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ABSTRACT

Research objectives were to: determine the impact of selected manpower programs on the Interlake area of Manitoba, employing a benefit-cost analysis; measure the differential effects of manpower services; produce a data base on characteristics of the unemployed and underemployed; and compare the long run benefits of manpower, capital improvements, and social service input. After determining 12 types of manpower services available, a service group (63 percent response) and a randomly selected norm group (43 percent response) were interviewed via questionnaire for comparative information on: (1) mechanisms most used in seeking jobs; (2) relocation preferences; (3) base period and exposure period; and (4) benefits and costs of manpower services. Some significant findings were: industrial, farm management, and vocational and special training were of greatest benefit to the trained client; base year level of earnings and level of weeks employed were the most important characteristics determining the level of income benefits from non-agricultural services; there was a potential for reducing unmet client needs with improved mobility and placement services; client characteristics indicated the disadvantaged were being served, particularly American Indians; and manpower services had increased employment and earnings for most groups. (JC)

BENEFITS AND COSTS OF MANPOWER SERVICES IN THE INTERLAKE RURAL DEVELOPMENT AREA

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AND FARM MANAGEMENT
FACULTY OF AGRICULTURE
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March, 1972

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PREFACE

In May 1969, a joint research team, headed by Professor James A. MacMillan of the University of Manitoba and Professor John J. Flagler of the University of Minnesota, was contracted by the joint Advisory Board [Fund For Rural Economic Development (FRED)] to conduct a research study to determine the economic impacts of manpower services in the Interlake Area of Manitoba. The purpose of the study was to determine the economic effects of the array of manpower services on the population of the Interlake, using benefit-cost and additional methods that the research team determined to be useful in identifying and measuring significant results.

The research team enjoyed the support and assistance of an Advisory Committee consisting of representatives of each of the government agencies providing manpower services in the Region. (See Appendix A for the list of Advisory Committee members.) The various agencies were concerned that the research be carried out with an objective and independent perspective and that the study be framed to provide useful results. Considerable time and effort was devoted to communicating with agencies concerning the study approach and progress. (See Appendix B for the list of meetings attended.) Considerable sensitivity existed concerning the use of information provided to Federal and Provincial agencies by clients on a confidential basis. With respect to confidentiality of client information, a statement on the use of client data (Appendix C) was prepared to respect the concerns of the agencies involved.

The close working arrangement with the Adv sory Committee repre-

sented a unique element in the research process. Discussions with agency representatives ensured that issues of relevance to current programming were included in the study and discussed in the report. Motivation, one issue of particular importance to agency members, was included as an objective secondary to economic factors in the study, but the results in the area were not conclusive. It was the wish of the Advisory Committee that the preface to the report include the following statement: "The Advisory Committee notes that as part of an evaluation process further study of the role of social and motivation processes in reaching disadvantaged regions, communities and people is required."

Research design and instrument development (see Appendix J for the questionnaire) was completed by July and data collection proceeded throughout the period July to December under the direction of Dr. MacMillan, assisted by Mr. L. Jersak who supervised field operations and Mr. J. Lockhart who supervised the enumeration of client work sheets and costs. Also, summer student staff of the Canada Department of Manpower and Immigration contributed to the interviewing of clients.

The format of the report is a substantial departure from the usual research report format. The standard format would start with a discussion of the regional development problem and a summary of the various alternative methods at hand to solve such problems. A general discussion of issues in general terms would be followed by an outline of specific alternatives and a formal exposition of the model selected. Lastly, the report would discuss the model results. In the present report the general problem is outlined in the second section and followed by an outline of the model. Regression results are given in Appendix H.

The first section summarizes selected results judged to be of critical importance to administrators of manpower services. A description of the sampling procedures and general results are discussed in non-technical terms. It is hoped that the presentation of results in this format will provide a general summary of the results in such a manner as to facilitate understanding by nontechnical readers while making appropriate references to the remainder of the text and Appendices for readers interested in technical details. The format was adopted at the suggestion of the Advisory Committee.

The substantial data base thus assembled was coded, edited and computerized at the University of Manitoba. Preliminary results were available in February, making possible the examination of the information utilizing a variety of statistical techniques, discussed in the methodology section of the report.

Among the many representatives of the cooperating agencies who contributed generously of their time and efforts are: Mr. E.A. Poyser and Mr. R.L. Carter, co-managers of the FRED plan; Mrs. J. Edmonds, Director General, Prairie Region, Canada Department of Manpower; Mr. R.A. Jenness, Director and staff members P. Faye and S. Magun of Canada Manpower, Planning and Evaluation Branch; and Mr. A. Getz, Director, Central Interlake, Manitoba Department of Health and Social Development.

Our appreciation is extended to the interviewing team, M. Bridges, L. Miller, and R. Hoffman, those who assisted in data editing and compilation, N. Longmuir, J. Tulloch, J. Craven, and D. Krawchuk, the typing services of the Department of Agricultural Economics, and the editing by Mrs. A. Block.

The assistance in analysis by Mrs. C. Lu, Research Assistant, University of Manitoba, and in the design stage of the study and literature review by M. Rosenblum, graduate student, University of Minnesota, is acknowledged. Also, comments by anonymous reviewers solicited by the Publication Review Committee were helpful in revising a previous draft.

Finally, while acknowledging the assistance which made possible the assembling of the data base necessary for the study, the authors assume full responsibility for the findings and interpretations. The report represents a joint effort by the authors: James A. MacMillan, currently Adjunct Professor in the Department of Agricultural Economics, University of Manitoba, and Associate Director of the Alberta Human Resources Research Council; Leo A. Bernat, Minnesota Research Associates, Minneapolis, and currently a Research Consultant, Minnesota Department of Education; and John J. Flagler, Professor of Industrial Relations, and Director of Labour Education Services, Industrial Relations Center, School of Business Administration, University of Minnesota.

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The study results and conclusions are discussed below in the context of the study terms of reference and research objectives. The major objective of the study is the determination of impacts of manpower services in the Interlake Area of Manitoba (see p. 41 for additional detail).

Enumeration of Clients by Service Type

The first step in the study was to define the set of manpower service categories to be evaluated (Table 1). The definition of service categories is a compromise between two extremes involving the analysis of a large number of service categories and projects with distinctive features versus a grouping of services to facilitate analysis. For example, manpower corps projects are evaluated as a group. The results, then, are representative of the average client and the average project. Benefits of "poor" projects are overstated and those of "good" projects understated. A similar aggregation problem exists for the numerous course types in vocational and special courses, and training in industry services.

The most difficult problems encountered in the initial stages of the study were: (1) determining characteristics of manpower services being provided, and (2) obtaining a count of clients receiving manpower services. The difficulties were due in part to the multiplicity of agencies involved in the delivery of manpower services: Canada Department of Manpower, Canada Department of Indian Affairs, Manitoba Department of

Table 1

Description of Manpower Service Categories

1. Training in Industry— Classroom instruction in a business establishment is the primary focus. Individuals are hired as employees of the firm. A separate contract is negotiated between the Federal Government and the firm. The contract provides for payment of a certain percentage of the employee's wage or salary by the Federal Government. The classroom training is to be separate from the actual production process. Canada Manpower and Indian Affairs have clients receiving this service.

2. Mobility: Relocation Assistance and/or Exploratory Grants-- Relocation assistance is usually for the relocation of an individual and his immediate family in a centre where a permanent job is available to the individual.

   Exploratory grants are made for the purpose of exploring feasible job opportunities in centres other than where an individual is currently residing. Canada Manpower and Indian Affairs have clients receiving this service. In addition, Manitoba Health and Social Development have some clients receiving this service, but due to time constraints they were not sampled.

3. Farm Management Course— A 5 month course during the winter months enables farm operators to improve their farm operation skills. Course sessions include instruction in soil and crop management, animal husbandry, farm accounting and business techniques, and applied science and mathematics. Clients are selected by a local committee and funds for training allowances and course costs are provided by Canada Manpower.

4. Manpower Corps Complete-- The Manpower Corps program combines occupational skills training with special skills training (money management, confidence building, employer-employee relations, etc.). Projects under the Manpower Corps program are usually associated with a provincial public works project. Some of the several types of projects under the Manpower Corps program include: construction of Community Education Centres; construction of Fisheries Training Centre at Hnausa; diamond drillers' helpers course; beach development at Winnipeg Beach; crafts building construction at Gimli Recreational Leadership Training Centre; Manpower Corps Training Plant-- Selkirk; etc. Clients are selected by a local committee and funds are shared by the Province and Federal Government under the FRED plan. Manitoba Health and Social Development clients (VRT) are included in the

Table 1 continued

category. Vocational Rehabilitation Training (VRT) refers mainly to Assessment and Rehabilitation Training at Pembina House—Ninette, Work Training at Industrial Workshop (Society for Crippled Children and Adults), Skills Unlimited (for mentally handicapped), and various private trade school courses and training on-the-job for the physically and mentally handicapped.

5. Manpower Corps Non-Complete-- Registered clients who dropped out prior to the end of the course or failed to report.

6. Employment Referral Complete— Referrals made by a Canada Manpower Counsellor of an individual to a potential job followed by acceptance of the job offer.

7. Employment Referral Non-Complete--Clients who fail to report, accept, or be accepted by the employer for the job position are included.

8. & 9. Basic Training for Skills Development IV & III Complete and Non-Complete--An academic upgrading program which upon successful completion of various levels enables the student to proceed into a vocational skills course (usually offered at one of the Province's 3 community colleges).

Level IV which is the lowest of the upgrading levels is a pre-requisite entrance requirement to Level III.

Successful completion of Level III (or a Grade 8 equivalent) will permit the individual to proceed into Level II or enter upon a waiter-waitress training course or a heavy equipment operator's course where Grade 8 is a requirement.

10. & 11. Basic Training for Skills Development II & I Complete and Non-Complete —Graduation from Level II with a standing of 80% or better in the three academic subjects (English, Mathematics and Science) which are taught in Level II will permit the individual to enter Level I upgrading. With a pass mark of 60% or better in all 3 subjects in Level II the individual may choose from a wide variety of vocational skills courses of 1 year or less in duration. These courses would normally only accept an academic Grade 10 standing as an entrance requirement.

Graduation from Level I will permit the successful individual to enter upon a course of 1 year or less in duration but which normally only accepts a complete Grade XI standing as an entrance requirement.

Grade equivalents are usually not identified with the various levels of BTSD upgrading. For those individuals with less than

Table 1 continued

a complete Grade X academic standing, a level placement test is given to determine at which level of the BTSD program the individual is functioning. The Indian Affairs services are given on reserves and in towns.

12. & 13. Vocational and Special Complete and Non-Complete--This category consists mainly of vocational skills courses (1 year or less in duration) which are offered at the community colleges. Courses may also be taken at some of the private trade schools throughout the province.

Indentured apprentices are obliged to take special theory courses in the various trades to which they belong. The theory courses vary in length, but are usually from 4 to 8 weeks in duration.

Canada Manpower pays training plan costs for clients who have been in the labour force one year or more and pays training plan costs and allowances for clients who have been in the labour force three years or more or who have been in the labour force one year or more and have dependents.

Indian Affairs will pay training allowances for clients who cannot meet the three-year labour force or dependency status requirements. In most cases it is charged to Health and Social Development and charged back to Indian Affairs.

Special training includes courses sponsored under the FRED Plan, such as the heavy equipment operator's course, carpentry upgrading courses, and various other skills courses of a "special" nature.

14. Canada Manpower Counselling Only--Clients who register at the Selkirk Centre but do not receive an additional service, i.e., mobility or training, are included.

Health and Social Development, and Manitoba Department of Agriculture. The same service is referred to by different names by different agencies and, in some cases, two agencies provide very similar services.

Future evaluation of manpower services would be facilitated if a common clearing point for all records on manpower clients could be

established. The present Client Record and Referral forms of the Manitoba Department of Agriculture provide the most complete count of Interlake clients. However, these data exclude the referral and counselling services of Canada Manpower, and the mobility and placement services of the Manitoba Department of Health and Social Development, as well as data on Indian Affairs clients.

The clients by service type (Table 2) are: counselling, 41 percent; training, 32 percent; mobility, 3 percent; and referrals, 24 percent (Table 3). The percentage allocations indicate the distribution of manpower clients among broad service categories.

In order to assess the impacts of counselling, it is necessary to have information on test scores and interview results. With this information it would be possible to determine whether services in addition to counselling were not received due to eligibility standards, or because the client represents a poor risk in terms of anticipated service benefits. Impacts of counselling were not assessed due to the absence of records by agencies other than Canada Manpower, and due to time constraints.

Interview Response

For the service group, 350 questionnaires were completed and judged satisfactorily for the analysis of benefits (Table 4). A total of 642 contacts was attempted. Including only questionnaires used in the analysis, the response ratio is 63 percent.[1] The numerator of the ratio excludes

[1]Eliminating mobility, 43 contacts, and ineligibles and invalid, 64 contacts, the response ratio for questionnaires used in the analysis is (350-13)/(642-43-64) = 63 percent.

Table 2

Number of Interlake Residents Completing Manpower Services by Service Categories, June 1, 1968 to May 31, 1969

Category Number	Service Category[a]	Number of Clients		
		Single	Multiple[b]	Total[c]
1	Training in Industry	86	27	113
2	Mobility[d]	69	14	83
3	Farm Management Course	205	1	206
4	Manpower Corps Complete	93	8	101
5	Manpower Corps Non-Complete[e]	43	10	53
6	Employment Referral Complete	477	-	477
7	Employment Referral Non-Complete	283		283
8	BTSD III & IV Complete	39	52	91
9	BTSD III & IV Non-Complete[f]	134	48	182
10	BTSD I & II Complete	46	3	49
11	BTSD I & II Non-Complete	62	10	72
12	Voc. & Special Complete	69	10	79
13	Voc. & Special Non-Complete[g]	49	4	53
14	Canada Manpower Counselling Only	1326	-	1326
	TOTAL	2981	187	3168

[a]Service categories are defined in Table 1, pp. 2-3.

[b]Clients receiving more than one service in the period June 1, 1968 to May 31, 1969 were categorized according to the last service completed. For this classification, placement or non-placement was not considered as a service when received in connection with another service because of the large number receiving placements after the other service.

[c]The total includes the multiple service clients.

[d]Includes 16 Indian Affairs clients.

[e]Includes 12 Vocational Rehabilitation Training clients.

[f]Includes 24 Indian Affairs clients.

[g]Includes 21 Indian Affairs clients.

Table 3

Percentage Distribution of Interlake Clients
Among Manpower Service Categories

Category Number	Service Category	Number	Percent
	Training--Completions		
1	Training in Industry	113	4
3	Farm Management Course	206	6
4	Manpower Corps	101	3
8	BTSD III & IV	91	3
10	BTSD I & II	49	2
12	Vocational & Special	79	2
	TOTAL	639	20
	Training--Non-Completions		
5	Manpower Corps	53	2
9	BTSD III & IV	182	6
11	BTSD I & II	72	2
13	Vocational & Special	53	2
	TOTAL	360	12
2	Mobility	83	3
	Employment Referrals		
7	Non-Complete	283	9
6	Complete	477	15
	TOTAL	760	24
14	Counselling Only[a]	1326	41
	GRAND TOTAL	3168	100

[a]Does not include counselling services of FRED Plan general counsellors for which an official record does not exist.

Table 4

Total Interview Contacts and Disposition

Cat. No.	Service Category	Questionnaires Used for Analysis	Not Home[a] when Located	No Contact[b]	Refusals	Ill or in Jail	Ineligible[c] or Invalid	Distant[d] Clients	Deceased	Total Attempted Contacts
1	Training in Industry	23	7	7	2	0	7	1	1	48
2	Mobility	13	3	9	0	0	7	11	0	43
3	Farm Management Course	26	3	2	2	0	15	1	0	49
4	Manpower Corps Comp.	27	6	6	0	1	4	4	0	48
5	Manpower Corps Non-Comp.	24	5	12	1	1	4	2	0	49
6	Employment Referral Comp.	29	3	5	1	0	9	3	0	50
7	Employment Referral Non-Comp.	23	9	6	4	1	9	7	0	59
8	B T S D III & IV Comp.	33	7	4	2	1	0	0	0	47
9	B T S D III & IV Non-Comp.	36	5	8	2	0	2	1	0	54
10	B T S D I & II Comp.	33	1	4	2	0	4	3	0	47
11	B T'S D I & II Non-Comp.	27	9	14	1	1	3	4	0	59
12	Voc. & Special Comp.	29	2	3	4	0	3	4	1	46
13	Voc. & Special Non-Comp.	27	3	4	1	1	4	3	0	43
	TOTAL SERVICE	350	63	84	22	6	71	44	2	642
	Indian Norm	22	8	8	0	1	10	16	0	65
	Farm Norm	20	6	12	0	0	12	0	0	50
	Rural Non-Farm Norm	11	5	6	2	0	8	1	0	33
	Urban Norm	10	5	8	2	1	13	2	0	41
	TOTAL NORM	63	24	34	4	2	43	19	0	189

[a]Not Home When Located--This means that place of residence was found, but client was either at work, away from home or somewhere else unknown to the residents of that particular home. At work, in many cases, appeared to be an excuse to avoid completing a questionnaire.

[b]No Contact--This means no contact at all with the client or family. This was a result of wrong directions or of the client being unknown.

[c]Ineligible--this refers to clients who were not in the labour force prior to receiving their service (student), retired (control mainly), or already surveyed for another service, insufficient data and exclusions such as 3 training in industry on a management course and 2 farm management trainees who did not farm. Invalid-Consistency checks on the questionnaire, checks with information on agency forms resulted in exclusion of the questionnaire from the analysis. This occurred for a large number of farm management clients due to problems of recall.

[d]Distant Clients--Clients who originally lived in the survey area, but have since moved out of the area.

questionnaires completed satisfactorily but excluded from the analysis due to unique characteristics which would distort the analysis of benefits. For example, 3 training in industry clients who took a one week business management course were excluded due to the short period of training. Also, 2 farm management trainees who did not farm were excluded. The number of completed mobility questionnaires was not sufficient for a detailed analysis but secondary data from forms was analyzed for Canada Manpower clients receiving mobility services (see Appendix F).

For purposes of analysis, questionnaires were designated ineligible if the service or control respondent was out of the labour force during the entire base period (retired or in school are two examples). Basic data such as age, education, occupation, when checked with the Canada Manpower forms, have revealed some cases of discrepancies. The discrepancies were due to client misrepresentation, or poor recall either at the time of the survey or interview with the Canada Manpower Counsellor.

A list of clients by name, address and Social Insurance number was compiled for each of the service categories. Initially, lists were compiled from the FRED plan Client Record and Referral form for all clients except Indian Affairs, Health and Social Development, and Canada Manpower training in industry and mobility. Mobility clients except for those receiving services from Health and Social Development were added to the list. A check on the list compiled from the Client Record and Referral form list was carried out using Canada Manpower Authorization lists. Very few omissions were found on the basis of the check. An attempt was made to obtain lists for the period 1967-70. However, lists from all sources for 1967 were incomplete.

Initially, a target of 30 in each of the service and norm groups was set. However, travel expenses and time constraints were such that this procedure was revised. Fifty names were selected at random from each service or control group and all clients were contacted. A 60 percent response rate, if achieved, would provide 30 clients. The resulting distribution of contacts by service and norm groups (Table 4) illustrates the variation in the number of questionnaires completed by group.

The random samples for the norm groups (urban, rural, non-farm and farm households) were drawn from the list of households used for the 1968 survey of the Interlake.[2] Initially, the target was to obtain 30 farm, 15 urban and 15 rural non-farm households. However, time and budget constraints prevented the achievement of this goal. A total of 63 questionnaires was completed and judged satisfactory out of a total of 189 attempted contacts. The overall response ratio including questionnaires used in the analysis for the norm group was 43 percent.[3]

For the Indian component of the norm group, a random sample was taken from labour force lists obtained from the Department of Indian Affairs. The list was reduced to registered Indians residing on reserves, and between the ages of 16 and 44, who had some work experience. Indians sampled in the service groups were excluded. Again the initial target was 30. However, it was difficult to obtain sufficient records from those with employment experience. Great difficulty was encountered in defining

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[2]Charles F. Framingham, James A. MacMillan, and David J. Sandell, The Interlake Fact (Winnipeg: Hignell Printing Co., 1970).

[3]Eliminating ineligibles and invalid, 43 contacts, the response rate for the questionnaire used in the analysis is 63/(189-43) = 43 percent.

a population list for reserve Indians and finding those selected. There is a great deal of mobility on and off the reserve; even immediate family members did not know the whereabouts of those off the reserve.

Labour Market Communication

To obtain information on the mechanism used by persons seeking jobs, subjective questions were asked of persons interviewed in both the service and norm groups. First, respondents were asked, "If you were looking for a job, which one of the following would you go to?". The second question asked was, "Which one of the above was most helpful to you in finding your last job?". The purpose of the sequence of questions was to assess the individual's expectations concerning job information. The second question provides a subjective measure of the effectiveness of alternative sources of labour market information.

Comparing the answers to the first and second questions (Table 5), a large percentage of respondents felt that the Canada Manpower Centre would be the place to seek a job. In contrast, the percentage who found the Canada Manpower Centre most helpful was considerably lower in all cases. The percentage seeking information from employers was lower than the percentage who found employers most helpful. In addition, a large percentage of clients in the lower skill courses (manpower corps and BTSD non-completions) contacted the Selkirk Manpower Centre after the service (Table 6). Furthermore, few contacts were made with other agencies.

Relocation Preferences

To obtain information on the preferences of respondents in both

Table 5

Labour Market Communication

	(1) Training in Industry		(3) Farm Management Course		(4) Manpower Corps Comp.		(5) Manpower Corps Non-Comp.		(6) Employ. Ref. Comp.		(7) Employ. Ref. Non-Comp.	
	Where sought job	Most helpful	Where sought job	Most helpful	Where sought job	Most helpful	Where sought job	Most helpful	Where sought job	Most helpful	Where sought job	Most helpful
	percent											
1. Friend	4	0	4	11	4	15	8	13	3	0	9	30
2. Newspaper	9	5	4	11	0	0	8	8	0	3	0	4
3. Canada Manpower Centre	48	21	61	0	44	33	54	25	52	55	52	30
4. Area Dev. Board	0	0	4	0	0	0	0	0	0	0	0	0
5. Indian Affairs	13	0	0	11	11	4	4	17	7	0	0	0
6. Health & Social Dev.	0	0	0	0	0	0	4	4	3	0	0	0
7. Employers	22	53	27	56	33	37	17	21	31	38	35	30
8. Other Organization	0	11	0	0	0	0	0	0	0	3	0	0
9. School Counsellor	0	0	0	0	0	0	0	0	0	0	0	0
10. Private Empl. Agency	0	0	0	0	0	0	0	0	3	0	0	0
11. Other	0	0	0	0	0	0	0	4	0	0	0	0
12. No One	0	5	0	11	0	11	0	4	0	0	0	4
13. Don't Know	4	5	0	0	4	0	4	4	0	0	0	0
TOTAL	100	100	100	100	96[b]	100	99[a]	100	99[a]	99[a]	96[b]	98[a]

Table 5 (Continued)

	(8) BTSD III & IV Comp.		(9) BTSD III & IV Non-Comp.		(10) BTSD I & II Comp.		(11) BTSD I & II Non-Comp.		(12) Voc. & Special Comp.		(13) Voc. & Special Non-Comp.		Non-Farm Norm	
	Where sought job	Most helpful	Where sought job	Most helpful	Where sought job	Most helpful	Where sought job	Most helpful	Where sought job	Most helpful	Where sought job	Most helpful	Where sought job	Most helpful
	percent													
1.	0	17	3	13	6	20	11	32	0	28	11	32	7	18
2.	6	3	6	0	12	3	4	4	3	0	0	4	2	5
3.	61	10	47	23	52	20	56	12	59	21	41	16	53	8
4.	0	0	0	0	0	0	0	0	0	0	0	0	2	0
5.	3	7	3	6	0	0	0	0	0	0	11	4	5	3
6.	0	0	0	0	0	0	4	4	0	0	7	0	2	0
7.	21	52	33	52	27	42	26	48	31	48	26	28	14	47
8.	0	0	0	3	0	0	0	0	7	0	0	0	0	0
9.	6	3	0	0	0	0	0	0	0	0	0	0	0	3
10.	0	0	3	0	3	0	0	0	0	0	0	0	0	0
11.	0	0	3	3	0	6	0	0	0	3	0	0	0	5
12.	0	7	0	0	0	9	0	0	0	0	4	16	7	11
13.	3	0	0	0	0	0	0	0	0	0	0	0	3	0
TOTAL	100	99[a]	98[b]	100	100	100	101[a]	100	100	100	100	100	95[b]	100

[a]Does not equal 100 due to rounding.

[b]Does not equal 100 due to non-response.

Table 6

Agency Communications After Service

	Training in Industry	Farm Management Course	Manpower Corps Comp.	Manpower Corps Non-Comp.	Employment Ref. Comp.	Employment Ref. Non-Comp.	BTSD III & IV Comp.	BTSD III & IV Non-Comp.	BTSD I & II Comp.	BTSD I & II Non-Comp.	Voc & Special Comp.	Voc & Special Non-Comp.	Non-Farm Norm
% Sa Manpower/Coun. After Ser. If Unemp.	4.35	-	18.52	29.17	10.34	13.04	18.18	16.67	27.27	11.11	20.69	18.52	-
If Yes, Where?													
Selkirk	0	-	1	1	2	2	2	3	6	2	5	3	-
Winnipeg	1	-	2	5	1	1	3	2	1	1	1	2	-
Other	0	-	2	1	0	0	1	1	2	0	0	0	-
% Spoke to other Gov. Agency Re. Employment	4.35	-	3.70	16.67	3.45	0	9.09	2.78	6.06	7.41	3.45	3.70	-
If Yes, Where?													
Ag. Extension	0	-	0	0	0	0	2	0	1	1	0	1	-
Health & Social Ser.	0	-	1	1	0	0	0	0	0	1	0	0	-
Indian Affairs	1	-	0	1	0	0	0	1	0	0	1	0	-
Other	0	-	0	2	1	0	1	0	1	0	0	0	-

the service and norm groups, questions were asked concerning commuting, relocation, present location and relocation out of province. The responses to the questions (Table 7) indicate as expected that a large number of respondents prefer their present location. However, a large number, more than 50 percent in all cases except training in industry, farm management, and referral non-completions, indicated either a preference for relocation and commuting or indecision.[4] It should be noted that the response to preferences was made without reference to availability or type of job associated with relocation. Information in Table 8 indicates that a large percentage of clients in all programs made one or more moves in the service period.

Base and Exposure Period Earnings and Employment

To assess the benefits of manpower services, a base period and exposure period were defined. For clients receiving a non-agricultural manpower service, the base period refers to the twelve month period immediately prior to the start of a service and the exposure period refers to the twelve month period immediately following the service. For the farm management trainees, the base period refers to the calendar year 1968 and the exposure period to the calendar year 1969. The calendar year basis was chosen to facilitate recall of data by farmers and approximates a before and after comparison because the 5 month course started on November 4, 1968 and ended on April 4, 1969. Only clients completing

[4]Training in industry and farm management relate to income producing employment associated with a job location. However, referral non-completions may tend to reflect inflexibility resulting in non-placement.

Table 7

Relocation Preferences

Preference	Training in Industry	Farm Management Course	Manpower Corps Complete	Manpower Corps Non-Complete	Employment Referral Complete	Employment Referral Non-Complete	BTSD III & IV Complete	BTSD III & IV Non-Complete	BTSD I & II Complete	BTSD I & II Non-Complete	Voc. & Special Complete	Voc & Special Non-Complete	Non-Farm Norm
	percent												
1. Commute	9	0	19	13	7	9	6	6	12	11	21	7	16
2. Relocate Within Province	13	4	33	42	14	13	33	36	21	33	17	33	5
3. Either 1 or 2	4	4	7	12	10	13	9	14	15	0	7	8	7
4. Prefer Present Location	61	92	34	33	48	65	43	41	46	48	41	44	70
5. Relocate Out of Province	9	0	0	0	10	0	3	0	3	4	7	4	2
6. No Preference	4	0	7	0	11	0	6	3	3	4	7	4	0
TOTAL	100	100	100	100	100	100	100	100	100	100	100	100	100

Table 8

Details on Moves by Service Categories

Service Category	No. Relocated During Exposure Period	Ave. No. of Move(s) Each	No. of Moves by Those Who Moved Their Entire Family			Ave. Distance Moved in Miles by Order of Move			No. Applied for Assistance by Order of Move	No. Received Assistance	Ave. Cost of Transportation by Order of Move ($)			
			1	2	3	1	2	3			1	2	3	Total
1. Training in Industry	5	1.4	3	-	-	290.00	28.00	28.00	-	-	55.60	2.20	2.20	60.00
2. Mobility	13	1.3	10	2	1	201.80	38.00	80.00	13	13	5.00	1.70	3.00	9.70
4. Manpower Corps Comp.	8	1.4	3	1	-	223.38	96.50	-	-	-	3.75	1.25	-	5.00
5. Manpower Corps Non-Comp.	10	1.2	5	-	-	183.20	12.00	-	1	-	11.70	1.00	-	12.70
6. Emp. Referral Comp.	8	1.6	7	3	-	652.63	283.13	-	-	-	38.13	4.00	-	42.13
7. Emp. Referral Non-Comp.	7	1.6	6	1	1	145.00	102.86	102.86	1	-	38.14	7.00	0.29	45.43
8. BTSD III & IV Comp.	10	2.0	7	6	3	158.30	124.10	38.00	1	-	23.40	21.80	3.50	48.70
9. BTSD III & IV Non-Comp.	10	1.9	7	5	1	121.70	115.30	18.60	-	-	8.50	5.30	0.60	14.40
10. BTSD I & II Comp.	10	1.4	9	2	1	59.30	14.00	8.00	1	-	5.10	0.40	0.30	5.80
11. BTSD I & II Non-Comp.	7	1.9	6	3	1	207.86	350.00	64.29	-	-	16.43	48.57	2.86	67.86
12. Voc. & Special Comp.	14	1.6	10	3	1	188.71	149.44	6.64	1	1	7.93	4.14	0.21	12.29
13. Voc. & Special Non-Comp.	8	1.3	8	3	-	143.00	92.50	-	-	-	22.00	7.50	-	29.50
Norm	2	1.5	1	-	-	67.50	-	-	-	-	-	-	-	-
Farm Norm	-[a]	-	-	-	-	-	-	-	-	-	-	-	-	-
3. Farm Management	2	1.0	2	-	-	3.50	-	-	-	-	1.50	-	-	1.50

Table 8 (continued)

Service Category	Ave. Cost of Accommodation by Order by Move ($)				Ave. Cost of Food by Order of Move ($)				Total Cost of Move(s) by Order of Move ($)			
	1	2	3	Total	1	2	3	Total	1	2	3	Total
1. Training in Industry	-	-	-	-	1.00	-	-	1.00	56.60	2.20	2.20	61.00
2. Mobility	5.00	-	-	5.00	1.40	-	-	1.40	16.40	1.70	3.00	21.10
4. Manpower Corps Comp.	-	-	-	-	00.63	0.63	-	1.25	4.38	1.88	-	6.25
5. Manpower Corps Non-Comp.	-	-	-	-	0.80	-	-	0.80	12.50	1.00	-	13.50
6. Emp. Referral Comp.	-	-	-	-	1.25	-	-	1.25	39.38	4.00	-	43.38
7. Emp. Referral Non-Comp.	-	-	-	-	-	-	-	-	38.14	7.00	0.29	45.43
8. BTSD III & IV Comp.	-	-	-	-	-	-	-	-	23.40	21.80	3.50	48.70
9. BTSD III & IV Non-Comp.	-	-	-	-	-	-	-	-	8.50	5.30	0.60	14.40
10. BTSD I & II Comp.	72.00	-	-	72.00	-	-	-	-	77.10	0.40	0.30	77.80
11. BTSD I & II Non-Comp.	1.14	-	-	1.14	1.43	7.14	-	8.57	19.00	55.71	2.8o	77.57
12. Voc. & Special Comp.	32.14	3.57	-	35.71	15.36	0.71	-	16.07	55.43	8.43	0.21	64.07
13. Voc. & Special Non-Comp.	27.50	-	-	27.50	-	-	-	-	49.50	7.50	-	57.00
Norm	-	-	-	-	-	-	-	-	-	-	-	-
Farm Norm	-	-	-	-	-	-	-	-	-	-	-	-
3. Farm Management	-	-	-	-	-	-	-	-	1.50	-	-	1.50

[a]Dash (-) indicates 0.

services in the period June 1, 1968 to May 31, 1969 were enumerated. The twelve month period for the base and exposure period was chosen to eliminate seasonal variations in income effects between the base and exposure period.

Non-agricultural training and referral. The pattern which emerges from a comparison of base and exposure period labour force characteristics demonstrates that the manpower services being provided to the population of the Interlake have produced significant benefits to the service clientele.

Some categories of manpower service lead more directly to employment and upgrading than others which are more preparatory in nature. The norm group increase in total annual earnings, 9.7 percent, is less than the percent increase for 8 out of the 11 service types (Table 9).

A comparison of average annual wage earnings, wage hours per week, and wage weeks employed illustrates that, on the average, clients registered higher wage earning increases, worked longer hours per week, and worked more weeks relative to the experience of the norm group. For all groups there was a decrease in the number unemployed after service compared to the number unemployed prior to the service.

Considering the component manpower services separately, there are differences in the employment and earnings effects among the various services. The largest improvement in income, 77 percent, was received by employment referral non-completions. The next greatest improvement in total income, 35.5 percent, was registered by participants in the training in industry completions and manpower corps non-completions.

The lowest percent increase in total income was registerd by the

Table 9

Base and Exposure Period Nonagricultural Employment and Earning Characteristics[a]

Service Category	No. in Sample	No. Unempl. Prior to Service Base (No.)	No. Unempl. After Service Exposure (No.)	Percent Change of Unempl. (%)	Unemployment Weeks Base (Weeks)	Unemployment Weeks Exposure (Weeks)	Weeks out of Labour Force Base (Weeks)	Weeks out of Labour Force Exposure (Weeks)	Wage Weeks Employed: Short-Term Jobs[b] Base (Weeks)	Wage Weeks Employed: Short-Term Jobs[b] Exposure (Weeks)	Wage Weeks Employed: Long-Term Jobs[c] Base (Weeks)	Wage Weeks Employed: Long-Term Jobs[c] Exposure (Weeks)	Percent Change of Total Wage Weeks (%)	Wage Hours Per Week[d] Base (Hours)	Wage Hours Per Week[d] Exposure (Hours)
Training in Industry	23	3	2	-33.3	5.17	2.52	3.04	0.00	0.17	0.09	28.48	36.34	27.2	33.10	35.96
Manpower Corps Comp.	27	17	11	-35.3	21.74	21.81	2.22	4.52	0.22	0.67	24.11	23.11	- 2.3	45.97	45.54
Manpower Corps Non-Comp.	24	18	15	-16.7	24.79	22.42	4.08	1.67	2.08	1.50	17.59	23.25	25.8	39.17	43.65
Empl. Referrals Comp.	29	18	4	-77.8	12.90	7.48	11.90	8.69	1.52	0.07	24.38	33.72	30.5	33.57	40.57
Empl. Referrals Non-Comp.	23	12	8	-33.3	15.30	11.35	15.57	7.96	0.83	0.78	17.82	28.70	58.0	34.92	37.27
BTSD III & IV Comp.	33	16	15	- 6.3	16.33	15.61	5.60	8.36	2.21	1.58	22.58	18.54	-18.8	31.85	32.65
BTSD III & IV Non-Comp.	36	17	14	-17.6	17.72	17.25	7.86	6.45	1.61	1.19	16.00	17.28	4.9	25.77	29.80
BTSD I & II Comp.	33	11	14	27.3	7.52	6.79	4.15	7.45	1.21	1.09	29.85	31.03	3.4	39.99	38.93
BTSD I & II Non-Comp.	27	7	8	-14.3	6.41	8.11	5.19	6.00	0.44	0.37	23.37	24.89	6.1	31.20	33.62
Voc. & Spec. Comp.	29	7	7	0.0	6.31	7.79	5.07	4.83	0.76	0.83	34.90	31.86	- 8.3	41.00	46.25
Voc. & Spec. Non-Comp.	27	14	15	7.1	17.52	19.48	4.30	4.18	0.15	2.11	21.04	19.59	2.4	27.81	33.12
Norm	43	N/A	N/A	N/A	11.40	13.28	2.02	0.54	0.0	0.21	33.60	33.16	- 0.7	37.02	36.81

[a]The employment weeks and earning are group averages. [b]Jobs less than 1 month in duration. [c]Jobs more than 1 month in duration.

[d]The hours worked per week and hourly wage are calculated for the group average including individuals having information on hourly wage and hours worked per week.

Table 9 (Continued)

Service Category	Percent Change of Wage Hours Per Week	Hourly Wage[d]		Percent Change of Hourly Wage	Annual Wage Earning[e]		Percent Change of Annual Wage Earning	Unpaid Family Work		Self-Employment Weeks					
										Piece Work		Farming		Fishing	
		Base	Exposure		Base	Exposure		Base	Exposure	Base	Exposure	Base	Exposure	Base	Exposure
	(%)	($)	($)	(%)	($)	($)	(%)	(Weeks)		(Weeks)		(Weeks)		(Weeks)	
Training in Industry	8.6	1.82	2.36	29.7	3,263.91	5,128.78	57.1	0.0	0.0	4.65	3.74	0.96	0.83	0.74	0.57
Manpower Corps Comp.	- 0.9	1.39	1.46	5.0	2,062.52	2,215.15	7.4	0.48	0.0	0.78	1.41	0.0	0.0	2.85	0.48
Manpower Corps Non-Comp.	11.4	1.58	1.72	8.9	1,825.38	2,511.54	37.6	0.0	0.0	1.13	2.04	0.0	0.0	2.33	1.42
Empl. Referrals Comp.	20.9	1.82	2.49	36.8	2,590.17	3,482.45	34.4	0.0	0.0	2.00	1.21	0.90	2.21	0.0	0.0
Empl. Referrals Non-Comp.	6.7	1.27	1.63	28.3	1,389.65	2,618.78	88.4	2.09	2.26	0.57	0.0	0.0	0.0	0.87	0.87
BTSD III & IV Comp.	2.5	1.45	1.53	5.5	2,026.52	1,615.82	-20.3	0.0	0.0	0.36	0.64	6.30	6.21	0.76	1.36
BTSD III & IV Non-Comp.	15.7	0.99	1.04	5.1	1,351.03	1,846.83	36.7	0.0	0.0	0.36	0.94	8.67	8.67	0.94	1.17
BTSD I & II Comp.	- 2.7	1.84	1.88	2.2	3,137.12	3,205.24	2.2	4.24	1.58	0.0	1.58	3.15	3.15	0.58	0.0
BTSD I & II Non-Comp.	7.8	1.13	1.33	17.7	1,915.33	2,604.48	36.0	3.22	2.22	1.48	1.63	9.78	9.19	0.33	0.15
Voc. & Spec. Comp.	12.8	1.67	2.13	27.5	3,196.83	3,699.31	15.7	0.0	0.0	0.59	2.38	6.48	7.24	0.59	0.34
Voc. & Spec. Non-Comp.	19.1	1.56	1.59	1.9	1,603.19	2,024.74	26.3	3.78	2.96	0.15	2.48	3.85	3.85	1.22	0 0
Norm	- 0.6	1.79	1.94	8.4	3,323.21	3,631.12	9.3	0.0	0.0	2.26	2.02	0.60	0.60	2.44	2.44

[e]Annual wage earning is the total gross wage income (including both long term and short term jobs) plus the total gross vacation and bonuses paid.

Table 9 (Continued)

Type of Service	Self-Employment Weeks: Other Base (Weeks)	Other Exposure (Weeks)	Total Base (Weeks)	Total Exposure (Weeks)	Percent Change of Self-Employ. Weeks (%)	Self-Empl. Earns. Base[c] ($)	Self-Empl. Earns. Exposure[f] ($)	Percent Change of Self-Employ Earning (%)	Total Earns. Base[d] ($)	Total Earns Exposure[g] ($)	Percent Change of Total Earning (%)
Training in Industry	9.04	7.91	15.39	13.05	-15.2	1,257.65	986.48	- 20.8	4,521.56	6,125.26	35.5
Manpower Corps Comp.	0.0	0.0	3.63	1.89	-47.9	101.70	83.33	- 18.1	2,164.22	2,298.48	6.2
Manpower Corps Non-Comp.	0.0	0.0	3.46	3.46	0.0	141.17	151.67	7.4	1,966.54	2,663.21	35.4
Empl. Referrals Comp.	0.79	0.0	3.69	3.42	- 7.3	76.21	106.55	39.8	2,666.38	3,589.00	34.6
Empl. Referrals Non-Comp.	0.0	0.0	1.44	0.87	-39.6	110.74	39.13	- 64.7	1,500.39	2,657.91	77.1
BTSD III & IV Comp.	0.0	1.58	7.42	9.79	31.9	34.36	328.79	856.8	2,060.88	1,944.61	- 5.6
BTSD III & IV Non-Comp.	0.0	0.0	9.97	10.78	8.1	158.22	154.44	- 2.4	1,509.25	2,001.28	32.6
BTSD I & II Comp.	1.58	0.91	5.31	5.64	6.2	209.09	203.03	- 2.9	3,346.21	3,408.27	1.9
BTSD I & II Non-Comp.	1.93	1.93	13.52	12.90	- 4.6	418.85	456.67	9.0	2,334.19	3,061.15	31.1
Voc. & Spec. Comp.	0.0	0.0	7.66	9.96	30.0	71.93	185.55	158.0	3,268.76	3,884.86	18.8
Voc. & Spec. Non-Comp.	0.0	0.0	5.22	6.33	21.3	114.00	25.93	-77.3	1,717.19	2,050.67	19.4
Norm	4.84	4.84	10.14	9.90	- 2.4	545.53	614.23	12.6	3,868.74	4,245.35	9.7

[f]The self-employed earnings include piece work, fishing and other self-employed except farming income.

[g]Total annual earning is different from the multiplication of weekly earning and employed weeks presented in Appendix G. Consequently, the benefits calculated from this total earning are different from those shown in Appendix G, due to the exclusion of piece work earning.

BTSD III & IV, BTSD I & II, and manpower corps completions, -5.6, 1.9, and 6.2 percent, respectively. With one exception, BTSD III & IV completions, the service clientele registered annual earnings increases. In all service types, clients completing services had a smaller increase in total earnings than non-completions, which may be due to movement from a service to a job without waiting for the end of the service.

Farm management training. Based on the random sample of 26 farms out of a total of 206 farms operated by those completing the farm management program in the period January 1, 1969 to May 31, 1969, the average increase in net farm income was $3,187. The change was calculated as 1969 calendar year income less 1968 calendar year income. Net farm income is defined as the return to labour and capital: total receipts - expenses + inventory change + farm perquisites. The inventory change and value of perquisites are taken as the Interlake average in 1968.[5] 1968 expenses were estimated by applying the 1969 expenses-to-receipts ratio to 1968 receipts listed on the farm management course application. In contrast to the norm group, the farm management trainees benefited substantially from the 1968-69 increase in livestock prices.

Benefits and Costs of Manpower Services

The basic approach of the study is to make a before and after examination of manpower program participants measuring all appropriate benefits and costs (Table 10) within the limits of available data, which would indicate labour market adjustments. These benefit levels would

[5] Framingham, MacMillan, and Sandell, The Interlake Fact.

Table 10

Benefits and Costs of Non-Agricultural Training Services

	Total Number of Clients	Number in Sample	Sample Benefits[a]	Average Benefits per Client in Service	Total Benefits[b]	Sample Costs[c]	Average Cost per Client in Sample	Total Cost[b]	Benefit-Cost Ratio
	(1)	(2)	(3)	(4)=(3)/(2)	(5)=(4)(1)	(6)	(7)	(8)	(9)=(5)/(8)
	(No.)	(No.)	($)	($)	($)	($)	($)	($)	
Training in Industry	113	23	416,400	18,104	2,045,752	10,200	443	50,059	40.87
Manpower Corps Completions	101	27	- 86,600	- 3,207	- 323,907	70,400	2,607	263,307	- 1.23
BTSD III & IV Completions	91	33	- 82,700	- 2,506	- 228,046	38,300	1,161	105,651	- 2.16
BTSD I & II Completions	49	33	-179,200	- 5,430	- 266,070	45,400	1,376	67,424	- 3.95
Vocational & Special Completions	79	29	214,700	7,403	584,837	58,200	2,007	158,553	3.69
Total Completions	433	145	282,600	1,949	1,812,566	222,500	1,534	644,994	2.81[d]
Manpower Corps Non-Completions	53	24	125,000	5,208	276,024	20,700	863	45,739	6.03
BTSD III & IV Non-Completions	182	36	70,300	1,953	355,446	31,300	869	158,158	2.25
BTSD I & II Non-Completions	72	27	176,300	6,530	470,160	22,900	848	61,056	7.70
Vocational & Special Non-Completions	53	27	27,600	1,022	54,166	48,900	1,811	95,983	0.56
Total Non-Completions	360	114	399,200	3,502	1,155,796	123,800	1,086	360,936	3.20[d]

[a]The benefits determined from a comparison of the earnings for a year immediately following the service relative to the year preceeding the service are projected for the clients expected working life and discounted to 1969 (Appendix G).

[b]The weighted benefits are calculated by multiplying the benefit per client in the sample by the total number of clients, Table 3, page 5. Weighted costs are calculated analogously.

[c]Sample costs are derived in Appendix D.

[d]The total benefit-cost ratio is calculated by dividing total weighted benefits by total weighted costs.

then be compared with those of the norm group to isolate and measure differentials, which could then be separated out as attributable to the manpower service provided. The benefits are assessed relative to the employment and earnings experienced in the area labour market. Negative benefits indicate the extent that the service earnings increases are below the average increases in the area (Appendix G). Projections of benefits were not made for farm management or referrals.

Non-agricultural training. An early caveat is in order in inspecting the various benefit-cost ratios. It does not follow that programs showing higher ratios are necessarily superior in design and implementation. It may be difficult to substitute one service type for another. There are distinctly different characteristics observable among the clientele of the various programs. Some of the programs are deliberately designed to meet the needs of clients whose employability problems are more severe, and where a lower on no immediate benefit outcome is to be expected.

The benefit-cost ratios for the pooled group of non-agricultural manpower training completions and non-completions are 2.81 and 3.20, respectively. The ratios signify that every dollar of government funds invested in manpower services in this region generates a return greater than the earnings improvement of the average worker in the Interlake Area. Benefits are discounted over the balance of their expected work lives.

On the sampling basis utilized in this present study, the sum of $1 million manpower service training and allowance costs is associated with an increase in earnings of $3 million. This calculation is adjusted

for average changes in earnings and employment in the area (Table 10).

Farm management. There was no significant change in average incomes for the norm group of 20 farmers, therefore the benefit of training was estimated to be the average net increase in income for the farm management client group ($3,187). Costs were provided by the Canada Department of Manpower. Allowances were $41 thousand and course costs were $10 thousand for the 26 clients in the sample. Projections of benefits were not made for the farm management trainees due to the restrictive assumptions required to account for changing prices of agricultural products and the working lives of farmers. Based on the random sample selected, the farm management group benefited in a single year over $630,000 at a cost of approximately $400,000 (Appendix G) resulting in a benefit-cost ratio of 1.53.

Mobility. Geographic mobility (exploratory and relocation) assistance questionnaires were not completed for a large enough sample to permit a detailed analysis of benefits. Information available on the Canada Manpower forms (Appendix F) for 53 clients receiving mobility during the period 1967-1970 were summarized. It is noteworthy that under the mobility category an equal number of clients moved into the area (25) as moved out (23), the balance being relocations within the Interlake. Excluding labour market entrants, the average weekly pay prior to mobility was $79 and after, $102, an increase of $23 per week. The major destination of out-migrants was Winnipeg (10) and Northern Manitoba (6). The major destination of in-migrants was Selkirk (20) and over half came from smaller Manitoba communities. If the results from the limited data available are accurate, substantial benefits would result from an

expansion of the mobility program.

Employment referral. Job referral completions and non-completions were analyzed to determine increases in earnings before and after the referral. The earnings increase was then adjusted for the increase in earnings experienced by the norm group (Table 11).

Table 11

Referral Benefits

	Total Number of Clients	Number in Sample	Average[a] Benefits Per Client	Total[a] Benefits
			($)	($)
Empl. Referral Comp.	477	29	17,621	8,405,069
Empl. Referral Non-Comp.	283	23	11,043	3,125,304

[a]Derivation procedures are given in Appendix G.

Benefit-cost ratios were not calculated for referrals because it is not reasonable to assume that those receiving a job by means of referral by the Canada Manpower Centre would not have obtained a job without the referral. For this reason the benefits calculated for the referral service require further interpretation.

Determinants of Benefits

While the primary tool selected for measuring and reporting the results of manpower services is the benefit-cost ratio (Table 10), this single ratio may, at times, conceal more than it reveals. Any such

aggregated measure tends to obscure particular factors which may have significant predictive or explanatory value.

Accordingly, in addition to the benefit-cost ratio computation, the data were examined in component, disaggregated form for the purpose of making certain discrete analyses where warranted. Further analytical treatment involved the use of multiple regression analysis in order to factor out key variables and relationships which would have significance to decision-makers.

Characteristics of non-agricultural service clients and norm. The characteristics of clients by service group (Table 12) illustrate variation in age, sex, education, physical health, maintenance of household, and ethnic background. Of particular significance is the large participation by those of native ancestry; 74 percent of Manpower Corps Completions are Indian or Metis. Also, the coefficients of variation given in Table 13 indicate that there is substantial variation in income levels and employment within service groups.

The base year level of weekly earnings was the most important characteristic explaining variation in the exposure year level of weekly earnings for the non-agricultural service norm group. Age and Indian or Metis ethnic background had a negative effect on the level of exposure year weeks employed, and females, maintenance of a household, and base year employment had a positive effect on the level of exposure weeks employed. The results of the regression analysis are summarized in Appendix H.

Two assumptions are used in the estimation of benefits associated with manpower services. First, benefits are calculated by deflating the

Table 12

Characteristics of Non-Agriculture Service and Norm Clients, (Group Averages)

Characteristics[a] / Service	Age 21-30 X_1	Age 31-40 X_2	Age 41-50 X_3	Age-Over 50 X_4	Average Age	Indian or Metis X_5	Education Grade 5 - 7 X_6	Education Grade 8-10 X_7	Education Over Grade 10 X_8	Average Grade Achieved	Female X_9
	(%)	(%)	(%)	(%)	(Years)	(%)	(%)	(%)	(%)	(Grade)	(%)
Training in Industry	39	35	13	13	36	22	9	43	43	9.5	9
Manpower Corps Comp.	52	22	11	4	29	74	52	22	37	6.1	0
Manpower Corps Non-Comp.	45	13	21	17	35	79	58	21	4	6.2	4
Empl. Referral Comp.	41	14	14	14	33	7	14	41	45	9.6	28
Empl. Referral Non-Comp.	43	17	13	13	33	9	26	39	30	8.6	43
BTSD III & IV Comp.	45	27	12	3	30	61	61	39	0	7.2	15
BTSD III & IV Non-Comp.	25	19	31	8	34	69	58	28	0	6.3	17
BTSD I & II Comp.	58	18	6	6	29	9	24	76	0	8.2	9
BTSD I & II Non-Comp.	30	30	19	4	32	19	26	70	0	7.9	19
Voc. & Special Comp.	59	21	7	3	28	17	7	72	17	8.9	17
Voc. & Special Non-Comp.	41	15	11	22	34	48	30	56	0	7.3	15
Weighted Average[b]					33	28				8.4	
Non-Agriculture Norm	14	28	26	21	39	51	37	35	16	7.6	12

Table 12 (continued)

Service \ Characteristics	With Disability X_{10}	Maintain Household X_{11}	Present Location Preference X_{12}	Employ. Weeks Base[d] X_{13}	Unempl. Weeks Just Prior to Service X_{14}	Total Unempl. Weeks in Base Period X_{15}
	(%)	(%)	(%)	(Wk.)	(Wk.)	(Wk.)
Training in Industry	0	91	61	38.43	2.65	5.17
Manpower Corps Comp.	22	96	34	27.19	10.44	21.74
Manpower Corps Non-Comp.	4	92	33	22.00	14.83	24.79
Empl. Referral Comp.	10	76	48	25.52	11.21	12.90
Empl. Referral Non-Comp.	13	70	65	19.52	11.22	15.30
BTSD III & IV Comp.	18	88	43	25.55	6.94	16.33
BTSD III & IV Non-Comp.	17	69	41	18.56	10.28	17.72
BTSD I & II Comp.	6	91	46	33.21	1.70	7.52
BTSD I & II Non-Comp.	11	89	48	26.07	4.15	6.41
Voc. & Special Comp.	3	97	41	36.24	4.76	6.31
Voc. & Special Non-Comp.	41	81	44	22.41	12.19	17.52
Weighted Average[b]	12	80	49	25.25	9.38	13.87
Non-Agriculture Norm	9	91	70	40.88	n/a	11.40

Table 12 (continued)

Characteristics / Service	Weeks Out of Labour Force in Base Period X_{16}	Weekly Earning Base[c] X_{17}	No. of Hours Worked Per Week Exposure X_{18}	With Some Farm Experience X_{19}	Weekly Earning in the Exposure X_{20}	Employment Weeks in the Exposure[d] X_{21}	Total Clients
	(Wk.)	($)	(Hr.)	(%)	($)	(Wk.)	
Training in Industry	3.04	95.74	35.96	4	122.8	44.9	113
Manpower Corps Comp.	2.22	69.39	45.54	0	74.8	24.3	101
npower Corps Non-Comp.	4.08	69.76	43.65	0	80.8	26.2	53
pl. Referral Comp.	11.90	70.92	40.57	3	103.2	33.8	477
mpl. Referral Non-Comp.	15.57	60.05	37.27	0	71.4	30.3	283
BTSD III & IV Comp.	5.61	65.59	32.65	15	72.4	23.1	91
BTSD III & IV Non-Comp.	7.86	47.34	29.80	17	57.5	19.6	182
BTSD I & II Comp.	4.15	86.46	38.93	6	83.9	33.0	49
BTSD I & II Non-Comp.	5.19	58.74	33.62	22	80.7	27.3	72
Voc. & Special Comp.	5.07	77.31	46.25	17	110.5	33.0	79
Voc. & Special Non-Comp.	4.30	58.52	33.12	7	70.6	21.7	53
Weighted Average[b]	9.02	67.36	38.00	6	86.7	30.0	1,553
Non-Agriculture Norm	2.02	84.86	36.81	2	94.5	40.7	

[a]Characteristics designated are independent variables (Appendix H).

[b]Weighted by service group according to the total clients by service category enumerated in Table 3, page 5, or the last column of Table 12.

[c]Weekly wage earnings are calculated by dividing the sum of total wage earnings, vacation pay and bonuses, and self employment income except farming, unpaid family labour and piece work by the sum of the corresponding weeks employed. The latter categories of employment are excluded on the assumption that non-agricultural manpower services are not designated to increase employment and income in agriculture or piece work.

[d]Employment weeks include: wage weeks, weeks of fishing and other self-employment, i.e, adding columns 9, 11, 28 and 30 of Table 9 for base period employment.

Table 13

Standard Deviation and Coefficients of Variation for Characteristics of Non-Agricultural Service and Norm Categories

	Training in Industry		Manpower Corps Completion		Manpower Corps Non-Comp.		Employment Referral Completion		Employment Referral Non-Comp.	
	Std. Dev.	Coef. of Var.	Std. Dev.	Coef. of Var.	Std. Dev.	Coef. of Var.	Std. Dev.	Coef. of Var.	Std. Dev.	Coef. of Var.
	(1)		(4)		(5)		(6)		(7)	
Average Age (years)	10.87	0.32	10.31	0.37	13.80	0.41	14.18	0.47	13.60	0.43
Base Employment X_{13}	16.18	0.38	15.61	0.57	16.46	0.68	16.20	0.49	17.03	0.77
Exposure Employment X_{20}	7.89	0.16	15.65	0.61	15.43	0.55	16.02	0.41	18.12	0.53
Base Wages Per Week X_{17}	44.18	0.49	42.25	0.63	47.48	0.71	46.92	0.55	78.91	1.13
Exposure Wages Per Week X_{21}	51.77	0.45	71.30	0.84	52.22	0.69	59.26	0.56	46.79	0.67

Table 13 (continued)

	BTSD III & IV				BTSD I & II				Vocational & Special			
	Completion		Non-Comp.		Completion		Non-Comp.		Completion		Non-Comp.	
	Std. Dev.	Coef. of Var.	Std. Dev.	Coef. of Var.	Std. Dev.	Coef. of Var.	Std. Dev.	Coef. of Var.	Std. Dev.	Coef. of Var.	Std. Dev.	Coef. of Var.
	(8)		(9)		(10)		(11)		(12)		(13)	
Average Age (years)	9.26	0.32	12.16	0.36	9.13	0.33	10.46	0.34	8.55	0.31	14.31	0.44
Base Employment X_{13}	19.29	0.69	20.08	0.76	14.80	0.36	17.05	0.42	14.44	0.35	20.23	0.72
Exposure Employment X_{20}	19.32	0.75	20.00	0.71	16.29	0.43	17.78	0.47	12.31	0.31	19.51	0.67
Base Wages Per Week X_{17}	49.75	0.76	56.15	1.15	63.56	0.77	47.68	1.01	51.56	0.68	49.95	1.04
Exposure Wages Per Week X_{21}	46.08	0.70	52.82	0.98	46.67	0.56	63.25	0.95	59.81	0.67	90.16	1.35

increase in employment and earnings by the percentage increases in employment and earnings which occurred from the norm group (Appendix G). This procedure adjusts for cyclic and secular effects on employment and wages. Second, an attempt is made to adjust the increase in employment for the differential net effects of age, sex, maintenance of a household, percent Indian or Metis, and the initial level of employment between each service group and the norm. If the norm group is proportionally older than the service group, then an adjustment should be made to account for this. By this procedure, the mean proportion of persons over 40 in the service group is substituted into the norm equation. The estimated increase in employment is the level for the service group which would exist if the norm relationship is assumed to apply to the service group.

The benefit-cost ratios resulting from the second procedure were generally lower than those using the first procedure and some changes in the rank of service types by the magnitude of the ratio occurred. For individual service categories, the base year level of employment and weekly earnings were the most important characteristics having a positive effect on the level of exposure weekly employment and earnings, respectively.

Farm management. The farm management training program required separate analysis. Since the major body of the study emphasizes increases in earnings and employment, farm management training is a special case, inasmuch as the participants in this particular manpower service were, for the most part, already employed. Furthermore, the benefit outcomes are not merely "returns to labour" but also include returns to investment. As a consequence, the following analysis and commentary are made.

Factoring out some of the major variables affecting the results experienced by farm management trainees (Table 14) reveals that those who held a non-farm job in 1968 fared poorly -- in fact, they experienced a decline in earnings in the 1969 period (Appendix H). The major share of income increases are attributable to expanded livestock investments resulting in inventory increases as well as sales.

Table 14

Characteristics of Farm Management Clients and Farm Norm

Characteristics	Farm Management Trainees	Farm Norm
Age in years	40	51
No. of dependents	4.2	2.5
Percent of non-farm job in 1968[a] (%)	34.0	40.0
Education (average grade level)	8.2	7.6
Percent of livestock sales in 1968 (%)	54.6	75.1
Percent of livestock sales in 1969 (%)	63.6	64.5
Value of land and buildings in 1968 ($)	27,866.00	13,732.00
Cultivated acres in 1968	364	212
Cultivated acres in 1969	378	212
Change in acres (1968-69)	14	0
Gross receipts in 1968 ($)	6,646.15	4,791.45
Expense in 1968[b] ($)	2,556.13	2,291.76
Inventory change in 1968[c] ($)	448.00	448.00
Farm perquisites 1968[c] ($)	287.00	287.00

Table 14 (continued)

Characteristics	Farm Management Trainees	Farm Norm
Net income 1968[d] ($)	4,825.01	3,235.08
Gross receipts in 1969 ($)	7,992.42	5,025.60
Expense in 1969 ($)	3,024.73	1,908.60
Inventory change in 1969 ($)	2,757.50[e]	- 254.85[e]
Farm perquisites 1969[c] ($)	287.00	287.00
Net income 1969[d] ($)	8,012.19	3,149.15
1969 net income--1968 net income ($)	3,187.17	- 85.93
No. in sample	26	20

[a]Non-farm jobs include wage earner, short-term job wage earner, piece work, fishing and other self-employed, except farming.

[b]Expenses in 1968 are estimated by multiplying the 1968 total sales by the ratio of expenses to total sales in 1969. In other words, it is assumed that 1968 expenses to total sales ratio is the same as that in 1969.

[c]Inventory change ($448.00) and farm perquisites ($287.00) are estimated from 1968 Interlake farm survey.

[d]Net income of farmers is calculated by (total sales + farm perquisites + inventory change - farm expenses), where farm expenses include fuel oil expense, livestock purchase, feed purchase, fertilizer purchase, crop and chemical expense, and land and equipment rental including community pasture payments.

[e]The components of inventory change in 1969 are shown as follows:

	Farm Norm	Farm Management
Livestock inventory change ($)	- 7,740.00	63,989.00
Crop inventory change ($)	2,643.00	7,706.00
Total inventory change ($)	- 5,097.00	71,695.00
Average inventory change ($)	- 254.85	2,757.50

Distribution of Benefits

The Agreement for the Interlake Area of Manitoba specifies that the broad objectives of the Plan are to increase income and employment opportunities and standards of living.[6] In 1968, 16 thousand people out of a total population of 54 thousand had a job (Table 15). In terms of income levels and distributions, 5 thousand households out of a total of 15 thousand had an average per household income of less than $3 thousand (Table 16). For the 2,243 households with an income of less than $1,500, the average per household income was $661, and for the 2,551 households in the $1,500 - $2,999 income class, the average per household income was $2,260. The basic research problem associated with the evaluation of the FRED plan is measuring the effect of expenditures in increasing the number of jobs for area residents and reducing the number of households in the lower income classes.

Comparing total earnings in the base period (Table 9) with the data in Table 16 shows that the training in industry, BTSD I & II completions, vocational and special completions (Table 9), and mobility (Table 35) service categories have base period earnings greater than $3 thousand, and the remaining service categories have earnings substantially below the $3 thousand earnings level. Manpower services in the Interlake could be concentrated solely on improving the income position of low income households by de-emphasizing programs which have a large proportion of

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[6] Canada Department of Forestry and Rural Development, Interlake Area of Manitoba Federal-Provincial Rural Development Agreement (Agreement Covering a Comprehensive Rural Development Plan for the Interlake Area of Manitoba) (Ottawa: Queen's Printer, 1967), p. 7.

Table 15

Employment and Population, Interlake Area, 1968

	Employment[a]	Population
Rural Farm	7,068	20,915
Rural Non-Farm	2,373	9,385
Urban	6,443	19,390
Total	15,884	49,690
Indian Reserve[b]		4,058
		53,748

Source: Charles F. Framingham, James A. MacMillan, and David J. Sandell, The Interlake Fact (Winnipeg: Hignell Printing Co., 1970), pp. 1, and 52-54.

The figures shown in this table exclude reserve Indian labour force, fishermen (fishing on Lake Manitoba or Lake Winnipeg but residing outside the Interlake), military and institutional labour force and unorganized areas. Population in St. Francois-Xavier (713) and St. Clements (5,027) was omitted from the 1968 survey and the number retired or employed for the entire year removed from the published figures. Dominion Bureau of Statistics, 1966 Census of Canada, Cat. No. 92-606 (Ottawa: Queen's Printer, 1967).

[a]Employment is defined as having a job in the calendar year 1968. The numbers of workers holding two or more jobs were reduced to a single job basis.

[b]Band lists obtained from the Department of Indian Affairs and Northern Development. Employment of reserve Indians is not known for 1968. In 1961, the total Indian labour force was 307.

Table 16

Income Distribution of Interlake Households

Income Class[a]	Rural Farm	Rural Non-Farm	Urban	Interlake
Under $1,500				
1. No. of Household	1,185	810	248	2,243
2. Ave. Household Income	254	1,086	1,217	661
$1,500-2999				
1. No. of Household	995	782	773	2,551
2. Ave. Household Income	2,226	2,212	2,352	2,260
$3,000-4,499				
1. No. of Household	1,153	687	569	2,409
2. Ave. Household Income	3,816	3,703	3,634	3,741
$4,500-5,999				
1. No. of Household	702	401	684	1,787
2. Ave. Household Income	5,128	5,116	5,396	5,228
$6,000-7,499				
1. No. of Household	628	301	839	1,768
2. Ave. Household Income	6,626	6,854	6,907	6,800
$7,500-8,999				
1. No. of Household	385	194	652	1,231
2. Ave. Household Income	8,152	8,059	8,124	8,123
$9,000 and Over				
1. No. of Household	869	314	1,561	2,744
2. Ave. Household Income	14,867	12,657	18,446	16,649

Source: Charles F. Framingham, James A. MacMillan and David J. Sandell, The Interlake Fact (Winnipeg: Hignell Printing Co., 1970), Table 21A, p. 60.

[a]Income is defined to include: total wages and salaries, manpower programs, dividends and interest, net rentals and business, net farm income, old age assistance, family allowances, Indian Affairs allowances, Unemployment Insurance, and compensation and cash from sales of non-farm assets and provincial social allowances.

clients earning over $3 thousand.

Limitations of the Study

The greatest value of establishing a benefit-cost ratio may be in the setting of a normative standard by which improvements can be measured over time. A final consideration is that even if a ratio were less than unity, say $.80 benefit outcome for each $1 invested, there is still the unanswered question of what other costs might be incurred if the investment had not been made. While seemingly a "loss" of $.20 on the dollar is incurred, the program may have succeeded in reducing a larger cost to government, society and the individual. Such an eventuality in the private sector is commonly referred to as a "least loss operation".

Perhaps the overriding consideration is that certain services are preparatory in nature and are designed to equip the client for effective participation in a subsequent manpower program where the outcomes are more positive. An examination of the various benefit-cost ratios shows three service categories registering negative outcomes as measured during the period of study. Of particular note is the fact that three of these, BTSD I & II, BTSD III & IV and manpower corps, enroll a substantial percentage of severely job disadvantaged persons, as indicated by the number of social service benefit recipients involved (Appendix E). The ultimate benefit of these services can only be traced as these clients proceed to higher levels of training. Such a longitudinal examination, however, could not be accomplished within the time limits of the present study.

The highest levels of positive outcomes for training were registered

by farm management and the training in industry service categories. It should not be surprising to note these higher levels of positive outcomes, relative to the other programs studied. The service recipients in these two categories for the most part, either already employed or are promised permanent jobs upon completion of training. While it is obviously desirable to expand those service activities which register the highest ratios of benefits, it is necessary to recognize the constraints imposed on such a choice by the conditions of the labour and farm markets on the one hand and by the characteristics of the program applicants on the other. Obviously not all clients can benefit from these programs. For instance, two persons in the farm management sample were not in farming before entering the program. They did not enter farming upon completion of the course, neither did they report earnings improvements in other occupational pursuits. Also, three persons in the training in industry group were owner-managers who took a business management course in Banff. These cases were removed from the analysis because it is difficult to assess benefits.

Benefits associated with non-completion of a service are difficult to estimate (Appendix I). It is not known how much of the benefit was due to a placement function or not associated with the service. However, it is hypothesized that benefit levels are understated due to:

1. Deflation of the reported increases in employment and earnings among the service clientele by the percentage increase in employment and earnings registered by the norm group. The assumption here is that if the service clientele had not participated in the manpower programs studied

during this period, they would have probably enjoyed the average rate of employment and earnings increase reported by those in the norm group. The benefit outcomes measured, therefore, represent the differential level of earnings and employment above that experienced by the norm group.

It can be argued however, that a larger share of benefit outcomes to the client group should be attributed to manpower services due to the fact that their incidence of employability problems was higher than in the norm group. The difficulty is that there is no satisfactory way of assigning a quantifiable value to the client employability characteristics in order to establish a weighting system which could isolate the true net effect of manpower service benefits.

2. Not calculating the benefit effects to the government of a decrease in the costs of health and social welfare. An attempt to discount these effects was undertaken in this study but the data did not permit the establishment of clear findings in this regard.

An original hypothesis of the research, which often is stated as an operational assumption of manpower programs, is that successful outcomes in the way of increased employment and earnings necessarily reduce the costs of health and social welfare. However, for the clients sampled, receipts of health and social welfare benefits increased from $13 thousand to $23 thousand (Appendix E) for service categories with "low" benefits.

This apparent contradiction, on closer examination, is explainable. One of the many consequences of involvement and interaction with other persons in need is that many service clients learn for the first time of benefits for which they are eligible.

3. Calculating benefit outcomes to the service clientele only, rather than to the entire economy of the Interlake. A multiplier effect occurs for the economy of the Interlake through the increased earnings increment of the service clientele and the manpower service expenditures, which find their way into the economy's spending stream. While the gains to the Interlake of this increase in income and spending which buoys the economy may be significant, weights are required to adjust the standard benefit-cost ratios.

4. "Negative" outcomes for three categories of manpower services have been discounted over the remaining worklives of the clients involved. This may understate benefit outcomes which could not be recorded during the exposure period of the study. It is hypothesized that beneficial effects of BTSD III & IV, BTSD I & II, and manpower corps (completions) would register if a longitudinal analysis of benefits were carried out.

Conclusions

The study results relate specifically to the research objectives outlined in the initial study proposal:

1. Determine the impact of selected manpower programs on the clientele served, employing a benefit-cost analytical framework.

2. Measure the differential effects of such services as a function of (a) selected characteristics of the population served, and (b) the type of adjustment service provided.

3. Provide a well defined data base on the characteristics of the unemployed and underemployed for the purpose of facilitating improvements in the deployment and distribution of manpower services.

4. Compare, within the limits of data available, the long-run benefits of manpower, capital improvements, and social service inputs in the Interlake.

Conclusions consistent with the objectives are:

1. Impacts of manpower services:

(a) Given the limitations of the study--a focus on economic benefits and the short exposure period for a reading on benefits--the following services (in order of importance) had the greatest pay-off to clients completing training:

i) Farm management

ii) Training in industry, and

iii) Vocational and special

(b) Preparatory services such as the manpower corps and all levels of BTSD need to be justified on the basis of social benefits not currently measured and on economic benefits hypothesized to be obtained in the future.

The large benefits to those not completing programs may be due to a placement function of training, i.e., potential employers seek out workers from training programs. A large proportion of non-completions failed to report. Also, unemployed persons may enter training, continue to seek employment, and drop out when they find a job (see Appendix I for further details).

(c) Substantial income benefits were received by those participating in mobility and job referral. However, responses to subjective questions indicate there is a potential for reducing unmet client needs with improved mobility and placement services.

(d) The majority of service categories have a large percentage of clients below the $3 thousand earnings. Training in industry, BTSD I & II, vocational and special, and mobility are exceptions.

2. Differential effects of services:

(a) Base year level of earnings and level of weeks employed are the most important characteristics determining the level of income benefits from non-agricultural manpower services.

(b) Presence of a non-farm job had a negative effect on the level of income benefits from farm management training, and livestock sales as a percent of total receipts had a positive effect on the level of income benefits from farm management training.

3. Data base relevant to deployment of manpower services:

(a) Conclusions outlined above indicate the usefulness of the data base in assessing the effectiveness of manpower services.

(b) Responses to subjective questions relating to labour market communication and relocation preferences imply there is a potential for reducing unmet client needs with improved placement and mobility services.

4. Trade-offs among manpower, capital improvements and social service inputs:

A central question which has often been raised by critics of manpower services is whether these are, in fact, welfare programs in disguise -- that is, whether the participants are truly seeking jobs or whether they enroll in the programs merely to benefit from the allowances paid. This study has not been concerned with the psychological motivations of manpower service clientele but rather has focused upon what the measurable job and earnings effects have been. The characteristics of

manpower service clients (low income level, weeks employed, education, and the large proportion of Indians) indicate the extent to which the disadvantaged are receiving manpower services in the Interlake. In addition, 20 percent of the clients received supportive counselling or financial assistance from the Manitoba Department of Health and Social Development (Appendix E, page 98).

The results demonstrate that, regardless of the original motivation of the clients, there is a high rate of return to individuals in the form of increased employment and earnings for most groups. However, for completion groups with a negative benefit-cost ratio, BTSD and manpower corps, a longitudinal study is required to determine if such courses have an employment and income impact in the future. If there are future benefits, then such programs are an effective means of reaching the disadvantaged. Time constraints prevented an analysis comparing manpower services with capital improvements.

EVALUATION CONCEPTS

The Regional Development Problem

The decision as to the optimum set of means to enhance the productivity of a region, thereby raising the level of living of its people, confronts the central problem of economics--rationing limited resources among various optional usages in order to maximize returns to the population to be served.

At a minimum, the options for government investment include:

1. Capital improvements: These include land reclamation, conservation, and transportation and public utility development. The effect of this kind of investment is to generate immediate employment opportunities and to benefit the economic base of the region in several ways, including raising agricultural and other basic resource output, while lowering the costs of production and marketing. With a strengthened economic base, it becomes possible to further expand local employment and even to attract new industry to the region.

2. Manpower services: A wide array of programs designed to increase the productivity of the work force through education, training, testing, counselling, rehabilitation, job development, referral and relocation. The objectives of these services are to equip a larger portion of the region's population for participation in the employment opportunities in the area, to raise the efficiency of the region's productive activities, thereby increasing income flow, and to provide a broader pool of manpower skills to potential employers. A further objective is to increase the mobility of the work force in order that

migration might result in a better balance between job seekers and employment opportunity within the region.

3. Creating a more rational infrastructure and organizational base: This activity involves the restructuring of the general pattern of public, private and voluntary community organizations in order to stimulate citizen participation in decision-making and action programs designed to improve economic activity and the quality of life in the region. The strategy here is to mobilize local human and organizational resources on the principle of voluntarism in order that the work of continuing economic development can be carried forward when federal and provincial investment is reduced.

Each of these three major programmatic strategies can be further sub-divided into discrete activities, but, essentially, they constitute the major sets of options available for regional economic development. Accordingly, the problem for decision-makers at both the policy and operations level is to establish a set of priorities among these three logical claims on available funds. Of equal importance, there is the need to assess the effectiveness of specific programs within each category, in order to modify and revise procedures to secure optimum outcomes.

Unfortunately, there does not yet exist either the theoretical framework nor the statistical tools to enable these decisions to be made with any great degree of precision. Notwithstanding the difficulties involved, the present study, which utilizes a modified benefit-cost analytical framework, provides an information base which should lessen the necessity for subjective decision-making considerably.

Objectives of Manpower Agencies

The objectives of international manpower service agencies have traditionally been summarized as ensuring the best possible organization of the employment market as an integral part of the national program for the achievement and maintenance of full employment and the development and use of productive resources, through cooperation with other public and private agencies concerned.

In less general terms, the objectives are accomplished by providing an array of services designed to:

1. Move the unemployed into jobs which match their skills and capabilities.

2. Assist the underemployed and underutilized workers to realize their employment potential.

3. Meet employers' manpower needs by locating and referring qualified workers.

The service provided to accomplish these ends can be usefully considered along a critical path from unemployment, underemployment and underutilization to an optimum placement which maximizes the worker's contribution to the economy and the consequent monetary return to the worker.

The critical path can be schematically described, as shown in Figure 1.

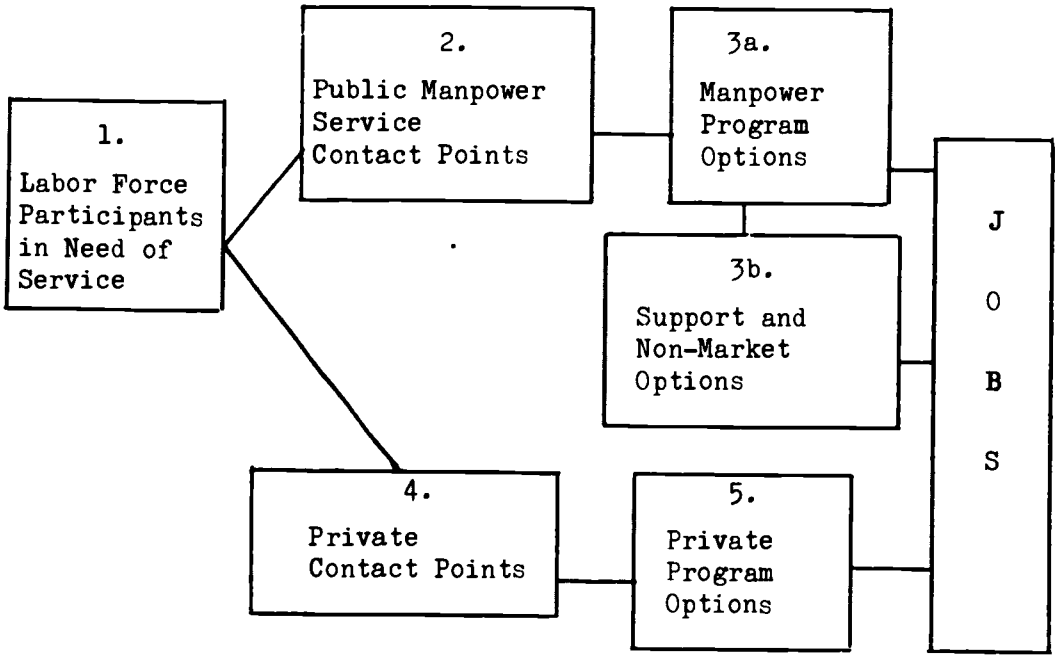

Figure 1

Labor Market Channels and Support Options

Explanatory Note :

1. Labor Force Participants in Need of Service: this group includes (a) the unemployed -- defined as ready, willing and able to work, and actively seeking a job, (b) the underutilized -- those who work fewer hours or weeks out of a potentially full work year because full time work is unavailable to them, usually due to seasonal factors, and (c) the underemployed -- those who are working at jobs which are substantially below their skills and capacity levels.

2. Public Manpower Service Contact Points: the person who first initiates the manpower service process for the client. These include counsellors who reach clients through several contact sources including Canada Manpower, the Department of Agriculture, Vocational and Rehabilitation Service, the school system, the Department of Indian Affairs, and the

Department of Health and Social services.

3a. Manpower Program Options: the department program staff must make a discretionary judgment on which specific program service best meets the needs of a particular client. Most of the specific manpower services will be provided through referral by a Canada Manpower interviewer or counsellor but significant options are mounted by the other public agencies listed.

The counsellor must first make a determination of need, eligibility and "risk" represented by the client. The counselling interview may be further buttressed with vocational testing to determine skills, interests and capacities of the client, where indicated. On the basis of the assessment made by the counsellor, a manpower service option should be selected.

Options may include any of the following: BTSD, training in industry, manpower corps, farm management training, mobility and relocation payments, vocational rehabilitation, job development, and direct referral to an employer with a listed vacancy. There will always be situations, however, where none of these programs may be suitable for the client, either because of explicit eligibility standards, or because the client represents a poor risk in terms of anticipated service benefits.

A skilled and conscientious counsellor should be able to prescribe an optimal choice for each client. Unfortunately pressures of time and lack of motivation on the part of the client often prevent the realization of the most positive outcomes.

There are also clients who present employability problems for which there currently exists no satisfactory solution. Furthermore, the effective-

ness of the manpower programs which are available is affected directly by the general performance of the economy.

3b. Support and Non-Market Options: the list of other public and private community resources to which the client might be referred is quite extensive and includes the categorical public assistance programs, unemployment insurance, private organizations such as Alcoholics Anonymous, the John Howard Society or the Family Service Bureau, where indicated, a return to the public school system, military service, etc.

4. Private Contact Points: public manpower service programs affect only in indirect ways the flow of persons who move into hiring channels outside the traditional public agencies.

5. Private Program Options: these channels include newspaper help wanted ads, personal contacts, union hiring halls, self-initiated contacts with employers, and private fee employment agencies.

Research Objectives

The Joint Federal-Provincial FRED Advisory Board on the Interlake expressed its understanding of the purpose of the present study in the following terms of reference:

> . . . ascertain the impact of manpower programs under the Interlake FRED Agreement on the Interlake region. Primary attention will be focused on economic effects with social and motivational factors included to the extent of resources available. Both the impact on the area and on program participants will be considered. The study findings should be available to assist in carrying out the fundamental review of the Interlake FRED plan. . . . As much as possible the project finding will be integrated with the overall evaluation carried out under contract with the University of Manitoba.[7]

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[7]Interlake Joint Federal-Provincial Advisory Board, "Suggestive Document for Special Meeting" (June 19, 1970, Winnipeg, Manitoba), p. II-2.

Operating under this general mandate, the joint research team, consisting of Dr. James MacMillan and his associates at the University of Manitoba, and Professor John Flagler and his colleagues of Manpower Research Associates, framed the following specific research objectives:

1. Determine the impact of selected manpower programs on the clientele served, employing a benefit-cost analytical framework.

2. Measure the differential effects of such services as a function of (a) selected characteristics of the population served, and (b) the type of adjustment service provided.

3. Provide a well defined data base on the characteristics of the unemployed and underemployed for the purpose of facilitating improvements in the deployment and distribution of manpower services.

4. Compare, within the limits of data available, the long-run benefits of manpower, capital improvements, and social service inputs in the Interlake.

To the extent these major objectives can be met, the following secondary objectives will be addressed:

1. Develop an improved information base for reordering manpower service priorities as indicated by the findings.

2. Strengthen the guidelines for discretionary judgments by counsellors and program staff on what particular program options best meet the needs of which clients.

3. Identify unmet training and communications needs among the cadre of counsellors and program staff in order that they can function more effectively in dealing with clients' employment problems.

4. Isolate unmet client needs in order to determine what public

services other than manpower programs may be indicated.

5. Establish an improved information system on the labour force characteristics of the Interlake which can be updated periodically with minimal expenditures.

Theory and Measurement of Return to Investment in Human Resources

The application of physical capital investment criteria to people is generally attributed to Schultz. The conceptual difficulties inherent in applying physical capital expenditure to people is succinctly expressed by Schultz:

> How can we estimate the magnitude of human investment? The practice followed in connection with physical capital goods is to estimate the magnitude of capital formation by expenditures made to produce the capital goods. This practice would suffice also for the formation of human capital. However, for human capital there is an additional problem that is less pressing for physical capital goods; how to distinguish between expenditures for consumption and for investment. This distinction bristles with both conceptual and practical difficulties. We can think of three classes of expenditures: expenditures that satisfy consumer preferences and in no way enhance the capabilities under discussion--these represent pure consumption; expenditures that enhance capabilities and do not satisfy any preferences underlying consumption--these represent pure investment; and expenditures that have both effects. Most relevant activities are clearly in the third class, partly consumption and partly investment, which is why the task of identifying each component is so formidable and why the measurement of capital formation by expenditures is less useful for human investment than for investment in physical goods. In principle there is an alternative method for estimating human investment, namely by its yield rather than by its cost. While any capability produced by human investment becomes a part of the human agent and hence cannot be sold, it is nevertheless 'in touch with the market place' by affecting the wages and salaries the human agent can earn. The resulting increase in earnings is the yield on investment.[8]

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[8] T.W. Schultz, "Investment in Human Capital," American Economic Review, 51: 1-17, 1961, reprinted in M. Blaug (ed.), Economics of Education 1 (Baltimore: Penquin Books Ltd., 1968), pp. 21-22.

In a criticism of Schultz, Shaffer[9] questions the possibility of establishing a cause-effect relationship. To prove that an income differential is solely due to additional education requires measurement of the influence of differences in innate abilities and associated characteristics on income, independent of education. In reply, Schultz comments that Denison has made these adustments.[10] However, Bowen[11] points out that Denison's analysis depends on the questionable procedure of subtracting the rate of growth attributable to all other factors except advances in knowledge from the total rate of growth. This "residual" likely depends on the results of secular changes in the quality of capital assets, change in output due to economics of scale, and a host of other factors.

More recently, complex models have been applied in the analysis of the rate of return to investment in human capital. For example, a model applied to Argentina by Adelman allows for the interaction between the demand and the supply side of human resource development. The cost-benefit or rate of return criteria is similar to the linear programming calculation of the marginal resource benefit of each type of education (marginal addition to GNP) with marginal resource cost, given cultural, political or other constraints, imposed on the model.[12] The explicit consideration

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[9] H.G. Shaffer, "A Critique of the Concept of Human Capital," American Economic Review, 52:1026-35, No. 4, 1961, reprinted in ibid., p. 49.

[10] T.W. Schultz, "The Concept of Human Capital: Reply," American Economic Review, 52:1035-9, No. 4, 1961, reprinted in ibid., p. 62.

[11] W.G. Bowen, "Assessing the Economic Contribution of Education," Higher Education, Report of the Committee under the Chairmanship of Lord Robbins 1961-63 (London: H.M.S.O., 1963), Appendix IV, pp. 73-96, Comnd. 2154-4, reprinted in ibid., p. 76

[12] M.J. Bowman, "The Human Investment Revolution in Economic Thought," Sociology of Education, 39: 111-38, 1966, reprinted in ibid., p. 131.

of demand, supply and cost elements introduces considerable sophistication into the analysis of returns to investment in human capital and in addition requires substantial data inputs.

In discussing the application of the theory of investment in human capital to manpower training, a critical issue concerns the determination of the benefits received by persons receiving a manpower service compared to the benefits received by those not taking training. Benefits in this case refer to an increase in productivity of labour with versus without training. If productivity gains in relation to costs are large relative to alternative public services, then manpower services are judged to be an efficient allocation of public funds.

In discussing the productivity increases of manpower training Sewell concludes:

> No previous analysis denonstrates unambiguously that the increase in the earnings of workers which were found to be associated with training were attributable to increases in the hourly wage rates of trainees. On the contrary, the evidence available in these studies seems to indicate that the increases in earnings associated with training were entirely attributable to increases in the employment of workers . . . .
>
> The fact that the training programs studied in past analyses were not apparently associated with any increases in the hourly wage rates of workers raises the obvious possibility that the employment effects . . . were simply transfers of income from nonparticipants in training programs to trainees.[13]

This finding is based on the use of hourly wage rate changes as a measure

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[13] D.O. Sewell, Training the Poor--A Benefit-Cost Analysis of Manpower Programs in the U.S. Antipoverty Program, Research Series: No. 12, Industrial Relations Centre, Queen's University (Kingston, Ont.: Hanson & Edgar, Ltd., 1971), pp. 43-44.

of productivity. If a person works longer hours, then this represents merely an increase in units of labour input, not output per unit of labour. However, it is difficult to construct an experimental design which rigorously meets the requirements of an experimental control group. Sewell proposes that the procedure of comparing qualified applicants who did not start the service is an adequate control for comparing effects of training.

Sewell's procedure and others combine the control group with the service group without testing the assumption that the characteristics of the two subpopulations are identical. A 't' test, F test or X^2 test are alternatives which would identify differences in characteristics of the two populations used in the regression to explain employment and earnings on hours worked per week. It may be that those receiving the service are significantly younger than those not taking the service. In this case the variable representing a service may be biased and may represent age differentials rather than the presence of the service. Tests are required to determine the homogeneity of all characteristics used in the regression equation, and appropriate interaction terms added to control such differences as do exist.[14]

The study by Sewell questions the techniques used in previous studies to measure the net productivity benefits of manpower training, and his own study results are based on homogeneity assumptions which require testing. On the basis of results to date it appears to be impossible

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[14] Sewell (ibid., p. 26) notes that clients were less likely to be trained if they were non-whites, women, had only elementary education, or were 44 years of age or over.

to measure productivity benefits of manpower services with analytical rigor. The present study measures productivity by weekly earnings increases of service clients deflated by the average rate of growth in weekly earnings in the area and increases in hourly wage rates. The area average growth in weekly earnings is derived from a random sample of the non-serviced labour force.

With regard to adequacy of results for policy decisions, Cain and Hollister make the point that acceptability criteria need to be modified. There is:

> . . . an inadequate taste for rigor (or an overwhelming penchant for visceral judgments) by administrators and legislators and excessive taste for the purely scientific standards by academics . . . . The result generally is that the evaluation is discredited, the information it provides ignored, and the decision-maker and legislator can resume the exercise of their visceral talents.[15]

In providing both sides of the case, Cain and Hollister add that while the legislator continues visceral exercises the academics continue to pursue "standards of 'proof' which cannot, at present, given the state of the art of social sciences, or perhaps never, given the inherent nature of social action programs, be satisfied."[16]

Manpower Services as a Means of Redistributing Income

In addition to productivity returns to investment in human resources, decision-makers are interested in the impacts of manpower services on income distributions. According to Weisbrod:

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[15]Glen G. Cain and Robinson G. Hollister, "Evaluating Manpower Programs for the Disadvantaged," Cost-Benefit Analysis of Manpower Policies, eds. G.G. Somers and W.D. Wood (Kingston, Ont. Hanson and Edgar, Ltd., 1969), p. 147.

[16]Ibid.

> Any evaluation of a manpower program should begin, therefore, with the presumption that the program is not economically efficient in the sense that benefits in the form of increased worker productivity (as measured by earnings) exceed the real cost of the program . . . .
>
> Even when manpower programs are not efficient, however, it does not follow that the programs are undesirable . . . . They do not merely raise earnings, but they do so as for a group deemed "deserving" --largely the poor and "hard-core" unemployed--and they do so in a manner that is socially preferred to transfer payment alternatives.[17]

Sewell's study is the only study which analyzes the impacts of manpower programs on income redistribution. Several alternative procedures exist for evaluating the income redistribution impacts of manpower services, including:

1. Calculate the reduction in the number of poor people according to a poverty line, prior to receiving a manpower service.

2. Calculate the dollar amount by which the incomes of the poor fall short of the poverty line, as outlined by Lampman.[18]

3. Weight income gains to people below the poverty line according to their income clas as outline by Ribich.[19]

4. Calculate income gains to those receiving manpower services and tabulate by income class, leaving assessments of the relative importance of income gains to decision-makers.

Sewell criticizes all the available procedures for assessing distributional impacts. Poverty lines constructed by Orshansky[20] and

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[17]Burton A. Weisbrod, "Benefits of Manpower Programs: Theoretical and Methodolc cal Issues," ibid., p. 15.

[18]Robert L. Lampman, "Approaches to the Reduction of Poverty," American Economic Review, 55:523, May, 1965.

[19]Thomas I. Ribich, Education and Poverty (Washington, D.C.: The

Friedman[21] are questionable due to:

1. The inadequacy of the food budget estimate of the minimum expenditure to provide an adequate diet for families of different sizes. (The cost of an adequate diet is necessarily subjective and bears no relation to what people of a particular income level actually spend.)

2. The arbitrary relationship raised to derive total expenditures of an average family at the poverty line. (Friedman uses a ratio of 1.67 for total budget to food and Orshansky uses a ratio of 3.)

3. The use of a poverty line does not differentiate income impacts between different income classes and omits consideration of income increments received greater than the arbitrary poverty line.

Due to the difficulties inherent in any procedure of explicitly measuring the income distribution impact according to any of the alternative standards of "poverty," it would appear that the most appropriate procedure is to tabulate income impacts by income class of manpower service clients.

Brookings Institution, 1968).

[20]Mollie Orshansky, "Counting the Poor: Another Look at Poverty Profile," The Social Security Bulletin, 28: 3-29, January, 1963.

[21]Rose D. Friedman, Poverty: Definition and Perspectives (Washington, D.C.: American Enterprise for Public Policy Research, 1965), p. 35.

MODEL SPECIFICATION

It is important that the exact nature of the model used be presented because of the wide range of the arbitrary decisions required in conducting a benefit-cost analysis. The uniqueness of the model and the problem are additional considerations essential for an understanding and interpretation of the results.

The present study has several distinctive features relating to the method of study and the nature of services being evaluated:

1. It is based on ongoing operations--other studies were based on a class or limited number of classes with fixed starting dates.

2. Other studies establish control groups; the present study compares the experimental group to one normative of the area labour market.

3. The study itself was the end-product of the other investigations into the Interlake economy, and attempts to relate findings to earlier study results.

4. Others had one pure service to evaluate; the present study had single and multiple services.

5. A variety of projected work lives, mostly arbitrary, were used in other studies; this study will rely on generally applicable work-life tables.

6. While other studies investigated specific occupational training, this study was involved with several services: training in industry, vocational training, basic training, farm management, mobility and job referral.

7. This study treats certain classes of non-completions as a

positive input, whereas some studies treat such as control groups.

8. In terms of benefits, social service and social insurance were examined for inputs.

Definition of Benefits and Costs

Past studies illustrate numerous alternative approaches to defining benefits and costs of manpower services. In particular, the critical sources of difference concern the definition of benefits relative to a control group and the implicit objective of the analysis.

For different manpower services categories there are alternative outcomes, which require definition. The alternative outcomes are enumerated below:

Service	Favourable Outcome	Other Outcome
Employment Referral	Placement	Non-Placement[1]
Pre-Vocational Training (BTSD)	Graduation	Withdrawal[2]
Vocational Training	Graduation	Withdrawal
Geographic Mobility	Relocation	Exploration
Farm Management Course	Completion	Withdrawal[3]
Manpower Corps	Completion	Withdrawal
Training in Industry	Completion	Withdrawal

[1] Includes failure to appear, failures to accept, and rejections. (Also includes non-referrals.)

[2] Includes failures to show, failures, and completions without graduation; rejection is not a factor.

[3] Withdrawals were not a large enough proportion to merit specific analysis.

Where two outcomes are possible, the benefit of the service is the benefit of each possible outcome weighted by the relative frequency (probability) of the respective outcomes.

$$B(T) = P(F)\ B(F) + P(E)\ B(E)$$

where: B = Benefit;

P = Probability;

T = Total;

F = Favourable Outcome;

E = Other Outcome;

$P(F) + P(E) = 1$.

Because the benefit considered is a marginal one, some authors have arbitrarily assigned the value of zero to $B(E_c)$, the benefit from other outcomes going so far as to indicate that these certain "other outcomes" could constitute the control groups for the favourable outcomes. The assumption that $B(E_c)$ is zero and that E_c is an outcome for a control group is not used by this investigation. The change in earnings associated with "other outcomes" is analyzed as a dependent variable in the same model used for "favourable outcomes."

Previous studies have categorized benefit-cost ratios according to several points of view, including the individual, the government (which can be more precisely defined by level), and the economy.[22] The rationale underlying the need for different ratios is that the components of analysis and results vary d pending on the relevant client or interest group.

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[22] Einar Hardin, "Benefit-Cost Analyses of Occupational Training Programs: A Comparison of Recent Studies," eds. Somers and Wood, op. cit., pp. 97-118.

Increased income is the major benefit of manpower services. However, there are many other elements of benefit, both in the service period and the post-service period. These may be both positive and negative, the latter indicated in Table 17 by inclusion within parentheses; some benefits are reductions in costs to other programs and should not be confused with manpower costs.

Table 17

Benefit and Cost Categories

Individual Benefits
Increased Income
(Opportunity Income Loss)
Manpower Service Supplemental Income
(Reduced Transfer Payments)
(Increased Taxes)
Reduced Social Disorganization Costs
Government
Increased Tax Revenues
Reduced Transfer Payments
Overhead on Transfer Payments
(Reduced Social Disorganization Costs)
Economy
Multiplier Effects
New Income From Newly-Filled Vacated Positions
(Lost Income From Newly-Filled Displaced Persons)

In the same manner that benefits are classified, so are costs.

Individual Costs
Personal Expenditures for Relocation
Personal Expenditures During Training

Table 17 (continued)

Governmental Service Costs
Relocation Grants
Mobility Pay (Training)
Income Supplements
Training Pay
Exploratory Relocation Grants
Pro-Rated Costs
Referral
FRED Services
Overhead
Unused Training Slots
Training in Industry Contract Costs
Manpower Corps Allowances
Fishery Station Maintenance
Governmental Support Costs
Supportive Services, Manpower
School Guidance Counselling
Extension Agents (Manpower)

Payments to individuals receiving a service are one element of service costs. The determination of agency costs by program practically involves the distribution of a flat overhead to the items to which costs are being allocated. Elements of total government costs discussed below were calculated but not used in the benefit-cost ratio due to the small magnitude of the dollar amount when allocated to specific programs.[23] Alternative combinations of benefits and costs can be computed for

[23]Current operation expenditure for the Selkirk Canada Manpower Center was $50 thousand in the fiscal year 1968-69.

different perspectives and interest groups (Figure 2).

For the Selkirk office for a certain period, the proportion of time used for placement activities and the special program activities was estimated, later apportioning the latter into separate programs using item activity counts. All time used in conferring with persons visiting the office for whom no service was rendered was uniformly apportioned over all programs (or over placements only if that is more feasible).

Using Interlake population figures on the total service of the Selkirk office by program, the administrative costs were ascertained for the Interlake as well as average cost per program applicant. Total costs of the Selkirk office, not just wage and salary items, were used. Office administration was apportioned by program. "No shows" were to be included inasmuch as the recipients were defined as those who registered for a service which was completed or discontinued.

Regional and federal costs by program were allocated to the Selkirk office in the proportion that the Selkirk load bears to the load of the regional and federal office. Supplementary Federal manpower services, etc. were not ignored. Certain judgments had to be made as to their inputs.

In addition, ARDA-FRED, Agriculture Department, Health and Social Development, and Department of Education (School Guidance) referral costs were to be aggregated and apportioned in the same fashion as is time spent on persons not receiving service.

For each program, cash outlays for mobility, relocation, income supplements, training pay, training in industry contracts costs, and training slots, etc. were to be aggregated and averaged over the number

	Benefits	Costs	Ratio
Individual	B_I	C_I	B_I/C_I [a]
Government		C_G	
Individual Total Plus Government Costs	B_I	$C_I + C_G$	$B_I/(G_I + C_G)$ [b]
Government	B_G		
Total Government	B_G	C_G	B_G/C_G [c]
Residual Economy	B_E	C_E	B_E/C_E [c]
Subtotal	$B_I+B_G+B_E$	$C_I+C_G+C_E$	
Multiplier Effect	m [d]	m [d]	
Total Economy	$B_T=m(B_I+B_G+B_E)$	$C_T=m(C_I+C_G+C_E)$	B_T/C_T [b]

Figure 2

Benefit-Cost Ratios Classified by Decision-Makers

[a]Most meaningful to individual.

[b]Usually computed for policy determinations.

[c]Important if over one; may be meaningless otherwise.

[d]May not be considered, that is, set equal to one.

registering in the program whether successful or not. (Non-appearances or wasted slots were considered as overhead.)

The total costs are the administrative costs, various overheads, and special expenditures by program.

With respect to Indian Affairs, a like assessment was made with one major difference: not all services involved manpower costs. Those services, including relocation for other than manpower reasons, were excluded from manpower costs. Expenditures made for general assistance, which are alleviated by manpower solutions, were examined as potential benefits (that is, going from a negative benefit to no or little assistance).

Indian Affairs, Unemployment Insurance, and Health and Social Development all provide services which presumably may be reduced or eliminated because of manpower solutions to individual economic situations. For persons in the survey, an attempt was made to assess such benefits for the pre-service, service, and post-service period.

From Unemployment Insurance, it was intended that data for the sample, as well as non-sampled serviced persons if possible, would be obtained by providing the Unemployment Insurance Commission with the social insurance numbers for persons having such numbers. The Unemployment Insurance data would have shown the degree of overlap with manpower services and provided estimates of total Unemployment Insurance activity in the Interlake. In addition, such program data as the Unemployment Insurance Commission can provide could prove helpful in evaluating the validity of data collection. However, due to the absence of codes specific to the Interlake, it was not possible to obtain the Unemployment Insurance data.

From Health and Social Development, data was obtained for sample cases; time did not permit counts and other assessments for non-sampled individuals to evaluate benefits and extent of overlap. Health and Social Development records w also used to identify social aberrations for predictive purposes--that is, social aberrations w ch are severe enough to be called to the attention of the province.

Due to time constraints, local welfare systems data were not examined.

Relation Between the Benefit-Cost Ratio and FRED Objectives

The particular ratio used in this study utilizes a unique modification of benefit-cost analysis appropriate for the FRED program. The FRED program objective is to increase income and employment opportunities subject to a fixed budget of $85 million over the period 1967-77. A review of the plan is scheduled for 1971 to assess the ongoing programs and reallocate funds where possible to the programs with the highest pay-off. The benefit-cost ratio consistent with the FRED objective and the review process is the ratio of the change in trainee benefits (pre-tax earnings above that experienced by the norm group) divided by total FRED costs (training allowances plus direct course costs). The FRED program managers need to know what the benefits (income) are per dollar of FRED expenditure in order to assess the likely increase in pay-off to reallocations among service categories. At this point, it is necessary to point out that the ratio calculated cannot be used directly for reallocation. Particular consideration is required for judgments concerning the total pool of potential clients for each service and differences between future

client characteristics and those of the sampled population. Also, earnings foregone during training are not subtracted from the benefits. A zero value is placed on earnings foregone during training due to the prevalence of unemployment prior to service and the difficulty of determining whether or not the individual would have had any earnings if training had not occurred. The assumption of zero earnings foregone is supported by the observation that a considerable number of non-completions dropped out to take jobs at wages equal to or greater than pre-service wage levels.

Simple Deflation of Benefits

In Model I, it is assumed that if the clientele had not participated in the manpower service they would have received the average rate of employment and earnings increase reported by the norm group. In addition, consideration of a differential effect between the service and norm groups due to group variations in age, education, and other hypothesized determinants of benefits is omitted. In Model I, the average growth in earnings or employment is used to deflate the earnings on employment benefits received by service clientele. In the calculation, the ratio of employment or earnings in 1969 over employment or earnings in 1969 is used to adjust the benefit to 1968 units, considered to be the initial period for the present value calculation.

The equation form of Model I is:

(1) $BE = [69E^S/(69E^N/68E^N)] - 68E^S$

(2) $BY = [69Y^S/(69Y^N/68Y^N)] - 68Y^S$

where: BE and BY = the net employment and earnings benefits, respectively

for a service;

$69E^S$, $68E^S$, $69E^N$, and $68E^N$ = employment in weeks for the service and norm groups, for 1968 and 1969 respectively; and

$69Y^S$, $68Y^S$, $69Y^N$ and $68Y^N$ = earnings per week for the service and norm groups, for 1968 and 1969, respectively.

The total benefit for an individual due to the employment and earnings effects of a service is the sum of two components. The first component, B^Y, is the deflated increase in earnings per week for the period (a measure of productivity increases) multiplied by the number of weeks worked in the base period:

$$(3) \quad B^Y = BY\ (68E^S)$$

The second component is due to the deflated increase in weeks employed (a measure of additional units of labour input) at the new level of deflated weekly earnings:

$$(4) \quad B^E = BE\ [69Y^S/(69Y^N/68Y^N)]$$

The total income benefit between the base period and the exposure period is the sum of the two components:

$$(5) \quad B^T = B^Y + B^E$$

The annual benefit in a given year is projected over the working life of the client on the assumption that such a benefit will persist over the balance of the expected work life. To measure the client's total benefits, an exposure period of greater than 1 year is required to adequately determine the stability of the benefits. Since data on the expected working lives of individuals in the area are not available, working life tables developed from the 1961 Census for the Prairie Region which appear to be relevant,

were used to compute the present value of the stream of benefits, PVB_k^T:

$$(6) \quad PVB_k^T = B^T \quad \frac{(1 + r)^{n_x} - 1}{r(1 + r)^{n_x}}$$

where: r = an arbitrary interest rate;[24] and

n_x = mean expectation of working life for the k^{th} individual of age x.[25]

Multivariate Regression Analysis

In Model II, a multivariate regression analysis is used to eliminate variation in increased earnings which is associated with or can be attributed to an independent variable. An increment in exposure year annual earnings can be due to two successful outcomes associated with manpower services--an increase in the level of wage or self-employment income or an increase in the period of employment. These elements have different meanings and are analyzed separately.

The basic level of earning benefit for a single service is:

$$(7) \quad BY_k = Y_{1k} - Y_{ok}$$

where: BY_k = income benefit to individual k from a service; subscript 1 indicates service received (experimental);

Y_{1k} = exposure year earnings for individual k upon receiving

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[24] Public finance economists have not been able to agree on an interest rate appropriate for evaluation of public expenditures; an arbitrary rate of 6 percent is chosen for the analysis.

[25] Working life tables are available for the Prairie Region based on the 1961 Census. See Frank T. Denton and Sylvia Ostry, Working-Life Tables for Canadian Males, 1961 Census Monograph, Dominion Bureau of Statistics (Ottawa: Queen's Printer, 1969).

a service; and

Y_{ok} = exposure year earnings for individual k without receiving a service.

The last term can be further defined:

(8) $Y_{ok} = f(X_{ok}, a_j) + E_{ok} = \hat{Y}_{ok} + E_{ok}$

where: subscript o indicates no service received (norm);

Y_{ok} = average weekly exposure year earnings for individual k;

X_{ok} = average weekly base year earnings for individual k;

f = a specific function, the least squares solution of the equation;

a_j = independent variables influencing production;

j = 1, . . . ;

E_{ok} = random error;

$\Sigma E_{ok} = 0$; and

$\hat{Y}_{ok}$ = predicted value of Y_{ok}.

By substituting characteristics of the service group into equation (8) and subtracting the predicted service income from the actual income of the service group, equation (9) is obtained:

(9) $BY_k = Y_{1k} - \hat{Y}_{ok} - E_{ok} - f(X_{ok}, a_j) - E_{ok}$

Alternatively, assume, subject to test, that the service and non-service groups can be pooled in the analysis. The assumption is that the same relations exist with service, using a least squares treatment, as for no service, except for the addition of a treatment effect, T:

(10) $Y_{1k} = f(X_{ok}, T, a_j) + E_{1k} = \hat{Y}_{1k} + E_{1k}$

(11) $BY_k = f(X_{ok}, T, a_j) - f(X_{ok}, a_j) + E_{1k} - E_{ok} = bT + E_{1k} - E_{ok}$

where b is a regression coefficient indicating the contribution of the service to an increment in earnings.

Analogous equations can be specified to estimate employment benefits, BE_k. Total benefits are calculated by substitution in equations 3, 4, and 5 above.

Experimental groups are to be compared with the norm group. If the relationships between socio-demographic characteristics are the same for serviced and non-serviced clients, the groups will be pooled. The outlined analysis is based on the assumption that homogeneity is found.[26]

If there is no homogeneity, it must be concluded that the experimental groups differ from the norm group and, therefore, overall generalizations cannot be made based on the model outlined above. It must be concluded that these differences are due to a selection process which may not be continued; the "cream of the crop" or the pool of disadvantaged may be exhausted early in the program, at which time it may be judged that benefit-cost relations will change from the original findings.

To have a separate norm group for each service is to identify some factor with the service which must be eliminated as a result of the comparison. This would result in obtaining a different norm group for persons not receiving one manpower service (e.g. referral) as compared to persons not receiving another manpower service (e.g. training); logically, the reason for separate norm groups lies in the method of selection of individuals for the various manpower services. Hopefully, the inbuilt

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[26] The assumption of homogeneity of coefficients between service and norm groups is rejected on the basis of regression results (Appendix H).

selection factor is eliminated so that inferences can be made with respect to the population as a whole. In regression analysis; the importance of the norm group lies in its use in tests of homogeneity of relations with the experimental groups and not in the observation, subjectively made, that it is a like group which can serve as a control. Even were such a decision made properly, the possibility of confounding (as described later) still remains a definite possibility.

With a pooled regression equation, from which the value of the benefit can be determined, the benefit is in fact determined for the individual or group of individuals using himself or themselves as the norm. The norm is the tested group itself. The norm group establishes relationships which are pooled with those of the experimental groups.

With respect to different services, it must be determined that the homogeneity of relations exists in order that they all be placed in a single equation. (Because of the difficulties involved, the initial evaluation will be confined to persons receiving a single service in the periods observed, and the receipt of multiple services is deferred.)

With the use of regression, the degree the dependent variable varies with each of the independent variables is measured holding all others constant. However, when an independent variable denotes either the presence or absence of a "treatment", the presumption of causation can be made if it is determined that all other measured factors are equal or nullified between the two groups.

The issue then remains whether any factor not equated could be confounded with the treatment so that the isolated effect could be due in part or total to the element confounded.

When the service is training, several factors have been hypothesized as being confounded with the training and possible cause of all or part of the results of the supposed training effect:

1. It has been speculated that the selection process for training gets the most "motivated" people, so that in general the trainees have a motivational level difference.

2. It has been conjectured that the trainees as a by-product receive better referral service resulting in better placement, and hence earning, experience than a control group.

3. It is obvious by the planning for training that persons who are unskilled in a depressed demand situation are being trained for semi-skilled and skilled positions for which there is higher demand. Before training is offered, there has to be evidence of a demand even if it is shown indirectly.

APPENDICES

APPENDIX A

Table 18

Advisory Committee to the Interlake Manpower Services Evaluation Study

G. Cooper	Department of Regional Economic Expansion, 337-A Main Street, Selkirk.
B. Cropo	Resource Analyst, Manitoba Department of Agriculture, Extension Service, 715 Norquay Building, Winnipeg 1.
F. Ewald	Director of Technical Service, Prairie Region, Department of Manpower & Immigration, Royal Bank Building, 220 Portage Avenue, Winnipeg 1.
Dr. C. Framingham	Director of Research Planning and Priorities, Committee of Cabinet, 193 Sherbrook Street, Winnipeg 1.
G. Lane (Senior Federal Representative)	Regional Economist, Dept. of Manpower & Immigration, Royal Bank Building, 220 Portage Avenue, Winnipeg 1.
J. Lockhart (staff liaison)	District Economist, Department of Manpower & Immigration, Royal Bank Building, 220 Portage Avenue, Winnipeg 1.
M. Marykuca	Employment and Relocation, Department of Indian Affairs, 301--267 Edmonton Street, Winnipeg 1.
J. Nykoluk	Director of Youth and Manpower Division, Department of Youth and Education, 308-1181 Portage Avenue, Winnipeg 10.
E. Petrich	Acting Director, Office of Research & Planning,[a] Dept. of Health and Social Development, 411 Norquay Building, Winnipeg 1.

Table 18 (continued)

E. Somers (Senior Provincial Representative)	Manpower Programmer, ARDA-FRED Administration, 809 Norquay Building, Winnipeg 1.

[a]Initially, J. Troniak represented the Department of Health and Social Development.

APPENDIX B

Table 19

Meetings Attended During the Study

Date	Location	Flagler	MacMillan	Bernat	Others
May 1/70	193 Sherbrook	x	x		Advisory Committee
May 21	193 Sherbrook	x	x	x	Advisory Committee
June 8	Selkirk		x	x	Ewald, Lane, Harvey
June 9	University		x	x	Somers, Framingham
June 11	Reg. Manpower			x	Edmonds, Ewald, Lane
June 12	Selkirk			x	Harvey
June 15	Reg. Manpower	x		x	Edmonds, Ewald
June 16	University	x	x	x	Advisory Committee
June 19	Sonesta Hotel	x	x	x	FRED Board
June 22	Ottawa		x	x	Jenness, Faye, Lane
June 23	Reg. Manpower		x	x	Edmonds, Lane
June 23	Health & Social Development		x	x	Troniak, Getz
June 24	Red River College		x		Manpower Program Directors
June 26	Canada Manpower Centre, Selkirk			x	Lane
June 26	Unemployment Insurance Commission			x	Lane, Frater, Others
June 30	Reg. Manpower			x	Edmonds, Others
June 30	Montcalm Motel		x	x	Somers, Cropo, Others
July 7	University		x	x	Somers, Cropo, Faye
July 23	University		x	x	Advisory Committee
July 28	University		x		Advisory Committee
July 31	University		x		Advisory Committee
Aug. 10	University		x		Advisory Committee
Oct. 21	Health & Social Development		x		Plesniarski, Getz

Table 19 (continued)

Date	Location	Flagler	MacMillan	Bernat	Others
Nov. 4	University		x		Advisory Committee
Jan. 28/71	University		x		Advisory Committee
Mar. 11	Ottawa, Canada Manpower		x		Faye, Magun
Apr. 14	University		x		Faye, Magun
Apr. 26,27	Gimli	x	x	x	Interlake Program Directors
June 7,8	Winnipeg	x	x		Interlake HRDAC Committee

APPENDIX C

Confidentiality of Individual Records Collected for the Evaluation of the FRED Plan

Interviews of individuals were obtained with the assurance that information collected would be treated with strict confidence. To date, no interpretation of the term 'confidentiality' has been made. The term will be interpreted to correspond with the use of the term by the Dominion Bureau of Statistics.

This means that apart from the data made public in The Interlake Fact and the research reports of the University of Manitoba, individual records will not be made available to agencies or individuals. Personnel of the ARDA-FRED administration participated in the collection and analysis of the data, and therefore will have access to individual records with the understanding that confidentiality will be maintained, and the data will be used solely for research purposes.

With respect to the Interlake Manpower Service Evaluation Study, carried out under contract with the FRED Board, the principle implicit in the above statements will apply. The ARDA-FRED administration and the Canada Department of Manpower and Immigration, who are participating in the collection and analysis of data, will have access to individual questionnaire data for their present clients (clients of provincial agencies and Canada Manpower, respectively). In addition, supplementary information provided by agencies will be returned to them if they so desire and no use of the data will be made beyond the scope of the present study. In the case of some agency records, such as the Canada Manpower 701 forms which were

xeroxed at considerable expense, it is requested that the Canada Manpower Regional office maintain these records for use in the future manpower studies.

In summary, two general principles apply to research data. First, individual data will not be made available to public agencies or individuals who have not participated in the collection and analysis of the data. Second, records provided by a single agency will be returned and not be divulged to any other agency. Therefore, agency data will not be used for research other than the study for which the data were provided.

APPENDIX D

Estimation of Course Costs by Manpower Service Category BTSD and Vocational and Special Training

The total cost of operating BTSD (all levels) and vocational and special training courses (both completions and non-completions) was $244,979 [$121,842 for allowances paid to the 185 students and $123,137 for their course places (Table 20)]. As one would expect, the allowances paid are considerably higher for the completions ($81,212) than for the non-completions ($40,630). This difference is a direct reflection of many students withdrawing from courses before their termination date. Of course, some of the non-completion students attend to the end but fail the course and others merely register for the course but do not show up later. In the BTSD III & IV, I & II, and vocational and special training non-completion samples, there were 8 out of 36, 5 out of 27, and 3 out of 27, respectively, that merely registered but never attended that course.

However, the non-completion clients, by failing to show up after registration or withdrawing from the course early, do not reduce the cost of courses. The slightly higher cost of the non-completion ($62,489 vs. the $60,648 for completion) courses can be attributed to some vocational and special students withdrawing from the more expensive course. There is quite a wide variation in the cost of these courses, ranging from $180 for a nurses aid course to $2,790 for commercial baking. BTSD course costs per person are generally $400 to $600 depending on location and benefits.

The table also reveals the significantly higher cost of vocational

Table 20

Summary of Allowances Paid and Course Costs for BTSD and Vocational Courses
(dollars)

Service Group	No. of Clients in Group	Allowances Paid[a] Comp.	Allowances Paid[a] Non-Comp.	Course Cost[b] Comp.	Course Cost[b] Non-Comp.	Total Cost Comp.	Total Cost Non-Comp.
8. BTSD III & IV Comp.	33	24,009 (17/33)[c]		14,250 (33/33)		38,259	
9. BTSD III & IV Non-Comp.	36		14,935 (19/36)		16,380 (34/36)[d]		31,315
10. BTSD I & II Comp.	33	32,036 (17/33)		13,400 (33/33)		45,436	
11. BTSD I & II Non-Comp.	27		11,943 (20/27)		10,917 (24/27)		22,860
12. Voc. & Spec. Comp.	29	25,167 (13/29)		32,998 (28/29)		58,165	
13. Voc. & Spec. Non-Comp.	27		13,752 (16/27)		35,192 (27/27)		48,944
Total Comp.	95	81,212	(55/90)	60,648	(85/90)	141,860	
Non-Comp.	92	(47/95)	40,630	(94/95)	62,489		103,119
Grand Total	187		121,842 (102/185)		123,137 (179/185)		244,979

[a]Information obtained from Selkirk Canada Manpower Centre using data from Authorization Forms (451), Change of Record Forms (453), and Client Record and Referral Forms. For those clients whose forms were not available, the weekly allowance was calculated based on questionnaire data and applying the formula and rates used by the Canada Manpower Centre office. The total allowance was derived by multiplying each

clients' authorized weekly allowance by the length of the service period.

[b]Course costs were obtained from the Manpower and Immigration Regional office. The courses taken by the clients were matched with the same course in the Regional Manpower and Immigration office. The course name, its starting date and location were used in the matching process. Cost of courses (spots) were specified on Manpower and Immigration forms.

[c]For 17 out of 33 clients, the exact allowances were estimated from authorization forms. The remainder (16) were calculated applying the formula that the Canada Manpower Centre used. This procedure was used for all completions.

[d]For 34 out of the 36 clients, the accurate course costs were obtained from the Manpower and Immigration Regional office. The average for the 34 was applied to the remaining 2 cases. This procedure was used for all non-completions.

and special training courses compared to the BTSD courses. Many of the BTSD courses are held in rural areas, where the cost of accommodation is considerably lower than in equipped urban teaching institutions where the vocational type of courses are usually taught.

The allowances paid for the vocational and special training courses completed are higher than the BTSD ones because of their greater length. Course types and numbers of clients for the sample are summarized in Table 21.

The Federal Department of Indian Affairs and Northern Development sponsored the training of 15 of the 187 clients in the BTSD and vocational and special sample. The cost of sponsoring these clients was $23,440 or 9.3% of the total for these six groups (Table 22). This is also reflected in the absence of BTSD levels I & II clients as opposed to 4 clients appearing in levels III & IV. Upon closer examination, it was found that the average length of the service period for the 11 vocational and pre-employment clients was only 5.2 weeks. Ten of these clients withdrew from their courses four weeks or less after the beginning date and the other client attended for 24 weeks. As was noted earlier, the vocational and pre-employment course costs are comparatively high in relation to the other types of courses. Early withdrawal from these courses does not reduce their cost to the sponsor.

Training in Industry

There were 23 clients surveyed in this group distributed across several industries (Table 23).

The cost of training the 23 clients was $10,238, of which

Table 21

Course Types: Vocational and Special Clients

	Number of Clients
12 Vocational and Special Completions	
Carpentry and Woodwork	2
Construction Electricity	4
Upholstery	1
Painting and Decorating	2
Automotive Mechanical Repair	4
Clerical, Bookkeeping and Office Machines	1
Nurse's Aid	1
Heavy Duty Equipment	6
Diploma Course Agriculture	3
Master-Minor Water Certificate	1
Commercial Baking	1
Meat Cutting	2
Business Administration and Merchandising	1
TOTAL	29
13 Vocational and Special Non-Completions	
Bricklayer Apprentice	1
Construction Electricity	1
Clerk Typist	1
Farm Mechanic	1
Commercial Baking	1
Heavy Duty Equipment	1
Painting and Decorating (Apprentice)	1
Welding	3
Practical Nursing	1
Master-Minor Water Certificate	1
Diploma Course Agriculture	1
Clerical, Bookkeeping and Office Machines	2
Electrical Appliance Repair	1
Auto Mechanic	1
Carpentry and Woodworking (Indian Affairs)	10
TOTAL	27

Table 22

Summary of Allowances Paid and Course Costs by Course for Indian Affairs Clients[a] (dollars)

Service Group	No. Cli.	Allowances Paid Completions	Allowances Paid Non-Comp.	Course Costs Completions	Course Costs Non-Comp.	Total Cost Completions	Total Cost Non-Comp.
8) BTSD III & IV Comp.	1	555(0/1)	--	400 (1/1)	—	955	--
9) BTSD III & IV Non-Comp.	3	--	445(1/3)	—	1,800(3/3)	--	2,245
10) BTSD I & II Comp.	0	0	—	0	—	0	—
11) BTSD I & II Non-Comp.	0	—	0	--	0	--	0
12) Voc. & Pre-Emp. Comp.	0	0	—	0	--	0	--
13) Voc. & Pre-Emp. Non-Comp.	11	—	1,540(3/11)		18,700(7/11)	--	20,240
Total Completions	1	555(0/1)	--	400(1/1)	--	955	--
Total Non-Comp.	14	—	1,985(4/14)	--	20,500(10/14)	--	22,485
Grand Total	15	2,540		20,900		$23,440	

[a]See Table 20 for explanatory footnotes.

Table 23

Distribution of Training in Industry Categories

5 were distillery plant maintenance trainees	(Calverts)
6 were distillery operator trainees	(Calverts)
5 were electrical trade improvement trainees	(various)
4 were transmission tower assembly trainees	(Dominion Bridge)
1 was nurse's aide or attendant trainee	(Selkirk Mental Hospital)
1 was a professional color photography trainee	(Magnusson Plant)
1 was a knit technology trainee	(Electroknit)

$6,598 (64%) was for wage reimbursements and $3,640 (36%) was for training costs. Wage reimbursements were approximately double the training costs. Average per client costs for training and wages were $158 and $287, respectively, or a total of $445 per client.

The lengths of the training periods as well as their total costs were relatively small, the highest for any client in the group being $595 and 45 days duration. There were no training in industry non-completions.

Manpower Corps

The total cost of conducting manpower corps training for the sample studied (28 completions and 24 non-completions) was $91,019 (Table 24).

For the completions, the amount paid out in allowances to trainees is about half the course cost. However, in the non-completions, the allowance paid is substantially lower in comparison with the course cost

Table 24

Manpower Corps Course Costs
(dollars)

	Completions	Non-Completions	Total
No. in Sample	28	24	52
Allowances Paid (All. per Client)	$22,488	5,388	27,876
Other Course Costs[a] (Course Cost/Client)	47,880	15,263	63,143
Total Cost	70,368	20,651	91,019

[a]Total and average course costs were derived by subtracting total allowances paid for each sample group from the total cost (allowances plus other training costs) of manpower corps for the sample.

(i.e., $5,388 and $15,263, respectively). This is due mainly to the large number (15) of clients in the sample (24) who applied or registered for manpower corps but never showed up or were not accepted. The average length of time a non-completion client remained in the course was only 4.5 weeks, compared to 12.2 weeks for the completion clients.

The following table (Table 25) indicates the type of manpower corps projects which the sample represents.

Table 25

Number of Manpower Corps Trainees by Project

Name of Project[a]	Completions	Non-Completions	Combined
Diamond Drilling (Various Locations)	8	6	14
Construction of Fish Training Centre (Hnausa)	8	6	14
Construction of Furniture Plant (Selkirk)	1	4	5
Construction of Adult Education Centre (Gimli)	3	3	6
Construction of Community Adult Centre (Jackhead)	1	0	1
Construction of Adult Education Centre (Lake Manitoba Resident)	2	0	2
Landscaping (Winnipeg Beach)	4	1	5
Social Rehabilitation (Ninette)	0	4	4
Other Vocational Rehabilitation Training	1	0	1
Total Trainees	28	24	52

[a]The projects can be grouped into four general categories: construction, diamond drilling, landscaping, and social rehabilitation.

APPENDIX E

Relationship Among Manpower Agencies and Social Service Agencies

Manitoba Health and Social Development client information was requested for three general purposes. First, information on social services to clients could potentially be used as a measure of social disorganization, i.e., delinquency and family problems. However, in checking the files, an insufficient number of manpower clients appeared to have family problems to permit analysis (Table 26).

Second, reduction in social service costs occurring with effective manpower services is a benefit which needs to be incorporated into the benefit-cost calculation. However, it is extremely difficult to sort out welfare services which could be reduced or not required if manpower services are effective. In some cases, the program is clear-cut, i.e., aged social allowance and infirm social allowance (Table 27) would not likely be reduced directly by effective manpower services. However, in other cases listed in Table 26, an assessment was made on the basis of program eligibility criteria to determine the amount of expenditure by Health and Social Development which could be reduced if the clients' manpower services were successful in increasing employment and/or income. Similar observations were not collected but appeared relevant to the potential reduction in welfare assistance provided by Indian Affairs.

Third, Health and Social Development provides manpower services: mobility assistance, job referral, and Vocational and Rehabilitation Training (VRT). The VRT clients have been included in the population of

Table 26

Manitoba Health and Social Development Services Provided to Sampled Manpower Service Clients

Program	No.[a] in Prog.	Family Job Relocation		Transportation Vouchers Provided		Goods Vouchers		Payments in Cash		Family[b] Problems
		$	No.	$	No.	$	No.	$	No.	
Social Allowance for Unemployables (SAU)	1							2488	(1)	1
Social Dependent Care (SDC)	3					1620	(1)	-		-
Unwed Mothers (UM)	1							66	(1)	-
Mother's Allowance (MA)	10					8670	(2)	16625	(7)	2
Aged Social Assistance (ASA)	1					-		2777	(1)	-
Infirm Social Assistance (ISA)	2					-		3087	(2)	-
Unorganized Territory Relief (UTR)	6					350		13703	(5)	1
Family Service (FS)	2					-		-		
Family Relocation (FR)	1	650	(1)			-		-		1
Foster Home (FH)	2					-		-		-
Training Referral (TR)	20			85	(5)	1519	(6)	505	(6)	1
Train. Ref. & Job Referral (TR & JR)	3			26	(2)	107	(2)	30	(1)	-
Job Referral (JR)	2			21	(1)	-		-		-
Other Voc. Rehab. Service (VRS)	10	820	(2)	96	(8)	1108	(8)	449	(6)	1
No Information	5									
TOTAL	69	$1470	(3)	$226	(16)	$13374	(20)	$39730	(30)	7

[a]Of the 64 surveyed clients which appeared on the Health and Social Development files:

47	19	clients received regular monthly financial assistance,
	12	clients received financial assistance serveral times (as required),
	16	clients received financial assistance only once,
17	16	clients received other than financial assistance.
	1	client provided a service (foster home).
Total	64	

5 more clients appear on the Health and Social Development files, but there is no information for them.

Grand Total 69 Number of clients in survey sample appearing on Health and Social Development files.

[b] The 7 family problem cases are:
3 desertions (2 husbands, 1 wife)
1 marital stress (distrust, obvious disharmony)
1 excess use of alcohol
2 job irresponsibility (cannot hold a steady job even when given the opportunity)

These 7 were recorded by the social worker as relevant to the program they were enlisted in.

The unwed mother was not indicated as having a family problem because mention was not made of Social worker. (It should probably be added: 7+1 = 8). She received only one $66.00 payment.

Where death or disability occurred, those cases were not considered family problems: there were 2 cases of father's death, and there were 6 cases of disability of one of the parents stated as significant circumstances of payment.

Table 27

Description of Health and Social Development
Social Service Categories[a]

SAU Social Allowance for the Unemployable
This program applies to an individual or couple with no dependent children, where the bread winner is disabled either physically, mentally or socially for a period in excess of 90 days.

SDC Special Dependent Care
This program applies to a dependent or dependents in a family who require(s) a specified or a specific type of care which cannot be provided out of a persons' earnings when it is judged against the social allowance budget. Examples of such care are a home-maker, institutional care, foster homes, day care, etc.

MA Mother's Allowance
These are all social allowance programs that assist families with dependent children. This program is available under the following conditions:

1. Where the bread winner has been disabled for a period longer than 90 days (as in SAU)

2. For mothers with a dependent child or children: (a) whose husband deserted her for longer than 90 days, (b) whose husband was sentenced to prison for longer than 90 days, (c) who has never been married, or (d) who has been divorced but never remarried.

ASA Aged Social Allowance
This program is available to persons over 65 years old whose needs exceed resources according to their budgetary requirements.

ISA Infirm Social Allowance
This program is available to individuals over 18 years of age who by medical or social evidence are required to be under the care and supervision of another person.

UTR Unorganized Territory Relief
This is a social allowance program for unemployed persons residing in Local Government Districts and Unorganized Territory.

FS Family Service
This is a counselling service under the provisions of the Child Welfare Act to individuals and families showing potential for child neglect. It is a protection service.

Table 27 (continued)

VRS or VRT	Vocational Rehabilitation Service or Vocational Rehabilitation Training This program provides vocational counselling and/or financial services leading to employment to those persons that would not otherwise qualify under the Social Allowance Act. These programs are cost-shared under the Vocational Rehabilitation or Disabled Persons Act 1960-61.

Budgetary requirements include:

1. Food, clothing, personal allowance, and household allowances according to regulations.

2. Rent, taxes, fuel and hydro, which are considered a cost in that particular home situation.

3. Special needs that may be met by the welfare program in question. These needs are determined by special circumstances and health within a discretionary manner.

All the above are governed by the number of persons in a household and their ages.

[a]The Student Aid Program of the Manitoba Department of Health and Social Development was not included because the program did not come into effect until June, 1970.

clients. However, information is generally unavailable on mobility and job referral so that it was not possible to interview the clients receiving referral and mobility from the Department of Health and Social Development. Two clients of other manpower services received family relocation payments and five received job referrals. These were counted as multiple services in terms of the service population, each of the clients having received another type of service from one of the other agencies. The total population of Health and Social Development clients receiving referral and mobility assistance is not known; a complete research of the files would be required to obtain this information.

If welfare clients are successful in achieving employment and income as a result of a manpower service (Table 28), welfare caseloads may be reduced. For clients listed (Table 28), the income level associated with the service (calculated from the questionnaire) was compared with the need criterion implied by the budgetary requirement (based on income, family size and household expenses used in the determination of the welfare benefit). It would appear that welfare financial and counselling services perform a supportive role to manpower service clients. An approximation to the total manpower clients receiving such supportive services in the period June 1, 1968 to May 31, 1969 is calculated by the ratio of those receiving welfare, 69, to total clients interviewed, 350. In other words, 20 percent of manpower service clients received supportive services from Health and Social Development. This is likely to be an underestimate to the extent that town and rural municipality welfare payments are not included.

Table 28

Persons Receiving Social Assistance
Classified by Manpower Service

	Service Name	No. of Clients	Dist. Among Services[a]	Dist. Within Services Type (%)[b]
1	Training in Industry	0	0	0
2	Exploratory and Mobility	0	0	0
3	Farm Management Course	1	2	3
4	Manpower Corps Completions	9	14	31
5	Manpower Corps Non-Completions[c]	5	8	21
6	Employment Referrals Completions	1	2	3
7	Employment Referrals Non-Completions	0	0	0
8	BTSD Levels III, IV, Completions	12	18	36
9	BTSD Levels III, IV, Non-Completions	16	25	44
10	BTSD Levels I, II, Completions	4	6	12
11	BTSD Levels I, II, Non-Completions	4	6	15
12	Vocational and Pre-Employment Completions	3	5	10
13	Vocational and Pre-Employment Non-Completions	9	14	31
	TOTAL	64	100	

[a]Social assistance clients divided by the total number of such clients responding by service type.

[b]Social assistance clients by service type divided by the number of clients responding by service type.

[c]Includes 1 VRT client.

Table 29 shows in some detail how the number of dependents and their ages affect the total requirements budget. It should be noted that the rates were increased by about 10 percent on November 1, 1969, as indicated on the same table. This accounts, in part, for a general increase in welfare costs. It should also be noted that Table 29 deals primarily with the regulatory type of allowances and excludes discretionary items which arise in particular family circumstances and may increase the budgetary requirements further.

Table 30 indicates a budgetary breakdown for 19 welfare recipients by service group. It may be noteworthy that significantly more of the non-completion manpower clients are welfare cases. The table also demonstrates that the essential items such as food (49%), clothing (14%), and rent (8%) allowances account for the greatest part of the budget. Almost all resources (earned income, old age assistance, veterans' pensions, workmen's compensation) are deducted from the requirements to arrive at the allowance paid. Only family allowances, twenty dollars deductible from resources, and justifiable expenses, such as transportation costs associated with employment, are not subtracted from the total requirements. For the 19 clients receiving regular welfare assistance, the average requirement per family unit was $247 (resources were $50 and allowance paid was $197).

Table 31 and 32 show how welfare costs changed from the base year to the exposure year for the 19 regular welfare recipients in the sample. The total increase was $22,655 - $12,741 = $9,914. Why was there such an increase in welfare costs to families who received a manpower service? Several relevant facts must be noted:

Table 29

Criteria for Determining Social Allowances

	Before Nov. 1/69	On Nov. 1/69
I. Food:		
Over 19 years of age	26.00	28.60
15 - 19 years of age	30.00	33.00
12 - 14 years of age	27.00	29.70
7 - 11 years of age	22.00	24.20
4 - 6 years of age	18.00	1.80
0 - 3 years of age	16.00	17.60
Family Size One - Three Persons		
In One Unit Household Add	5.00	5.50
In Two Unit Household Add	3.00	3.30
In Three Unit Household Add	1.00	1.10
Family Size Over Five		
Deduct per Person in Excess of Five	2.00	2.20
II. Clothing:		
0 - 6 years of age	4.00	6.00
7 - 11 years of age	5.00	7.50
12 - 14 years of age	6.00	7.50
15 - 19 years of age	6.00	9.00
Over 19 years of age	5.00	7.50
III. Household + Personal Allowance		
Single Adult	10.00	
Two or More Adults	15.00	
IV. Rent:		
Single Person	25.00	
Two or More Adults	40.00	
Greater than Two	55.00	
V. Repairs (Maximum Annual Allowance)		125.00
VI. Supplies		3.00
Each Legal Dependent		1.00
VII. Personal Needs		12.00

Table 30

Budgetary Requirements of Regular[a] Clients Receiving Social Allowances

	No. of clients	Board and Room	Rent	Mortgage	Taxes	Insurance	Utilities	Fuel	Food	Clothing	Personal Needs	Household Supplies	Homemakers	Health Needs	Total Requirements	Available Resources	Req. Res.
		(dollars per month)															
1. Training in Industry	0																
2. Exploratory &Mobility	0																
3. Farm Management	0																
4. Manpower Corps (C)	1				4.87	1.83	9.00	13.50	34.10	11.60	17.21			27.50	119.61	111.00	Canc.
5. Manpower Corps (N.C.)	1								82.50	22.50	24.00	5.00			134.00	0	134.00
6. Empl. Referrals (C)	0																
7. Empl. Referrals (N.C.)	0																
8. BTSD III & IV (C)	2		120.00		3.76		19.00	13.33	291.10	85.50	36.00	16.00	150.00		734.69	0	734.69
9. BTSD III & IV (N.C.)	5	44.29	2.00		10.16		28.00	46.66	591.50	180.00	96.00	33.00	75.00		1106.61	416.00	690.61
10. BTSD I & II (C.)	2					1.00	31.50	25.00	342.40	94.50	36.00	16.00			546.40	120.85	425.55
11. BTSD I & II (N.C.)	2		70.00		9.41	1.83	24.00	38.50	251.10	69.00	36.00	13.00			512.84	293.50	219.34
12. Voc. & Pre-Emp (C)	1	52.50								7.50	12.00	3.00			75.00	0	75.00
13. Voc. & Pre-Emp (N.C.)	5		165.00	131.67	26.39	2.56	29.50	60.83	701.20	206.65	96.00	39.00			1458.80	0	1458.80
TOTAL	19	$96.79	357.00	131.67	54.59	7.22	141.00	197.82	2293.90	677.25	353.21	125.00	225.00	27.50	4687.95	941.35	3737.99
Av. Requirements per Family unit		$ 5.09	18.79	6.93	2.87	.38	7.42	10.41	120.73	35.64	18.59	6.58	11.84	1.45	246.73	49.54	196.74
% of Total Requirements			2%	8%	3%	1%	0%	3%	4%	49%	14%	8%	3%	5%	0%	100%		

[a] Those receiving regular monthly payments.

Table 31

Social Allowance by Service Group Prior to, During, and After, Service

Type of Manpower Service	Type of Social Assistance					Total No. of Clients	Amount Paid In Base Period	Amount Paid In Service Period	Amount Paid In Exposure Period
	MA	SAU	UTR	SDC	ISA				
1. Training in Industry	0	0	0	0	0	0			
2. Exploratory & Mobility	0	0	0	0	0	0			
3. Farm Management Course	0	0	0	0	0	0			
4. Manpower Corps Complete	1	0	0	0	0	1	1558	102	1288
5. Manpower Corps Non-Complete	0	0	1	0	0	1	0	0	0
6. Employment Referrals Complete	0	0	0	0	0	0			
7. Employment Referrals Non-Complete	0	0	0	0	0	0			
8. BTSD III & IV Complete	1	1	0	0	0	2	1530	483	2134
9. BTSD III & IV Non-Complete	1	0	2	1	1	5	4082	114	5669
10. BTSD I & II Complete	1	0	1	0	0	2	854	0	4418
11. BTSD I & II Non-Complete	2	0	0	0	0	2	0	0	0
12. Vocational & Pre-Employment Complete	0	0	0	0	1	1	0	0	150
13. Vocational & Pre-Employment Non-Complete	4	0	1	0	0	5	4717	320	8996
Total	10	1	5	1	2	19	12,741	1019	22,655

Table 32

Social Assistance Payments by Service Type

Type of Welfare Program	No. of Recipients	Amount Paid In Base Period	Amount Paid In Service Period	Amount Paid In Exposure Period	Total
MA	10	7299	475	13,601	21,375
SAU	1	1530	483	1329	3342
UTR	5	3058	61	6371	9490
SDC	1	0	0	280	280
ISA	2	854	0	1074	1928
Total	19	12741	1019	22,655	36,415

1. As mentioned earlier, there was a 10% increase in welfare rates on November 1, 1969, which also corresponds approximately to the dates separating the study's base period from the exposure period. Fixed costs of living, (such as taxes, home repairs, rent, utilities, fuel, etc.), which are included in the recipients' budgets, have also likely increased during the survey period.

2. New welfare programs (e.g., Unorganized Territory Relief) were introduced which increase the opportunity to become enrolled. Some recipients formerly on "vouchers as required" were enrolled into a regular program.

3. The persistence of high employment in the Interlake. Having attended a course, many clients, through communication with fellow students, instructors, and civil servants, have likely increased their knowledge of the welfare system as well as their self-confidence to take the initiative to apply if necessary. This may be the most significant single factor related to the increased cost because it was further found on the detailed work sheet for Table 31 that of the 19 regular welfare recipients, only 8 of them received assistance in the base year, and 15 of the 19 received assistance in the exposure year. This is not to say that the serviced clients are worse off in the exposure year, but they may be better equipped to deal with their problem in temporary periods of unemployment.

Table 33 indicates the total number of families in which a significant family problem was recorded. The problem may or may not have been the client himself. The problem may have been the parent(s), brother, sister, son or daughter of the client receiving the service.

Table 33

Family Problems or Disorder by Service Category[a]

Manpower Service	No. of Cases Indicating Family Problem	Problems Cases Over the Number of Clients Responding by Service Type (%)
1. Training in Industry	0	0
2. Exploratory and Mobility	0	0
3. Farm Management Course	1	3
4. Manpower Corps Complete	6	21
5. Manpower Corps Non-Complete	3	12
6. Employment Referral Complete	1	3
7. Employment Referral Non-Complete	1	4
8. BTSD III & IV Complete	2	6
9. BTSD III & IV Non-Complete	3	8
10. BTSD I & II Complete	3	9
11. BTSD I & II Non-Complete	3	11
12. Voc. & Pre-Employment Complete	0	0
13. Voc. & Pre-Employment Non-Complete	2	7
Total Family Problems in Sample	25	

[a]The family problems listed in Table 26 do not include criminal cases such as juvenile delinquency.

The problems recorded ranged in severity, but were all sufficiently significant and relevant to be mentioned by a social worker in his report. Examples of family problems were general irresponsibility, desertion, excessive consumption of alcohol, unwed mothers, and juvenile delinquency (requiring probation and parole service).

The payments to 12 clients receiving assistance under the Indian Affairs mobility program are listed in Table 34. It would appear that this program approximates the function of the Provincial Department of Health and Social Development rather than the Canada Manpower mobility function, except that the payments are made to individuals in difficulty after a move.

Table 34

Type of Assistance Received by Department of Indian Affairs Mobility Clients

Type of Allowance Received	Transportation	Accommodation	Subsistence	Clothing	Household Equip.	Personal Allowance	Housing	Tools
No. Clients Receiving This Type of Assistance	2	9	5	8	2	7	0	1
Total Amount of Assistance Received by These Clients ($)	$15	$857	$420	$375	$670	$160	$0	$175
Amount of Assistance by Type as % of Total	1%	32%	16%	14%	25%	6%	0	6%
Total Assistance Received	$2672							
(by) No. of Clients	12							
Assistance per Client	$ 223							

1. Information obtained from "Confidential Relocation and Employment Information Records", Department of Indian Affairs and Northern Development.

From the above table it is evident that the assistance given to the "mobility" clients was of a general 'welfare' nature rather than mobility as the title on the forms would suggest. Only 2 of the twelve clients received a transportation allowance (5 and 10 dollars, respectively) and only 2 clients received household equipment which might be associated with relocation. Most of these clients, rather, were given allowances for temporary accommodation, clothing and a personal allowance.

The circumstances of payment were found to be associated with: (1) an interim period of unemployment following training, (2) an interim period of unemployment between two jobs, and (3) temporary general assistance after the client has found a job but before he has received his or her first pay cheque.

The assistance seems to be similar in types, amounts, and circumstances to that received by the Provincial Health and Social Development VRT clients.

APPENDIX F

Mobility (Exploratory and Relocation)

Work sheets for 53 recipients of mobility aid, including relocation and exploratory, were reviewed for the period 1967 to 1970. Attempts to locate and interview mobility clients were unsuccessful. Most of the data on the period after receiving aid, such as the number of weeks employed or unemployed, was not available. The rest of the questions were completed for most of the recipients. However, it is suspected that the distinction between a person who is unemployed and a person who is not in the labour force was not made accurately in all cases. A number were reported as unemployed for most of the year preceding mobility aid.

Differences in per capita income and unemployment levels as indicators of regional disparities were considered. Mobility programs can raise per capita incomes and lower unemployment rates by encouraging the unemployed to move to other regions where there are jobs, and by encouraging the underemployed to move to other regions where there are better jobs paying higher incomes. The movement can be within the region itself or it can be complete out-migration from the region.

In examining the employment history of the recipients for both exploratory and relocation assistance in the year previous to service, records were complete for 50 clients. The data for the group is as follows:

	Average per Person
Weeks Not in Labour Force	11.6
Weeks Employed	27.3
Weeks Unemployed	13.1

A number of recipients held more than one job in that year. All 50 found jobs after mobility although one is reported to have quit. How permanent the second period's jobs were is unknown.

With regard to migration into or out of the Interlake Region, out-migration almost equalled in-migration. Those household heads moving out took 66 dependents with them, while those moving in brought 40 dependents with them. To measure the change in incomes earned, weekly earnings were examined. The average weekly pay prior to mobility was $89.85 for out-migrants, and $101.88 for in-migrants. At first, the weekly pay for the after-mobility period appeared to be $87.38 for in-migrants. However, 12 or 25% of the sample were single girls who were not employed or did only summer jobs in the first period, and who were employed at a low wage ($55) as nurses' aides, in the second period. Nine were in the in-migrant category. Suspecting that these nine were biasing the results, they were excluded and the second period's weekly pay was recalculated. The new average weekly pay was $103.77 for in-migrants. Breaking up the other 37, (excluding the twelve single girls), into those who were working in the Interlake in the first period, and those who were working in the Interlake in the second period, the weekly pay was computed for the two groups. The average weekly pay prior to mobility in the Interlake Region was $79.29. The second period's average weekly pay in the Interlake Region was $101.69. Assuming that the weeks of employment for those working in the Interlake are not less in the second period, regional income will have increased significantly.

The major destination of the out-migrants was Winnipeg (10) and the mining communities in Northern Manitoba (6). Two went to the

construction site at Gillam, while the remaining five left the province. The major destination of the in-migrants was Selkirk (20). Over half of the in-migrants came from small Manitoba communities.

The summary data (Table 35) gives information on average years of schooling, education, average number of dependents, and the number changing occupations. Total moving costs paid by Canada Manpower amounted to $20,000.

Table 35

Summary Information on Relocation Service

Out-Migration (Interlake)	23	(66 Dependents)
In -Migration (Interlake)	25	(43 Dependents)
Migration in Interlake	5	
Total	53	

Characteristics of Migrants	Out Migrants	In-Migrants
Number[a]	23 (66 Dependents)	25 (43 Dependents)
Average Age[b]	29.2	29.7
Male	22	14
Female	1	11
Marital Status[c]		
Single	5	12
Married	17	12
Separated	1	0
Education[d] (Av. Yrs. School)	9.5	10.4
Av. No. of Dependents	2.9	1.6
Employment History (Before Service)		
(1) Not in Labour Force (Wks)[e]	13.1	8.2
(2) Employed (Weeks)[e]	28.1	22.9
(3) Unemployed (Weeks)[e]	6.2	16.8
Total	47.4	47.9

After Service, All Assumed Employed.

(4) DOT Description		Before[f]	After	Before[f]	After
Managerial	000-100	0	0	3	3
Professional, Tech.	101-200	2	1	1	1
Clerical	201-300	1	1	2	0
Sales	301-400	4	5	4	12
Serv. & Recr.	401-500	1	0	1	1
Transp. & Commun.	501-600	1	2	0	0
Farmers, Loggers, Miners	601-700	1	1	2	1
Craftsmen, Prod. Process Workers	701-800	0	1	1	1
Mechanists, Plumbers, etc.	801-900	8	8[g]	1	3
Labourers, Other Prod. Process Work	901	3	4	3	3

Table 35 (continued)

DOT Description	Before[f]	After	Before[f]	After
Unemployed	2	0	3	0
Training or School	0	0	4	0
Number Changing Jobs[h]	10		5	
Weekly Pay (Average)	89.85	105.39	101.88	87.38
Annual Pay	3,211.61			3,583.18
Moving Cost to Department of Manpower and Immigration				
Exploratory Grants	204.50			76.40
Medical Examinations	25.00			6.00
Travel Costs	868.65			966.60
Re-Establishment Allowance	6,952.70			5,674.85
Homeowners Allowance	1,000.00			1,000.00
Moving Allowance	2,351.48			1,109.48
	11,402.33			8,833.33

Out-Migration--Where They Went

Within Manitoba		Other Provinces	
Winnipeg	10	Edmonton, Alberta	1
Gillam	2	Lanigan and Prince Albert, Saskatchewan	2
Thompson	3	Terrace Bay, Ontario	1
The Pas	2	Hay River, N.W.T.	1
Flin Flon	1		

[a]Excluding 5 non-migrants and 1 commuter who received exploratory, not relocation, assistance.

[b]1 unknown.

[c]1 unknown.

[d]2 unknown.

[e]As reported, but suspect some information may not reflect DBS definitions. 3 unknown. The figures are the average weeks per client.

[f]More than one job held in this period but recorded once according to job with longer period.

[g]One did not stay at his job.

[h]The number changi g jobs includes those who change jobs between two different groups as defined.

APPENDIX C

Estimation of Benefits and Benefit-Cost Ratio

Table 36

Calculation of Total Benefits per Client for Non-Agricultural Training

Service	Net Employment Benefit				Net Income Benefit			
	$69E^S$ (1)	$(69E^N/68E^N)$ (2)	$68E^S$ (3)	BE^a (4) = [(1)/(2)]-(3)	$69Y^S$ (5)	$69Y^N/68Y^N$ (6)	$68Y^S$ (7)	BY^b (8)= [(5)/(6)]-(7)
Completion		(40.7/40.9)=				(94.5/84.9)=		
Training in Industry	44.9	0.995	38.4	45.1-38.4= 6.7	122.8	1.113	95.7	110.3-95.7= 14.6
Manpower Corps	24.3	0.995	27.2	24.4-27.2= -2.8	74.8	1.113	69.4	67.2-69.4= - 2.2
Employ. Referral	33.8	0.995	25.5	34.0-25.5= 8.5	103.2	1.113	70.9	92.7-70.9= 21.8
BTSD III & IV	23.1	0.995	25.6	23.2-25.6= -2.4	72.4	1.113	65.6	65.0-65.6= - 0.6
BTSD I & II	33.0	0.995	33.2	33.2-33.2= 0.0	83.9	1.113	86.5	75.4-86.5= -11.1
Voc. & Special	33.0	0.995	36.2	33.2-36.2= -3.0	110.5	1.113	77.3	99.3-77.3= 22.0
Non-Completion								
Manpower Corps	26.2	0.995	22.0	26.3-22.0= 4.3	80.8	1.113	69.8	72.6-69.8= 2.8
Employ. Referral	30.3	0.995	19.5	30.5-19.5= 1.1	71.4	1.113	60.1	64.2-60.1= 4.1
BTSD III & IV	19.6	0.995	18.6	19.7-18.6= 1.1	57.5	1.113	47.3	51.7-47.3= 4.4
BTSD I & II	27.3	0.995	26.1	27.4-26.1= 1.3	80.7	1.113	58.7	72.5-58.7= 13.8
Voc. & Special	21.7	0.995	22.4	21.8-22.4= -0.6	70.6	1.113	58.5	63.4-58.5= 4.9

Table 36 (Continued)

Service	Benefits due to Change in Employment Weeks			Benefits due to Change in Weekly Income			Total Benefits Per Client
	B^E (9)=(4)	$69Y^S$ (10)=(5)/(6)[c]	B^E (11)=(9)(10)	$68E^S$ (12)=(3)	BY (13)=(8)	B^Y (14)=(12)(13)	B^T (15)=(11)+(14)
Completion							
Training in Industry	6.7	110.3	739.0	38.4	14.6	560.6	1,299.6
Manpower Corps	-2.8	67.2	-188.2	27.2	- 2.2	- 29.4	- 217.6
Employ. Referral	8.5	92.7	788.0	25.5	21.8	47.3	835.3
BTSD III & IV	-2.4	65.0	-156.0	25.6	- 0.6	- 15.4	- 171.4
BTSD I & II	0.0	75.4	0.0	33.2	-11.1	-368.5	- 368.5
Voc. & Special	-3.0	99.3	-297.9	36.2	22.0	796.4	498.5
Non-Completion							
Manpower Corps	4.3	72.6	312.2	22.0	2.8	61.6	373.8
Employ. Referral	1.1	64.2	70.6	19.5	4.1	80.0	150.6
BTSD III & IV	1.1	51.7	56.9	18.6	4.4	81.8	138.7
BTSD I & II	1.3	72.5	94.3	26.1	13.8	360.2	454.5
Voc. & Special	-0.6	63.4	- 38.0	22.4	4.9	109.8	71.8

[a] $B^E=[69E^S/(69E^N/68E^N)]-68E^S$ for the j^{th} service type where $69E^S$, $68E^S$, $69E^N$, $68E^N$ are the employment in weeks for the base exposure period for the service and norm groups, respectively. Income includes wage and self-employed non-farm income, excluding piece work, part-time jobs and unpaid family labour. Employment is estimated by adding the wage weeks and self-employed weeks, except farming and piece work.

[b] $B^Y=[69Y^S/(69Y^N/68Y^N)]-68Y^S$ where the terms are analogous to those for employment defined above.

[c] $69Y^S=69Y^S/(69Y^N/68Y^N)$ and other terms are as previously defined.

Table 37

Benefit-Cost Ratios for Non-Agricultural Training

Service Type	Client Average Age (1)	Expected Working Life[a] (2)	Present Worth Factor at 6%[b] (3)	Average Benefit Per Client ($)[c] (4)	No. of Clients in Sample (5)	Total Sample Benefits ($)[d] (6)=(3)(4)(5)	Total Sample Costs ($)[e] (7)	Benefit/ Cost Ratio (8)=(6)/(7)
Training in Industry	34	31	13.93	1,299.6	23	416,400	10,200	40.82
Manpower Corps Comp.	28	37	14.74	- 217.6	27	- 86,600	70,400	- 1.23
BTSD III & IV Comp.	29	36	14.62	- 171.4	33	- 82,700	38,300	- 2.16
BTSD I & II Comp.	28	37	14.74	- 368.5	33	-179,200	45,400	- 3.95
Voc. & Special Comp.	27	38	14.85	498.5	29	214,700	58,200	3.69
Manpower Corps Non-Comp.	34	31	13.93	373.8	24	125,000	20,700	6.04
BTSD III & IV Non-Comp.	33	32	14.08	138.7	36	70,300	31,300	2.25
BTSD I & II Non-Comp.	31	34	14.37	454.5	27	176,300	22,900	7.70
Voc. & Special Non-Comp.	32	33	14.23	71.8	27	27,600	48,900	0.56

[a] Frank T. Denton and Sylvia Ostry, Working-Life Tables for Canadian Males, 1961 Census Monograph, Dominion Bureau of Statistics (Ottawa: Queen's Printer, 1969), Table 5, p. 36.

[b] $\frac{(1+r)^n - 1}{r\,(1+r)^n}$ where r = .06 and r = expected working life, Column 2.

[c] Column 7, Table 32.

[d] Rounded to the nearest $1,000.

[e] Appendix D, rounded to the nearest $1,000.

APPENDIX H

Regression Analysis

Determinants of Manpower Service Benefits

In order to evaluate and allocate benefits from the training, it is necessary to find out the changes in income and in employment associated with the manpower service. The estimation of benefits based on the survey results are made by individual service type (sample size and interview response are discussed on p. 8, Table 4). The benefits received from the training are divided into two effects, i.e., income benefits and employment benefits. For example, the clients might receive more weekly income and work the same weeks after taking the training course (i.e., income benefit), or they might work more weeks during a year and receive the same weekly earnings (employment benefit), or both. Regression analysis is employed to test hypotheses concerning the factors associated with the training benefits by service. The dependent variables used in this study are the weekly earnings and employment weeks.

The weekly earnings include wage earnings and self-employed earnings, except farming, piece work and unpaid family labour. Farming, piece work, and unpaid family work are excluded based on the assumption that such income changes between the base period and the exposure period are not a primary objective of the training service. The purpose of manpower training is to improve the skills of clients and then to increase non-farm employment opportunities, except for the farm management program which is directed to improving farm income.

The regression analysis used in this study used dummy variables specifying the characteristics of clients and continuous variables for the income and employment factors. The use of dummy variables provides an adjustment for nonlinear relationships.[27] The variables used are outlined in Table 38.

Hypotheses concerning the net effect of independent variables are:

1. Age: The age factor is generally considered as one of the important characteristics of clients. It is hypothesized that the clients under age 21 or over age 50 will have lower benefits because of a disadvantage in the labour market due to lack of experience.

2. Race: It is hypothesized that the Indian or Metis clients have lower income and employment benefits due to discrimination.

3. Education: It is hypothesized that the more education a person has, the higher his earning level will be.

4. Sex: It is hypothesized that female clients will receive lower earnings than male clients due to discrimination.

5. Location Preference: It is hypothesized that if a person is geographically mobile, a greater opportunity for employment exists and benefits should be greater than benefits for a person expressing a desire to remain in the same location.

6. Physical Condition: A physical or health disability would restrict a person's work capabilities, and frequently subjects the person

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[27] Daniel B. Suits, "The Use of Dummy Variables in Regression Equations," Journal of American Statistical Association 52:548-551, December, 1957.

Table 38

Variables Used in Regression

Description	Symbol
Non-Agriculture	
Independent Variables	
Age Under 21	0
21 - 30 years	X_1
31 - 40 years	X_2
41 - 50 years	X_3
51 years and over	X_4
Indian or Metis (yes = 1)	X_5
Education Grade 0-4	0
Education Grade 5-7	X_6
Education Grade 8-10	X_7
Education Grade 10 and Over	X_8
Sex (Female = 1)	X_9
Disability (yes = 1)	X_{10}
Maintain Household (yes = 1)	X_{11}
Present Location Preference (yes = 1)	X_{12}
Weeks Employed in the Base Period	X_{13}
Weeks Unemployed Prior to Service	X_{14}
Weeks Unemployed in the Base Period	X_{15}
Weeks Not in Labour Force in the Base Period	X_{16}
Weekly Earning in the Base Period ($)	X_{17}
Hours Worked per Week in Exposure Period	X_{18}
Farm Job (yes = 1)	X_{19}
Dependent Variables	
Weekly Earnings in Exposure Period ($)	X_{20}
Employment Weeks in Exposure Period	X_{21}

Table 38 (continued)

Description	Symbol
Agriculture	
Independent Variables	
Age of Operator (years)	Y_1
Education Level (Grade)	Y_2
Number of Dependents	Y_3
Non-Farm Earning Job (yes = 1)	Y_4
Percent Livestock Sales	Y_5
Income in 1968 ($)	Y_6
Value of Assets in 1968 ($)	Y_7
Number of Cultivated Acres in 1968 ($)	Y_8
Dependent Variable	
Weekly Earnings in the Exposure Period ($)	Y_9

to job discrimination; thus, employment opportunities are narrowed. It is hypothesized that the clients having a disability would have low benefits.

7. Household Maintenance: It is hypothesized that the persons having the responsibility of maintaining households would have a higher income compared to those without household responsibility. This is based on the assumption that family responsibility provides an incentive to gain earnings increases through greater effort and longer hours worked per week.

8. Prior Labour Force Experience: It is hypothesized that persons having experience in the base period are likely to have more job opportunities and higher wage payments as compared to clients without

experience. The weeks employed in the base period, unemployment weeks prior to the service, or unemployment weeks in the base period are the variables used to reflect the client's experience before the service.

9. Number of Weeks Out of the Labour Force in the Base Period: Persons out of the labour force include those who spend weeks in school or in training courses, those who are aged or permanently disabled who do not work, and those who remain at home but are not classified as unpaid family workers. Persons in high school before taking a manpower service would have less opportunities because of their youth and non-experience.

10. Weekly Earnings in the Base Period: It is hypothesized that the weekly earnings in the exposure period are dependent upon the weekly earnings in the base period; the higher the base period earnings, the higher the benefit.

11. Hours Worked per Week in the Exposure Period: In some instances, the number of hours worked per week is substantially different between the base period and the exposure period. The more hours worked per week, the higher the weekly earnings, if the hourly wage is the same for all hours worked. The use of the number of hours worked per week adjusts for this effect.

12. Farm Jobs: Persons attempting to adjust from a farm or a combination farm--non-farm job are hypothesized to have lower benefits relative to persons who have had only non-farm wage experience. The reverse is hypothesized regarding benefits of the farm management traininng. If the person is a full-time farmer taking a non-agriculture training course, the weekly earnings are shown as zero. In some service types,

all clients are in non-agriculture jobs, and this variable is then excluded.

Non-Agriculture Manpower Services

The regression equations for weekly earnings and employment weeks are summarized in Table 39 for 11 service types. The dummy variable procedure partitions the independent variables into a set of mutually exclusive categories, assigning the value of one to the class which the client belongs to and zero to the other categories. One element of each set of dummy variables is omitted to avoid the over-determination where a constant term is present in the equation.[28] The other partial regression coefficients within a set of dummy variables indicate the effect of that variable on the dependent variable as compared to clients in the class omitted. For example, the clients 31-40 years of age appear to receive an average of $38.39 more in weekly earnings after taking the training in industry course than those under 21 years of age taking the same course (Table 39).

There is considerable variation among the service types with respect to the effect of age. For some service types, including BTSD and vocational and special training completions the highest weekly earnings are associated with the group 31-40 years old. In contrast, the highest weekly earnings in the training in industry group are associated with the clients 41-50 years of age. For the employment referral non-completion

[28] In using dummy variables to partition the factors into sets of mutually exclusive categories, two ways of avoiding the over-determination could be used, i.e., constant term or one element of the set of dummy variables is omitted in the equation. Suits, ibid., pp. 549-551.

Table 39

Summary of Regression Equations of Weekly Earnings, and Employment Weeks by Service Type, Interlake 1970[a]

Service Type	Dependent Variable	Constant	Age 21-30 X_1	Age 31-40 X_2	Age 41-50 X_3	Age Over 50 X_4	Race (Indian = 1) X_5	Education Grade 5 - 7 X_6	Education Grade 8 - 10 X_7	Education Grade 10 + X_8	Sex (Female = 1) X_9	Disability (Yes = 1) X_{10}
Training in Industry	Weekly Earning	211.23 (4.74)***		38.39 (2.86)**	82.88 (2.86)**	47.78 (2.34)**	-145.63 (-5.05)***	22.07 (-0.58)	-207.09 (-4.77)***	-226.75 (-4.07)***	-152.40 (-4.93)***	
	Employ. Weeks	49.57 (2.90)**		-3.02 -0.40	-9.75 (-1.04	-13.48 (-1.64)	-20.42 (-1.83)*	-4.91 (-0.31)	-13.32 -0.82	-24.15 (-1.18)	13.63 (-1.09)	
Manpower Corps Completions	Weekly Earning	22.66 (0.20)	18.74 (0.33)	6.28 (0.11)	-14.28 (-0.21)	-71.11 (-0.86)	53.57 (1.37)	4.72 (0.12)	1.73 (0.05)	60.92 (0.72)		-9.21 (-0.32)
	Employ. Weeks	18.96 (0.43)	-23.57 (-1.09)	-24.17 (-1.16)	-28.48 (-1.34)	-45.77 (-1.74)	-0.91 (-0.06)	3.44 (0.24)	5.18 (0.40)	-28.34 (-0.49)		-10.94 (-0.99)
Manpower Corps Non-Completions	Weekly Earning	-34.75 (-0.43)	-66.47 (-0.65)	5.62 (0.06)	-51.21 (-0.62)	-99.10 (-1.35)	2.17 (0.08)	44.35 (2.08)*	24.90 (0.87)	-17.57 (-0.44)	-73.72 (-1.48)	
	Employ. Weeks	-37.42 (-1.19)	47.68 (1.69)	69.95 (2.22)*	46.80 (1.56)	49.78 (1.69)	-29.32 (-2.23)*	18.39 (1.97)*	5.67 (0.44)	13.46 (0.77)	-3.48 (-0.19	
Employment Referral Completions	Weekly Earning	7.54 (0.00)[b]	16.36 (0.87)	98.85 (3.93)***	28.98 (0.76)	35.97 (1.20)	80.42 (2.11)**	87.75 (0.00)[b]	55.87 (0.00)[b]	46.15 (0.00)[b]	-43.99 (-1.44)	37.10 (1.38)
	Employ. Weeks	-29.84 (-0.00)[b]	0.21 (-0.02)	11.03 (0.69)	14.09 (0.73	5.81 (0.32)	-45.81 (-1.93)*	39.32 (0.00)[b]	50.96 (0.00)[b]	44.29 (0.00)[b]	6.67 (0.33)	-12.96 (-0.73)
Employment Referral Non-Completions	Weekly Earning	-6.58 (-0.09)	-52.07 (-1.22)	-49.45 (-1.08)	-4.20 (-0.09)	-115.62 (-1.93)*	-0.25 (-0.01)	-23.12 (-0.44)	22.92 (0.43)	9.70 (0.19)	-4.64 (-0.11)	24.48 (0.50)
	Employ. Weeks	-57.71 (-2.38)**	46.93 (2.44)**	37.85 (1.92)*	20.83 (1.18)	62.22 (2.77)**	16.75 (1.30)	1.49 (0.08)	3.55 (0.22)	16.53 (1.01)	-2.68 (-0.34)	-31.50 (-2.65)**
BTSI III & IV Completions	Weekly Earning	-169.55 (-0.00)[b]	18.52 (0.88)	25.39 (1.07)	-36.00 (-1.37)	-44.43 (-1.11)	-29.80 (-1.79)*	246.07 (0.00)[b]	226.09 (0.00)[b]		-16.32 (-0.51)	-7.86 (-0.44)
	Employ. Weeks	-44.02 (-0.00)[b]	9.98 (1.37)	-4.35 (-0.56)	3.84 (0.43)	9.26 (0.67)	-4.60 (-0.97)	44.97 (0.00)[b]	47.09 (0.00)[b]		-1.99 (-0.31)	0.41 (0.07)
BTSI III & IV Non-Completions	Weekly Earning	-5.87 (-0.13)	-4.06 (-0.16)	16.36 (0.60)	49.69 (1.56)	5.10 (0 12)	25.54 (1.06)	20.35 (0.79)	31.46 (1.04)		-25.94 (-0.77)	-25.37 (-1.18)
	Employ. Weeks	-6.82 (-0.48)	-1.22 (-0.15)	-1.78 (-0.15)	9.69 (0.73)	5.03 (0.38)	13.48 (1.86)*	1.40 (0.18)	2.80 (0.31)		-2.06 (-0.22)	-4.09 (-0.59)
BTSI I & II Completions	Weekly Earning	58.52 (1.54)	72.38 (3.43)***	74.00 (3.02)***	46.85 (1.68)	7.24 (0.18)	23.78 (1.42)		-26.01 (-2.06)*		-51.23 (-2.10)**	-9.09 (-0.38)
	Employ. Weeks	15.23 (0.58)	20.65 (1.57)	10.62 (0.76)	16.02 (0.94)	-0.04 (-0.00)[b]	-8.13 (-0.86)		-7.80 (-0.90)		3.27 (0.15)	-8.54 (-0.63)
BTSI I & II Non-Completions	Weekly Earning	-50.92 (-0.74)	16.20 (0.44)	35.86 (1.00)	34.08 (0.91)	50.92 (0.61)	-33.55 (-0.96)		-26.52 (-0.88)		37.14 (1.01)	-9.79 (-0.24)
	Employ. Weeks	4.14 (0.19)	-14.39 (-1.31)	-12.26 (-1.05)	-26.06 (-2.19)**	-12.74 (-0.47)	-13.71 (-1.52)		1.02 (0.12)		-0.01 (0.00)[b]	27.84 (2.01)
Vocational and Special Completions	Weekly Earning	-127.71 (-1.42)	126.59 (2.36)**	150.06 (2.77)**	-3.23 (-0.05)	77.67 (1.01)	64.69 (1.52)	13.65 (0.24)	46.47 (0.92)	-21.35 (-0.41)	108.59 (2.95)**	-126.26 (-2.94)**
	Employ. Weeks	-36.14 (-1.54)	4.45 (0.29)	10.70 (0.68)	6.74 (0.40)	-16.45 (-0.78)	-6.09 (-0.55)	-0.42 (-0.03)	7.74 (0.53)	-10.73 (-0.71)	0.15 (0.02)	-28.02 (-2.16)**
Vocational and Special Non-Completions	Weekly Earning	-82.67 (-0.88)	6.41 (0.12)	68.49 (0.96)	49.90 (0.67)	14.45 (0.20)	-5.93 (-0.17)	-57.50 (-1.57)			-78.58 (-1.47)	60.73 (1.36)
	Employ. Weeks	-10.20 (-0.85)	1.05 (0.16)	-6.93 (-0.74)	2.09 (0.23)	9.42 (0.98)	1.60 (0.37)	-8.72 (-1.73)			5.75 (0.87)	-0.24 (-0.04)
Non-Agriculture Work	Weekly Earning	2.00 (0.03)	36.64 (0.66)	4.09 (0.08)	16.39 (0.31)	0.54 (0.01)	-0.30 (0.01)	4.00 (0 14)	21.62 (0.74)	12.79 (0.35)		-19.60 (-0.66)
	Employ. Weeks	-9.86 (-0.53)	6.60 (0.45)	0.76 (0.05)	-4.41 (-0.31)	-6.54 (-0.44)	-8.81 (-0.59)	15.56 (1.04)	5.63 (0.73)	1.10 (0.12)		1.67 (0.22)

Table 39 (continued)

Service Type	Dependent Variable	Maintain Household X_{11}	Present Location Preference X_{12}	Employ. Weeks Base X_{13}	Weeks Unemployed Prior to Service X_{14}	Total Weeks Unemployed Base X_{15}	Weeks Not In Labor Force Base X_{16}	Weekly Earning Base X_{17}	Hours Worked Per Week Exposure X_{18}	Farm or Farm and Non-Farm Job X_{19}	R^2	Sample No.
Training in Industry	Weekly Earning		-67.58 (-3.12)**		5.28 (6.15)***		7.29 (5.12)***	1.27 (7.30)***			0.91	23
	Employ. Weeks		-1.32 (-0.16)	0.48 (2.67)**	0.71 (2.06)*		0.71 (1.36)				0.73	23
Manpower Corps Completions	Weekly Earning	-62.89 (-0.74)	1.54 (0.06)	1.36 (1.45)				0.37 (1.14)			0.57	27
	Employ. Weeks	19.55 (0.60)	-0.02 (-0.002)	0.39 (1.23)			-0.20 (-0.16)				0.45	27
Manpower Corps Non-Completions	Weekly Earning	85.22 (1.63)	-23.09 (-1.38)		0.22 (0.38)			0.30 (1.01)	0.91 (1.58)		0.87	24
	Employ. Weeks	1.14 (0.06)	7.27 (0.91)	0.33 (1.10)			-0.34 (-0.80)		0.38 (1.55)		0.76	24
Employment Referral Completions	Weekly Earning	3.74 (0.09)	-16.31 (-0.87)		-0.03 (-0.03)	-0.43 (-0.53)		0.39 (2.13)**		-99.21 (-2.64)***	0.91	29
	Employ. Weeks	-8.36 -0.30	-7.84 -0.67	0.74 (2.69)**	-0.44 (-0.78)	0.98 (1.81)*				-25.50 (-1.05)	0.58	29
Employment Referral Non-Completions	Weekly Earning	19.89 (1.70)	55.32 (1.87)		-1.55 (-1.48)	2.58 (1.99)*		0.76 (1.26)			0.78	23
	Employ. Weeks	8.10 (0.78)	-27.62 (-2.24)*	1.55 (3.33)**	0.75 (1.99)*		1.35 (2.92)**				0.87	23
BTSD III & IV Completions	Weekly Earning	12.23 (0.56)	-3.45 (-0.24)				-0.82 (-1.08)	0.26 (1.35)		-36.01 (-1.66)	0.73	33
	Employ. Weeks	-2.19 (-0.30)	9.02 (1.90)*	0.72 (5.04)***						-0.19 (-0.03)	0.78	33
BTSD III & IV Non-Completions	Weekly Earning	30.45 (1.40)	-26.22 (-1.47)					0.24 (0.63)		-35.16 (-0.96)	0.65	36
	Employ. Weeks	1.87 (0.13)	-0.16 (-0.03)	0.64 (2.20)**			0.12 (0.41)			-0.93 (-0.08)	0.78	36
BTSD I & II Completions	Weekly Earning	-50.67 (-1.90)*	2.46 (0.20)	1.03 (2.74)**				0.01 (0.07)		(0.00)[b] (0.00)[b]	0.81	33
	Employ. Weeks	-6.51 (-0.30)	0.24 (0.04)	0.50 (2.34)**			-0.19 (-0.37)			(-0.00)[b] (-0.00)[b]	0.64	33
BTSD I & II Non-Completions	Weekly Earning	31.61 (0.64)	-10.95 (-0.44)			0.83 (0.89)		0.43 (1.66)	2.20 (3.92)***		0.76	27
	Employ. Weeks	-0.81 (-0.05)	6.17 (0.83)	0.58 (2.73)**					0.47 (2.99)**	8.61 (0.84)	0.74	27
Vocational and Special Completions	Weekly Earning	-52.56 (-0.85)	-61.29 (-3.06)***			-0.31 (-0.34)		1.53 (5.16)***		196.42 (6.56)***	0.88	29
	Employ. Weeks	49.07 (3.49)***	9.33 (1.65)	0.26 (1.32)			0.76 (2.13)*			-9.56 (-1.25)	0.80	29
Vocational and Special Non-Completions	Weekly Earning	-1.55 (-0.03)	46.55 (1.14)		1.50 (1.01)			-0.21 (-0.47)	3.42 (4.09)***		0.68	27
	Employ. Weeks	2.63 (0.30)	-6.13 (-1.11)	0.88 (7.75)***					0.35 (3.30)***	7.14 (0.65)	0.90	27
Non-Agriculture Norm	Weekly Earning	16.18 (0.28)	-8.70 (-0.49)					0.60 (2.24)**	0.36 (0.98)		0.59	43
	Employ. Weeks	10.00 (0.68)	4.53 (1.00)	0.99 (8.10)***							0.83	43

[a] Value in brackets is the t value of regression coefficient, * indicates it is statistically significant at the 90% level, while ** indicates it is statistically significant at the 95% level, and *** indicates significant at the 99% level. The variables are omitted in the equation where there are no observations or an intercorrelation with other variables greater than .7.

The variables X_1-X_{12} are dummy variables for which the regression coefficient represents the deviation from the intercept of omitted dummy variables class taken as a base.

[b] Less than 0.005.

group, the clients under 21 years receive the highest weekly earning among the group. For most service types, except the vocational and special training completion it appears that low weekly earnings are associated with the clients under 21 years of age or over 50 years of age. The results supports the hypothesis that the workers under 21 years or older than 50 years have a disadvantage in the labour market with respect to ear- earnings per week. However, the results do not support this hypothesis for weeks of employment.

Regarding the ethnic origin variable, equations for training in industry and BTSD III & IV Completion show that Indian or Metis clients have lower weekly earnings that non-Indian clients. For example, in the training in industry group, Indian or Metis clients have an average of $145.65 less in weekly earnings than non-Indian clients. In contrast, for employment referral completions and BTSD III & IV non-completions, higher average weekly earnings are associated with the Indian or Metis clients.

The education variable worked in an indeterminate direction. The increments of education level are not significantly associated with the successively higher average weekly earnings. The average weekly earnings of the clients with higher education levels are lower than clients with low levels of education. In the training in industry group, clients with at least a Grade 10 education received an average of $226.75 less in weekly earnings than those with education less than Grade 5. This unusual observation in the relationship between the weekly earning and education level might be due to the economic structure of the area. There are few opportunities requiring a higher education in the area. Consequently, benefits to high levels of formal education may be negligible.

From the partial regression coefficient for the sex variable, it is observed that female clients receive lower average weekly earnings than male clients for some service types. The BTSD I & II non-completion is an exception. The high weekly earnings of female clients in BTSD I & II non-completion group are attributable to the larger number of hours worked per week in vocational and special training groups. In fact, the lower average weekly earnings of females are attributable to the effect of lower pay rates per hour.

The regression coefficients of the variable specifying the presence of a disability generally confirm the hypothesis stated earlier. The clients with a disability have a disadvantage in obtaining higher weekly earnings.

For the household maintenace variable, the signs of the regression coefficients indicate that those with this characteristic have higher weekly earnings in 8 service groups, except the manpower corps completion, BTSD I & II completion, and vocational and special training completion groups. The clients with household maintenance in the vocational and special training completion group receive lower weekly earnings but work significantly more weeks than those not maintaining households.

The signs of the regression coefficients indicate that clients with present location preference receive lower average weekly earnings than those without location preference in 7 service groups, including training in industry, vocational and special completion, and BTSD, except BTSD level I & II completion. However, the clients with present location preference receive higher average weekly earnings than those without this preference for manpower corps completion and employment referral non-completion.

For the variable representing the prior labour force experience, it is indicated that there is a positive correlation between the employment weeks in the base period and the weeks employed in the exposure period for all service types. The employment weeks in the base period is highly correlated with the variable of unemployment weeks in the base period. Therefore, these two variables are not included in the same equation.

For some service groups, the variables of weeks not in the labour force, weeks unemployed, and weeks unemployed prior to service correlated with the weekly earnings and employment are positively correlated in the after service period. This finding is contrary to the hypothesis that prior unemployment and out of the labour force would be negatively correlated with the services period employment and earnings.

In employment referral completion, BTSD I & II non-completion, and vocational and special training non-completion, the hours worked per week in the exposure period are positively and significantly correlated with weekly earning in the exposure period. In other words, the higher weekly earnings are attributable to the more hours worked per week. For some service types, the correlation of the number of hours worked per week and the weekly earnings is large, so this factor is excluded.

The clients holding a farm job have generally lower weekly earnings in most of the service groups. This implies that it is difficult for farmers to adjust to non-farm jobs. It should be noted that the farm income is not included in the calculated average weekly earnings. Consequently, the more weeks the clients worked on the farm, the lower the weekly earnings will be.

Regression results summarized in Table 39 indicate that many of

the regression coefficients are not statistically significant. However, the R^2 are generally high relative to the results of other studies and the signs are consistent with the hypotheses in the majority of cases.[29] Also, the magnitude of the Beta coefficients (standardized regression coefficients) indicates that the base period earnings or employment variables are the most important factors determining benefits of manpower services.

Agriculture Manpower Services (Farm Management Training Course)

The results imply that for entering farm management trainees an increase in net farm income is associated with a large proportion of livestock sales. However the presence of a non-farm job had a negative impact on the 1969 level of net income. The increase in livestock prices from 1968 to 1969 may account for part of this effect. Another limitation on the generality of the results is the small sample of farm management clients and the sample of non-trainees taken as a norm group.

In order to determine factors important in explaining the average increase in net farm income, 1969 net farm income was regressed on a series of variables hypothesized to be determinants of farm management course benefits. The list of variables included age of operator, education level, number of dependents, non-farm earnings or not, percent livestock, 1968 income, 1968 value of assets, and 1968 number of cultivated acres. Only the presence of a non-farm job and the percent of livestock

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29 D.O. Sewell, Training the Poor: A Benefit-Cost Analysis of Manpower Programs in the U.S. Antipoverty Program, Research Series No. 12, Industrial Relation Centre, Queen's University (Kingston, Ont.: Hanson and Edgar, Ltd., 1971).

were statistically significant. The resulting equation is:

(12) $Y69 = 5478.46 + 63.80\ X_1 - 3530.01\ X_2$

$(2.89)^{***}\ (-1.86)^{*}$

$R^2 = 0.33$

where: *** statistically significant for a two-tailed 't' test at the 99 percent level;

* statistically significant at the 90 percent level for the two-tailed 't' test;

Y69 = 1969 net farm income;

X_1 = percent livestock sales in 1968; and

X_2 = if the farmer had a non-farm job in 1968 (yes = 1).

Adjustment of Benefit-Cost Ratio Based on Regression Analysis

Characteristics of individuals and earnings and employment vary substantially by service category (Table 40). The norm group is proportionately older than the service group. For example, 47 percent of the individuals in the norm sample are over 40 years of age, while only 26 percent of clients in the training in industry group are over 40 years of age. In the training in industry group, 22 percent of clients are Indian or Metis while 51 percent of individuals in the norm group are Indian or Metis. To account for those differences existing between the service group and norm group, the mean values of the characteristics of clients in the service categories are substituted into the regression equations of the norm group (Equations 13 and 14).[30] By this procedure,

[30] The equations used for estimating the income and employment in the exposure period include only variables for which the tests of regression coefficient are statistically significant.

Table 40

Mean Value of Characteristics of Individual in Service Group and Norm Group[a]

Service Type	Age Over 40 (X_3)	Maintain Household (X_4)	Indian or Metis	Employment Weeks in Base Period (X_5)	Weekly Earning in Base (X_1)	No. of Hours Worked Per Week in Exposure Period (X_2)
	(%)	(%)	(%)	(Wks.)	($)	(Hrs.)
Completion						
Training in industry	26	91	22	38.43	95.74	35.96
Manpower Corps	15	96	74	27.19	69.39	45.54
BTSD III & IV	15	88	61	25.55	65.59	32.65
BTSD I & II	12	91	9	33.21	86.46	38.93
Voc. & Special	10	97	17	36.24	77.31	46.25
Non-Completion						
Manpower Corps	38	92	79	22.00	69.76	43.65
BTSD III & IV	39	69	69	18.56	47.34	29.80
BTSD I & II	23	89	19	26.07	58.74	33.62
Voc. & Special	33	81	48	22.41	58.52	33.12
Norm Group	47	91	51	40.88	84.86	36.81

[a]Mean values of all variables are given in Table 12, p. 29.

the adjusted weekly earning and employment weeks in the exposure period are estimated for the service groups. The methodology for calculating the benefit-cost ratio is outlined in the text in the section on Model Specification.

The adjusted benefit-cost ratios (Table 41) are different from those presented in the previous appendix. The highest benefit-cost ratio is associated with the training in industry group for both cases, but the adjusted ratio has a larger value. The adjusted benefit-cost ratios are negative in the completion group except for training in industry. The benefit-cost ratio in vocational and special completion is positive (i.e., 3.69), while the adjusted one is -1.03. The weighted average benefit for the completion group is -0.46, compared to 2.81 without adjustment.

The difference is due to the negative net income and net employment effects for the service group which would exist if the relationship between the employment, income and characteristics of individuals in the norm group are assumed to apply to the service group. For example, the average employment weeks in the exposure period is 24.3 weeks in the manpower corps completion group compared to the estimated employment of 30.6 weeks, which is derived by assuming an employment-characteristics relationship the same as the norm group. This leads to a negative employment effect. In other words, the increase in employment after receiving service is not as large as that existing in the norm group. From the results shown in Table 40, it is observed that the increment in exposure year annual earning of most service completion groups, except training in industry, is not large enough to offset the increase in annual earnings of the norm group.

Table 41

Benefit-Cost Ratio for Non-Agricultural Training Adjusted for Differences in Characteristics Between Service and Norm Group

Service Type	Net Employment Benefit[a]					Net Income Benefit[b]				
	$69E^S$ (1)	$\hat{69E}^S$ (2)	BE (3)=(1)-(2)	$69Y^S$ (4)	B^E (5)=(3).(4)	$69Y^S$ (6)	$\hat{69Y}^S$ (7)	BY (8)=(6)-(7)	$68E^S$ (9)	B^Y (10)=(8).(9)
Completion										
Training in Industry	44.9	39.7	5.2	122.8	638.56	122.8	102.6	20.2	38.4	775.68
Manpower Corps	24.3	30.6	-6.3	74.8	-471.24	74.8	88.1	-13.3	27.2	-361.76
BTSD III & IV	23.1	28.2	-5.1	72.4	-369.24	72.4	76.5	- 4.1	25.6	-104.96
BTSD I & II	33.0	35.8	-2.8	83.9	-234.92	83.9	97.2	-13.3	33.2	-441.56
Voc. & Special	33.0	39.4	-6.4	110.5	-707.20	110.5	94.8	15.7	36.2	568.34
Total Completion										
Non-Completion										
Manpower Corps	26.2	23.9	2.3	80.8	185.84	80.8	87.1	- 6.3	22.0	-138.60
BTSD III & IV	19.6	18.2	1.4	57.5	80.5	57.5	60.2	- 2.7	18.6	- 50.22
BTSD I & II	27.3	28.3	-1.0	80.7	- 80.7	80.7	71.7	9.0	26.1	234.90
Voc. & Special	21.7	23.4	-1.7	70.6	-120.02	70.6	71.2	- 0.6	22.4	- 13.44
Total Non-Completion										

Table 41 (Continued)

Service Type	Total Benefit Per Client B^T (11)= (10)+(5)	Present[c] Worth Factor at 6% (12)	No. of Sample Client (13)	Total No. of Client (14)	Ratio of Total to Sample No. of Client (15)=(14)/(13)	Total Benefit (16)=(11).(12) (13).(15)	Total[d] Cost (17)	Benefit-Cost Ratio (18)=(16)/(17)
Completion								
Training in Industry	1414.2	13.93	23	113	4.91	2,224,696	50,082	44.42
Manpower Corps	-833.0	14.74	27	101	3.74	-1,239.874	263,296	-4.71
BTSD III & IV	-474.2	14.62	33	91	2.76	-631,441	105,708	-5.97
BTSD I & II	-676.5	14.74	33	49	1.48	-487,013	67,192	-7.25
Voc. & Special	-138.9	14.85	29	79	2.72	-162,702	158,304	-1.03
Total Completion			145	433		-296,334	644,582	-0.46[e]
Non-Completion								
Manpower Corps	47.2	13.93	24	53	2.21	34,874	45,747	0.76
BTSD III & IV	30.3	14.08	36	182	5.06	77,711	158,378	0.49
BTSD I & II	154.2	14.37	27	72	2.67	159,741	61,143	2.61
Voc. & Special	-133.5	14.23	27	53	1.96	-100,532	95,844	-1.05
Total Non-Completion			114	360		171,794	361,112	0.48[e]

[a] $_{69}E^S$, $_{69}Y^S$ are the employment weeks in the expsoure period and weekly earnings in the exposure period; $\hat{69E}^S$ is derived from the employment and income equations of the norm group by substituting the mean value of characteristics of individuals by service.

[b] $_{68}E^S$ is the weeks employed in the base period; $\hat{69Y}^S$ is derived analogously to $\hat{69E}^S$ described above.

[c] See Table 37, Appendix G.

[d] Total cost is obtained by multiplying the sample cost (shown in Table 37, Appendix G) by the ratio of total to sample number of clients.

[e] The weighted average is calculated by taking the total weighted benefit (e.g. -296,334) divided by the total weighted cost (e.g. 644,582).

Income Equation of Norm Group:

$$(13)\quad Y = 2.8597 + 0.7922\ X_1 + 0.6647\ X_2$$
$$(0.13)\quad (5.91)^{***}\quad (2.40)^{**}$$
$$R^2 = 0.51$$

Employment Equation of Norm Group:

$$(14)\quad E = -3.6713 - 6.5196\ X_3 + 10.4882\ X_4 + 0.9256\ X_5$$
$$(-0.44)\quad (-1.82)^{*}\quad (1.69)^{*}\quad (11.37)^{***}$$
$$R^2 = 0.81$$

Where: y = weekly earning in exposure period, including wage income, self-employment income, except farming, piece work, and unpaid family work;

E = employment weeks in exposure period, weeks employed including wage weeks, fishing weeks, and other self-employed weeks, except farming and piece work;

X_1= weekly earnings in the base period;

X_2= number of hours worked per week in exposure period;

X_3= age if more than 40 years (if yes, $X_3 = 1$);

X_4= maintain household (if yes, $X_4 = 1$); and

X_5= employment weeks in the base period.

---

*Indicates it is statistically significant at the 90% level for the two-tailed 't' test.

**Indicates it is statistically significant at the 95% level for the two-tailed 't' test.

***Indicates it is statistically significant at the 99% level for the two-tailed 't' test.

APPENDIX I

Characteristics of Non-Completions

The average length of service period (Table 42) by group is related to the scheduled length of the course or training and the length of time clients stay in the course or training. The length of service period for Interlake clients varies considerably among the manpower services. The longest length of service, about 21 weeks, is associated with the farm management course. In contrast, clients taking training in industry have an average service length of 7.61 weeks.

In order to assess the income and employment benefits associated with the non-completion group, the income and employment characteristics are summarized (Table 43) for four types of non-completions: (1) those that register, but fail to attend and have a job, (2) those that register, but fail to attend and do not have a job, (3) those that attend the course, and drop out with a job, and (4) those that attend the course, but leave without a job.

In manpower corps non-completion, 54 percent of the clients register, but fail to report, while 29 percent of the total clients have a job without attending the course. The average annual earnings in the exposure period are $3,186.50 for those who register but fail to report and have a job. In contrast, the clients who register but fail to report and have no job have an increase in annual earnings of 172 percent between the base period and the exposure period. This implies that jobs were not associated with a referral service. On the other hand, the clients who take the course

Table 42

Average Length of Service Period in Weeks

Program	Length of Service (Weeks)	Registered but Failed to Report
1. Training in Industry	7.61	
2. Exploratory and Mobility	N/A	
3. Farm Management	20.69	
4. Manpower Corps Completion	12.06	
5. Manpower Corps Non-Completion	6.98	13
6. Employment Referrals Completion	N/A	
7. Employment Referrals Non-Completion	N/A	
8. BTSD III & IV Completion	13.80	
9. BTSD III & IV Non-Completion	7.46	9
10. BTSD I & II Completion	17.16	
11. BTSD I & II Non-Completion	9.55	6
12. Vocational & Special Completion	19.04	
13. Vocational & Special Non-Completion	11.74	3

Table 43

Income and Employment Characteristics by Type of Service in Non-Completion Group

Characteristics \ Service Type		Manpower Corps Non-Completion				BTSD III & [illegible]n-Completion			
		Register but Fail to Report		Register and Attend		Register but Fail to Report		Register and Attend	
		With Job	Without Job	With Job	Without Job	With Job	Without Job	With Job	Without Job
Distribution of Non-Completion Clients	(%)	29.2	25.0	8.3	37.5	13.9	8.3	38.9	38.9
Annual Earned Income Per Client in Base Period	($)	2,977.2	1,345.7	4,000.0	1,408.2	1,247.8	80.0	2,135.4	1,030.5
Annual Earned Income Per Client in Exposure Period	($)	3,186.5	3,659.0	4,352.0	1,312.6	3,089.4	0.0	2,431.1	1,270.1
Employment Weeks in Base Period	(Wks)	32.3	22.2	25.0	16.2	16.6	1.3	27.3	14.2
Employment Weeks in Exposure Period	(Wks)	32.9	36.2	29.0	15.0	20.0	0.0	25.8	17.1

Table 43 (continued)

Characteristics \ Service Type		BTSD I & II Non-Completion				Vocational & Special Training Non-Completion			
		Register but Fail to Report		Register and Attend		Register but Fail to Report		Register and Attend	
		With Job	Without Job	With Job	Without Job	With Job	Without Job	With Job	Without Job
Distribution of Non-Completion Clients	(%)	7.4	14.8	55.6	22.2	0.0	7.4	40.7	51.9
Annual Earned Income Per Client in Base Period	($)	1,080.0	2,879.0	2,458.7	1,731.8	0.0	6,668.0	2,040.0	1,116.4
Annual Earned Income Per Client in Exposure Period	($)	1,900.3	1,683.0	3,629.3	2,083.3	0.0	7,800.0	3,049.0	1,182.3
Employment Weeks in Base Period	(Wks)	12.0	34.5	28.9	30.0	0.0	35.0	33.8	15.4
Employment Weeks in Exposure Period	(Wks)	24.5	19.5	33.2	17.2	0.0	14.5	29.9	16.3

and leave without a job have an average annual earnings decrease from $1,408 in the base period to $1313 in the exposure period. The benefits from training calculated for manpower corps non-completion are likely due to the increased income and employment between the base and exposure periods for the clients who register for the course but do not attend the class. A similar observation can be made for oth . groups, such as BTSD III & IV non-completion, BTSD I & II non-completion, and vocational and special training non-completion. As a result, the benefits from training for non-completion groups are likely to be overstated, because of the effect of attributing to a service the large increase for those who failed to report but did not have jobs at the time of the failure to report.

APPENDIX J

Questionnaire

HINTERLAKE MANPOWER SERVICE EVALUATION - 1970

SCHEDULE 0 - 1

Description: Identification	Data
* NAME: _____	
* SOCIAL INSURANCE NUMBER: _____	☐☐☐☐☐☐☐☐☐
* ADDRESS: _____	
_____	
CORRECTED ADDRESS (If Different Than Above)	
_____	
* TELEPHONE NUMBER (State Exchange):	
HOME: _____ WORK: _____	
RESIDENCE LOCATION (Legal Description): _____	
TYPE OF RESIDENCE: Rural ☐ 1, Urban ☐ 2	☐
YEAR OF BIRTH: (Last 2 digits) 19____	☐☐
SEX: MALE ☐ 1 FEMALE ☐ 2	☐
MARITAL STATUS: Single ☐ 1 Married ☐ 2 Other ☐ 3	☐
FAMILY SIZE: _____	☐☐
NO. OF LEGAL DEPENDENTS:	☐☐
* TYPE OF SERVICE: _____	
Codes: 1. BTSD Level III &/or IV 2. Vocational & Special Training 3. Farm Management 6. Training in Industry 5. Manpower Corps &/or VRT 8. Employment Referral 7. BTSD Level II &/or I 9. Mobility Assistance &/or Exploratory	☐
COURSE OR FIRM: _____	
* DATES OF SERVICE - SERVICE PERIOD: FROM: _____ TO: _____	From: ☐☐ ☐☐ ☐☐ Day Month Year To: ☐☐ ☐☐ ☐☐
* BASE PERIOD: FROM: _____ TO: _____	From: ☐☐ ☐☐ ☐☐ Day Month Year To: ☐☐ ☐☐ ☐☐
* EXPOSURE PERIOD: FROM: _____ TO: _____	From: ☐☐ ☐☐ ☐☐ Day Month Year To: ☐☐ ☐☐ ☐☐
APPOINTMENT: (1) Date: _____ Time: _____ (2) Date: _____ Time: _____	
QUESTIONNAIRE COMPLETED: Yes ☐ 1 No ☐ 2 Partly ☐ 3 If Partly, Why? _____	☐
If No, Why? No Contact ☐ 1 Refused ☐ 2 Explain: _____	☐

GENERAL COMMENTS: _____

_____

DATE QUESTIONNAIRE COMPLETED: _____

ENUMERATOR: _____

CHECKED BY: _____

* OFFICE USE ONLY

INTERLAKE MANPOWER SERVICE EVALUATION - 1970

SCHEDULE O - 2

Description General Identification	Data
What year did you come to live in this municipality? 1970 ☐ 1 1930's ☐ 5 1960's ☐ 2 1920's(or earlier) ☐ 6 1950's ☐ 3 Born here ☐ 7 1940's ☐ 4	☐
What do you regard your ethnic background (racial origin) as being? Indian ☐ 1 European ☐ 3 Metis ☐ 2 Other ☐ 3	☐
What languagee do you Speak: French ☐ 1 English ☐ 2 Other ☐ 3 (specify) _____, _____	☐ *
Write: French ☐ 1 English ☐ 2 Other ☐ 3 (specify) _____, _____	☐ *
What was the highest grade that you completed in the regular school system? Grade: _____ Codes: (1) 0-4 (2) 5-7 (3) 8-9 (4) 10 (5) 11-13 (6) University, Post Secondary & 14+	☐
YEAR COMPLETED (Last 2 Digits) 19_____	☐☐
Are you chiefly responsible for the maintenance of this household? (i.e. - pay the bills) Yes ☐ 1 No ☐ 2	☐
Is there any work that you would like to do but cannot do because of a health problem or physical disability? Yes ☐ 1 No ☐ 2 (If yes, please specify handicap _____	☐
Comments: _____	

Interlake Manpower Service
Evaluation 1970

SCHEDULE 2 - 1

Base Period From: _____ To: _____

Description: Labor Market Characteristics

Note: Round Income Figures To Nearest Dollar

Regarding Your Employment During the Above Noted Base Period, Would You Give Us The Following Information?

WAGE EARNERS Describe Occupations for jobs of 1 month or more (Most recent job first)	L.D.S. Occup. Group	Place of Work (Town, R.M., L.G.D., etc.)	Place of Residence (Town, R.M., L.G.D., etc.)	Method of Travel to Work See **	Number of Weeks (calendar)	Hours per Week	Gross Wages per Week $	Gross Income (wages) $	Gross Vacation & bonuses if paid separately $	Name of Employer and Type of Business	* S.I.C. Group
SUM OF SHORT TERM JOBS											
WAGE EARNERS TOTAL											
UNPAID FAMILY WORKERS		WAGE EQUIVALENT IN KIND TO BE IMPUTED									
SELF-EMPLOYED: PIECE WORK (explain)											
FARMING											
FISHING											
OTHER (specify) _____											
SELF-EMP. TOTAL											
UNEMPLOYED	1. And Actively Seeking Work										
	2. And Not Actively Seeking Work										
TOTAL UNEMPLOYED											
NOT IN LABOUR FORCE	1. In School or Training (specify) _____										
	2. Other (specify) _____										
TOTAL NOT IN LABOUR FORCE											
GRAND TOTAL											

Minimum of 52 weeks

Just prior to receiving your service were you unemployed? Yes ☐ 1 No ☐ 2

If "Yes," how many weeks of continuous unemployment were there immediately prior to service? ☐☐ weeks

If "No," were you employed? Yes ☐ 1 No ☐ 2

Other (specify) _____

Comments: _____

_____

* Office Use Only

** Method of Travel to Work
Codes: (1) Walk
(2) Private Vehicle
(3) Public Transportation

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Interlake Manpower Service
Evaluation 1970

SCHEDULE 2 - 2 Exposure Period From: _____ To: _____

Description: Labor Market Characteristics

Note: Round Income Figures To Nearest Dollar

Regarding Your Employment During the Above Noted Exposure Period, Would you Give Us the Following Information?

WAGE EARNERS

Describe Occupations for jobs of 1 month or more (Most recent job first)	* D.D.S. Occup. Group	Place of Work (Town, R.M., L.G.D., etc.)	Place of Residence (Town, R.M., L.G.D., etc.)	Method of Travel to Work See**	Number of Weeks (calendar)	Hours per Week	Gross Wages per Week $	Gross Income (wages) $	Gross Vacation & bonuses if paid separately $	Name of Employer and Type of Business	* S.I.C. Group
SUM OF SHORT TERM JOBS											
WAGE EARNERS TOTAL											
UNPAID FAMILY WORKERS		WAGE EQUIVALENT IN KIND TO BE IMPUTED									
SELF-EMPLOYED: PIECE WORK (explain)											
FARMING											
FISHING											
OTHER (specify) _____											
SELF-EMP. TOTAL											
UNEMPLOYED	1. And Actively Seeking Work										
	2. And Not Actively Seeking Work										
TOTAL UNEMPLOYED											
NOT IN LABOUR FORCE	1. In School or Training (specify) _____										
	2. Other (specify) _____										
TOTAL NOT IN LABOUR FORCE											
GRAND TOTAL											

Minimum of 52 weeks

Immediately after receiving your service were you unemployed? Yes ☐ 1 No ☐ 2

If "Yes" were you actively seeking work? Yes ☐ 1 No ☐ 2

How many weeks of continuous unemployment were there until your first job? ☐☐ weeks

If "No", were you employed? Yes ☐ 1 No ☐ 2

Other (specify) _____

Comments: _____

_____

* Office Use Only

** Method of Travel to Work
Codes: (1) Walk
(2) Private Vehicle
(3) Public Transportation

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INTERLAKE MANPOWER SERVICE EVALUATION - 1970

SCHEDULE 3 - 0 EXPOSURE PERIOD: FROM_____TO_____

Description: Communication Channels	Data
If you were actively seeking work just after receiving service: Did you speak to a Canada Manpower counsellor regarding possible employment for yourself? Yes ☐ 1 No ☐ 2	☐
(If yes), where? Selkirk CMC ☐ 1 Winnipeg CMC ☐ 2 Other ☐ 3 (specify) _____	☐ *
Did you speak to a person from another government agency regarding employment? Yes ☐ 1 No ☐ 2	☐
(If yes), From which agency? Agricultural Extension ☐ 1 Health & Social Services ☐ 2 Indian Affairs ☐ 3 Other (specify) ☐ 4	☐ *
If you were looking for a job, which one of the following would you go to? A Friend ☐ 1 The Newspaper ☐ 2 The Canada Manpower Centre ☐ 3 The Area Development Board ☐ 4 The Dept. of Indian Affairs ☐ 5 Health & Social Development ☐ 6 Employers ☐ 7 Other Organized Group (specify) _____ ☐ 8 A School Counsellor ☐ 9 A Private Employment Agency ☐ 10 Other (specify)_____ ☐ 11 No One ☐ 12 (allow consideration of Don't Know above before including this possibility) ☐ 13	☐☐
WHICH ONE OF THE ABOVE WAS MOST HELPFUL TO YOU IN FINDING YOUR LAST JOB?	☐☐

INTERLAKE MANPOWER SERVICE EVALUATION - 1970

SCHEDULE 4 - O Expoeure Period: From _____ To _____

Description: Mobility	Data
During the Exposure Period:	
Did you relocate? Yes 1☐ No 2☐	☐
If yes, how many times did you relocate? ____	☐☐
Did you regard your locality at the end of the period as permanent? Yes 1☐ No 2☐	☐

Moves During Exposure Period..	1*	2**	3***	1	2	3
Did you move your entire immediate family?	Yes 1☐ No 2☐	Yes 1☐ No 2☐	Yes 1☐ No 2☐	☐	☐	☐
How far did you move (hwy. miles)	_____	_____	_____	☐☐☐	☐☐☐	☐☐☐
Did you apply for government monetary relocation assistance?	Yes 1☐ No 2☐	Yes 1☐ No 2☐	Yes 1☐ No 2☐	☐	☐	☐
If yes, did you receive government monetary assistance?	Yes 1☐ No 2☐	Yes 1☐ No 2☐	Yes 1☐ No 2☐	☐	☐	☐
Specify Agency	_____	_____	_____			
How much of your own money did you spend on:						
1. Transportation (Fares, gas & oil for own vehicle & shipping costs)	$_____	$_____	$_____	☐☐☐	☐☐☐	☐☐☐
2. Accommodation	$_____	$_____	$_____	☐☐☐	☐☐☐	☐☐☐
3. Food	$_____	$_____	$_____	☐☐☐	☐☐☐	☐☐☐
TOTAL COST	$_____	$_____	$_____	☐☐☐	☐☐☐	☐☐☐

Just after receiving service, where would you have preferred to work if suitable work were available?

Not Applicable ☐ 1 No Preference ☐ 2

Specify Town or Municipality _____ ☐☐

Coneidering your immediate family circumstances, would you have preferred to

Commute ☐ 1

Relocate your home ☐ 2

Either (1) or (2) ☐ 3

Preferred Present Location ☐ 4 ☐

COMMENTS: _____

*1. Most Recent Move **2. Second Most Recent Move *** 3. Third Most Recent Move

INTERLAKE MANPOWER SERVICE EVALUATION - 1970

SCHEDULE 5 - Q

Description: Business and Family Income and Expenses	Data
Note: Income and Expense Figures to be rounded. I am now going to ask you a number of questions regarding the calendar years January 1, 1968 to December 31, 1968, and January 1, 1969 to December 31, 1969. INCOME:	
Self-employed Businessmen (exclude farmers)	$ 1968 / 1969
Gross Receipts	
Total Operating Expense	
Depreciation	
Net Income (Before Personal Exemptions and Deductions)	
Note: To be asked of all respondents. WAGE EARNINGS In 1969, what were the total gross wages for your immediate family?	$ 1969
Husband	
Wife	
Others (specify relationship)	
TOTAL	
What other income did your immediate family receive during 1969 (net)?	$ 1969
Dividends	
Interest	
Rents	
Profits of Small Businesses	
Room and Board	
Insurance Benefits	
Other (specify)	
TOTAL	

Comments:

INTERLAKE MANPOWER SERVICE EVALUATION - 1970

SCHEDULE 5 - 1

Description: Income and Expenses	Data
Did your family receive any of the following payments during 1969? (Indicate amounts)	$ 1969
Family Allowance	
Youth Allowance	
Old Age Pension	
Disability Allowance	
Workmen's Compensation	
Provincial Welfare	
Municipal Welfare	
Widow's Allowance	
Unemployment Insurance Benefits	
Others (specify)	
TOTAL	

EXPENDITURES	1969 $	% Personal Use
During 1969, what was the purchase value of the following motor vehicles which you bought?		
Truck		
Car		
Snowmobile		
Boat and/or Motor		
Other (epecify)		
TOTAL		

During 1969, how much did you spend on the following:	$ 1969
Household Furniture (exclude household appliances)	
Home Construction, Repairs and maintenance, including labour (exclude construction of a new home)	
Recreation Expenses including travel fares, Accommodation, Equipment, Movies, Games, etc.	

Comments: _____

INTERLAKE MANPOWER SERVICE EVALUATION - 1970

SCHEDULE 5 - 2

Description: Farm Operation	Data
FARM OPERATORS	
From your farm operations, what were your receipts for the sale of the following products in 1969?	$ 1969
Sale of Livestock	
Sale of Livestock Products (milk, cream, eggs and include subsidies)	
Sale of Crops (include Wheat Board payments)	
In 1969, what was the amount paid out for the following farm expenses?	$ 1969
Fuel, Oil, and Grease	
Livestock Purchased	
Feed Purchased (Forages, Grains. Premixed Feed, Minerals & Vitamins, etc.	
Fertilizer Purchased	
Crop Chemicals	
Cash Rent for Land and Equipment (include community pasture payments)	
What was the estimated market value of the following as of December 31, 1968 and December 31, 1969	$ Dec.31/68 Dec.31/69
Farm Machinery & Equipment	
Buildings Owned (include house)	
Land (owned)	
Livestock	
Grain on Hand	
How many acres of land did you purchase in 1969?	acres
What was the purchase price of this land?	$
	Acres Dec.31/68 Dec.31/69
Acres Owned	
Acres Rented and Leased	
Total Acres	
Allocate total acres according to:	
Cultivated Acreage	
Unimproved Acreage	
Total Acres	

Comments: _____

INTERLAKE MANPOWER SERVICE EVALUATION - 1970

SCHEDULE 6 - O

Description: Employee Satisfaction | Data

TO BE COMPLETED BY WAGE EARNERS ONLY

This page (strictly confidential) relates to your present job [1] ☐

or Last job [2] ☐ if currently unemployed ☐

Type of Work _____

Name of Employer _____

Read each of the following statements and indicate with a check (✓) the answer that is most true for you

	Strongly Agree 1	Agree 2	Undecided 3	Disagree 4	Strongly Disagree 5	
1. In general, my working conditions are good (such as lighting, ventilation, equipment, cleanliness, etc.)						☐
2. My immediate supervisor (boss) takes time to explain new work to me						☐
3. My pay is all right for the kind of work I do						☐
4. There is a lot of favouritism where I work (some of the employees get all the breaks)						☐
5. I feel that the work I do is very important						☐
6. My immediate supervisor (boss) is quick to take care of complaints brought to him by employees						☐
7. Most of the people I work with are the kind who say "hello" when I pass them on the street						☐
8. I make as much money as most of my friends						☐
9. I would like to change my job for another						☐
10. My immediate supervisor (boss) is where he is because he knows the work						☐

11. Do you regard your job as permanent?

Yes ☐ 1 No ☐ 2 ☐

Comments: _____

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