio-economic relations, from the empirical exploration of which additional knowledge may be generated.

"Let one thousand flowers flourish", advised Chairman Mao. For the sake of progress in experimental economics, it seems useful to continue attempting to implement empirically large GE models. But, in this case, let us follow Ginsburgh and Waelbroeck's track in RPO 670-07 and rigorously incorporate the full flavor of advanced general equilibrium theory in these models.

NON-RPO : Two papers by Bela Balassa

The papers by Bela Balassa consist of empirical tests of important predictions of orthodox trade theory. Trade barriers are presumed to reduce international trade flows and affect the international location of production. This topic is analyzed empirically in Balassa's contribution to the Nobel Symposium.

Balassa's paper to the Tokyo IEA Congress tests the prediction that comparative advantage in trade in manufactures, as revealed by relative export shares, is affected by the capital labor ratio of trading countries.

In devising his tests, Balassa demonstrates once again his justly praised ingenuity to implement empirically abstract economic theories. His results are most comforting to orthodox trade theory.

This reader's only complaint relates to Balassa's propensity to carry his findings perhaps a bit too far. For example, consider his assertion on p.24 of the IEA paper: "The empirical estimates show that intercountry differences in the structure of exports are in large part explained by differences in physical and human capital endowments". First, alternative theories were not tested; the empirical analysis refers to the statistical significance of the relevant coefficients for the Heckscher-Ohlin hypothesis, investigated by means of ordinary least squares. Second, the coefficients of determination of the regressions explaining export shares are not published. Hence, the author can say that his results are statistically significant, but not that they explain a large part of the differences in export structures.

The first part of the document
 discusses the general principles
 of the system and its
 objectives. It is intended to
 provide a clear understanding
 of the scope and purpose of
 the project. The following
 sections will describe the
 various components and
 their interactions.

The second part of the document
 details the specific
 implementation of the system.
 This includes a description
 of the hardware and software
 used, as well as the
 configuration and testing
 procedures.

The third part of the document
 discusses the results of the
 experiments and the
 conclusions drawn from them.
 It also includes a discussion
 of the limitations of the
 study and suggestions for
 future work.

General remarks

Seven projects were analyzed. One, consisting of two non-RPO papers by Balassa, was completed successfully. Two others, on the migration of industries from Japan to South East Asia, were clear failures. A fourth one, a general equilibrium model of international trade, has not yet produced empirical results (but its methodological contributions looks most impressive to a non-specialist like the reviewer). The three others are on sources of industrial growth and structural change: one is designed to organized a data bank on relevant industry and trade magnitudes; a second has only recently started; and a third is about to conclude - but its eight country studies have not yet been made available.

Excepting the two failures, all the material that was reviewed is of the best quality that one can find anywhere in the profession. One may argue with methodologies or implicit ideologies; competence is undisputable.

There is one important lesson to be learned from the failures. The WB research group does not know how to deal with consultants outside the Big Family. Here, much perhaps can be learned from the experience of Ford Foundation with its system of open world competitions. Besides hiring outside consultants to work on projects formulated by the staff, the WB should design topics of general interest in the areas of industry and trade. Then, independently of its staff, should open an international competition for projects in the area, big or small. There should be a guarantee that these international competitions, with a reasonable amount of money and even a grant element involved, would be opened year after year. Given this guarantee, I envisage the possibility of creating in different LDCs nuclei of competence in economic research, which could contribute significantly to the expansion of research capacity in these countries. The Bank should be prepared to accept proposals with a "local tate", for there lies the immediate concern of research groups in LDCs. A global perspective is the responsibility of the WB staff, but this should not be imposed on LDCs researchers. The art of designing the world competitions would lie on the compatibilization of the interests and competence of LDCs researchers on local topics with the WB need for a universal outlook.

Yale University *New Haven, Connecticut 06520*

INSTITUTION FOR SOCIAL AND POLICY STUDIES

16A Yale Station (111 Prospect Street)

October 24, 1978

670-23 ✓
-25 ✓
-54 ✓
-95 ✓
671-51 ✓
-177)

Suman Bery
The World Bank
1818 H Street
Room F 1233
Washington, D.C. 20433

Dear Suman,

Enclosed are eight copies of my preliminary evaluation of the projects I was assigned. I appreciate your willingness to get the copies to my fellow panel members.

Sincerely,

Richard R. Nelson
Richard R. Nelson
Professor of Economics

RRN/rg
Enclosures

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Yale University
Inter-Office Correspondence

Date: October 23, 1978

To: Assar Lindbeck, Kirit Parikh, and the Panel on Research on Industrial Development and Trade

From: Richard Nelson

Subject: Evaluation of World Bank projects on capital utilization, capital labor substitution, and technological change.

I. Remarks on my interpretation of my assignment.

There are at least two different assignment lists. Therefore I am not fully sure as to the projects for which I have primary reviewing responsibility. However, because the particular assignment made sense, I have taken it upon myself to review the set of projects under the above heading: project numbers 670-23, 670-25, 670-54, 670-95, 671-51. I also am not certain as to the appropriate form of my review, recognizing its preliminary stage. It seems to me that, to facilitate discussion among the panel, a rather informal presentation is warranted. This I present below.

II. Project Review

Reading through the project proposals and the papers written under the projects enables one to trace the development of thinking at the Bank about production function related phenomena. One can see how work under one project generated insight and puzzles which influenced work under a subsequent project. The overall impression is that of a cumulative research program that is contributing significantly not only to thinking at the Bank about industrialization problems, but which is influencing thinking within the development economics community more broadly.

Three of the projects (really two because 670-25, and 670-95 are basically on the same topic) now are closed down, and have received earlier reviews. The Bank research on industrial capacity utilization (670-25 and 670-95) was path breaking and important. The objective was to assess carefully and empirically casual impressions that despite the scarcity of capital in less developed countries, capital was not being used very intensively, and if that proposition held up, to contribute to understanding of the phenomena. The endeavor posed methodological, empirical, and theoretical problems: by in large they were adequately resolved. This work now is widely recognized as having made a significant contribution to understanding of patterns and problems of economic development.

The project on employment and capital labor substitution (670-54), now also completed, was more of a mixed bag. It was related to the work on capacity utilization in that this project also was concerned with examining ways in which capital could be used more frugally. The research under the project did not have the coherence of work under the capital utilization project, and by and large the output of the project has had nowhere near the impact. However, the questions considered under the project still are of prime importance to the Bank, and their exploration continues under another project, 670-23. ?

CONFIDENTIAL

MEMORANDUM FOR THE DIRECTOR, FBI
SUBJECT: [Illegible]

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The two major projects currently underway at the Bank are the above mentioned 670-23, "Scope for Capital - Labor Substitution in the Mechanical Engineering Industry", and 671-51, "Appropriate Industrial Technology". The former project has been underway for much longer than the latter, more resources have been invested in it, and the output is much more impressive. The latter project is just beginning, and while it is too early to judge, it appears promising.

The research tack taken by the current project on capital labor substitution is to explore in microeconomic detail the nature of the production processes involved in particular areas of manufacturing, and to examine the range of capital - labor substitution available in each. The project has had to face methodological, empirical, and theoretical questions of considerable difficulty. The struggle has been valiant, and the project has provided an analyses of production processes and the range of choice that is more detailed and more sophisticated than any other work I know probing similar questions. Other studies under the project have explored the choices of technique actually made by firms, and the market and other institutional factors which have influenced those choices (which in a number of cases have been much more capital intensive than would make sense from an economists point of view). The project appears to be having considerable impact within the Bank, and while academics tend to lag in the development of their appreciation of work of this sort, the importance of the project is beginning to be recognized by the academic development economics community. 670-23
?

As mentioned above, the project on Appropriate Industrial Technology is just beginning. The project has two thrusts: measuring the gains to less developed countries from adopting more appropriate technologies, and examining the capital goods sector in less developed countries as a possible major determinant of the availability of appropriate technologies. A few illustrative numbers has been put together on the first issue, and some literature review, casual empiricism, and thought have been directed at the second. The work thus far is promising but it is too early to tell how successful the endeavor will be. Projects 671-51, and 670-23 compliment and support each other. The relevance to good policy making of better understanding of choice, or (more sharply) understanding why more capital using techniques are chosen when less capital using ones are available, is obvious. The more recent reports on both projects reveal the authors growing concern about innovation, as contrasted with choice among "obvious and available" alternatives and, as mentioned above, a complimentary interest in institutional structure. I shall comment on these intellectual developments later.

I already have made comments on most of the points we are to try to assess, but let me rundown the check list. 1) What has been the contribution to knowledge - direct and indirect? Very considerable. The projects score high in this dimension. 2) Has there been an attempt to survey existing knowledge, and has the project avoided duplicating work that was already done elsewhere? Yes, on both counts. Several of the projects commissioned literature review papers early in their careers. Most of the papers written under the projects reveal, through their ~~fiting~~ citing of the literature, a good awareness of what was going on. And, as remarked above, far from duplicating other work, several of the projects were path breaking and unique. 3) What has been the relevance of the work to a) bank operations b) extending knowledge of development process c) meeting needs of LDC policy makers? From what I am able to understand, the research has significantly influenced thinking at the Bank regarding how to evaluate industrial investment projects, and the institutional environments and constraints that facilitate efficient development. The projects have

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contributed significantly to understanding of developmental processes. I do not know how the work has affected policy making in the less developed countries, but I would think that potentially the work could have a real impact.

4) Was any real basic research attempted? Successfully? The answer is a strong yes on both counts. 5) Has the research output been used by operating people at the Bank? This question seems to me to duplicate 3a. My understanding is that it has influenced thinking in the operating departments. 6) What type of involvement has there been by researchers in less developed countries? At least two of the projects certainly have involved researchers in research institutions in less developed countries. Two of the other projects were in effect, one person shows (by economists with a base in the U.S.). 7) What is the mix of insiders and outsiders doing research? I find it hard to pin down what "insiders" and "outsiders" might mean. I remarked above about the use under the projects of researchers from less developed countries. In the United States, both full time bank members and consultants have been used. It would appear that two projects, 670-25, and 670-54, largely involved a contract with outsiders with little direct connection with researchers at the Bank. The work under these projects seems a bit distant from the research at the Bank. In the more successful projects, bank employees or more or less full time consultants were involved importantly or dominantly. 8) How can one characterize the allocation of resources in various dimensions? As I suggested above, the projects have tended to involve a mix of methodological, empirical, and theoretical research. Some of the work has been quite basic, other studies have been really quite close to operating policy issues. 9) How could the research allocation be explained? I suspect that this question was meant to apply to project areas where the allocation has been unsatisfactory. In this case, the allocation seems to me to have been quite satisfactory. 10) Any recommendations? Mainly I have applause rather than suggestions for change. However, I would like to call attention to three related topics of interest that appear to be arising in the research: industrial innovation, entrepreneurship, and the institutional structure which molds and constrains not only incentives but also information flows.

III. Where should they go from here?

The bank's research under the current two projects reported above increasingly is highlighting that effective capital labor substitution, and the adoption of appropriate technology more generally, is not adequately described in terms of picking things off the shelf. At the least adaptation, and in many cases innovation is involved in effective choice of technique. Recognition of the importance of adaptation and innovation calls attention to the entrepreneurial dimension in business leadership, and to the institutional structures that encourage, support, constrain, and deter entrepreneurship.

I detect an ambivalence on the part of the Bank regarding putting their research commitments where their own research findings indicate they ought to be put. The tradition of economic research at the Bank has stressed neat, quantitative, formally specified models; there has been a reluctance to delve into areas of economic research where precise models and econometric technique can not serve as the primary tools. Issues of innovation, entrepreneurship, and institutional structure tend to be viewed as "unresearchable" or at least not amenable to rigorous research. But I propose that the logic of the Bank's own past research endeavors has led it inexorably to a requirement to engage in this kind of research. And the methodological situation is not as bad as some people in the Bank may think. Over the last decade both the interest and

the rigor of research on industrial organization has increased greatly. A considerable body of good and rigorous research on the economics of technical change has evolved. However, for the most part, research in these fields has been focused on issues and phenomena in advanced countries, not developing ones. I think the Bank should accept the obvious challenge.

RRN/rg