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P. P. KUCZYNSKI

Research Committee - F/Y 74 Research Proposals

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Pedro-Pablo Kuczynski Files: Research proposals 02

Review number

Project number

WORLD BANK RESEARCH PROGRAM
Project Proposal

Date of Submission

March 21, 1973

PART I. PROJECT IDENTIFICATION

1. Title: Capital Utilization in Manufacturing in Developing Countries.

2. Department Responsible:

D.E.D.

3. Staff Member Responsible:

Helen Hughes

4. No. of Contracts: 9

5. Total Estimated Cost: \$162,881

132,880

6. Total Estimated Staff Time:

Professional: 18 man months

Special Services: 3 man months

Part II. COORDINATION AND APPROVAL

. Interdepartmental Coordination:

Department	Name & Signature	Support Project	Do not Support Project - Comments Submitted
Industrial Projects, DFC, IFC	<i>Fredrick Shoro</i>	✓	
Asia	<i>Farver Hasan</i>	✓	
Western Africa	<i>Barentelvis</i>	✓	→ please see the Hardyman's note
EMENA	<i>Edson</i>	✓ subject to <i>highly funds</i>	

. Approval:

Mike Hughes

Division Chief

Richard Shuman

Department Director

- Methodological problems
- Regression analysis will not lead to policies
- Interviewing 800 firms in 4 countries difficult.

PART III. IMPLEMENTATION

1. Date Work to Start: July 1973
2. Date First Draft Expected: Spring 1974
3. Final Report Due: Autumn 1975
4. Implementation Method:
- a. Bank Staff. ☒
 - b. Individual Consultants. ☒
 - c. LDC Contractor/Institute. ☒
 - d. Developed Country Contractor/Institute. ☐
 - e. Seminar ☒

5. Reports Expected in Current Fiscal Year:

None

PART IV. FINANCIAL AND STAFF DATA

1. Dollar Costs (Estimated Disbursements by Fiscal Year):

	FY 74	FY 75	FY 76	After FY	Total
a. Contractual	53,388	41,498	11,825		106,711
b. Travel	24,795	19,230	2,945		46,970
c. Data Processing	4,000	3,000	2,100		9,200
Total	82,183	63,828	16,870		162,881

- 2 Staff Requirements (man-months):

	FY 74	FY 75	FY 76	After FY	Total
a. Professional	39.5	29.5	6		75
b. Special Services	18	18			36

PART V. PROJECT SUMMARY
(Use Additional Sheets if Necessary)

1. Research Objectives:

Support basis for Bank Policy ☒Support for Bank Operation in Projects or Sectors ☒Support for Country Economic Work ☒Increase Knowledge of the Basic Development Process ☒Develop Institutional Capacity for Research in LDC's ☒

2. Description:

a. Problem

b. Method

c. Coordination

d. Implication for Bank Policy and Operations

e. Project Organization

See attached proposal.

A Research Proposal for a Study of Capital Utilization
in Manufacturing in Developing Countries

- I. Introduction and Summary
- II. The Theoretical Framework
- III. Methodology
- IV. Organization
- V. Benefits
- VI. Costs
- VII. Budget
- VIII. Bibliography

A Research Proposal for a Study of Capital Utilization in Manufacturing in Developing Countries

I. Introduction and Summary

1. Low capital utilization in manufacturing is paradoxical in developing countries where social labor costs are low and capital is relatively scarce. Recent studies have begun to make the extent of capital underutilization impressively clear. It has been estimated that in Pakistan and Korea the existing utilization of capital stock in manufacturing is only 15 percent, while in Colombia it is only about 30 percent on a three shift, 7 day week basis. While a 100 percent utilization level would of course be unrealistic, there is ample room for increases in the utilization of existing and new capital stock to substantially increase output and employment with given investment outlays. Successful efforts to understand and hence improve the utilization of capital in developing countries could increase the productivity of industry, and substantially lower the average and marginal capital labor ratios, bringing the use of resources into a better relationship with social factor prices and hence improve national productivity. In sum, the objective of this study is to induce an increase in capital utilization in manufacturing in developing countries comparable to that which took place in the United States during World War II.

2. Recent economic analysis suggests that a rigorous study of capital utilization in developing countries could now have a considerable payoff in guiding development policies toward an increase in capital utilization and employment. First, much of the confusion in conflicting and uncertain objectives and concepts of "excess capacity", "capacity utilization" and "capital utilization" has been resolved in recent studies, so that it is now possible to collect data that are coherent and comparable between industries and between countries. Second, recent contributions to formal production theory have shown that low capital utilization can be economically rational, that is, capital is installed with the intention that it will be idle much of the time, to maximize profits. The "optimal idleness of capital" is usually an economic and not an engineering decision; it is influenced by economic variables and is thus amenable to changes in economic policies.

3. It is suggested that an empirical study of capital utilization be undertaken in five or six countries to serve three closely related objectives:

- (a) The collection of data of the typical distribution of capital utilization and idleness among plants in developing countries; identifying those industries where capital

utilization is relatively high and those where it is low in the sample countries, what represents a "normal" level of utilization; and how these differ between developing and advanced countries. Such information is not available in, and cannot be derived from, existing statistics.

- (b) The analysis of the causes of idle capital. Many explanations exist. Some reasons for idle capital, for example demand deficiency, are familiar; some, such as planned idleness due to input price rhythms, such as wage differences between day and night shifts have only recently been identified. In general, the various explanations are complementary; a single cause rarely accounts for all observed capital idleness. It is important to obtain a sense of the relative influence of the various causes because alternative causes have very different implications for corrective policies.
- (c) The evolution of policies for increasing capital utilization, and hence for higher capital productivity, higher employment per unit of capital invested, increased foreign exchange earnings, a more rapid rate of economic growth and better income distribution.

4. The objective of the study is to devise policies which would simultaneously increase the utilization of capital, employment and output. Such policies would moreover, not second-guess firms' managements, attempting to impose on them a "superior" external wisdom. Instead they would induce managements to increase utilization, output and employment by making it profitable to do so.

II. The Theoretical Framework

5. Studies of capital utilization have been dominated by advanced countries' concern with business fluctuations and short term national income forecasting, that is by Keynesian type idle capital. [14]. Most discussions and all regularly published statistical measures of "capacity" utilization in the U.S. and U.K. deal with fluctuations of actual utilization from desired levels, but they have not defined these desired levels in absolute terms. In fact a comparison of present with past output (or employment or electricity consumption) is used as a proxy for fluctuations in capital utilization. The data generated in these statistics are a set of ratios (expressed as percentages) with unknown and inconsistent denominators. These are quite appropriate to measuring management's relative satisfaction with current business conditions, but cannot express the efficiency with which capital stock is used.

6. The first study to estimate the level of capital utilization (and its trend) was Foss' 1963 description of U.S. manufacturing capital utilization for 1929-56 [5]. Two facts emerged: (1) the level of utilization per se was surprisingly low, capital was idle over 75% of the time; and (2) the trend in utilization showed rise over the period, concentrated largely in the war years. This second result, the rising trend of capacity utilization, was central to Jorgenson-Griliches' re-estimates of U.S. capital productivity [8] challenging the Solow-Denison [16, 4] estimates. (Capital stock estimates understate the amount of productive capital services if utilization increases). The first of Foss' results, the low level of utilization, was ignored.

7. In the meantime, Robin Marris had presented the argument, based on an extensive and detailed examination of British industry, that idle capital is a rational part of investment planning. The need to pay higher night-time wage rates often makes it profitable, and hence "optimal", in the strictest sense, to "overbuild" a plant so that all output can be produced during the daytime and the plant can be shut down at night [11]. A given output can be produced with a large capital stock utilized at a low rate (to avoid high-cost labor inputs), or with a smaller capital stock utilized at a higher rate. Scale economies in management and in equipment compatibility tend to increase the advantage of higher utilization. Investment planning, therefore, embodies a choice of the combination of size of the capital stock and level of its utilization. Marris' pioneering work complemented earlier analyses which had described capital left intentionally idle for a number of other reasons: because of imperfect competition (Chamberlin [2], Cassells [1] because of anticipated peak load demand patterns (Smith [15]), to retain sales-delivery flexibility. (Nicholls [13]) or because, dynamically, plants may be built ahead of a growing demand if there are scale economies (Chenery [3], Mann [10]).

8. Winston's 1968 study of capital utilization in West Pakistan manufacturing [18] applied Foss' utilization concepts to a developing country, finding an even lower general level of capital utilization than Foss had for the U.S. (and with high variance) and, probably more significantly, finding substantial support in inter-industry analysis for Marris' hypothesis of rational, intentionally idle capital. Subsequent studies by Thouni in Colombia [17] and Kim and Kwon in Korea [9], though not entirely comparable, suggest that low levels and high variance of utilization are, indeed, typical of poor countries.

9. Excessively idle capital in developing countries was suspected, of course, long before these studies measured it (Mason [12], Hirschman [6], Hogan [7], for instance). It was typically explained, however, by orthodox Keynesian demand deficiency, by unanticipated shortages of inputs or solely as the result of misguided import/investment licensing or foreign aid granting policies.

10. Recently, Winston [20] and Winston-McCoy [22] have refined Marris' concept of planned capital idleness, using a rigorous formal production theory, and have generalized the phenomenon of intentionally idle capital to situations where the price of any input to production -- not just the wage rate -- is expected to vary rhythmically over the day or (most likely) the year. This considerably increases the potential relevance of the analysis for development policy. These formal models show that:

- (a) The optimal level of utilization incorporated in a firm's investment decision depends on relative factor prices, on the amplitude of the input price (e.g., wage) rhythm and on the "instantaneous" elasticity of substitution among inputs.
- (b) Output and employment per unit of capital stock depend on factor prices, through varying optimal utilization rates.
- (c) The lower the opportunity for ordinary "factor substitutability", the more likely is an improvement in utilization rates to lead to higher capital productivity and a better ratio of employment to capital investment.

11. Clearly, there is no single cause of idle capital. Previous studies leave us with a variety of compatible explanations: (1) unexpectedly deficient product demand, (2) unexpected input shortages, (3) intended idleness in anticipation of product demand fluctuations, growth of demand or market structure and (4) intended idleness, planned in anticipation of regular input price rhythms. For completeness those explanations that see idle capital as caused by simple irrationality or ignorance should also be included but it is expected that they will prove relatively unimportant.

12. In determining causes of varying levels of capital utilization, attention must focus on private business behavior. Private and social costs and benefits are not, however, synonymous. The incentive structure is an important cause of divergence between private and social costs, and hence between privately and socially optimal capital utilization. In many developing countries incentives lead to input price distortions and hence to low capital utilization. The study will pay particular attention to the role of existing policies in determining capital utilization to enable improved policies to be designed.

III. Methodology

13. A cross section of countries would be included in the study. Countries will be chosen in several geographical areas to obtain a sample reflecting differences in factor endowments, cultural heritage, past

economic policies and political systems. However, since the study's concern would be with the industrial sector, the countries chosen would be the ones with an existing industrial base.

14. The nature of the research proposed would require extensive knowledge of the industrial structure of the countries in question. It would therefore be necessary to choose countries with a good data base. It is intended to work closely with local research institutions. Where possible the consultants in charge of each country study will be chosen from such institutions to ensure the maximum incorporation of the study's results in local research methodology and policy formulation. As assisting the Bank to improve its lending and help developing countries to define their policies is a major goal of the study, the countries to be studied would be ones in which Bank lending is significant or where the Bank expects to make loans in the future. However, because of budget limitations, very large countries would be excluded.

15. In light of these considerations, and after preliminary consultations with the Regions, the following countries have been identified as being of interest:

Malaysia
Yugoslavia
Nigeria
Korea

Latin American countries have not been included, as this project is to be complementary to the Boston University Center for Latin American Studies' project on this subject. As at the present stage there is very little knowledge about industrial capital utilization in general, it is proposed to seek collaboration with a developed country institution, probably in the United States, so that an industrially advanced country could also be studied.

Data Collection

16. A major contribution of the study would be the accumulation of hitherto unavailable data about capital utilization in manufacturing plants. This necessitates extensive questionnaire surveying of manufacturing firms, supplemented by intensive interviews with a smaller number of firms in each of the sample countries.

A. Surveys

17. Selected manufacturing sectors, comparable among the countries studied, would be sampled in each country by an interview survey. The economy of a mail survey was considered, but the problem of identifying capital utilization precludes its use. The involvement of local institutions is thus critical to the study.

18. A questionnaire now being constructed would be pre-tested in each of the sample countries and revised in light of these pre-test results. The questionnaire is designed to overcome the problem of identifying capital utilization in a meaningful manner. It would yield: (1) plant and firm characteristics; (2) the basic facts about the amount of time the capital stock is idle and the intensity of its use during operation; (3) demand characteristics including market structure, growing demand with scale economies, peak load capacity, and (4) input price rhythms including night-time wage premia, seasonally priced inputs, managerial preferences. The basic data collected will include the same information as that being collected by the Boston University project to ensure comparability of data between Latin American and other developing countries.

19. Because comparability among firms, industries and countries is basic to the study, modifications to the questionnaire would be made after pre-testing had been completed for all countries. A limited number of country-specific questions could be added for each country, but this would be done reluctantly, so that the length of the questionnaire could be restricted. Otherwise, uniformity in the basic questions though awkward, would be essential. It would be essential, too, to limit the overall scope of the questionnaire (and the study). This would mean excluding very worthwhile questions, based on hypothesis about the potential influence of increasing capital utilization on industrialization. As the study proposed would cover a very new area, all aspects of the problem could not be covered. However, suggestions for further promising research on capital utilization for other researchers would form a useful by-product.

B. Sampling

20. Within each country the basic data would be related to data for the industrial sector as a whole. The survey results would be consistent with published data.

21. After taking into consideration the size of the industrial sectors of the developing countries proposed for the study and the opinion of Bank staff familiar with these countries industries, it is believed that surveys of the following magnitude would be required:

	Number of Manufacturing Establishments (1969)/a	Number of Firms Surveyed	Percentage of firms surveyed
Korea	24,752	300	1.2
Malaysia	3,191	200	6.3
Nigeria	625	150	24.0
Yugoslavia	2,153	150	7.0

a/ Includes establishments with 5 or more employees in Korea and 10 or more in Nigeria. No definition for Malaysia and Yugoslavia. 1968 data for Nige 1.

Source: United Nations, The Growth of World Industry 1970 Edition, New York.

C. Analysis

22. In so new a field of investigation as this, much of the analysis of the survey and interview results must be informal, guided by the informed judgement of those conducting the study. To plan otherwise would be to prejudge and restrict the results of the study. However, three levels of more formal analysis would be included:

- i. Descriptive Statistics. Simple statistical aggregates of the results would be used to describe level and variation (mean and variance) in observed utilization within the sample as a whole, within each sample country, and within industrial sub-sectors. The most sophisticated statistical technique used here would be the determination of the significance of the observed differences in means.
- ii. The Causes of Capital Idleness. On the basis of responses and indirect evidence from the surveys and other compatible data, the observed idleness of capital would be composed into its apparent causes. This would be supplemented by inter-country comparison by industry among the sample countries. This would enable the most important causes of capital idleness in each country, e.g. lack of foreign exchange, labor legislation, etc. to be identified.
- iii. The Variability of Planned Idleness. Anticipating the results of the analysis of causes of idleness, much of the observed idleness of capital would probably be intentional, planned as part of the investment decision. A major question would be then whether the level of planned idleness is sensitive to economic policy, especially price, variables. While this study would not give a conclusive answer, we expect a very useful test of that hypothesis to come from comparison of sectoral utilization results observed in various price-policy environments. It is essential, therefore, that the sample countries represent a diverse set of development policies. On a more formal level, the intensive investigation of one or two selected industries in all countries should provide estimates of the prices, elasticities and price amplitudes necessary for a more disaggregated test of the hypothesis.

D. The Researchers

23. The project would be carried out under the guidance of the Economics of Industry Division. It is proposed that Helen Hughes be in charge of the project, and that Francisco Thoumi devotes 18 months to it

during Fiscal Years 1974, 1975 and 1976. It is also proposed that Gordon Winston, who is one of the few economists with experience in this field, be the Senior consultant for the project. A review panel of Bela Balassa, Stephen Lewis and Robin Marris is also proposed.

24. Francisco Thouni will be participating in the Boston University study to ensure comparability between the two projects. The country studies would preferably be undertaken by economists from research institutions within the developing country. In some cases these would be strengthened by assistance from other consultants.

25. The following prospective institutions would be asked to provide the institutional base and domestic support required for the study:

<u>Country</u>	<u>Institution</u>
Korea	Korean Development Institute
Nigeria	The University of Ibadan
Malaysia	Federal Industrial Development Authority
Yugoslavia	Institute for Industrial Economics

It is expected that these institutions would provide local counterparts, research assistance, and a base for consultants where appropriate. All the economists in charge of country studies would be at the post doctoral level. They would be selected from those who have had experience in the field and who are not over-burdened with other responsibilities.

IV. Organization

A. Preparatory Work

26. Preparatory work has been under way for some time and will be completed by June, 1973. The following remain to be finished.

- i. Final country selection and procurement of institutional support.
- ii. Selection of consultants.
- iii. Elaborating and testing of the questionnaires.

B. Field Work and Country Report Writing

27. The field work would be done between July, 1973 and September, 1974 to take advantage of University vacations. During the summer of 1973, the supporting consultants would visit the countries studied, samples would be selected, and initial plant interviews would be undertaken.

Complementary information would be collected. During the period September 1973-June 1974, the data obtained would be collated and a preliminary report would be written for each country.^{1/} Where consultants would be employed, they would return to the country studied, in the summer of 1974, fill out missing information and, possibly collect additional material on the basis of preliminary results obtained. Final country reports would be completed by late 1974 or early 1975.

28. Two seminars would be conducted at the Bank with those in charge of country work during the course of the study.

29. The study output will include:

- (a) A detailed, policy oriented paper for each country studied. These papers would be written in close cooperation with the Regions as the empirical work is completed. They would also be ready in the spring of 1975.
- (b) A general policy paper for Senior Management focusing on the way in which the Bank could, through its various lending techniques - program loans procurement practices, direct loans and loans through development finance companies - affect capacity utilization levels.
- (c) A book which would consist of a theoretical and methodological section, chapters on each of the individual country studies, and policy conclusions. This would also be completed by autumn 1975.

V. Benefits

30. The countries' studies would have, for the first time, information on the relative utilization of their industrial capital stock in various sectors and, by comparison with the other countries in the sample, a sense of whether their own utilization performance is relatively good or bad. This factual information -- a set of comparisons between industries and between countries -- should be of considerable use in the sample countries in guiding their own policies and further investigation of the use and idleness of their capital. The use of this information would of

^{1/} The data processing would be done at the consultant's home base to the extent that this would be economic; other processing would be centralized in Washington.

course differ from country to country, but basically it would enable countries to improve their policies to ensure higher capital utilization in general, or in particularly poorly performing industries. Pending the adoption of new policies, rough guidelines could be set for utilization by sector so that a new investment project proposed in a low utilization sector would require special justification while an investment project in a high utilization sector would escape special surveillance.

31. It is clear that a policy that is appropriate and effective in offsetting one sort of idle capital may be ineffectual or worse in affecting another. To devise utilization policy without knowledge of causes would be risky in the extreme. In the U.S., for instance, the evidence suggests that even in a recession year, less than 10 percent of idleness of manufacturing capital is due to deficient demand / 21 /. If this proves to be the case, too, for developing countries, policies merely suggesting that idle capital be used for export expansion will be ineffectual at best and seriously disruptive of foreign exchange balances at worst. If, on the other hand, much capital idleness did prove to be of this Keynesian sort, expansion of product demand would effectively increase output and employment with no additional investment. Other unique compensating policies are implied, if the bulk of low utilization is caused by unexpected input shortages, market imperfections, peak demand loads, etc.

32. If the variable optimal utilization theory appears correct, there will be a real possibility to increase capital utilization by changing development policies. Most important, the prices of capital and labor actually paid by firms will be seen as being of greater importance. The price of capital depends on the domestic price of equipment (imported and domestic), on the rate of interest paid and on depreciation and tax policies. This is a set of prices that may be distorted by overt development policies as well as by covert but common practices like over-invoicing capital equipment imports (which, alone, appeared to lower the price of imported capital by more than 40 percent in Pakistan in 1970 / 19 /). A change in prices that results in an increase in the price of capital paid by firms will increase the utilization of the capital stock. On the other hand, an increase in the wage rate paid -- because of minimum wage legislation, social taxes, union intervention or, simply, a rising supply price -- will tend to reduce the level of utilization.

33. Perhaps less obvious is the fact that an increase in the amplitude of "input price rhythms" facing firms will reduce capital utilization. For instance, higher night wage premiums will make it profitable to reduce the utilization of capital and lay off workers. Thus, well-meaning "humanitarian" legislation requiring that night shift workers be paid a premium wage will reduce employment, output and growth. To take

a counter example, the example, the expansion of rice paddy storage facilities, by reducing the seasonal amplitude of the paddy price to rice millers, will tend to increase the utilization of milling capital and result in less seasonal unemployment.

34. The verification of the variable optimal utilization theory would reinforce the growing conviction that input prices are critical in development policies; that development can either be eroded or reinforced by pricing policies. Specifically, it seems likely that the widespread policy of providing cheap capital to firms has led to its utilization at very low levels, reducing output, growth and employment. Even if such a pricing policy were considered necessary to overcome an "absorptive capacity limit" it is not clear a priori that a low capital price that induces investment with low utilization has a positive net effect on output and employment. Verification of this model would thus be an important part of the general reexamination of the incentives created by development pricing policies.

VI. Costs

35. Two questions central to Bank Group consideration of the undertaking of this study remain. (a) Why is the considerable expense of original data collection necessary, especially in light of the many existing studies of "excess capacity"? (b) Why should the Bank Group undertake it, rather than some other agency or independent scholar? The two are related.

36. Existing data on capital utilization are not, and cannot be made comparable between firms, industries or countries. The only source of data on actual levels of utilization is direct survey. This is costly. The need for comparable original data, even in a modest number of developing countries, recommends a study of such magnitude that no individual scholar -- and only a few agencies -- can consider it.

37. The magnitude of the study suggests that the Bank Group may be the only agency that can effectively organize and coordinate such an investigation. It has, on the one hand, the contacts and working relationships with competent local research organizations and international scholars whose involvement is essential to the accumulation of meaningful information and analysis. It seems highly unlikely that any other agency would be able to instigate and coordinate research activities in a number of countries in such a way as to produce a coherent and comparable picture of capital utilization in poor developing countries. The Bank Group also appears to be the only agency capable of taking the lead in organizing and motivating the resources of other funding agencies, notably the Ford Foundation, which would be approached to collaborate in the study if the Bank decides to take the initiative.

38. It should be noted that a considerable part of the cost of the study arises from the desire to use it as a research training vehicle for the developing countries studied. Thus it is intended to provide sufficient stipends to local collaborators to enable them to devote sufficient time to the study, and at the same time to support them by first class assistance from experienced researchers where necessary.

VII. Budget

39. The budget of this study was estimated under the assumption that local consultants would undertake two countries, and two outside consultants would assist in the other two studies. It has also been assumed that one of the outside consultants would be hired in the U.S.A. and the other one abroad.

(a) Costs independent of the number of developing countries studied i.e. fixed costs would be:

	<u>FY-74</u>	<u>FY-75</u>	<u>FY-76</u>
	\$	\$	\$
<u>1. Review Panel</u>			
Fees	3,000		1,000
Per diem	1,400		490
Travel	675		175
<u>2. Senior Consultant</u>			
Fees (6 months)	5,200	5,200	5,200
Per diem	2,100	2,100	2,100
Travel	180	180	180
<u>3. Researcher</u>			
(from IBRD) to coordinate study. (18 months)	9,375	9,375	9,750
<u>4. Secretary</u>			
(from IBRD) (12 months)	2,813	2,813	2,875
<u>Year Total</u>	24,743 12,555	19,668 7,480	14,770 9,145
<u>Fixed Costs Total:</u>	\$59,161	29,180	

(b) Country Studies

1. KOREA - studied by local consultant.

	FY-74 \$	FY-75 \$
1. <u>Local Consultant</u> <i>Who?</i>		
Fees (12 months)	4,550	3,250
Travel - international	1,750	1,750
- domestic		300
Per diem - domestic		600
- Washington	210	210
2. <u>Research Assistants</u>		
Two at \$ 300/month (6 months each)	<u>1,800</u>	<u>1,800</u>
Yearly Total	<u>9,210</u>	<u>7,910</u>
Country Total: \$ 17,120		

2. MALAYSIA - studied by outside consultant and local counterpart.

	FY-74 \$	FY-75 \$
1. <u>Consultant</u> <i>Who?</i>		
Fee at \$ 1,400/month (6 months)	5,600	2,800
Travel - international	2,050	2,050
- domestic	200	200
Per diem - domestic	4,800	2,400
- Washington	210	210
2. <u>Consultant (local)</u>		
Fee at \$ 800/month (6 months)	2,400	2,400
Travel - international)		2,260
Per diem - Washington)		
3. <u>Research Assistant</u>		
One at \$ 400/month (8 months)	<u>1,600</u>	<u>1,600</u>
Yearly Total	<u>16,860</u>	<u>13,920</u>
Country Total: \$ 30,780		

3. NIGERIA - studied by outside consultant and local counterpart.

	FY-74 \$	FY-75 \$
1. <u>Consultant</u>		
Fee at \$ 1,400/month (6 months)	5,600	2,800
Travel - international	3,250	1,450
- domestic	600	600
Per diem - domestic	4,800	2,400
- Washington	210	210
2. <u>Consultant (local)</u>		
Fee at \$ 800/month (6 months)	2,400	2,400
Travel - international)		1,660
Per diem - Washington)		
3. <u>Research Assistant</u>		
One at \$ 400/month (8 months)	<u>1,600</u>	<u>1,600</u>
Yearly Total	<u>18,460</u>	<u>13,120</u>
Country Total: \$ 31,580		

4. YUGOSLAVIA - studied by local consultant

	FY-74 \$	FY-75 \$
1. <u>Local Consultant</u>		
Fees (12 months)	4,550	3,250
Travel - international	650	650
- domestic	300	
Per diem - domestic	1,200	
- Washington	210	
2. <u>Research assistance and data collection costs.</u>	<u>2,000</u>	<u>2,000</u>
Yearly Total	<u>8,910</u>	<u>6,110</u>
Country Total: \$ 15,020		

5. Data processing and materials

40. The data processing costs estimates must be preliminary. However, after discussing the problems with the computing center of the Bank, the following estimate was obtained:

	FY-74 \$	FY-75 \$	FY-76 \$
Computing time and data processing	3,500	3,000	2,000
Materials	500	100	100
Yearly Total	4,000	3,100	2,100

Data processing and materials
Total \$ 9,200

41. According to these estimates, the total and yearly costs of the project are:

<u>Total Costs</u>	<u>FY-74</u>	<u>FY-75</u>	<u>FY-76</u>
\$ 162,881	\$ 82,183	\$ 63,828	\$ 16,870
132,880	69,995	51,640	11,245

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II. AGRICULTURE AND RURAL DEVELOPMENT

1. Land Tenure and Land Reform in Latin America
2. Smallholder Agriculture (Yugoslavia)

OFFICE MEMORANDUM

TO: Mr. Ernest Stern

DATE: March 30, 1973

FROM: Dragoslav Avramovic *AW*SUBJECT: Research Proposal -- Small-holder Agriculture, Yugoslav Experience

1. A Review Panel consisting of Messrs. V. Dubey, P. Hasan and J. Hendry met on March 28 on the above proposal. Also present were Messrs. E. Hawkins and S. Reutlinger (Development Economics) and Mr. G.F. Donaldson (author of the proposal).

2. The Panel agreed that the subject was of high priority and the research proposal was well prepared. The relationship and linkages between the large modern farms of high capital intensity and modern management, and the small farms operating with a large supply of labor and relatively quick possibilities of adjustment, were a major focus of the study. These relationships and linkages are of interest for many developing countries of different social and economic systems. The second major research area concerned the experience with the economies of scale. For example, it appears that small farmers in Yugoslavia have been quite successful in growing livestock for beef (in addition to milk), frequently based on supply and marketing arrangements with the large modern farms in the social sector. The problem of economies of scale in agriculture, and particularly in livestock, has been one of the most hotly debated subject in the Bank, of considerable interest for its lending operations in agriculture. It would be of importance to analyze the Yugoslav experience and the factors -- both general and unique -- responsible for this experience.

3. The Panel suggested that in the implementation of the study particular attention be paid to those aspects which would go beyond special circumstances of the country and thus be of international interest.

4. Since the success of the study depends on the cooperation and support of the Yugoslav Government, it is recommended that the Country Program Department concerned explore with the Government the prospects of obtaining its endorsement. The planned and needed collaborative arrangement with the Institute of Agricultural Economics, Belgrade, should not be considered a substitute for the Government's endorsement.

cc and cleared with: Messrs. Dubey, Hasan and Hendry.

cc: Messrs. Hawkins, S. Reutlinger, G. Donaldson.

OFFICE MEMORANDUM

TO: Mr. Ernest Stern

DATE: March 30, 1973

FROM: Dragoslav Avramovic *DAV*

SUBJECT: Research Proposal -- Land Tenure and Land Reform Strategies in Latin America

1. A Review panel consisting of Messrs. J. Hendry, P. Hasan and myself reviewed the above project on March 28. Also present were Messrs. E. Hawkins, S. Reutlinger (Development Economics), A. Ray, (OPS), and S. Eckstein and T. Carroll (authors of the research proposal).
2. The Panel agreed that the research area covered by the proposal commanded priority. A review of the comparative experiences in the selected key aspects of land reform in five Latin American countries -- Mexico, Chile, Bolivia, Peru and Venezuela -- would contribute to the formulation of Bank future activities in supporting the land reform measures.
3. The Panel considered that the "Tentative Hypotheses" included in the research proposal represented a good starting base for organizing the staff work and the collaborative arrangements with the national research organizations.
4. The Panel was of the view that the successful implementation of the project depended on several considerations:
 - (a) The focus of the study should be the experiences with land reform measures rather than the historical evolution of land tenure. In order to remove possible ambiguities on this issue, it is suggested that the title of the project be modified.
 - (b) The scope of the project would still remain enormous, and it is suggested that special care be taken to focus the research on the selected key aspects (such as those in the "Tentative Hypotheses"), rather than attempt to cover the whole waterfront. The scope of the research and studies already started may usefully be reviewed from this viewpoint.
 - (c) Due to factors beyond the study's control, collaborative research arrangements have been made only with organizations in Mexico so far. Even if such arrangements are made with the other countries very quickly, it is improbable that the results will be in on time to meet the present time-table. It is suggested that the phasing of the project be reviewed, and work organization and cost of the last phase clarified.
5. It is expected that the Development Economics Department would consider the above before the Research Committee Meeting of April 5 and let us know their reaction.

cc and cleared with: Messrs. Hasan and Hendry.

cc: Messrs. Hawkins, Reutlinger, Ray, Eckstein, and Carroll.



Record Removal Notice

File Title Pedro-Pablo Kuczynski Files: Research proposals 02		Barcode No. 1849444		
Document Date c. March 1972	Document Type Project Proposal Form			
Correspondents / Participants				
Subject / Title World Bank Research Program Project Proposal				
Exception(s) Personal Information				
Additional Comments		The item(s) identified above has/have been removed in accordance with The World Bank Policy on Access to Information or other disclosure policies of the World Bank Group. <table border="1"><tr><td>Withdrawn by S. Thompson</td><td>Date August 19, 2025</td></tr></table>	Withdrawn by S. Thompson	Date August 19, 2025
Withdrawn by S. Thompson	Date August 19, 2025			

DESCRIPTION

LAND TENURE AND LAND REFORM STRATEGIES IN LATIN AMERICA

a. Problem

The basic problem to which this research is addressed is: how can land reform assist in reaching simultaneously the basic development goals of raising output, achieving a more equitable distribution of income, and creating employment opportunities.

More specifically, the following problems are being analyzed: What has been the role that distributive land reforms have played in the economic development process in Latin American countries, both directly within agriculture and indirectly in other sectors?

What have been the complementarities and possible trade-offs between growth promoting and income distributing effects of various kinds of reforms? Is there a significant time lag in growth after initial distribution?

How could land reform be turned into an effective tool for the redistribution of productive capacity, employment opportunities and hence income generating power?

To what extent have land reforms induced technological innovations with positive effects both in the production and in the distribution spheres?

What sort of reform policies can raise productivity without necessarily displacing workers?

How did reforms affect economies of scale in production and services and what tenure models could achieve scale economies within the basic objective of income redistribution?

Cooperative, collective or group farming is usually cited as a major solution to land tenure problems; where and under what conditions has it worked satisfactorily, and what lessons for future group farming schemes emerge?

"Integrated smallholder development" is another favorite prescription; how can land tenure changes be used as a basis or catalyst for such programs in technical, organizational, institutional, and financial terms?

The joint provision of an extension-credit-insurance-marketing "service package" is considered to be the economic basis for rural development -- how is this related to land tenure changes?

On the macro level, one of the main constraints to a massive increase in rural income through an output boost, are the low income and price elasticities of demand for crops produced by poor farmers; under what conditions can land reform significantly contribute to the removal of this demand constraint?

b. Method

(1) Conceptual framework.

Land reform was neither conceived nor carried out in a unique manner in different places and times. The analysis will be made in terms of a typology of the diverse reform policies and programs on which

experience is available. The above-mentioned problems will hence be examined within the specific context of each reform type.

The extent to which the various topics will be covered depends on (1) data and time limitations, and (2) the relevance of the issues to the overall strategy.

Nonetheless, it will be intended with regard to each of the major issues to arrive at meaningful and relevant conclusions, in three stages:

- (1) What has happened in practice? (Assessment of the real output, income and employment effects of diverse reform policies, and appraisal of the general and specific causes for this outcome in each case.)
- (2) What would be the feasible optimum conditions and organizational structure, at all operational levels? (Identification of promising reform designs, models of new tenure organizations and of supporting institutions.)
- (3) Appropriate strategy or policy conclusions and expectations bearing on the major development objectives.

The approach will be empirical and pragmatic without neglecting the theoretical and "forward looking" perspective.

Empirically, the experience gained in some Latin American countries in these matters will be thoroughly examined, as to why have some experiments in tenure innovation failed, and what has contributed to the success of others. In the "forward-looking" realm, lessons will be drawn from this experience that are of practical relevance and use to rural development planning and implementation elsewhere.

Pragmatically, land tenure innovations, institutional arrange-

ments and rural development policies that offer promise of attaining the above-mentioned goals, will be assessed on all operational levels, but with special focus on the local level.

(2) Scope of Study

The study concentrates on the Mexican experience, which is by and large the oldest, richest, and of largest scale in the region, drawing in relevant comparative material from Venezuela, Bolivia, Chile and Peru which have some very interesting experiences of more recent years.

(3) Plan of Work

a. Highly selective and critical examination and evaluation of available information, including publications, reports and case studies (especially unpublished, original, first hand research material).

b. Specific small case studies in areas - both geographical and functional - of major interest but lacking in information, mainly through collaborative research agreements with institutions in the five countries studied. Such collaboration will also be sought to complement step (a).

c. Statistical analysis of data collected in 1967 in field surveys of Mexican CIDA Land Tenure Study, available here, together with comparable data whenever available from other sources and countries.

d. Brief field visits and surveys of major relevant projects in some of the countries studied.

e. Interviews of and discussions with professional, technical, and administrative personnel involved in these projects.

f. Preparation of report and discussion with Bank staff.

c. Coordination

(1) Land Tenure Policy Paper.

The results of the study will serve as input to the policy paper that is being prepared on the same topic by Mr. M. Yudelman (CPS). Furthermore, Mr. Eckstein is collaborating on the preparation of the Policy Paper.

(2) Other Research in the Bank

The Land Tenure Study ties in very organically with most other studies now done in or planned by the Rural Development Division, DPS, as well as with some of the studies planned in the Agriculture Department, CPS. They all dwell on the same basic issue - how to increase output, productivity, employment and income of small farms - but not always with specific reference to related tenure problems.

(3) Collaborative Research in LDC Institutions

As mentioned above (paragraph b/3) it was envisaged to carry out a substantial part of the work through collaborative research agreements with institutions in the five countries studied. Such agreements will cover bibliographical surveys and several case studies and should also prove useful during field visits and discussions with local professionals.

A collaborative agreement has been made in Mexico. Interesting contacts have been made in the other countries as well, but could not materialize into formal agreements because of the lack of funds.

d. Implications for Bank Policy

The general framework for this study is established by the Bank's Agricultural Sector Paper of June 1972:

"The challenge for agriculture is to combine an acceptable rate of growth of production with movement towards -- the goals of creation of employment opportunities and alleviation of poverty" (pp. 3,4).

"Governments should pursue land policies which help disperse the benefits of agricultural progress widely" (p. 35) through "land reforms aimed at securing a more equal distribution of land" (p. 30).

It has been repeatedly stated by Management that the Bank has to address more attention to issues related to land reform. This the study intends to help accomplish.

It will provide insights into the inter-relationships between distributive land reforms and the rural development process. To the extent that generalizations for future strategies are possible, the study will furnish practical lessons relevant to Bank policy in this area.

The study will also assist the Bank in relating specific programs and projects to their land tenure settings and indicate further specific and operational areas of work.

The recent discussions around the Bank's report on The Development of Colombian Agriculture provided an example of the many land tenure and reform issues involved in the Bank's interest in redistributive policies. The role of land reform meaning, scope and levels

of decision and implementation, financial constraints, the classical growth-equity dilemma, the feasibility of group farming and servicing, etc. - all came up, and remained in many instances open questions. If some evidence could be made available on the results observed in past and ongoing reform programs, the ground for conjecturing answers would be much firmer, at least in the Latin-American setting.

e. Project Organization

(1) Phases

The study is planned to proceed along the lines laid out in the Plan of Work. A tentative time-table was prepared when work started, as follows:

	<u>Months</u>	<u>Approx. Dates</u>
I. Preparation of project, data files, country contacts	2	10/72 - 11/73
II. Bibliographical screening, compilation, and organization of available material	2	12/72 - 1/73
III. Development and preliminary testing of hypotheses	4	2/73 - 5/73
IV. Field visits, interviews, and analysis of findings	3	6/73 - 8/73
V. Drafting of reports and staff discussions	3	9/73 - 11/73
VI. Final report writing and review	6	12/73 - 5/74

This time-table was indicative of the work plan and of the relative emphasis to be given to the different phases, but does not imply sharp chronological border lines between the successive steps. Rather, they are overlapping to a large extent.

* See attached progress report for work done so far.

(2) Professional Staff and Supervision

Mr. Eckstein is responsible for and supervising the study, with Mr. Thomas F. Carroll as senior consultant.

Since Mr. Eckstein is returning to Israel in the end of the year, Phase V will have to be partly concluded there, through some consulting arrangement.

OFFICE MEMORANDUM

TO: Mr. S. Reutlinger

DATE: March 21, 1973

FROM: Shlomo Eckstein

SUBJECT: Progress Report on the Land Tenure Study

1. The first few months were devoted to:
 - (a) Re-formulating and detailing the research outline
 - (b) Visiting Mexico first for preliminary exploration and later for final launching of field studies
 - (c) Collection and classification of all available publications and reports
 - (d) Creation of statistical data files and initiation of their analysis
 - (e) Preliminary development of framework of analysis and working hypotheses

Some organizational matters are discussed under (F).

A. RESEARCH PROGRAM

2. The research proposal was redrafted after consultations with persons related to the subject both within and outside the Bank, and after rapidly reviewing the available general literature. Emphasis is being put on gathering and evaluating available evidence on concrete experiences with new tenure arrangements and institutional settings as compared with old or existing structures, with an attempt to assess problems encountered and results observed both at the macro and the micro levels.

3. Comments and suggestions on the proposal were received from a number of staff members, and we tried to accommodate them in our program, wherever relevant and feasible.

B. SPECIFIC STUDIES LAUNCHED IN MEXICO

4. During October 1972, I visited Mexico to explore the possibilities of entering collaborative research agreements with Mexican institutions. As a result, such agreements were formally signed with the Centro de Investigaciones Agrarias (CDIA) for a sum of \$5,000.00 and informally agreed upon with several other institutions (mainly the CEA - Centro de Economia Agricola in Chapingo). I have just returned from a second trip

March 21, 1973

to finalize these arrangements and to launch the field studies to be undertaken there. As a result, the Mexican portion of the work is well under way and looks promising. The response of the Mexican collaborating research institutes has been far in excess to the very small financial contribution by the Bank.

5. Following is a list and short description of the studies now underway in Mexico:

(a) Bibliographical Survey - Dr. Rene Barbosa has started to screen and evaluate the publications and reports available in Mexico on the subjects of our study, using the methodology and cards system developed for this purpose and used by us here. (See para. 6 below)

(b) Typology of group action - The CDIA will contract a high-level consultant to survey all existing cases in Mexico of group action in farming and farm services, and to prepare jointly with us a typology of such forms of peasant cooperation; with respect to function, structure, operation, institutional support and performance. This survey was discussed with senior personnel of DAAC (Departamento Agrario), and will be carried out with and financed by them.

(c) Cananea Study - The CDIA will also undertake a study of the collective ejido cattle ranch in Cananea, using data that has accumulated from previous studies.

(d) 1970 Tenure Structure - Since 1970 Agricultural Census data have not yet been published, the CDIA will try to obtain from the Census Bureau certain basic distributions of output and resources by farm size on a national level, so as to bring the CIDA 1968 figures up to date on this topic, and analyze the major changes occurred since 1950.

(e) Collective Ejido Research and Seminar - The National School of Economics has assigned 15 students to write their Licenciado theses on collective ejidos in three major areas (Laguna, Bajio, Culiacan), with the financial aid of CONACYT (Consejo Nacional de Ciencia y Tecnologia). It was agreed in a joint meeting with CONACYT that the CDIA will take a leading role in guiding these studies, and in organizing a seminar in July or August, to evaluate these and other experiences, together with the students, professionals who have been active in this field, and related senior government officials.

(f) Technological Change in the Bajio - Evaluate the mechanism of technological change and its relationship with tenure structure and output income and employment patterns. CDIA data of 1954 and 1966 will be compared with survey data to be collected in the field in 1973. (Mr. Kenneth Roberts (CEA/Ford) and Mr. Carlos Gonzalez).

(g) Mechanization and rural development - Evaluate observed experiences with respect to farm mechanization and its effects on output, income and employment distributions, under different tenure structures

March 21, 1973

and physical conditions (Dr. Santiago Friedman (CEA/Ford) and Mr. Uriza (CEA)).

(h) Small-irrigation and rain-fed development projects - Evaluate selected cases of projects in operation and their adaptability to different tenure structures and institutional settings, in terms of socio-economic achievements, costs, technical manpower requirements and replicability. (Dr. William Lord (CEA/RFF), Mr. Hugo Carmona and Mr. Guillermo Gonzalez), with the aid of Ing. Jose Iniz Zaragosa (DAAC).

(i) Fundacion Mexicana de Desarrollo (FMD) - Analysis of FMD sponsored projects on group farming and group services to ascertain "success elements" and the possible viability of new tenure arrangements for a more generalized rural development strategy (Dr. Santiago Friedman and Mr. Lorenzo Nieto).

(j) Group action in Milk Farms - Comparative evaluation of two apparently successful experiences in cooperative milk farms - collective ejido groups in the Laguna sponsored by the national credit system (Banco Agropecuario) and service cooperatives of private and ejido farmers sponsored by a private organization (FMD) - Dr. Santiago Friedman and Mrs. Rosario de Matus.

C. BIBLIOGRAPHICAL SURVEY

6. In December, two research assistants were hired, on a half-time basis each, to collect, classify, screen and synthesize all related material that could be made available in the form of books, articles, reports, theses, and the like. A methodology was developed that will permit us to arrive at an easily accessible standardized annotated bibliography, that is now being applied in Mexico as well. Hopefully, the same system will be extended to the remaining four study countries - Peru, Chile, Bolivia and Venezuela - so as to enable a rapid cross-country evaluation of and access to all available material.

7. The first phase of the bibliographical screening in Washington, is expected to be concluded by the end of March; in Mexico, by the end of April; in the remaining countries no action has been started as yet in spite of very good connections and interesting offers - because of our inability to make any financial commitments. This might prove to turn into a serious bottleneck later on.

D. STATISTICAL ANALYSIS

8. Data files were created with field survey data of the CIDA/CDIA

March 21, 1973

Mexico study in 1966/68, made available to the LTS. These data are now being analyzed, at this moment for two purposes:

(a) Evaluate the economic results of a consolidation project in the Northern part of the Laguna region, that was carried out as part of an IBRD Rehabilitation Project. (analyzed jointly with Lic. L. Bassoco, of the Secretaria de la Presidencia, Mexico)

(b) Examine the relationship between social (e.g. education, attitude to innovations) and economic (e.g., income, productivity) variables contained in matched questionnaires submitted to different tenure groups in several regions. (jointly with D. R. Stavenhagen of the Colegio de Mexico)

9. It is hoped to obtain comparable data from some of the other four study countries, in order to analyze them jointly and test some of the basic hypotheses on an inter-country level.

E. PRELIMINARY FRAMEWORK OF ANALYSIS

10. In conjunction with the foregoing, we have developed a rather detailed though preliminary framework of analysis and set of working hypotheses. The working outline and some preliminary hypotheses are attached (A).

We are now entering the phase of trying to establish a meaningful typology of tenure problems and land reform programs, within which the implementation of reform programs and the performance of "reformed sectors" will be examined. We shall attempt to draw on the accumulated material to test and substantiate or modify our hypotheses, which should then provide a framework for analyzing possible future strategies and models.

F. ORGANIZATIONAL MATTERS

11. In order to avoid a serious bottleneck in the very near future, it is imperative to arrive at collaborative research agreements with institutions in Chile, Peru, Bolivia and Venezuela along the Mexican lines. We have developed some very interesting contacts, but could not arrive at any understanding because we were unable to commit any funds for this purpose. This may prove to be detrimental to the LTS, whose main purpose is a comparative evaluation of mainly recent experiences of which little published material is readily available, and that require some field visits and surveys by collaborating institutions. Precious time has been lost already, and therefore the substantive material on Peru and Chile in the draft report may not be as rich and thorough as we had planned and may have wished.

Mr. Reutlinger

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March 21, 1973

12. Likewise, it is imperative to assure funds for the continuation of work in FY'74, according to the Budget Proposal submitted to you on 2-23-73 (attachment B). These are minimum requirements, and we shall not be able to carry out the research project as presently envisaged - if we shall not be able to make commitments now to cover next year's needs.
13. In general, the study is proceeding according to the original schedule, with some delay in getting started (the contract of the research assistants started in mid-December only). If no unforeseen difficulties arise and the proposed budget be approved shortly, we should be able to produce our draft report by the end of 1973, and write the final report after staff discussions and reviews in the Spring of 1974.

LAND REFORM STRATEGIES IN LATIN AMERICA

WORKING OUTLINE

A. Framework of Analysis

1. Definition of concepts
2. Geographical framework
3. Conceptual framework

B. Setting and Objectives of LR

1. The Economic setting
2. The Political setting
3. Pre-reform tenure structure - a typology
4. LR Objectives and programs

C. Implementation of LR and its Problems

1. Paths of reform implementation
2. The ensuing tenure structure
3. Supporting programs, related to LR
4. The financing of LR
5. Constraints to implementation

D. Primary Effects of LR (by level of measurement)

1. The farm family

2. Farming unit (individual or group).
3. Village or group action - ejidos, asentamientos, coops.
4. Regional, "program" or "project" level.

E. Macro and secondary effects

1. Performance of the "reformed" subsector in agriculture.
2. Effects of LR on the "non-reformed" subsector in agriculture.
3. LR and some of the broader processes of economic development.
4. Socio-political participation and institution building.

F. Second Generation Problems

1. Insufficiencies of LR progress
2. Deficiencies in implementation
3. Old problems left unsolved
4. New problems that emerged in the process
5. The limitations of LR (problems it cannot solve)

G. Strategy lessons

1. LR as means to rural development
2. Promotion of agricultural growth vs. equity (possible trade-offs, complementarities and time lags)
3. Technological innovation and tenure structures

4. "Integrated smallholder development" within a LR context.
5. Role of government vs. peasant groups
6. Encouragement of promising tenure arrangements
7. LR supporting programs
8. Prospects of partial or limited reforms
9. Colonization vs. or complement of LR
10. Costs and financial requirements
11. Public administration of LR

TENTATIVE HYPOTHESES

Growth-Equity Dilemma

In the short run (1-3 years), massive land reform has caused dislocations in output: in the "reformed sector", due to managerial and institutional incapacities, and in the "non-reformed sector" due to uncertainties about future government policy.

Affected landowners have responded rapidly and intensified the use of their remaining land, as soon as the policy framework has stabilized.

The reaction of the beneficiaries of reform has been slower; it has depended on the speed and efficacy with which managerial and institutional problems have been solved and supporting measures provided.

The overall observed effect, so far, has been of recuperation of production after a few years, and of accelerated growth immediately afterwards. In the long run, growth in output seems to depend on indirect or "catalytic" effects of land reforms rather than on the new tenure arrangements.

Land redistribution by itself, even when relatively significant, had only a marginal effect on income redistribution and did not provide the basis for sustained growth in incomes of the beneficiaries.

In instances where land reform was carried out on a massive scale and supported by a minimum of favorable policies and services, a significant redistribution has been brought about not only in resources (land), but also in the income generated by these resources and in the share of small farmers in income growth.

Although conditions vary greatly among regions and over periods of time, certain minimum supporting packages can be specified that will enhance the probability of success, in terms of the typology of tenure problems and the ensuing reform programs.

Income and Output Effects by Tenure Types

The effects of reforms on income and output have been quite different in the various agricultural regions of Latin America:

(1) In more traditional highland agriculture (where production is mainly for subsistence), the elimination of labor obligations and the greater access to land has resulted in much more favorable income distribution among the rural population and some increases in production even without adequate planning and follow-up measures.

(2) In semi-commercial areas (where production is mainly for the market), reforms have tended to benefit recipients of middle-sized plots and the resulting income distribution has become progressively more uneven. Production effects depended on (a) speed of managerial replacement, (b) effectiveness of service network, (c) investments in economic infrastructure, (d) tenure models chosen, mainly individual versus group arrangements.

(3) Reforms in highly commercial agriculture (plantation sector) seldom involved physical redistribution of land; the scale remained the same, while ownership and management changed. Direct income distribution effects have been minimal, as workers were already well unionized and obtained relatively high cash wages. Indirect income distribution effects, however, were more significant, depending on the utilization pattern of the investible surplus. Reform has had little effect on output; expansion of production depended mainly on factors other than

reform policy.

Institutions

Some land reforms have experimented with completely "integrated" package projects, combining land distribution with provisions of credit/marketing/extension/research/infrastructure. Three lessons appear to emerge from this experience:

(1) Such schemes, even if successful locally, can be expanded or duplicated only in a setting in which land reform becomes a part of a wider reform policy. This requires the creation and reinforcement of national institutions which are strongly reform-oriented.

(2) Reliance might also be placed on a regional or zonal type of program in which land tenure changes become part of a comprehensive rural development strategy.

(3) The integrated approach seems to succeed only if a mechanism is created which is based on decentralized management and local responsibility - with minimum bureaucratic control.

Land reform programs have created a number of cooperative and group farming models; some concentrated on the joint provision of services, while others included the pooling of land and other productive resources. These group systems have:

- 1) induced technological innovations
- 2) overcome diseconomies of small scale operation
- 3) facilitated implementation and decentralized management of reform
- 4) proven their operational viability

Technology

Most technological innovations introduced so far in Latin American agriculture have been scale oriented and labor saving. Without land reform, technological innovations and concomitant public investments have therefore tended to produce negative employment and income distribution effects. Evidence from Latin America indicates that well-planned land reforms and new tenure institutions have the capacity of mitigating these adverse effects.

Reformed systems, which are generally labor intensive, have proved to be more efficient than large private farming systems, when evaluated in terms of relative scarcity of resources at the national level.

Some of the new tenure models and strategy lessons emerging from the Latin American experience point to a number of possibilities for a relatively successful attainment of equity, growth and efficiency objectives simultaneously.



Record Removal Notice

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Correspondents / Participants				
Subject / Title Land Tenure Research Project Budgetary Needs for FY '74				
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OFFICE MEMORANDUM

TO: Mr. Ernest Stern (through Alexander Stevenson) DATE: March 20, 1973

FROM: Shlomo Reutlinger S.R. H.V.

SUBJECT: Study Proposal - Development Strategies for Smallholder Agriculture:
A Case Study of Yugoslav Experience

1. This study would analyze the effects on smallholders of institutional arrangements, government policies and socio-economic conditions in Yugoslavia. It is based on a field study of farms in three differently developed regions of Serbia. Since they are at different stages, comparative analysis will permit some insight into the adjustment that occurs over time as an increasing proportion of the personal income of rural people comes from the modern sector.
2. In pursuing rural development we can expect to encounter a range of institutional and economic circumstances surrounding the agricultural sector in different countries. These may vary from large versus small farm dualism on the one hand to evenly-distributed smallholdings on the other. Accordingly, there is a need to seek strategies which might be applied in these differing situations. One means of doing this is by studying models that exist in practice, as is proposed here. It is in this operationally-oriented context that its priority should be assessed.
3. Yugoslavia has followed a dualistic strategy of agricultural development, with emphasis on large-vertically-integrated, capital-intensive enterprises interposed within an extensive traditional sector treated with more or less benign neglect, despite its importance as producer, and even more so as a source of employment. The study will examine the consequences of this policy, with particular attention to the positive linkages and conflicts between the modern and traditional sectors. The key concerns are (i) whether the resources of the traditional sector might be more effectively mobilized by more direct participation of government through smallholder policies, and (ii) which of the various linkage arrangements are most beneficial and how should they be fostered.
4. The study will permit some evaluation of the applicability and usefulness of the "Yugoslav agro-industrial model" for other countries, and of how, within such a strategy, traditional sector development might also be fostered. It is proposed that this should be the first of several comparable studies aimed at evaluating alternate smallholder development strategies. To our knowledge, no comparable studies are underway or proposed at this time.
5. This proposal has its origins in the experience gained from the Economic Mission to Yugoslavia in November 1971. Much supporting material is therefore documented in the background study to the "Economic Report" of 1971 entitled Agriculture in Yugoslavia, by G. Weinschenk and G. F. Donaldson, January 1972. Further, since the

Mr. Ernest Stern
(through Alexander Stevenson)

- 2 -

March 20, 1973

proposed study team is currently involved in the Special Economic Mission to SAP Kosovo (one of the three suggested study regions) the study is well integrated with the operational work of the Regional Office. The concerns of the Special Mission coincide, for the rural sector, very closely with many of those outlined in the attached proposal.

Attachment
CFDonaldson/coh

cc: Mr. Gulhati
Mr. Hawkins



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PART V. PROJECT SUMMARY
(Use Additional Sheets if Necessary)

1. Research Objectives:

- | | |
|--|-------------------------------------|
| Support basis for Bank Policy | ☒ |
| Support for Bank Operation in Projects or Sectors | ☒ |
| Support for Country Economic Work | ☒ |
| Increase Knowledge of the Basic Development Process | ☒ |
| Develop Institutional Capacity for Research in LDC's | ☒ |
-

2. Description:

- (An analysis of the effects of institutional arrangements, government policies, and socio-economic conditions on the economic performance of smallholders in Serbia.)
- a. Problem
 - b. Method - The study will be based on a cross sectional survey of smallholders in the three geographic areas of Serbia. The primary data to be gathered will explain the economic performance of the smallholder sector and as such will concentrate on physical inputs and output but will encompass variables relating to the standard of living and the economic flow mechanisms. Concurrently, it will be necessary to examine in a more general context the policies, conditions and infrastructure, all of which affect the traditional smallholder sector
 - c. Coordination - See cover memo and Study Proposal
 - d. Implication for Bank Policy and Operations - see cover memo and Study Proposal
 - e. Project Organization - See cover memo and Study Proposal.

DEVELOPMENT STRATEGIES FOR SMALLHOLDER AGRICULTURE:

A CASE STUDY OF YUGOSLAV EXPERIENCE

STUDY PROPOSAL

An Analysis of the Effects of Institutional Arrangements,
Government Policies, and Socio-Economic Conditions on
the Economic Performance of Smallholders in Serbia.

Prepared by:

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I. INTRODUCTION

1. This outline proposes a case study of the relationships between policies, institutional arrangements and economic performance in a traditional farming sub-sector found co-existing with a modern large-scale farming sub-sector, in the context of a rapidly modernizing and relatively developed market economy. While it is acknowledged that, in the long run, the importance of smallholder farms is likely to decline, smallholder farming remains the traditional and predominant form of agriculture in most developing countries. Further, given the likely rates of population growth and the best possible development rate for the modern sector in these countries, it seems certain that smallholder farming will remain a dominant part of their agricultural sector and a significant part of their total economy (especially in respect of employment) for decades to come. Given this likelihood, it seems relevant to investigate the ways of achieving the best use of this sub-sector in promoting both economic development and the well-being of rural people. This case study is thus foreseen as one of a series directed to this end.

2. One scenario that might be envisaged for many developing countries in the future is that a small-scale, labor intensive rural sub-sector might continue to exist even when 60 per cent or more of the active population has become employed in the modern sector. By this stage, a relatively capital intensive agriculture may have emerged alongside the smallholdings, possibly with positive linkages and inevitably with some conflicts between the two. Just such a situation exists in Yugoslavia. This country situation thus provides a working model which might usefully be studied for insights into both the Yugoslav and a more general context. Such a study might seek to

both: (i) provide some assessment of the best directions for future Yugoslav policy regarding this relatively neglected sector, especially with regard to institutional arrangements and sectoral policies, and (ii) permit some evaluation of the applicability and usefulness of this form of dualistic organization for other developing countries, and of the best means of pursuing it, especially with respect to the institutional arrangements and conditions necessary for traditional sector development.

II. REASONS FOR ANALYSIS

3. The study is intended to be useful to three groups: (i) to Bank policy staff concerned with promoting rural development, (ii) to Bank regional staff concerned with operational policies for Yugoslavia, and (iii) to Yugoslav policy-makers involved in formulating future policy for their smallholder sector. It will also contain an element of technical assistance to Yugoslavia. Accordingly, the study will explore practical implications with respect to the development of traditional agriculture in order to provide insights for these three groups.

4. First, it will seek to provide a better comprehension of the operation of a traditional agricultural sector and how better use may be made of its resources in the general context of promoting rural development. An increasing concern about traditional sector development is currently shared by many organizations, including the World Bank. Although problems of smallholder sectors in developing countries can readily be identified, they are not easily analyzed and attacked when a conceptual framework is not available. A shortage of conceptual models for smallholder agriculture, together with a lack of detailed case studies of those that do exist, suggest that such analysis would be extremely useful.

5. Second, analysis will specifically explore implications for Bank operational policies in Yugoslavia and other developing countries with

emerging agricultural situations similar to those existing in Yugoslavia. The phenomenon of the large-enterprise social sector co-existing with the private smallholder sector should provide constructive insights for Bank policy, since this co-existence has enabled Yugoslav agriculture to very successfully mechanize and modernize while at the same time maintaining a large segment of its working population employed in labor-intensive production of agricultural products. With respect to Yugoslavia, the Bank has a long-term interest in the agricultural sectors of the less developed Republics of Montenegro and Macedonia and the autonomous Province of Kosovo. Of immediate benefit is that part of the analysis dealing with the farm credit infrastructure. Loans made for large projects are relatively manageable; however, loans distributed among a large number of smallholders are dependent on the framework of institutions, both at the Republic and local levels. Since part of the analysis deals with credit and credit institutions, a specific report will be made to the Bank concerning the efficiency and operation of Yugoslav delivery mechanisms and credit packages for smallholders.

6. Third, in addition to the insights for Bank policy, the study will

point out specific obstacles to further development of the traditional smallholder sector in Yugoslavia of importance to Yugoslav policy-makers themselves. Three factors underlie the reality that the smallholder sector of agriculture is unlikely to be absorbed by an expansion of the large enterprise sector in the short run, nor perhaps even in the long run.

(i) The strong reluctance of the Yugoslav peasant to surrender his land however unproductive it may be, is a non-economic constraint obstructing the complete socialization of the agricultural sector. (ii) The present

inability of the modern sector of the Yugoslav economy to absorb a sizable migration of surplus rural labor if the private sector were socialized provides a socio-economic constraint. (iii) The mountainous terrain of much of the country presents a considerable constraint on large-scale mechanized farming and is a technico-economic constraint.

7. The study will also produce a guaranteed benefit for Yugoslav policy formulation by creating a basis for surveying the smallholder sector. The very limited amount of published data on the smallholder sector reflects the apparent unwillingness of the Yugoslav government to do anything about the smallholder sector, largely because it has no place in the Yugoslav political ideology. This long-term disregard for smallholder agriculture has resulted in a deficiency in the institutional arrangements in Yugoslavia through which adequate data can be obtained. This study would be an initial step toward developing some capacity in a major Yugoslav research institute for collecting and maintaining such data. The Institut za Ekonomiku Poljoprivrede in Belgrade is the most likely candidate for such an accommodation. Preliminary investigation shows that this is the only research institute having any sound experience in sampling the smallholder sector.

III. THE CASE STUDY

8. Smallholder performance in Yugoslavia merits study for five reasons. First, the performance of the agricultural sector continues to have a strong influence on the overall Yugoslav economy and on the well-being of a large proportion of Yugoslav people. Agriculture accounted for approximately 22.6 per cent of the Yugoslav Social Product¹ and of the 73

¹ Statistički Godišnjak Jugoslavije (SGJ), 1970.

per cent of the Yugoslav population living in rural areas, 70 per cent² were engaged in agricultural activities. Second, Yugoslavia has an extensive traditional smallholder sector which persists within an economy whose large-scale social sector enterprises have rapidly modernized and industrialized. Smallholdings are strictly limited by law to a maximum of 10 arable hectares. Social enterprises may be agro-industrial complexes covering thousands of hectares. Their number is few; Serbia, for example, has only 126 of these agricultural giants. Third, the smallholder sector of agriculture, unlike in other Eastern European countries but similar to other developing countries, is (i) based on private enterprise, (ii) responsible for feeding the majority of the Yugoslav population, and (iii) co-exists with highly mechanized large-scale agricultural enterprises. Fourth, the government impetus for higher education since World War II has created a basic research infrastructure (though one which overlooks small farmers). This emphasis enhances greatly the feasibility of gathering sound primary data, the reliability of existing secondary data, and the general research environment. Fifth, Yugoslavia has a national income pattern which is evenly distributed. The fact that the smallholder shares so well in the national income is especially interesting in that the Yugoslav government has done very little to aid the smallholder sector.

9. Within Yugoslavia, the case study relates to the smallholder sector of agriculture in Serbia. This geographic limitation is quite advantageous. As one of the six Yugoslav Republics, Serbia accounts for 50 per cent

² Agriculture in Yugoslavia, Background Study to Economic Report, World Bank, draft prepared by G. Weinschenk and G. F. Donaldson, Feb., 1971. This estimate includes both full-time and part-time employment.

of the total Yugoslav agricultural production. It consists of three separate political regions: the two autonomous provinces of Vojvodina and Kosovo, and the rest of the Republic referred to as Serbia Proper. The political subdivisions cover the gamut of development. Kosovo, the southern constituent of the Republic, is an underdeveloped region; Serbia Proper, bordered on its south side by Kosovo and on its north side by Vojvodina, is on the borderline of the developed and undeveloped classification; and Vojvodina reflects a high degree of modernization in agricultural mechanization and the employment of new technology.

10. The geographical limitation is based on four practical considerations. First, Serbia is a manageable entity. Second, data are not collected uniformly for all Republics. Third, owing to the three separately administered regions of Serbia, the data are subdivided geographically into these three regions, each with different geographic features, natural endowments, social characteristics and level of development. Fourth, fiscal and monetary policies are regionalized by Republics, making inter-Republic comparison difficult.

11. The political division of Serbia into three regions resulted from historical developments. These developments are reflected in the structure of the traditional smallholder agriculture of each region. Vojvodina and Serbia Proper are culturally Serbian, but a European feudal system was imposed on the former and a Turkish system on the latter. Serbia Proper and Kosovo share much the same climate and topography, but their ethnic composition makes them differ culturally; Kosovo's population is 67 per cent Albanian. To analyze the Serbian smallholder agriculture with

respect to these differences will therefore broaden the applicability of the implications and conclusions of this study for other countries.

IV. STUDY OUTLINE

12. The study will be based on a cross-sectional survey of smallholders in the three geographic areas previously mentioned. The primary data to be gathered will explain the economic performance of the smallholder sector and as such will concentrate on physical inputs and outputs. Additionally, they will encompass variables relating to the standard of living and the economic flow mechanism.

13. The analysis of the smallholder sector at the micro level must be related to the conceptual framework of the country. Concurrently, it will be necessary to examine in a more general context the policies, conditions, and infrastructure, all of which affect the traditional smallholder sector.

14. The overall aim of the study is to analyze the interaction between the smallholders on one hand and the policies, socio-economic conditions, and infrastructure on the other hand.

1. Analytical Framework

15. (i) Background Description. The background to the study is formed by describing in general terms the development of the smallholder and the large enterprise sectors of agriculture, both nationally and in Serbia itself, where its development differs from the rest of the nation or among the three regions.

16. (ii) Hypotheses. The overall hypothesis is that the traditional smallholder sector of agriculture in Serbia has the potential to achieve a significant rate of economic growth in the future so as to make a sizable contribution to the whole Yugoslav economy. There are four important corollary hypotheses: first, the dichotomous structure of Yugoslav agriculture has enabled the smallholder sectors in Vojvodina, Serbia Proper, and Kosovo to maintain relatively sound economic efficiency vis-a-vis their socialized counterparts in view of the very limited amount of governmental aid; second, this dichotomous structure of Yugoslav agriculture can provide a basis for agricultural development of traditional smallholder sectors in other countries; third, the relationship between the smallholder and socialized sectors is synergistic, rather than complementary or competitive; and fourth, recent Yugoslav policies, by obstructing capital formation and utilization within the smallholder sector, have not encouraged or allowed the smallholder to be more efficient in production and, consequently, a more positive asset to the Yugoslav economy. Notwithstanding the breadth of these hypotheses, the aim is to isolate and examine the relevant key variables.

17. (iii) Research Method. Surveys will be conducted of smallholders in Serbia Proper, Vojvodina, and Kosovo. Survey analysis will involve the use of descriptive statistical methods and analysis of variance. If the survey provides data of adequate quality, regression and covariance analysis may also be applied. The overview will rely heavily on secondary data and analysis already undertaken, especially in regard to policies and the macro aspects of the institutions.

2. Comparison Among Smallholders

18. The objective of this part of the study is the micro-analysis of the smallholder sector of agriculture. The analysis is directed toward the relative efficiencies in the use of factor inputs, the economic flows, and the linkage mechanism for the flows. From an economic viewpoint, the overall questions to be looked at are: (i) whether there are any opportunities in the traditional smallholder sector for increasing output per unit of labor and of land by augmenting, to a relatively small extent, the amounts of investment per man and per unit of land; (ii) the relative importance of the linkage mechanisms for economic flows among the more efficient producers; and (iii) what the most promising area of expansion of the smallholder sector is, be it in expansion of acreage, increase in yields, or shifts to more valuable industrial crops. If opportunities exist for increasing labor and land productivity, it should be determined from the results of the comparison in the analysis of production whether the investment should be biological (fertilizers, seed, etc.) and consequently land-saving and labor-intensive, or mechanical and therefore land-saving and capital-intensive, or a combination of both types of investment.

19. The linkage mechanism for economic flows is the interaction between the large enterprise and smallholder sectors. It is pervasive and affects both production and output. The three main types of association are: (i) smallholders who work on social enterprises in agriculture, (ii) cooperative arrangements with the socialized sector in which capital and land inputs are involved, and (iii) general agreements of varying degrees, such as leasing by retired smallholders to the social enterprises and

contracts by the social sector to buy the output of the smallholder, usually stipulating a portion of the smallholder's output to be purchased at a guaranteed price.

20. In order to allow a sufficient number of degrees of freedom, thirty observations per cell (Table 1) would require a sampling of 270 smallholdings evenly divided among Serbia Proper, Vojvodina, and Kosovo. Three hundred smallholdings is considered an initial maximum sample. If the classification is later altered to a 4 x 4 array with sixteen cells, twenty observations per cell would be adequate.

Table 1. TWO-WAY CLASSIFICATION FOR SMALLHOLDER SURVEY

A. Breakdown by Degree of Cooperation with Social Sector

	<u>Proportion of Participants</u>		
	<u>Serbia Proper</u>	<u>Vojvodina</u>	<u>Kosovo</u>
1. No cooperation	High	Medium	Very high
2. Partial cooperation	Medium	Very high	Low
3. Complete cooperation	Very low	Medium	Very low

B. Breakdown by Degree of Subsistence

	<u>Proportion of Participants</u>		
	<u>Serbia Proper</u>	<u>Vojvodina</u>	<u>Kosovo</u>
1. No significant per capita increase in production	Medium	Low	Very high
2. Extensive amount of subsidiary employment	Medium	Medium	High
3. Use of hired labor	Low	High	Very low

3. Economic Environment for Capital and Technology

21. Long-term growth in agricultural productivity and output is achieved in any economy through capital formation and technological change. For Yugoslavia as a whole, these related processes have progressed beyond the initial stage of development. The objective of this part of the study is to analyze the environment for capital and technological expansion, as created by government policies, conditions, and the overall structure through which agricultural production is promoted and its efficiency increased.

22. (i) Policies. This stage is largely descriptive in that it reviews the results of government policies for taxation, prices and consumption in respect to personal savings of the smallholder sector of agriculture, policies of national credit and remittances from abroad, and policies concerning the interaction with the socialized sector. The sub-hypothesis is that such policies in general have not allowed capital and new technology to flow freely into the smallholder sector.

23. A policy study in itself might constitute a complete study. However, this study will use secondary sources and analyses already made of policies affecting agriculture with respect to the ability of the smallholder to accumulate or to invest in capital. Credit policies will be especially explored, with regard to the credit policies of the World Bank and the socialized sector policy on interaction with the smallholder sector.

24. (ii) Socio-economic Conditions. Here some of the socio-economic conditions influencing the operation of the smallholders will be examined. These conditions can be described in terms of social and economic constraints,

some of which distinguish Serbian from other Yugoslavian smallholders, and also from those in other developing countries. These are the conditions which exert an influence on the decision-making of the subject smallholders.

25. First, the smallholder family will be studied for patterns of cyclical developments in expansion and dispersion. The concept of a tightly knit family of three generations is relevant to the context of the situation in which investment decisions are made. Second, the ownership and inheritance of land should be investigated in view of the general claims that extreme fragmentation through inheritance is a major brake on capital and technological formation. Third, the occupational status of the smallholder greatly influences his desire to take on off-farm activities and increases greatly the probability of his children leaving the farm for urban jobs. Fourth, the study must look at the overall economic climate in which the smallholder operates. If it is unstable, the smallholder tends to be reluctant to accept measures that will aid him in securing new capital and technological innovations.

26. (iii) Overall Structure. The overall framework will be dealt with in terms of the agricultural infrastructure. This will include physical capital and the institutions which provide economic services to smallholders and have a significant effect upon the economic functioning of the smallholder sector, but which are external to the individual smallholder farms. The infrastructure can be divided into two parts: capital-intensive and capital-extensive. The former is similar to the concept of social overhead capital in that it covers reproducible capital for the provision of services, such as roads, bridges, watehouses, or irrigation. The latter involves those

services in which the tangible capital component is negligible, such as credit and financial institutions, extension services, conservation schemes, agencies for plant and animal protection, disease and pest control organizations. This section will emphasize irrigation and the macro aspects of the structure and operation of the financial mechanism because these two services are likely to have the greatest impact on the functioning of the smallholder sector.

4. Implications and Conclusions

27. The implications of the analyses will be considered in terms of: (i) alternative policy measures; (ii) possible modifications of the institutional structure, and (iii) the position the government should adopt for its participation in the adjustment of the traditional smallholder sector of agriculture in Serbia. This proposal maintains that the conclusions drawn for Serbia will be of relevance for all Yugoslavia as well as elsewhere.

28. Alternative policy measures will be reviewed in terms of taxation, prices, land and credit provision. The modifications to the institutional structure will be broken down into the financial, marketing, and the technical support structures. Finally, the overall framework for government participation in the adjustment of the private smallholder sector should be evaluated in two perspectives: first, the amount of participation - whether the government should have nil, partial, or complete participation in the adjustment; and second, the question of what form this participation should take.

V. STUDY EXECUTION

29. The study will be undertaken in the Development Economics Department, where the staff member responsible will be Mr. Graham F. Donaldson.



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