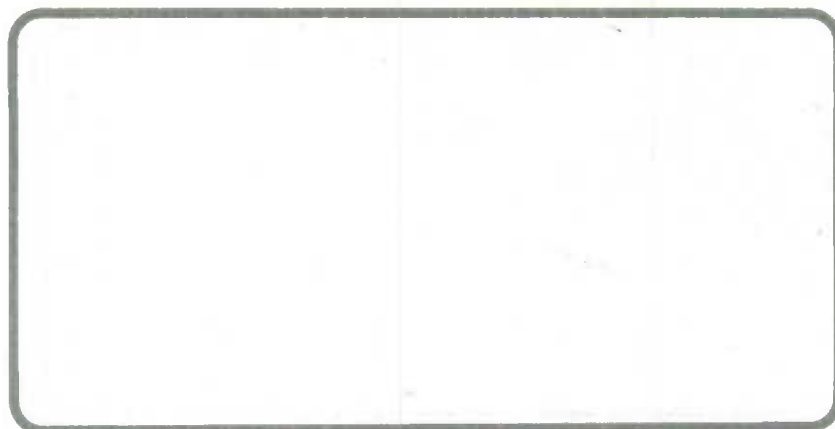




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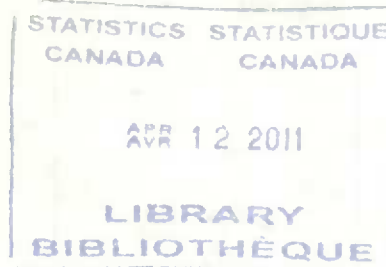
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**INTEGRATION OF CANADIAN FARM AND OFF-FARM
MARKETS AND THE OFF-FARM WORK OF WOMEN,
MEN AND CHILDREN**

by

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No. 16

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does not necessarily represent the views or policies of Statistics Canada.

ABSTRACT

Current levels of participation in off-farm work by farm family members might be viewed as part of an historical trend toward greater integration of the farm enterprise and of the family with the non-farm economy. Over time, farm enterprises have sold larger shares of their produce. As well, larger shares of their output have been based on cash inputs and, at least since the last war, there is a trend towards a greater relative reliance on borrowed capital and paid labour.

To understand the integration of the farm family with the off-farm economy, it is important to analyse the farm business situation separately from the farm family situation. For the farm family, income from off-farm investments and income from off-farm jobs are both becoming relatively more important contributors to farm family income. We note that one off-farm factor - high interest rates - has had a negative impact on farm business income while simultaneously having a positive impact on the income of some farm families.

Keywords: agriculture, integration, farm family income, off-farm work

INTEGRATION OF CANADIAN FARM AND OFF-FARM MARKETS AND THE OFF-FARM WORK OF FARM WOMEN, MEN, AND CHILDREN

1. INTRODUCTION

Canadian farms and farm families have never been "truly" self-sufficient. Farms have always marketed some portion of their produce and farm families have always purchased some portion of their production requirements. Nonetheless, over time, farms and farm families have become increasingly integrated with the nonfarm economy.

One possible result is that nonagricultural factors are now more influential determinants of farm family economic welfare. As farm/off-farm labour and capital markets become more integrated, macroeconomic policies, such as those reflected in interest rates and unemployment rates, may have greater effects upon the economic well-being of farm families than they have in the past.

The purposes of this paper are: (1) to document briefly the trends concerning measures of integration; (2) to describe the on-farm and off-farm work patterns of farm operators, their spouses, and their children; and (3) to demonstrate the importance of separating the analysis of the farm business enterprise from the analysis of farm family economic welfare.

It is probably well understood that there is no "average" Canadian farm. The well-acknowledged diversity of farm enterprises with respect to size will be analysed along with the diverse patterns of on-farm/off-farm labour allocation among farm families.

In short, just as there is no "average" farm, so is there no "average" farm family. Moreover, given the diversity of farms and farm families in Canada, macro-economic trends can be expected to have widely different effects upon farms and farm families.

2. TRENDS IN THE INTEGRATION OF PRIMARY AGRICULTURAL ENTERPRISES WITH OFF-FARM MARKETS: AN HISTORICAL PERSPECTIVE

This section describes four measures of the trends concerning farm/off-farm integration at the farm enterprise level.

2.1. FARM OUTPUT

Annual national farm accounts are available from 1926 to date. In 1926, 14 percent of farm production was consumed on the farm and 86 percent was sold to off-farm markets (Figure 1 and Table 1). At this time, farms were already well integrated with the nonfarm economy in terms of marketing their produce. By

Percent of Production Marketed CANADA, 1926 - 1988(p)

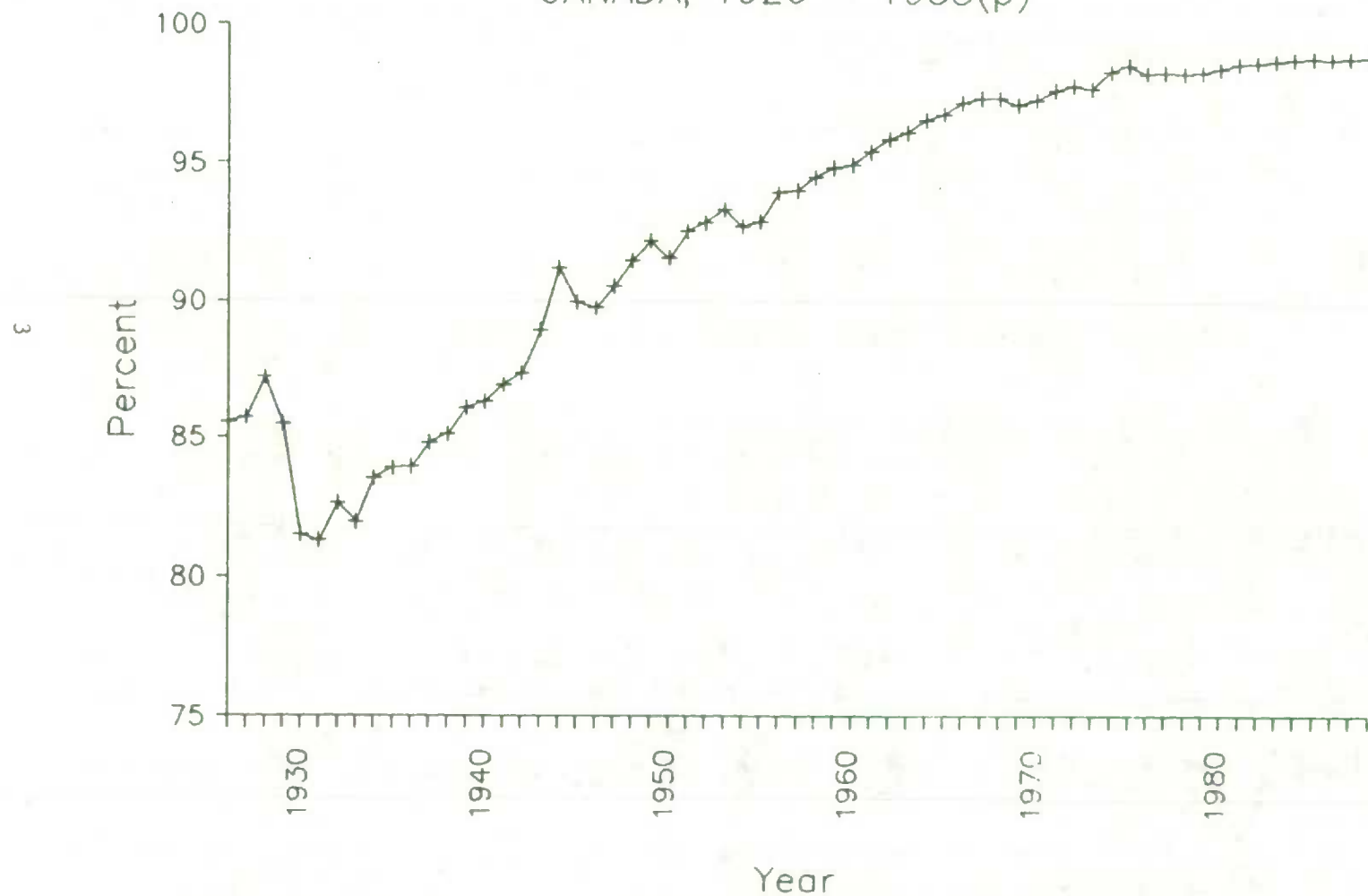


FIGURE 1.

Table 1. Percent of Production Marketed, Canada, 1926-1988

Year	Gross cash receipts (\$million)	Income in kind (\$million)	Gross value of production (\$million)	Percent of production marketed	Year	Gross cash receipts (\$million)	Income in kind (\$million)	Gross value of production (\$million)	Percent of production marketed
1926	961	162	1,123	86	1957	2,516	161	2,677	94
1927	940	157	1,097	86	1958	2,754	161	2,915	94
1928	1,064	156	1,220	87	1959	2,754	151	2,905	95
1929	932	158	1,090	85	1960	2,734	147	2,881	95
1930	642	146	788	82	1961	2,888	140	3,028	95
1931	472	109	581	81	1962	3,112	135	3,247	96
1932	409	86	495	83	1963	3,200	131	3,331	96
1933	420	92	512	82	1964	3,496	127	3,622	97
1934	503	99	602	84	1965	3,818	129	3,947	97
1935	533	102	635	84	1966	4,272	126	4,398	97
1936	587	112	700	84	1967	4,396	122	4,517	97
1937	638	114	753	85	1968	4,369	121	4,490	97
1938	650	114	764	85	1969	4,233	127	4,360	97
1939	712	115	827	86	1970	4,193	119	4,312	97
1940	731	116	847	86	1971	4,551	113	4,664	98
1941	876	132	1,008	87	1972	5,521	126	5,647	98
1942	1,101	159	1,260	87	1973	7,020	169	7,189	98
1943	1,393	174	1,566	89	1974	8,984	158	9,141	98
1944	1,806	174	1,980	91	1975	10,138	155	10,293	98
1945	1,656	185	1,841	90	1976	10,128	187	10,315	98
1946	1,682	192	1,874	90	1977	10,206	184	10,391	98
1947	1,924	201	2,125	91	1978	12,030	219	12,249	98
1948	2,381	222	2,604	91	1979	14,337	258	14,595	98
1949	2,398	204	2,601	92	1980	15,849	266	16,115	98
1950	2,122	195	2,317	92	1981	18,533	274	18,806	99
1951	2,725	220	2,946	93	1982	18,615	270	18,884	99
1952	2,799	216	3,015	93	1983	18,708	261	18,969	99
1953	2,709	194	2,903	93	1984	20,286	266	20,552	99
1954	2,293	181	2,474	93	1985	19,786	251	20,037	99
1955	2,239	172	2,411	93	1986	20,486	265	20,751	99
1956	2,529	164	2,694	94	1987p	20,917	264	21,181	99
					1988p	20,933	258	21,191	99

Source: Canada. Statistics Canada.

AGRICULTURE ECONOMIC STATISTICS (Cat. No. 21-603)

1981, only 1 percent of farm output was consumed on the farm and 99 percent of production was marketed. In part, two factors may account for this trend:

- (a) farm size has increased in relation to family consumption; and
- (b) consumption of home-produced agricultural products has declined.

2.2. FARM INPUTS

2.2.1. All Purchased Inputs

Before the introduction of the tractor and other motorized machinery, farms were more "energy self-sufficient", producing their own power. Draught animals supplied power; their fuel source -- hay and oats -- were grown on farms. Similarly, many other activities, such as machine repair and small-scale manufacture were undertaken within the farm enterprise.

Consistent with increasing specialization typical of other industrial sectors, farms have specialized in crop or animal husbandry and are now less likely to produce goods used in farm production.

In the late 1920's, roughly 40 percent of the value of production was allocated to purchased inputs (Figure 2 and Table 2) as it was during the 1940's and 1950's. Since then, purchased inputs have become increasingly important. In the early 1980's over two-thirds of the value of production was allocated to purchased inputs. Farms now rely more on off-farm manufactured inputs and, in this sense, have become more integrated with the nonfarm sector.

2.2.2. Borrowed Capital

Aspects of the "farm financial crisis" underscore the sensitivity of primary agriculture to the non-farm macro-economy. This sensitivity should be understood in its historic context, as measured by interest payments as a percentage of total value-added in farm production, that is as a percent of the total returns to the factors of production, capital and labour.

In 1981, the share of value-added paid to nonfarm creditors represented 23 percent of total value-added (Figure 3 and Table 3). This represents a dramatic increase from the 2 percent share reported in the late 1940's. During in the post-war period, farm enterprises appear to be becoming more integrated with off-farm capital markets. However, the 1981 period also represents a peak (at least for Canada as a whole) in the financial crisis that can be compared to the depression of the

Cash Inputs as % of Production CANADA, 1926 - 1988(p)

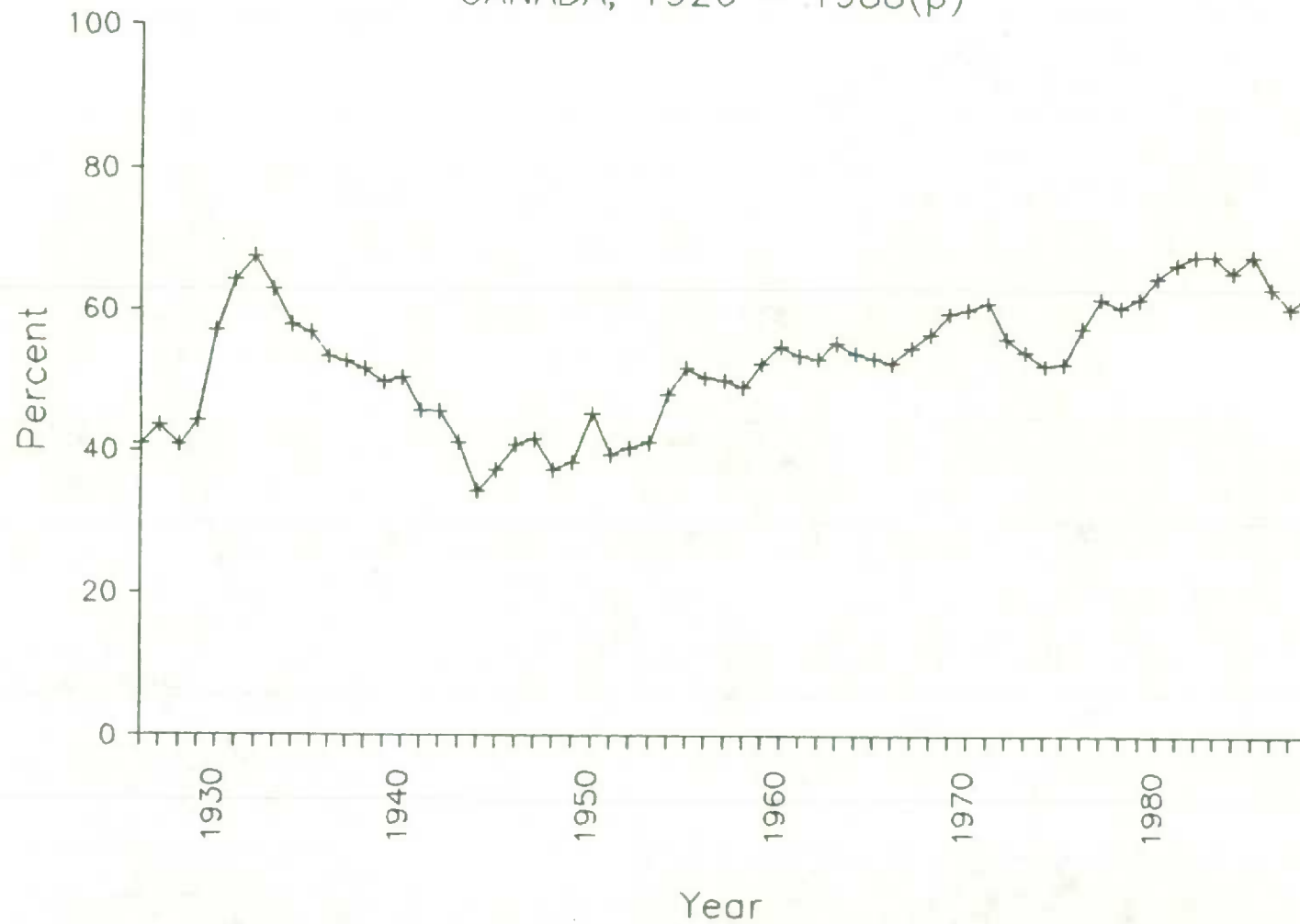


FIGURE 2.

Table 2. Purchased Inputs as Percent of Value of Production, Canada, 1926-1988

Year	Purchased inputs (\$million)	Gross value of production (\$million)	Purchased inputs as percent of production	Year	Purchased inputs (\$million)	Gross value of production (\$million)	Purchased inputs as percent of production
1926	460	1,123	41	1957	1,341	2,677	50
1927	477	1,097	44	1958	1,433	2,915	49
1928	497	1,220	41	1959	1,525	2,905	52
1929	482	1,090	44	1960	1,584	2,881	55
1930	450	788	57	1961	1,629	3,028	54
1931	373	581	64	1962	1,731	3,247	53
1932	335	495	68	1963	1,852	3,331	56
1933	323	512	63	1964	1,960	3,622	54
1934	349	602	58	1965	2,109	3,947	53
1935	361	635	57	1966	2,317	4,398	53
1936	373	700	53	1967	2,477	4,517	55
1937	397	753	53	1968	2,551	4,490	57
1938	394	764	52	1969	2,605	4,360	60
1939	411	827	50	1970	2,602	4,312	60
1940	426	847	50	1971	2,861	4,664	61
1941	460	1,008	46	1972	3,178	5,647	56
1942	575	1,260	46	1973	3,910	7,189	54
1943	645	1,566	41	1974	4,786	9,141	52
1944	681	1,980	34	1975	5,425	10,293	53
1945	688	1,841	37	1976	5,959	10,315	58
1946	768	1,874	41	1977	6,440	10,391	62
1947	886	2,125	42	1978	7,449	12,249	61
1948	972	2,604	37	1979	9,042	14,595	62
1949	999	2,601	38	1980	10,473	16,115	65
1950	1,051	2,317	45	1981	12,580	18,806	67
1951	1,166	2,946	40	1982	12,860	18,884	68
1952	1,222	3,015	41	1983	12,923	18,969	68
1953	1,200	2,903	41	1984	13,541	20,552	66
1954	1,188	2,474	48	1985	13,650	20,037	68
1955	1,251	2,411	52	1986	13,175	20,751	63
1956	1,359	2,694	50	1987	12,833	21,181	61
				1988	13,315	21,191	63

Source: Canada. Statistics Canada.

AGRICULTURE ECONOMIC STATISTICS (Cat. No. 21-603)

Interest Paid as Percent of Value-added CANADA, 1926 - 1988(p)

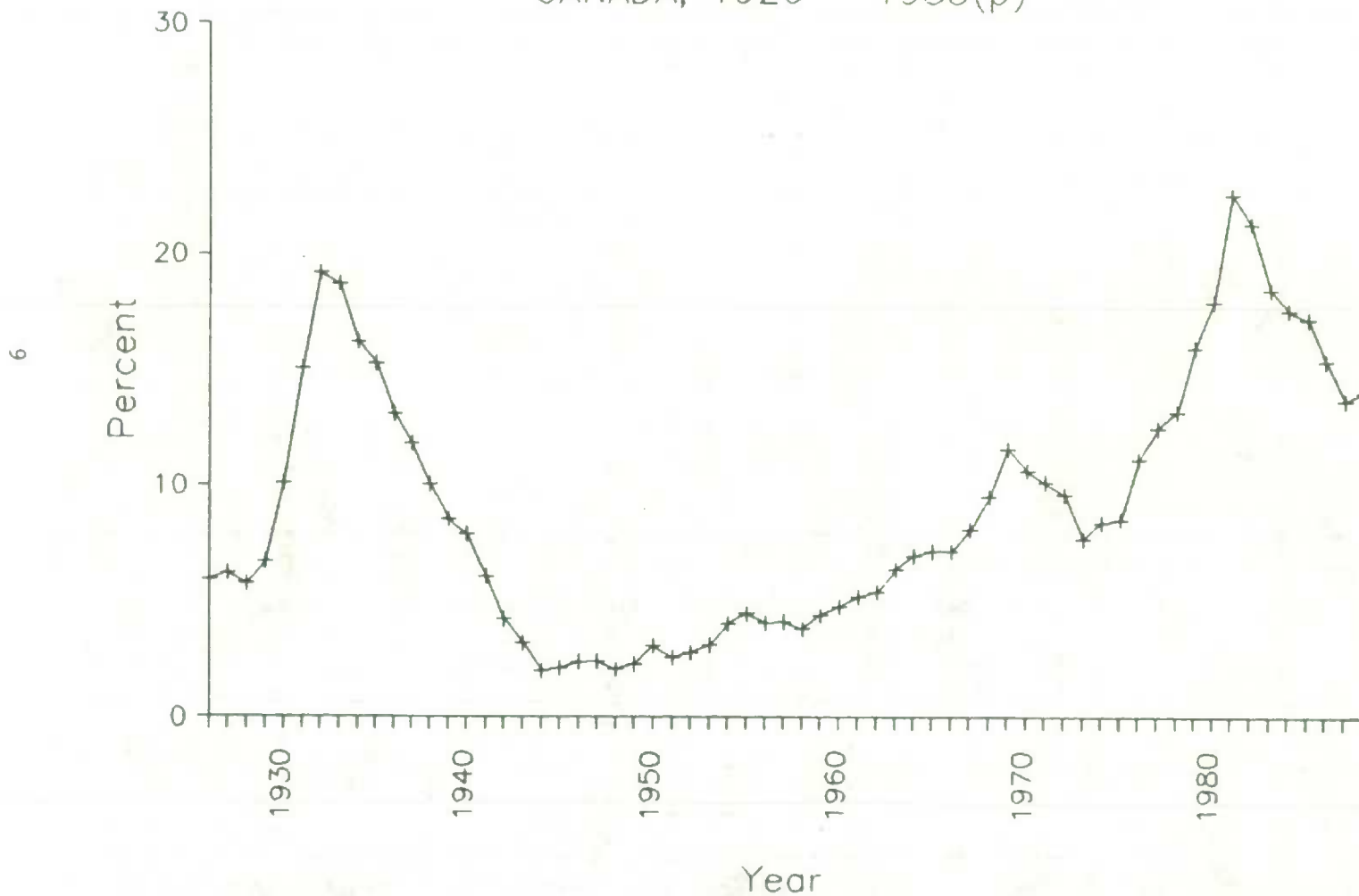


FIGURE 3.

Table 3. Percent Distribution of Value-added, Canada, 1926-1988

Year	Realised net farm income	Interest payments	Deprec- iation (land and buildings)	Wages paid (incl. room and board)	Property taxes	Gross farm rent	Value- added (1)	Year	Realised net farm income	Interest payments	Deprec- iation (land and buildings)	Wages paid (incl. room and board)	Property taxes	Gross farm rent	Value- added (1)
percent								***percent***							
1926	62	6	9	12	5	6	100	1957	61	4	16	11	4	4	100
1927	59	6	10	13	5	7	100	1958	64	4	15	10	4	4	100
1928	62	6	10	11	5	6	100	1959	59	4	17	11	4	4	100
1929	58	7	12	13	6	5	100	1960	57	5	17	12	4	5	100
1930	41	10	17	17	9	5	100	1961	58	5	17	12	4	4	100
1931	29	15	21	19	11	5	100	1962	59	5	16	11	4	5	100
1932	23	19	22	17	12	7	100	1963	55	6	17	11	5	6	100
1933	30	19	20	16	10	6	100	1964	57	7	17	10	4	5	100
1934	40	16	16	14	8	6	100	1965	57	7	17	10	4	5	100
1935	43	15	15	14	8	6	100	1966	59	7	16	9	4	5	100
1936	48	13	13	13	7	6	100	1967	56	8	18	9	4	4	100
1937	51	12	12	14	6	5	100	1968	52	9	20	10	4	4	100
1938	53	10	12	14	6	5	100	1969	47	12	21	11	5	5	100
1939	56	9	11	13	6	6	100	1970	48	11	22	11	4	4	100
1940	56	8	11	13	6	6	100	1971	48	10	21	12	4	5	100
1941	64	6	9	11	5	5	100	1972	56	10	17	10	4	4	100
1942	67	4	8	10	4	8	100	1973	60	8	15	10	3	5	100
1943	72	3	7	9	3	6	100	1974	63	8	15	8	2	4	100
1944	77	2	6	7	3	6	100	1975	59	8	17	9	2	4	100
1945	75	2	7	8	3	5	100	1976	50	11	22	10	3	5	100
1946	73	2	8	9	3	5	100	1977	42	12	26	12	3	5	100
1947	73	2	8	8	3	5	100	1978	44	13	24	10	3	5	100
1948	77	2	7	7	3	4	100	1979	42	16	24	10	2	6	100
1949	75	2	9	7	3	4	100	1980	37	18	26	10	2	7	100
1950	67	3	12	9	4	5	100	1981	35	23	24	10	2	6	100
1951	73	3	10	7	3	5	100	1982	33	21	26	11	2	6	100
1952	71	3	10	8	3	5	100	1983	33	18	27	12	3	7	100
1953	69	3	12	8	3	4	100	1984	39	18	24	11	2	6	100
1954	62	4	16	10	4	3	100	1985	37	17	24	13	3	6	100
1955	59	4	17	11	5	5	100	1986	42	15	22	12	3	6	100
1956	61	4	15	10	4	5	100	1987	47	14	21	12	2	4	100
								1988	44	14	22	13	3	5	100

Source: Canada. Statistics Canada. AGRICULTURE ECONOMIC STATISTICS (Cat. No. 21-603)

(1) Value-added is the return to labour and capital (ie. the factors of production) and is calculated as (realized) net farm income plus interest, depreciation

1930's - in both 1932-33 and in 1981-82, 19 percent or more of value-added was paid to service farm debts.

2.2.3. Hired Labour

In 1951, self-employed workers (66%) and unpaid family workers (17%) contributed the bulk of agricultural labour, while paid workers provided only 17 percent of farm labour (Figure 4 and Table 4). By 1981, farmers relied much more on paid labourers to operate their farms, when over 40 percent of all workers in agriculture were paid. However, the percentage of paid workers who are also members of the farm family in years prior to 1971-1981 is uncertain⁽¹⁾ and it should be noted that the share of value-added paid to hired workers has remained in the 10 to 15 percent range over the past 30 years (Table 3).

(1) We will see later (Table 6) that about one-third of all paid workers were in fact members of "family farm" households in 1981. In 1971, as well, about one-third of paid workers were members of "family farm" households. We do not know this proportion for 1951 or 1961. If one-third of paid workers have always lived in farm households, then the shift shown in the data (Figure 4 and Table 4) is correct. If a smaller proportion of paid workers were members of farm households before 1971, then the shift shown in the data overestimates the trend towards a greater reliance on the nonfarm labour market for farm labour requirements.

Agricultural Labour Force by Class of Worker

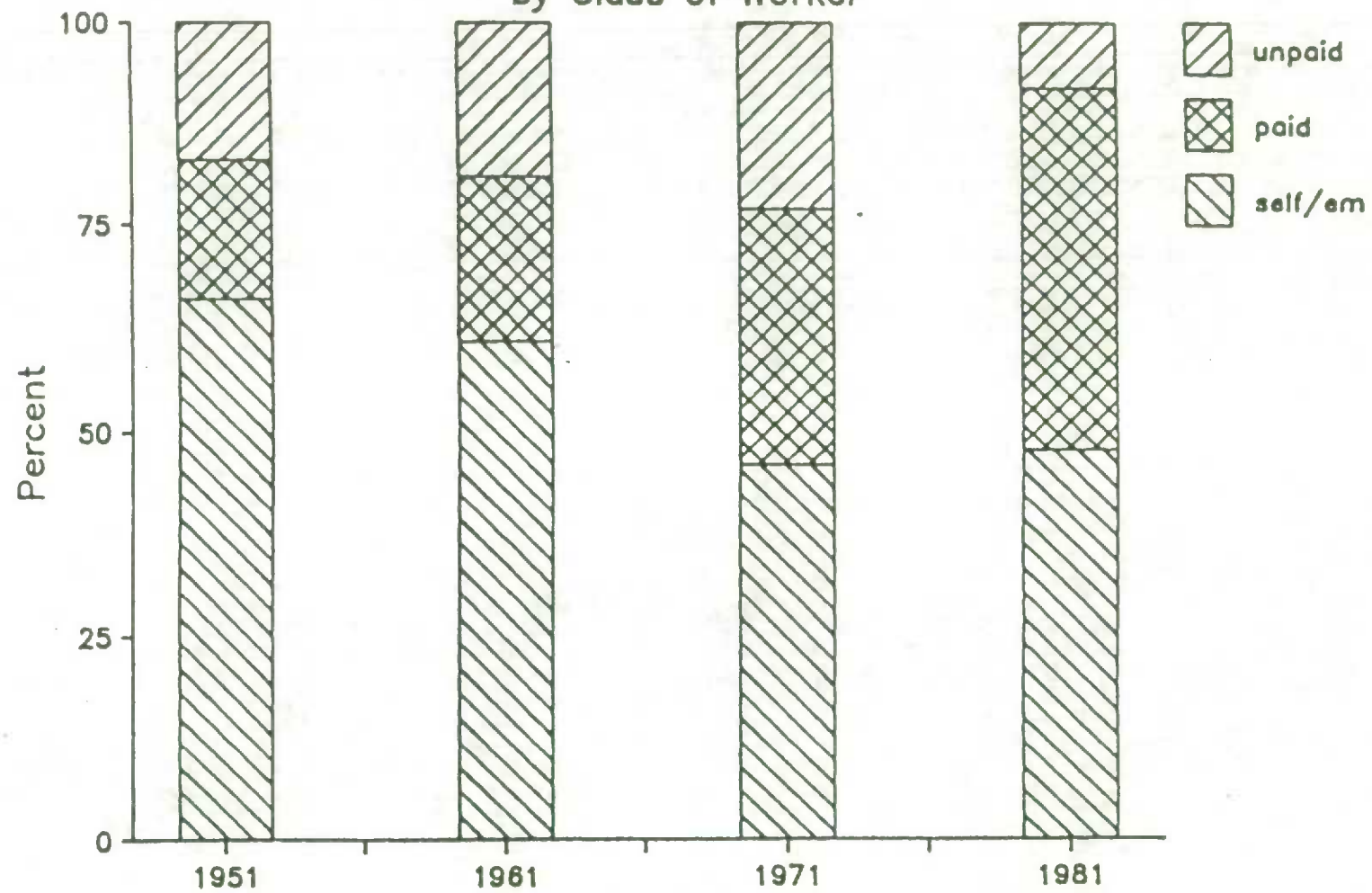


Figure 4

Table 4. Distribution of Agricultural Labour Force
by Class of Worker, Canada, 1951 - 1981

Year	Class of worker			Total
	Self- employed operator (or partner) (1)	Wage earner(1)	Unpaid family worker	
1951	66	17	17	100
1961	61	20	19	100
1971	47	32	23(2)	100
1981(3)	48	44	8(2)	100

Source: Canada. Statistics Canada. 1951 Census of Population, Vol. IV, LABOUR FORCE, Table 11.
1961 Census of Population, Vol. III, LABOUR FORCE, Table 20.
1971 Census of Population, Vol. III, LABOUR FORCE, Table 8.
1981 Census of Population, unpublished tabulations.

- (1) Self-employed individuals in incorporated companies are classified as wage earners in 1971 and 1981.
- (2) Unpaid family workers are higher in 1971 and lower in 1981 compared to other censuses because of the way the questions were asked. See Gilles Simard, "Analyse du statut professionnel et de la forme juridique au Recensement de 1981," unpublished paper, Statistics Canada, February, 1984.
- (3) Figures reported here include farm managers who are not included in the agricultural occupation classified in 1981, but who were coded to the management code 1146. The present figures are based on the 1971 occupational codes to preserve comparability.

2.3. IN SUMMARY

- ** Farms enterprises are more integrated with off-farm commodity markets--a larger share of output is now sold;
- ** Farms are more integrated with off-farm markets that supply farm inputs--a larger share of production is now derived from purchased inputs;
- ** Farms now rely more on off-farm capital markets for capital required to operate the farms; and
- ** Farms now rely more on paid labour. It remains uncertain whether this labour is true "hired", "non-family" off-farm labour or whether it is paid farm family labour.

Generally, farm enterprises are now more integrated with the non-farm economy along three important "output" or "input" dimensions but whether they rely upon "off-farm" labour markets to a greater degree remains uncertain.

3. TRENDS IN INTEGRATION OF THE FARM FAMILY WITH OFF-FARM MARKETS

Farm family members have traditionally devoted most of their capital and labour to the farm enterprise. The purpose of this

section is to determine the degree of integration of the farm family with off-farm capital and labour markets.

3.1. INTEGRATION WITH OFF-FARM CAPITAL MARKETS

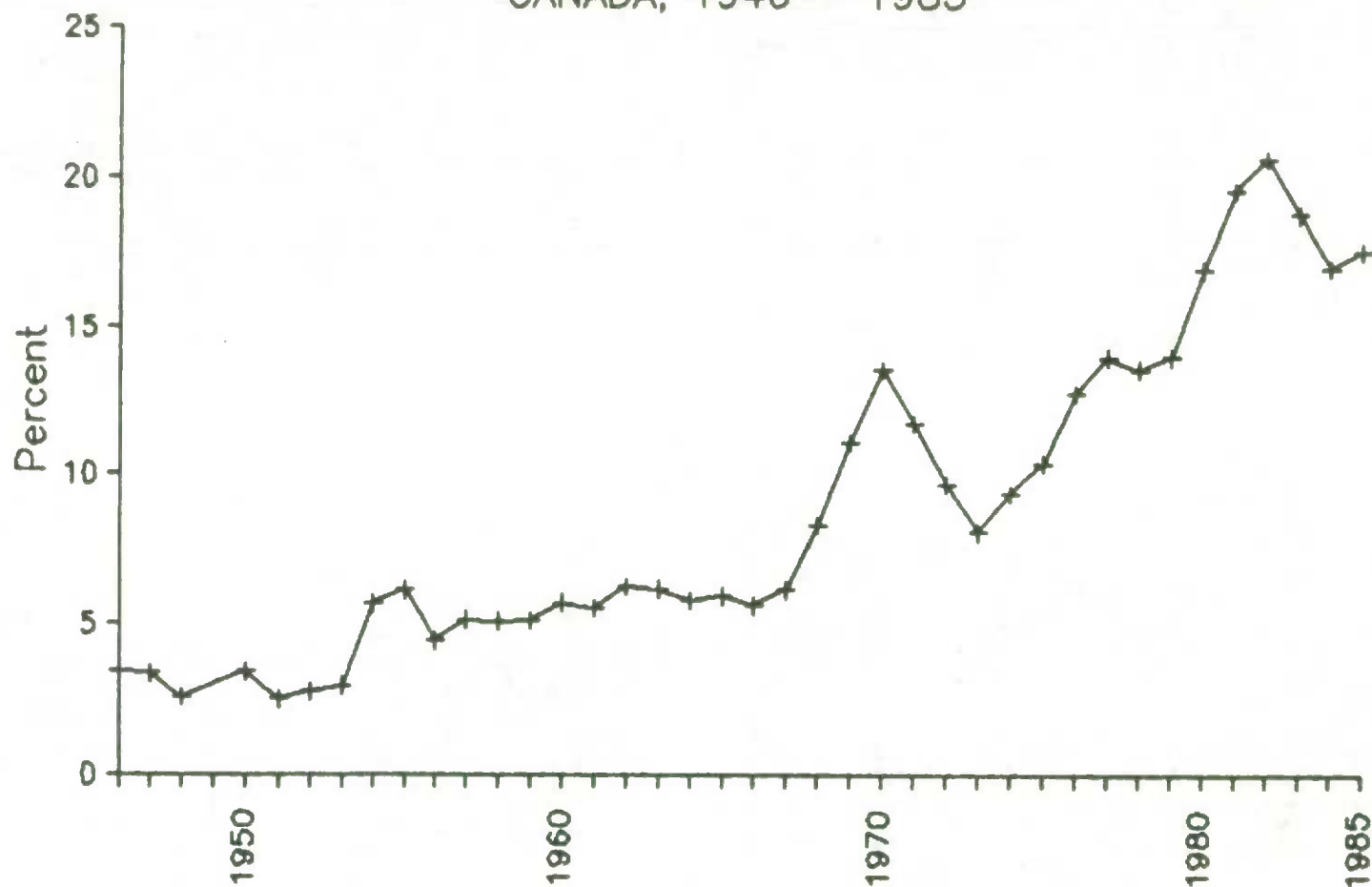
For this purpose, the best, long-term data series available to investigate this is a 1946-1982 taxation data source.⁽²⁾ In 1946, income received from off-farm investments averaged \$37 per "farmer" and represented 3 percent of income from all sources (Figure 5 and Tables 5a and 5b). By 1982, investment income peaked at \$3,213 which represented 21 percent of total income. Farmers are investing more in off-farm capital markets--returns from off-farm investments are becoming a larger share of total income.

We saw earlier (Figure 3) that the farm enterprise is sensitive to developments in off-farm capital markets (specifically, interest rate levels). Farms financed with debt capital experience a "crisis" when interest rates rise. However, farm families with off-farm investments benefit from higher interest rates. Certainly, high interest rates were one reason for the higher level of average investment earnings in recent years. The

(2) Several different definitions of farmers are possible using this source. For this purpose, farmers are defined as unincorporated taxfilers whose principle source of gross income is from farming.

Percent of Income from Investments

CANADA, 1946 - 1985



"farmers": taxfilers with gross farm income as major source

FIGURE 5.

Table 5. Average Total Net Money Income by Source for "Farmers", (1) Canada, (2) 1946-1985

(A)

Year	Number of "farmers" (1)	Net farming or fishing income (14)	Wages and salaries (3,4,6, 11)	Family allowance (5)	Unemployment insurance benefits (5)	Pension income (3,6,7)	Off-farm self-employment net income	Investment income (8)(9)	Net rental income	Estate income (10)	Net taxable capital gains (5)	Miscellaneous income including alimony (12)	Total off-farm income (sub-total)	Total net income	Average income of all male taxfilers percent of all sales	Income of "farmers" as a percent of all sales	Average income of all taxfilers	Income of "farmers" as a percent of all taxfilers
946	117,647	1,015	26	..	...	0	0	37	0	2	...	1	82	1,097	..	..	1,601	65.2
947	193,160	1,092	61	..	...	0	12	41	16	3	...	1	134	1,227	..	..	1,876	65.4
948	190,090	1,473	74	..	...	0	14	42	12	2	...	2	147	1,620	..	..	2,091	77.4
949	197,760	..	..	..	...	..	..	..	..	..	...	..	(13)	1,853	..	..	2,245	82.5
950	197,150	1,361	66	..	...	0	11	52	0	11	...	3	145	1,506	..	..	2,346	64.1
951	189,060	1,860	81	..	...	0	22	51	19	8	...	2	183	2,051	..	..	2,552	80.3
952	196,380	1,921	107	..	...	18	22	60	25	6	...	4	240	2,162	..	..	2,700	80.0
953	204,800	1,877	114	..	...	21	17	63	29	4	...	6	254	2,131	..	..	2,789	76.4
954	206,760	1,199	128	..	...	24	16	84	24	4	...	0	279	1,479	..	..	2,785	53.1
955	205,830	1,041	151	..	...	27	20	83	30	5	...	8	314	1,355	..	..	2,884	46.9
956	200,967	1,501	180	..	...	29	21	82	32	3	...	0	345	1,846	..	..	3,061	60.3
957	204,855	1,462	226	..	...	30	16	96	32	4	...	0	405	1,867	..	..	3,160	59.0
958	205,331	1,847	203	..	...	39	15	114	20	4	...	0	397	2,244	..	..	3,300	68.0
959	205,581	1,861	209	..	...	43	23	117	21	5	...	15	433	2,294	..	..	3,405	67.3
960	209,720	1,867	209	..	...	49	21	132	18	4	...	18	451	2,318	..	..	3,501	66.2
961	209,119	2,051	230	..	...	48	26	140	18	5	...	20	486	2,537	..	..	3,601	70.4
962	220,513	2,172	252	..	...	64	25	169	19	5	...	12	546	2,719	..	..	3,701	73.4
963	222,645	2,245	267	..	...	63	27	172	16	4	...	1	549	2,794	4,412	63.3	3,822	73.1
964	234,553	2,517	291	..	...	70	27	180	17	4	...	10	598	3,115	4,655	66.9	4,014	77.6
965	246,977	2,659	325	..	...	69	29	195	14	7	...	7	647	3,306	4,924	67.1	4,195	78.8
966	290,587	2,690	377	..	...	74	30	190	17	6	...	5	699	3,392	5,218	65.0	4,439	76.4
967	292,545	2,744	398	..	...	83	31	214	18	5	...	6	755	3,499	5,505	63.5	4,655	75.2
968	291,553	2,392	424	..	...	91	35	268	19	6	...	8	852	3,244	5,816	55.8	4,918	66.0
969	283,859	1,914	443	..	...	107	36	314	18	4	...	7	929	2,845	6,263	45.4	5,232	54.4
970	276,686	1,758	456	..	...	130	42	380	20	6	...	8	1,042	2,799	6,627	42.2	5,534	50.6
971	277,319	2,159	523	..	...	140	46	385	22	6	...	7	1,129	3,288	7,063	46.6	5,876	56.8
972	279,714	3,048	661	..	42	156	46	427	30	...	11	16	1,389	4,437	7,904	56.9	6,381	69.5
973	285,810	5,054	795	..	54	181	63	545	36	...	32	23	1,729	6,783	8,736	77.6	7,066	96.8
974	282,267	6,789	888	296	45	217	79	875	38	...	118	40	2,596	9,385	10,147	92.5	8,170	114.9
975	279,247	7,568	1,024	317	59	239	108	1,112	44	...	221	52	3,168	10,736	11,438	93.8	9,223	116.4
976	272,486	6,570	1,046	309	48	270	90	1,282	50	...	326	55	3,474	10,045	12,713	79.0	10,313	97.3
977	245,902	6,133	1,204	330	61	309	110	1,405	54	...	351	71	3,904	10,836	13,718	73.1	11,114	90.3
978	268,791	6,505	1,330	332	84	329	119	1,460	43	...	433	107	4,237	10,741	14,760	72.3	10,964 (3)	98.0
979	279,288	7,744	1,473	247	63	374	115	1,766	60	...	598	157	4,854	12,598	16,264	77.5	12,079	104.3
980	276,523	7,539	1,662	258	64	436	136	2,251	50	...	678	192	5,727	13,265	18,241	72.7	13,716	96.7
981	277,470	8,970	1,914	257	80	487	147	3,169	54	...	882	199	7,192	16,159	20,282	79.7	15,415	104.8
982	270,264	8,201	1,956	286	123	575	180	3,213	64	...	625	232	7,257	15,535	22,053	78.4	16,825	92.3
983	273,859	7,605	1,995	276	162	684	192	2,749	86	...	628	210	6,987	14,588	22,709	64.2	17,333	84.1
984	271,740	8,768	1,959	279	158	755	237	2,701	105	...	652	241	7,094	15,855	23,873	66.4	19,149	82.8
985	265,694	8,072	2,217	273	173	815	216	2,751	118	...	780	216	7,565	15,634	..	19,386	90.6	

See footnotes at the end of this table.

Table 5. Average Total Net Money Income by Source for "Farmers", (1) Canada, (2) 1946-1985 (Concluded)

(B)

Year	Number of "farmers" (1)	Net farming or fishing income (14)	Wages and salaries (3,4,6, 11)	Family allowance (5)	Unemployment insurance benefits (5)	Pension income (3,6,7)	Off-farm self-employment net income	Investment income (8,19)	Net rental income	Estate income (10)	Net taxable capital gains (5)	Miscellaneous income including alimony (12)	Total off-farm income (sub-total)	Total net income
each income source as percent of total income														
1946	117,647	92.5	2.4	.0	.0	.0	.7	3.4	.7	.2	.0	.1	7.5	100.0
1947	193,160	89.0	5.0	.0	.0	.0	.9	3.4	1.3	.2	.0	.1	10.9	100.0
1948	190,090	90.9	4.6	.0	.0	.0	.9	2.6	.7	.1	.0	.1	9.1	100.0
1949	197,760	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	100.0
1950	197,150	90.4	4.4	.0	.0	.0	.0	3.4	.0	.7	.0	.2	9.6	100.0
1951	189,060	91.1	3.9	.0	.0	.0	1.1	2.5	.9	.4	.0	.1	8.9	100.0
1952	196,380	88.9	4.9	.0	.0	.0	1.0	2.8	1.2	.3	.0	.2	11.1	100.0
1953	204,800	88.1	5.3	.0	.0	1.0	.8	2.9	1.4	.2	.0	.3	11.9	100.0
1954	206,760	81.1	8.7	.0	.0	1.6	1.1	5.6	1.6	.3	.0	.0	18.9	100.0
1955	205,830	76.8	11.1	.0	.0	2.0	1.4	6.1	2.2	.4	.0	.0	23.2	100.0
1956	200,967	81.3	9.8	.0	.0	1.6	1.1	4.4	1.7	.2	.0	.0	18.7	100.0
1957	204,855	78.3	12.1	.0	.0	1.6	.9	5.1	1.7	.2	.0	.0	21.7	100.0
1958	205,331	82.3	9.0	.0	.0	1.7	.7	5.1	.9	.2	.0	.0	17.7	100.0
1959	205,581	81.1	9.1	.0	.0	1.9	1.0	5.1	.9	.2	.0	.7	18.9	100.0
1960	209,720	80.5	9.0	.0	.0	2.1	.9	5.7	.8	.2	.0	.8	19.5	100.0
1961	209,119	80.8	9.1	.0	.0	1.9	1.0	5.5	.7	.2	.0	.0	19.2	100.0
1962	220,513	79.9	9.3	.0	.0	2.4	.9	6.2	.7	.2	.0	.4	20.1	100.0
1963	222,645	80.4	9.6	.0	.0	2.3	1.0	6.1	.6	.1	.0	.0	19.6	100.0
1964	234,553	80.8	9.3	.0	.0	2.2	.9	5.8	.5	.1	.0	.3	19.2	100.0
1965	246,977	80.4	9.8	.0	.0	2.1	.9	5.9	.4	.2	.0	.2	19.6	100.0
1966	290,587	79.3	11.1	.0	.0	2.2	.9	5.6	.5	.2	.0	.1	20.6	100.0
1967	292,545	78.4	11.4	.0	.0	2.4	.9	6.1	.5	.1	.0	.2	21.6	100.0
1968	291,553	73.7	13.1	.0	.0	2.8	1.1	8.2	.6	.2	.0	.2	26.3	100.0
1969	283,859	67.3	15.6	.0	.0	3.8	1.3	11.0	.6	.1	.0	.2	32.7	100.0
1970	276,686	62.8	16.3	.0	.0	4.6	1.5	13.6	.7	.2	.0	.3	37.2	100.0
1971	277,319	65.7	15.9	.0	.0	4.3	1.4	11.7	.7	.2	.0	.2	34.3	100.0
1972	279,714	68.7	14.9	.0	.9	3.5	1.0	9.6	.7	.0	.2	.4	31.3	100.0
1973	285,810	74.5	11.7	.0	.8	2.7	.9	8.0	.5	.0	.5	.3	25.5	100.0
1974	282,267	72.3	9.5	3.2	.5	2.3	.8	9.3	.4	.0	1.3	.4	27.7	100.0
1975	279,247	70.5	9.5	3.0	.5	2.2	.9	10.4	.4	.0	2.1	.5	29.5	100.0
1976	272,486	65.4	10.4	3.1	.5	2.7	.9	12.8	.5	.0	3.2	.5	34.6	100.0
1977	245,982	61.1	12.0	3.3	.6	3.1	1.2	14.0	.5	.0	3.5	.7	38.9	100.0
1978	268,791	60.6	12.4	3.1	.8	3.1	1.1	13.6	.4	.0	4.0	1.8	39.4	100.0
1979	279,288	61.5	11.7	2.8	.5	3.0	.9	14.8	.5	.0	4.7	1.2	38.5	100.0
1980	276,523	56.8	12.5	1.9	.5	3.3	1.0	17.0	.4	.0	5.1	1.4	43.2	100.0
1981	277,470	55.5	11.8	1.6	.5	3.0	.9	19.6	.3	.0	5.5	1.2	44.5	100.0
1982	270,264	53.3	12.6	1.8	.8	3.7	1.2	20.7	.4	.0	4.0	1.5	46.7	100.0
1983	273,859	52.1	13.7	1.9	1.1	4.7	1.3	18.8	.6	.0	4.3	1.4	47.9	100.0
1984	271,740	55.3	12.4	1.8	1.0	4.8	1.5	17.0	.7	.0	4.1	1.5	44.7	100.0
1985	265,694	51.6	14.2	1.7	1.1	5.2	1.4	17.6	.8	.0	5.0	1.4	48.4	100.0

.. figures not available

... figures not appropriate or not applicable

(1) "Farmers" are defined as taxpayers whose major source of gross income is (unincorporated) self-employment income from farming. This is the definition used by Revenue Canada, Taxation in their "Taxation Statistics" annual publication.

(2) Canada includes the Yukon and Northwest Territories. Newfoundland is not included until 1949.

(3) "Commissions from employment" and "other pensions or superannuation" were included in wages and salaries prior to 1966.

(4) "Other employment earnings" (i.e., adult training allowances, research grants, tips and gratuities) were included in wages and salaries prior to 1954 and from 1959 to 1971.

(5) This item became taxable in the year indicated.

(6) "Old age pension" was included in wages and salaries prior to 1952.

(7) From 1968 to 1970, the amount reported in Old Age Pension included Supplements and Canada Pension Plan (CPP) of Quebec Pension Plan (QPP) Benefits.

(8) Dividends represent actual dividends received prior to 1971. Starting in 1971, the "taxable amount of dividends" is included, which, in general, is one third higher than the actual dividends received.

(9) Starting in 1969, Bond Interest and Bank Interest were categorised separately.

(10) "Income from trusts" and "Estate income" were separate items prior to 1951. They were combined under "Estate income" from 1951 to 1972 and they were combined under "Income from trusts" thereafter.

(11) Annuity income is included in wages and salaries prior to 1951.

(12) "Other Canadian investment income" is included in "miscellaneous income" prior to 1951 and from 1959 to 1963.

"Foreign investment income" is included in "miscellaneous income" prior to 1963.

(13) In 1949, at the Canada level, average earned income equalled \$1.796 and average investment income averaged \$57

(14) Starting in 1980, net farming and net fishing income were tabulated separately in Table 3 of Revenue Canada, Taxation "Taxation Statistics" (annual).

(15) The average income of all taxpayers fell in 1978 due to the influx of taxpayers with little or no income who claimed the child tax credit.

Source: Canada. Revenue Canada, Taxation Statistics (annual).

Unpublished statistics were obtained from Revenue Canada, Taxation.

other reason is that savings deposits had been built up during the previous farm income boom. This allocation of investment capital to the off-farm market represents an increasing integration of farm families with off-farm capital markets.

In Section 2.2.2 above, we noted that increasing interest payments by the farm sector to the nonfarm sector represented increased integration of farm enterprises with the nonfarm sector. Here, we observe that farm families now allocate more of their financial investments to off-farm capital markets on average.

But, these averages hide a structural diversity. About one-third of all operators receive more interest than they pay, another one-third pay a small amount of interest (e.g., under \$5,000 per year) and the remaining one-third pay over \$5,000 interest per year (Bollman, 1983). Therefore, the observation that "farms" now borrow more from the non-farm sector must be tempered with the observation that "farm families" are investing more in off-farm capital markets. Further, the varying activities of three separate groups in the farm structure with respect to interest payments and receipts suggest there are different types of integration with capital markets.

3.2. INTEGRATION WITH OFF-FARM LABOUR MARKETS

Farm families also allocate more of their labour to the off-farm labour market. Between 1951 and 1981, the proportion of census-farm operators reporting "some days of off-farm work" has increased from 28 percent to 39 percent (Figure 6). In 1941, the proportion of operators reporting off-farm work was high--largely as a result of short-term opportunities for performing custom work for other farmers. The percentage of operators reporting full-time off-farm work⁽³⁾, has increased from 3 percent in 1941 to 14 percent in 1981. Average days of off-farm work per operator reporting has also increased from 75 days to 171 days (Figure 7). As a result, developments in off-farm labour markets may have an increasingly important impact on farm family income.

Another measure of the importance of off-farm labour markets is to note the proportion of total income of "farmers" that accrues from off-farm earnings. In 1946, off-farm wage earnings averaged \$26, which represented 2 percent of total income (Figure 8 and Tables 5a and 5b). By the 1970's and 1980's, off-farm wage earnings ranged between 9 and 16 percent of total income.

(3) Defined as more than 228 days of off-farm work.

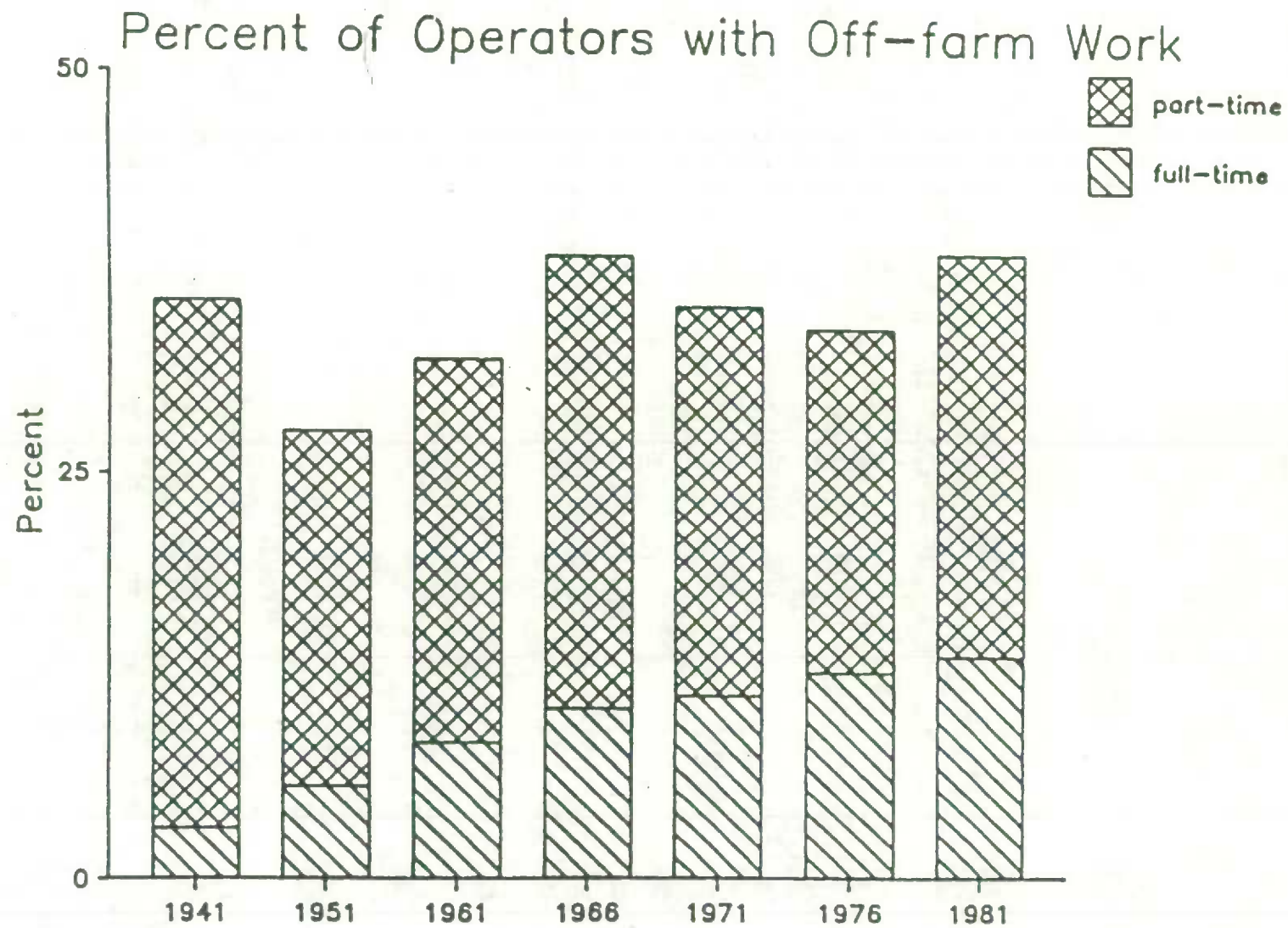


Figure 6

Average Days Off-farm (PER OPERATOR REPORTING)

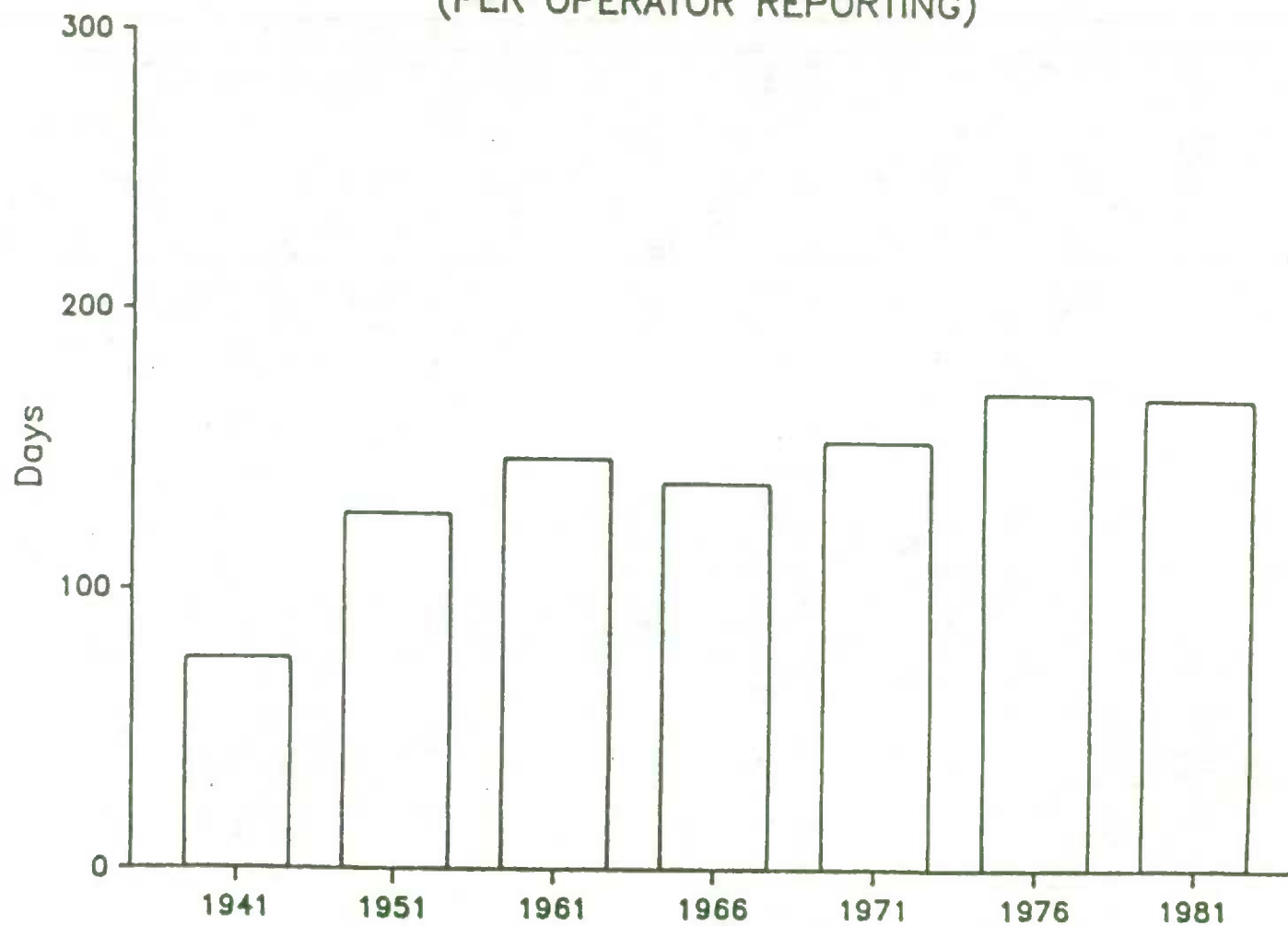


Figure 7

Percent of Income from Off-farm Wages

CANADA, 1946 - 1985

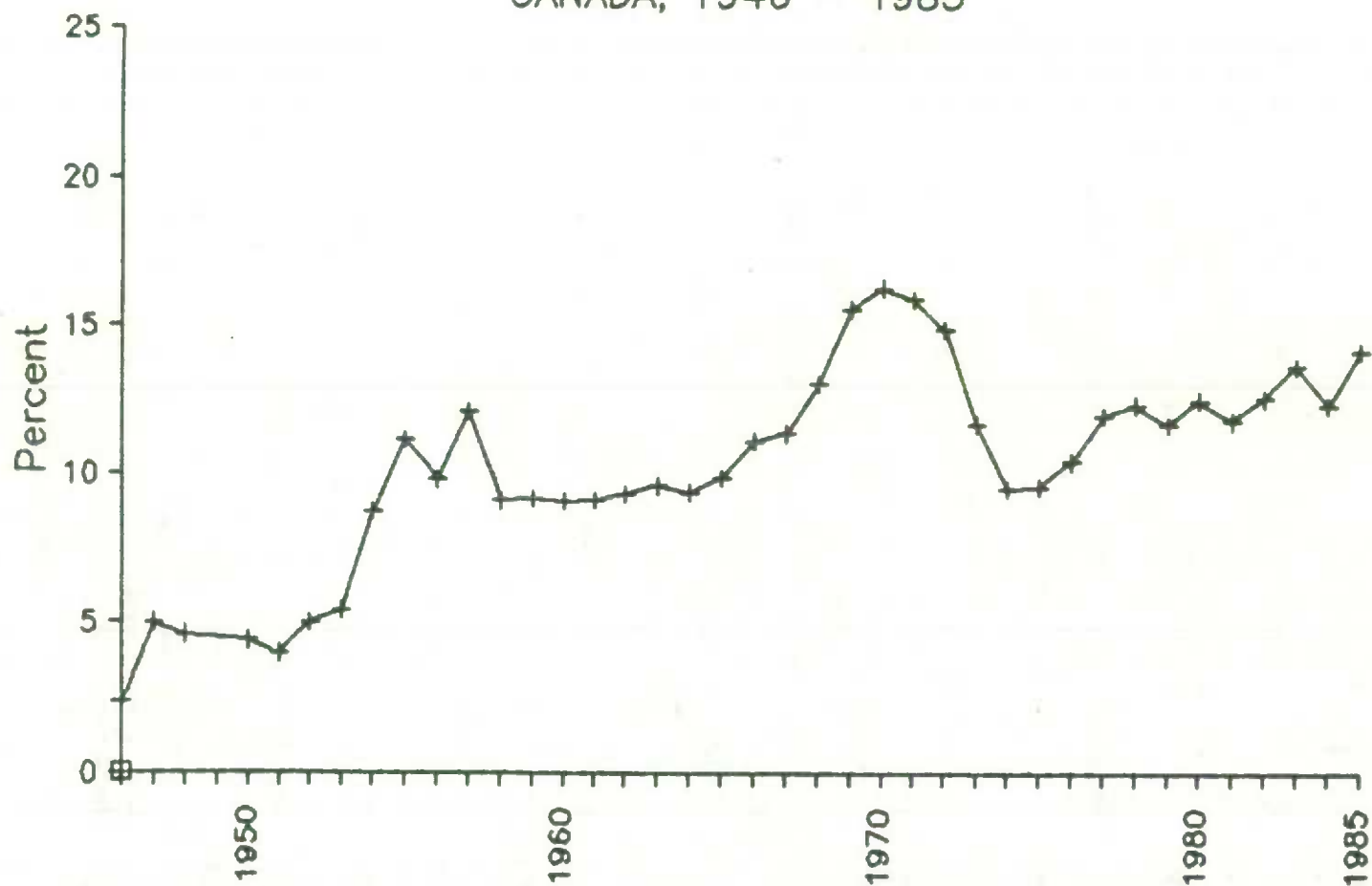


FIGURE 8.

"farmers": taxfilers with gross farm income as major source

3.3. IN SUMMARY

** Farm families now derive a larger share of farm family total income from off-farm employment earnings.

** On average, a larger share of farm family total income is derived from off-farm investments.

Therefore, it can be expected that the economic well-being of farm families is becoming more sensitive to macro-economic trends, such as unemployment rates and interest rates.

4. OFF-FARM WORK PARTICIPATION BY WOMEN, MEN AND CHILDREN

To this point, various trends which suggest the increasing integration of both farm enterprise and the farm family with the nonagricultural economy have been considered. The purpose of this section is to describe the current patterns of off-farm work participation by farm men, women and children.

By way of introduction, we note that households of operators of "family farms"⁽⁴⁾ supply two-thirds of all the labour in

(4) "Family farms" refers to proprietorships, partnerships and family corporations. Excluded are institutions, community pastures, Hutterite colonies, nonfamily corporations and miscellaneous types such as estates and trusts.

agriculture (Table 6). Virtually all (96 percent) of unpaid family and the great majority (88 percent) of self-employed workers reside in "family farm" households.

4.1. DISTRIBUTION OF HOUSEHOLD MEMBERS ACCORDING TO MAJOR OCCUPATION

For each individual 15 years of age or over, an occupation was recorded for the major job for the week prior to the census (June 3, 1981), or, if the individual did not work, for the last job held since January 1, 1980. Aggregate annual hours for each individual are calculated by multiplying the hours worked last week by the weeks worked last year. The results indicate that "family farm" households worked a total of 1.2 billion hours in 1980 (Table 7). Overall, 60 percent of the household labour is supplied by the operator, 16 percent is supplied by the spouse, and 12 percent is supplied by children. Two-thirds of the work was on-farm and one-third was off-farm.⁽⁵⁾

The farm/nonfarm labour allocation pattern shows significant differences by sex of the household member. Among male

(5) We recognize that some individuals classified to an agricultural occupation would work part-time off the farm and similarly, some individuals classified to a nonagricultural occupation would work part-time on the farm. It is not possible to determine whether, on balance, aggregate hours attributed to farm work or to off-farm work would be overstated or understated.

Table 6. Proportion of Agricultural Labour Force who are members of households of operators of "family farms"(1), within each sex and class of worker group, Canada, 1981

Sex	Class of worker			Total
	Self-employed worker	Paid worker	Unpaid family worker	
percent				
Male	87	32	92	64
Female	94	42	98	69
Total	88	34	96	65

Sources: Canada. Statistics Canada. LABOUR FORCE - OCCUPATION BY DEMOGRAPHIC AND EDUCATIONAL CHARACTERISTICS, 1981 Census of Population (cat. no. 92-917)
Canada. Statistics Canada. Unpublished tabulations from the 1981 Agriculture-Population Linkage

(1) "Family farms" refers to proprietorships, partnerships, and family corporations. Excluded are institutions, community pastures, Hutterite colonies, non-family corporations, and miscellaneous types such as estates and trusts.

Table 7. Within Household Distribution of Aggregate Hours of Work,
for "Family Farm"(1) Households, by Type of Family Member,
by Major Occupation, by Sex, Canada, 1981

Type of family member and major occupation(2)	Estimated aggregate annual hours (3) (million hours)			Percent of aggregate annual hours			Percent of aggregate hours for each type of family member		
	Males	Females	Both	Males	Females	Both	Males	Females	Both
Farm operator									
-- agric. occn.	524	6	530	55	2	44	74	60	74
-- non-agric. occn.	182	4	185	19	1	16	26	37	26
-- total(4)	710	10	720	74	4	60	100	100	100
Operator's spouse									
-- agric. occn.	3	84	87	0	35	7	30	46	46
-- non-agric. occn.	6	88	95	0	37	8	69	49	50
-- total(4)	9	160	190	0	76	16	100	100	100
Children of operator									
-- agric. occn.	64	6	70	7	2	6	55	19	48
-- non-agric. occn.	50	24	74	5	10	6	43	78	50
-- total(4)	117	31	148	12	13	12	100	100	100
All members of households with multi-operators									
-- agric. occn.	32	2	35	3	1	3	87	56	84
-- non-agric. occn.	5	2	6	0	0	0	13	38	15
-- total(4)	37	4	41	4	2	3	100	100	100
Other household members									
-- agric. occn.	60	5	65	6	2	5	74	37	69
-- non-agric. occn.	19	7	26	2	3	2	23	57	28
-- total(4)	81	13	94	8	5	8	100	100	100
All household members									
-- agric. occn.	683	103	786	72	43	66	72	43	66
-- non-agric. occn.	262	125	386	27	52	32	27	52	32
-- total(4)	955	228	1193	100	100	100	100	100	100

Source: Canada. Statistics Canada. Unpublished tabulations from the
1981 Agriculture-Population Linkage

- (1) "family farms" refers to proprietorships, partnerships, and family corporations. Excluded are institutions, community pastures, Muttarite colonies, non-family corporations, and miscellaneous types such as estates and trusts.
- (2) The occupation is requested for the major job of the individual (15 years of age or over) for the week prior to the census (June 3, 1981), or if not working, then for the last job held since January 1, 1980.
- (3) Aggregate hours are estimated by multiplying the hours worked last week by the weeks worked last year.
- (4) "Occupation not stated or not applicable" is not shown, but is included in the totals.

operators, three-quarters of their work is agricultural and one-quarter is off the farm (Figure 9 and Table 7), whereas female spouses split their work between agriculture (57%) and off-farm employment (Figure 10 and Table 7). Male children allocated slightly more than half of their labour (55 percent) to agricultural work while female children allocated over three-quarters (78 percent) of their labour to non-agricultural occupations.

4.2. OFF-FARM WORK PARTICIPATION PATTERNS

Participation in off-farm work is defined by an individual receiving employment earnings (i.e., wages and salaries or non-farm self-employment income), where his or her usual place of work is not "at home."⁽⁶⁾

In 1981, 29 percent of the operators reported off-farm work and 29 percent of the spouses of operators reported off-farm work (Table 8). In 17 percent of the farm families, children of the farm operator work off the farm. In total, 53 percent of Canadian farm families depend on off-farm earnings contributed either by the operator, or by the spouse, or by one or more

(6) This last criterion represents an attempt to exclude farm family members who receive wages for working on the family farm.

Distribution of Male Hours

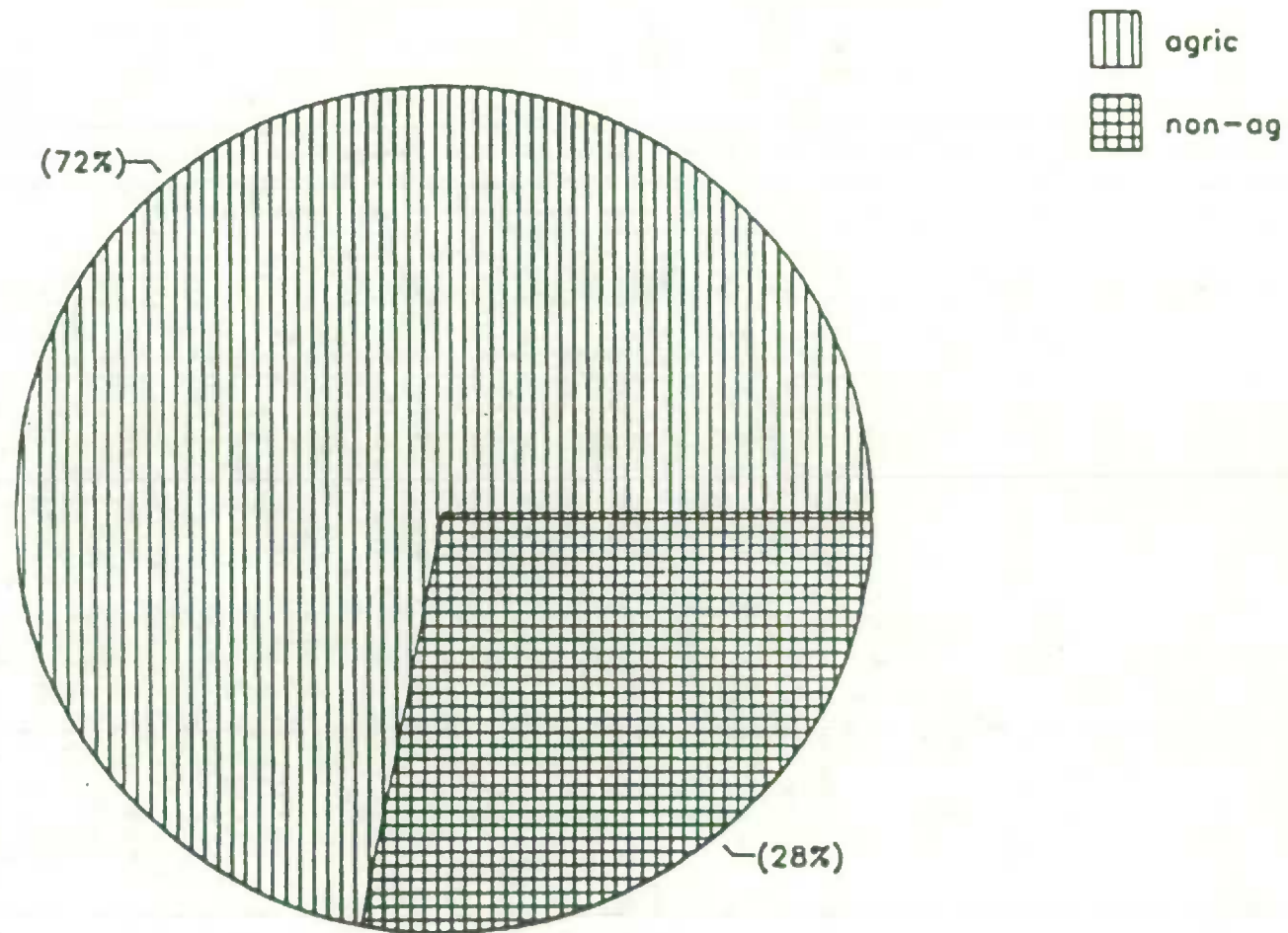


Figure 9

Distribution of Female Hours

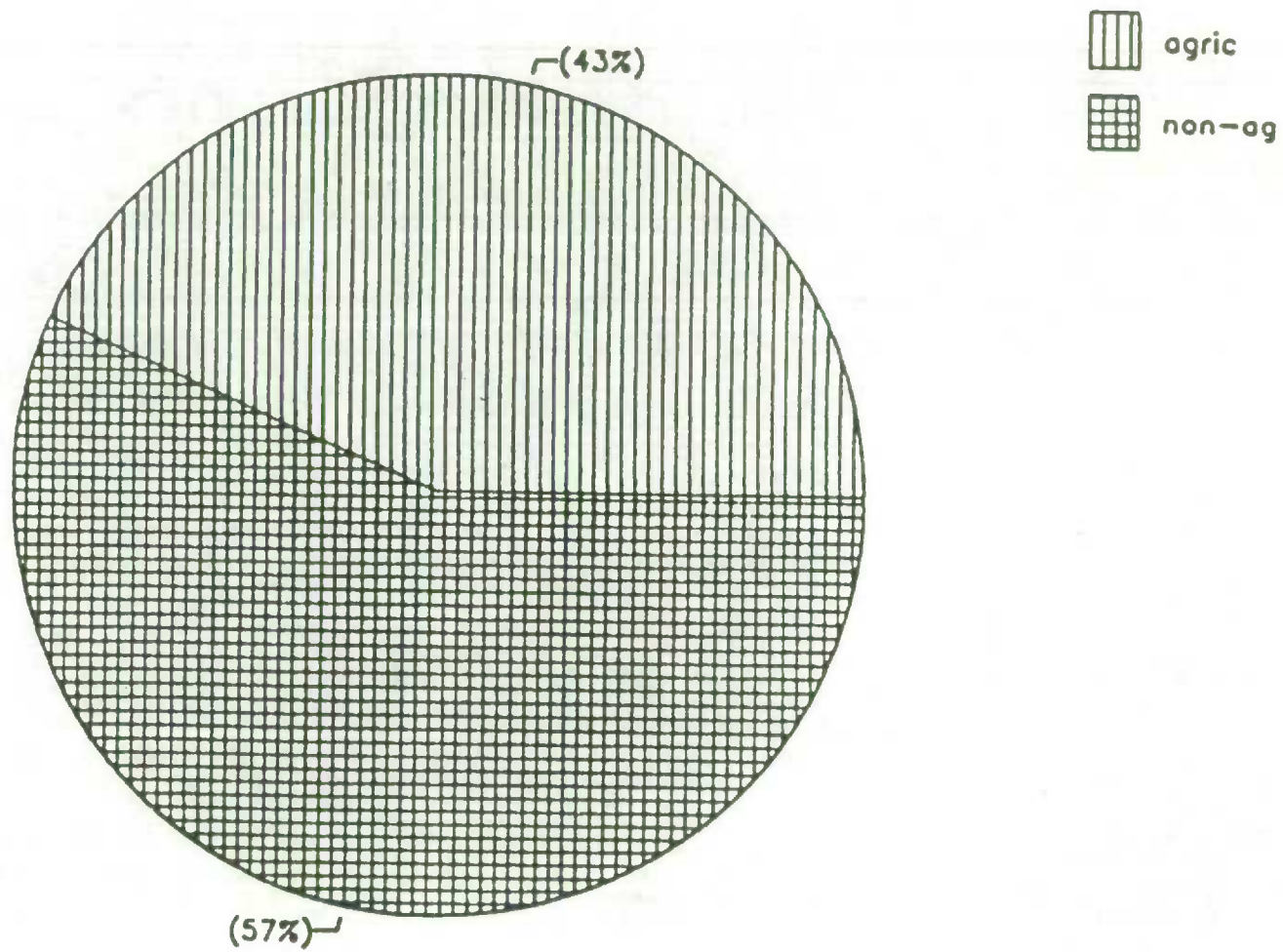


Figure 10

Table 8. Off-farm Work Patterns of Operators, Spouses, and Children,
by Size of Gross Farm Sales, Canada, 1981

Off-farm work pattern	Size of gross farm sales						Total
	under \$5,318	\$5,318- 21,805	\$21,805- 55,999	\$56,000- 159,999	\$160,000- 399,999	\$400,000 or over	
	*** percent ***						
Neither operator nor spouse nor child(ren) work off-farm	25	40	57	65	66	59	47
Child(ren) only work off-farm	5	7	10	11	12	10	8
Spouse only works off-farm	8	12	16	15	14	13	13
Child(ren) and spouse work off-farm	2	3	3	3	2	2	3
Operator only works off-farm	26	2	6	3	2	4	13
Operator and child(ren) work off-farm	6	4	2	0	0	3	3
Operator and spouse work off-farm	21	14	5	2	2	5	10
Operator and spouse and child(ren) work off-farm	6	4	1	0	0	2	3
Total(1)	100	100	100	100	100	100	100
subtotal: operator works off-farm	60	23	14	5	6	14	29
subtotal: spouse works off-farm	37	22	26	20	20	23	29
subtotal: child(ren) work(s) off-farm	19	18	16	15	16	16	17

Source: Canada. Statistics Canada. Unpublished tabulations from
1981 Agriculture-Population Linkage

(1) This group represents 87% of all census-farms. Excluded are
institutions, community pastures, non-family corporations, Hutterites,
and miscellaneous types such as estates and trusts. Also excluded are
unmarried operators and multi-farm households.

children, or by any combination of these. However, for a large group (47 percent), off-farm earnings are not a factor in family economic welfare. The detailed distribution of census-farm operator families is as follows:

- 47 percent have neither the operator nor the spouse nor any children working off the farm;
- 13 percent have only the spouse working off the farm;
- 13 percent have only the operator working off the farm;
- 10 percent have both the operator and spouse working off the farm;
- 8 percent have only (one or more) children working off the farm;
- 3 percent for each: spouse and children working off-farm, operator and children working off-farm, operator and spouse and children working off-farm (Figure 11).

These patterns vary significantly among farms of different sizes, in terms of gross farm sales. In 1981, 25 percent of all census-farms had less than \$5,318 gross sales (Ehrensaft et al., 1984). For these small holdings, 75 percent report at least one family member with off-farm work. At the other end of the scale,

Family Off-farm Work Pattern

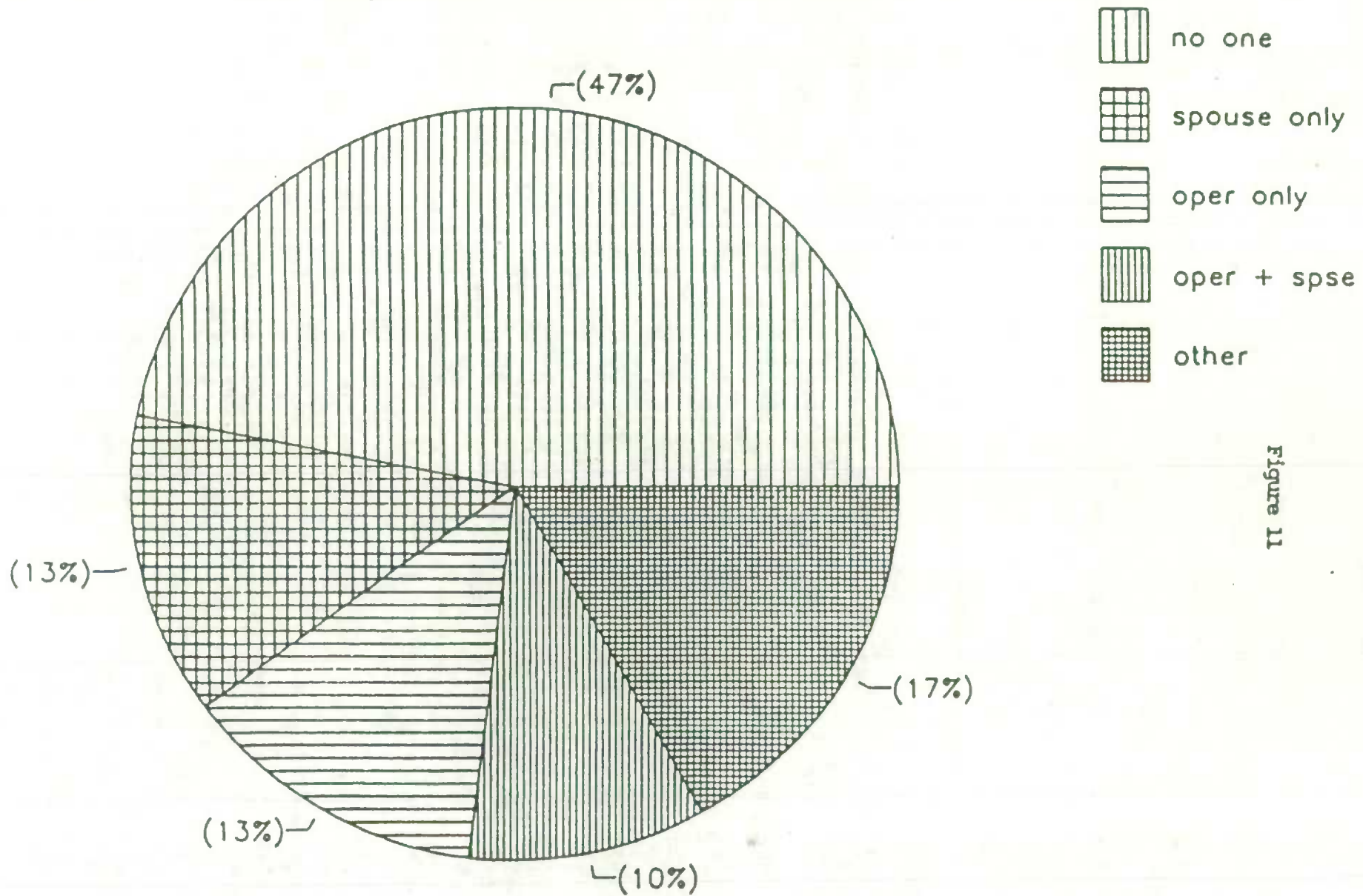


Figure 11

for farms with gross sales from \$56,000 through to \$399,999,⁽⁷⁾ two-thirds of the families have no family member with off-farm work. If they do report off-farm work, it is a case of "spouse only" or "child(ren) only" with some off-farm work. Only 5 or 6 percent of the operators in this gross sales range reported off-farm work.

The case where the "operator only" works off the farm is four times more predominant for small farms under \$5,318 sales than for any other sales class. On larger farms, the operator is much less likely to participate in off-farm work, either by her/himself or with other family members. If a family member works off the farm on larger farms, it is likely to be the spouse or a child.

These findings show a complex pattern of on-farm/off-farm labour allocation. Generally, there is less likelihood of off-farm work participation by farm family members on larger farms. The complexity of the labour allocation patterns becomes evident when the type of family member is considered. The wide diversity of farm families in terms of their on-farm/off-farm labour

⁽⁷⁾ In 1981, 25 percent of all census-farms reported gross sales of \$56,000 or greater, accounting for 74 percent of aggregate gross sales. One percent of census-farms reported sales of \$400,000 or more and provide 19 percent of gross sales. Thus, farms in the \$56,000 to \$399,000 range (i.e., the 75th to 98th percentile) represent 24 percent of the farms and 55 percent of aggregate gross sales.

allocation patterns means that there is no such thing as an "average" farm family.

4.3. CONTRIBUTION OF OFF-FARM WORK TO FARM FAMILY INCOME

When farmers are asked why they combine farm and off-farm work, their responses can be classified into two groups: (1) a desire to maintain or supplement family income and (2) a preference for rural living (Bollman 1979, Appendix D). Off-farm work by the operator, the spouse and the children provided 35 percent of the total farm family income in 1981 (Table 9), but the contribution to family income varies considerably depending upon which family member and how many family members report off-farm earnings. The proportion of total family income coming from off-farm earnings (Table 9) should be considered jointly with the proportion of families reporting each off-farm work pattern (Table 8).

For larger farms (with gross sales of \$56,000 or over), off-farm earnings contributed only 12 percent of total family income on average.⁽⁸⁾ Therefore, among farms that produce the bulk of agricultural sales, off-farm earnings are not a large factor in

⁽⁸⁾ Recall that 25 percent of census-farms in 1981 had sales of \$56,000 or more and accounted for 74 of the aggregate gross sales.

Table 9. Contribution of Off-farm Earnings to Total Family Income, by Operator, Spouse, and Child(ren) Off-farm Work Pattern, by Size of Gross Farm Sales, Canada, 1981

Off-farm work pattern	Size of gross farm sales											
	under \$56,000				\$56,000 or over				Total			
	Child(ren)		Spouse Operator		Child(ren)		Spouse Operator		Child(ren)		Spouse Operator	
	All		All		All		All		All		All	
****percent****												
Neither operator nor spouse nor child(ren) work off-farm	-	-	-	-	-	-	-	-	-	-	-	-
child(ren) only work off-farm	23	-	-	23	12	-	-	12	18	-	-	18
Spouse only works off-farm	-	39	-	39	-	27	-	27	-	33	-	33
Child(ren) and spouse work off-farm	15	28	-	44	9	19	-	27	13	25	-	39
Operator only works off-farm	-	-	74	74	-	-	58	58	-	-	73	73
Operator and child(ren) work off-farm	13	-	56	69	9	-	50	60	13	-	53	66
Operator and spouse work off-farm	-	28	60	88	-	23	51	74	-	28	60	87
Operator and spouse and child(ren) work off-farm	9	21	52	82	10	17	40	66	10	21	51	81
Total		12	30	45		2	5	4	12		3	33

Source: Canada. Statistics Canada. Unpublished tabulations from 1981 Agriculture-Population Linkage

- (1) This group represents 87% of all census-farms. Excluded are institutions, community pastures, non-family corporations, Nutrient es, and miscellaneous types such as estates and trusts. Also excluded are unmarried operators and multi-farm households.

the total family income. However, within this group of larger farms, off-farm work is important for a small group of families. For example, on 15 percent of these farms, the "spouse only" works off the farm (Table 8) and contributes 27 percent of the family income (Table 9).

For families with farms under \$56,000 gross sales, off-farm earnings on average contribute 45 percent of the total family income. Here again, off-farm earnings are very important for a small group of families. For example, both the operator and the spouse work off the farm on about 10 percent of the farms with gross sales less than \$56,000 and their earnings provide 88 percent of total family income.

4.4. IN SUMMARY

Over half (60%) of all farm families' aggregate hours of work are contributed by farm operators; three-quarters of their hours are worked in agriculture, while the remaining 25% are worked off-farm. Spouses work 16% of the total aggregate household hours, but their work is split almost equally between on- and off-farm work. Children contribute 12% to the aggregate pool of labour from all household members, and male children are more likely to work these hours in agriculture (55%) than are female children (22%).

Off-farm work is one means by which farm families can supplement their income from farming. As might be expected, therefore, participation in off-farm work is more characteristic of farms with lower gross sales than those with higher gross sales. However, while this relationship is most pronounced for farm operators, it is less evident among spouses or operators. Furthermore, it is non-existent among children, whose off-farm work participation is unaffected by size of gross sales.

As well, the general relationship between size of gross sales and off-farm work should not be exaggerated. Even among farms with relatively large gross sales -- where the average percentage of total family income derived from off-farm sources is only 12%, there are some (15%) in this sales class where "spouse-only" off-farm work provided 27% of the total family income in 1980. Nor should the general relationship be regarded as a uniform pattern, without significant variation. Among farms with relatively low gross sales, where off-farm work provides an average of 45% of total family income, there are those (10%) where both the operator and the spouse work off-farm and derive almost all (88%) of their total family income from this source.

5. CONCLUSIONS AND FURTHER RESEARCH ISSUES

Current levels of participation in off-farm work by farm family members might be viewed as part of an historical trend toward greater integration of the farm enterprise and of the farm family with the non-farm economy. Over time, farm enterprises have sold larger shares of their produce. As well, larger shares of their output have been based on cash inputs and, at least since the last war, there is a trend towards a greater relative reliance on borrowed capital and paid labour.⁽⁹⁾

From the point of view of the farm family, income from off-farm investments and income from off-farm jobs are both becoming relatively more important contributors to farm family income. Off-farm work contributes 35 percent of total farm family income, on average. Among families on the larger farms which produce the bulk of agricultural output, however, off-farm earnings are not a major factor--contributing only 12 percent of total family income in 1981. Nonetheless, for farms with either relatively small or large gross sales, there is considerable variation in the percentage of total income earned from off-farm work.

(9) Although it should be remembered that it is unclear whether increases in paid labour are attributable to non-family or family paid labour.

Canadian family farms have always interacted with "off-farm" markets. The purpose of this paper has been to assess whether primary agriculture has become increasingly integrated with the "off-farm economy" and whether participation in the "off-farm labour market" can be understood in this context.

To conduct these assessments, we have proposed that it is necessary to analyze the characteristics of the farm enterprise separately from those of the farm family. Many "off-farm" factors impact upon the enterprise and the family. We have suggested that one of these--high interest rates--has had a negative impact on farm business income while simultaneously having a positive impact on the income of some farm families. This observation confirms the need to analyze enterprise characteristics separately from those of the farm family, for the interaction of these "off-farm" factors may affect the behaviour of farm family members in complex ways.

Some analysts view macro-trends in off-farm work participation as indicators of the desire to acquire capital for farm expansion or of the need to maintain family income levels. Although these are important indices, off-farm work participation patterns are complex. Conclusions drawn from such indices should be tempered by a consideration of several other factors, including the place of farm families in the farm structure. When participation in off-farm work by farm family members is consi-

dered in terms of the structure of agriculture production, as defined by size of gross farm sales, at least two conclusions are evident. The first conclusion is that there is no "average" Canadian farm enterprise, for there is a wide diversity of farm sizes. Farm families have varying degrees of dependence on off-farm sources for income, either from interest or from off-farm work. Averages often mask complex behaviours and trends. The second conclusion is that there is no "average" Canadian farm family, for on-farm/off-farm labour allocation patterns of farm families are also diverse. Farm size does influence the overall level of family off-farm work. At the same time, however, the tendency of various farm family members to engage in off-farm work appears to be only partly related to farm size.

These conclusions underscore the need for further research and discussion. What are the principal factors which are related to the diversity of the off-farm work patterns of all farm family members? If the tendency of operators' spouses to engage in off-farm work is only partly related to farm size, what are the other factors associated with this? Can models developed for the operator (eg. Bollman, 1979) be used to explain the off-farm work participation of spouses and children? Is there an important interaction between the extent to which farm operators and their spouses participate in off-farm work? To what extent are these interactions mediated or required by the characteristics of the enterprise, such as gross sales or major enterprise type?

Furthermore, to what extent do "off-farm labour market" factors, such as relative wage rates and demand for particular occupations, influence off-farm work patterns? Since ultimately the size of the farm enterprise may be determined simultaneously with the on-farm/off-farm allocation of labour, can the fundamental factors which explain the on-farm/off-farm allocation of labour be identified?

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