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Studies of
the Royal Commission
on the Status of Women
in Canada

Women at Home:
The Cost to the Canadian Economy
of the Withdrawal from the Labour Force
of a Major Proportion
of the Female Population

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While this study was prepared for the Royal Commission on the Status of Women in Canada and is being published under its auspices, the views expressed therein are those of the author and not necessarily those of the Commissioners.

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PART ONE

"WOMEN AT HOME" AS AN ECONOMIC PROBLEM

Our primary question - "How much does female
non-participation in the labour force cost the Canadian
economy?" - merely summarizes a series of other, more specific
inquiries. For example, since we are speaking of cost, what
sort of an expense do we mean? Who is paying it? In terms
of what social objectives does partial female non-employment
represent a real cost? Does the present state of social
accounting allow an adequate measurement of the phenomenon?

This study offers the Commission a summary examination
of these questions in three successive stages. First, we
must define the question more clearly in terms of theory,
measurement and economic policy. These preliminaries will be
complemented by an examination of the present state of
research, both Canadian and foreign, on the questions. Within
the framework thus drawn up, we shall proceed to a general
calculation of the potential contribution to the Canadian
economy of women not now working. Finally, these approximate
results will be corrected, to a certain extent, to take into
consideration the influence of such factors as the work done
by women within the home, the differences in ability between
working and non-working women, the special time-related
characteristics of female participation in the labour force.

Actual economic literature on the subject, dealing with
both theory and empirical micro - or macro-economic research
is scarce. This lack of interest arises, it seems to me, from
the scope of the statistical problems inherent in the measure-
ment of any non-market phenomenon and the uncertainty of
economic theory in the field of welfare in general and, more
particularly, in all matters associated with leisure.
Obviously, to a certain extent, these two groups of difficulties
are complementary; when the subject to be measured is not
itself particularly clearly defined, it is not surprising that
there is some hesitation about devoting large sums to the collection
of data which does not arise spontaneously from the actual
workings of a modern economy.

In any case, the relevant economic publications may be
divided into two groups: first, those dealing with the

problems created for national accounting by the existence of non-market economic activities, with the work done by women in the home, the major item in this group; and secondly, those which analyze the factors governing the female employment rate. The first group of studies is of greater interest to us, as our viewpoint is primarily macro-economic.

We should point out that, in current estimates of national revenue, the value of the work done by women who remain in the home is not a new concern. In fact, since the early days of national accounting, researchers have been studying this question. Indeed, there is some evidence that this was a subject of even greater interest at that time than it is today.

The first estimates of national revenue did not include assessments of the non-market contribution of the female population. This situation led Pigou [1] to point out the paradox in a measurement of collective welfare which indicates a reduction in this welfare when a man marries his cook. Similarly in 1922, Bowley [2] pointed out that the experience of the war of 1914-1918 had shown the importance of the labour reserve constituted by the so-called non-working female population. When employment in domestic service drops as a result of an increase in munitions production and certain tasks are carried out by the lady of the house, this increase in the amount of work done may not be reflected at all in the normal statistics of national accounting. Indeed, they may even show a reduction in national income.

The two authors cited, like the very great majority of their successors, conclude nonetheless that measurements of national revenue must be restricted more or less to exchanges directly related to the market. For, besides actual statistical difficulties, the inclusion in the national accounts of estimates of the value of unpaid housework requires distinctions to be made arbitrarily and from the outside, as to the fuzzy line between what is pleasure and what is work.

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[1] A.C. Pigou, The Economics of Welfare, (London, 1946), pp. 33 - 34.
[2] A.L. Bowley, "The Definition of National Income", The Economic Journal, Vol. 33, (March 1922), p 3.

Simon Kuznets [3/] excludes work carried out by women in the home, in part because, "The conditions under which (the productive activities of housewives) are carried out and the factors that affect the amount of income from them are so vastly different from those that bear upon activities whose products usually appear on the market place that it seems best to exclude them."

This statement is, however, partially contradicted somewhat later when Kuznets mentions the extreme cyclical instability in relative importance of the economic activity which takes place within the family unit. [4/] If such cyclical variations do exist, they reflect the adaption of households to changes in their economic conditions, an adaptation which takes the actual form of an increase or reduction in the amount of non-market work provided. In short, strictly with regard to economic theory, the exclusion of unremunerated female labour cannot be explained on a basis as questionable as the alleged non-economic nature of this work. This reason for exclusion appears, moreover, in Kuznets, as an a posteriori justification and of relatively secondary importance as compared to the work of evaluating women's contribution. According to Kuznets, such a measurement, even if large sums were available to finance it, would still be of such dubious value that it would not merit the effort. Kuznets is supported in this view by a spokesman for those who actually assess national income, Jaszi, who accepts as legitimate any charges which do not modify the boundaries of the field of economic activity, but hastens to add that the work of housewives, if included, would constitute such a modification. [5/]

3/Simon Kuznets, National Income and Its Composition 1919-1938, (N.B.E.R, New York, 1941), pp. 431 - 32.
4/Simon Kuznets, ibid.
5/George Jaszi, "The Conceptual Basis of the Accounts: A Re-examination", in A Critique of the United States Income and Product Accounts, Vol. 22 in Studies in Income and Wealth, (N.B.E.R., Princeton, Princeton University Press, 1958), p. 61.

It is rather astonishing to note that Kuznets'
observations concerning the quality of the data relating to
the family sector are still fully justified 30 years later. 6/

Although it has been stated relatively recently 7/ that
a measurement of the non-market contribution of women, even if
it were desirable, would be impossible, at least one attempt was
made during the thirties to carry out a systematic calculation
of this kind. 8/

This estimate was made of the evolution of the
importance of non-market female labour in Sweden, for the
period 1861-1930. The method used by Lindahl, Dahlgren and
Kock is, in principle, very simple. It involves simply
assigning to all women between the ages of 15 and 64 and
holding no remunerated employment, the wages paid to profes-
sional housekeepers. For agriculture, the assessment is made
on the basis of the wages received by unskilled workers in
this sector. The inclusion of domestic work is esstential to

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6/Simon Kuznets, National Income: A Summary of Fingings,
(N.B.E.R., New York, 1946), p. 136: "So far, national income
measurement has been most successful in recording the
contribution of the business area, least in the public and
family sectors. Future study lies largely in the latter - both
within a single economy and for several - because international
comparisons cannot mean much unless the relative weight and
relations of the three sectors in each economy are known."
7/Everett E. Hagen, and Edward Budd, "The Product Side: Some
Theoretical Aspects", in A Critique of the United States Income
and Products Accounts, (N.B.E.R., Princeton, 1958), p. 233:
"...the work of housewives is performed both because it is
satisfying and because the result is wanted, it is therefore
economic. Its value is omitted from measurement because it
cannot be measured very accurately; its omission should not
be rationalized on other grounds".
8/Erik Lindahl, Einar Dahlgren and Karin Kock, National Income
of Sweden 1861-1930, (2 vol., London, P.S. King & Sons Ltd.,
1937), p. 100 ff.; and S. Kuznets, op. cit., pp. 431-437.

these researchers both for a correct assessment of the behaviour of the economy at any given point in time and for any measurement of growth.[9] By this estimate, unpaid domestic work constitutes 20 per cent of the national income in 1930. One totally unexpected point is that this proportion is remarkably stable over a long period of time, from 1861 to 1930.[10] This stability is so contrary to other well-known phenomena of economic growth (e.g., greater specialization, economies of scale), that the authors conclude that their statistical bases are inadequate and content themselves with a more conventional measurement of the collective welfare in their analysis, thus excluding the value of unpaid domestic work.[11]

The 20 per cent of the national income attributed by the Swedish researchers to the non-working female population is comparable to the figure arrived at both by their Norwegian counterparts and in the estimates made by Simon Kuznets.[12] Kuznets, for example, estimated (roughly) a 25 per cent increase in the national income measured in the United States in 1929 as a result of inclusion of the work done by women at home.[13]

This brief description covers nearly all the attempts made to date to evaluate the contribution to the economy by ("non-employed" women. Studies have been rare and have encountered little success.

Moving on now from the strictly statistical problems of national income assessment, some considerations are required of the economic theory on which these previous or hypothetical calculations are based.

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[9] E. Lindahl, op. cit., Part II, pp. 527-528.

[10] Ibid., p. 235.

[11] Ibid., pp. 213-214.

[12] Z. Y. Herslag, "The Case of the Unpaid Domestic Service," Economia Internationale, Vol, 13, (February 1960), pp. 25-41.

[13] Simon Kuznets, op. cit., p. 433. Kuznets does not mention how he arrives at the figure of 25 per cent. As for the Norwegian estimates, this work does not appear to have been translated into either French or English, and hence we must content ourselves with the reports on it given by Herslag, and Ingmar Ohlsson, On National Accounting, (Stockholm, Konjuncturinstitutet, 1953), pp. 195, 241.

First of all, we must examine somewhat more closely the criteria which should be used in planning a measurement of the present and/or potential contribution of non-employed women. In this connection, the approach used in the above-mentioned studies leaves room for a great deal of criticism. The calculations of Lindahl and his colleagues assume that women outside the labour market are engaged full-time in specific tasks similar to those of domestic servants. For those women who, in fact, employ domestics, such an hypothesis is clearly far from the truth. Moreover, unless there is systematic discrimination in employment, it is not at all clear why the great majority of women would choose such a poorly paid profession. If the wage paid to domestics and professional housekeepers seems, at first sight, a good index of the work carried out by non-employed women, the same is not true if we consider the actual employment possibilities available to those who have chosen to stay out of the labour market. Theoretically, within the framework of a competitive economy, it would be more accurate to assess the value of the time spent by women in the home as more or less equivalent to what these women could actually receive on the market. In national accounting, it is this approach which is used by Kravis [14] in establishing his criteria for the inclusion of activities within the national income.

Within such a framework, in a balanced situation, there is no longer any distinction between the "potential" and "actual" contribution of the non-market female population. We might note in passing that Lindahl's methods of calculation are, in fact, merely one particular case of this approach. Lindahl is simply specifying that the potential occupations of women who remain at home are limited to those of domestic and housekeeper.

[14] Irving B. Kravis, "Problems in the International Comparison of Economic Accounts", p. 349, in A Critique...op. cit. Kravis gives as the second rule of eligibility for classification as an economic activity "The rule of sensitivity to rewards; within households, activities on which time spent would diminish in response to higher rewards for remunerated activities outside the household are economic".

One of the merits of Kravis' approach is that it conforms with the requirements of the theory of general equilibrium that it be significant in terms of welfare. 15/ An assessment based on possible earnings outside the home leads to the sum of two elements ordinarily considered as being distinct: work within the home and the leisure consumed by the female population outside the labour markets. In terms of a strict measurement of the level of economic activity, we then obtain an extension of the concept of national income as an index of the collective welfare through the addition of leisure to the sum of goods and services consumed by the population. We should note here, however, that if the calculation of the national income is to take into consideration the leisure consumed by the female population no longer employed it should also include a measurement of the leisure enjoyed by the rest of the population.

A priori, the traditional hypotheses of economic theory lead us to believe that the distribution of time available between remunerated work, non-remunerated work and leisure will be affected by the wages offered on the market, both collectively and within the individual household. If this is true, the leisure consumed in a society is a perfectly legitimate subject for measurement, and indeed, an esstntial one. Statistically, such a requirement is obviously far-fetched: in comparison, measurement of work done in the home is mere child's play. Although economic theory suggests a link between wages offered and distribution of time, it does not necessarily indicate the nature of this relationship, as a result of the counterplay of the effects of substitution and income.

15/J.R. Hicks, "The Valuation of the Social Income", Economica, Vol. 13, (May 1940), pp. 105 - 124.

Empirically at least, the influence of economic conditions on employment rates in general and female rates in particular is fairly well established. In general, although we have not yet succeeded in distinguishing clearly the factors which lead people to enter or leave the labour markets, as a result of short-term fluctuations. we have come to realize the scope of the phenomenon.[16]/[17]/ We may therefore state, without a great deal of doubt, that the distribution of women's activities is rather broadly governed by the conditions prevailing upon the labour markets. We do not wish to assume here that economic factors exercise the major influence of these choices but simply that economic phenomena affect the decisions of women as to whether or not to seek work outside the home.

On the levels of both theory and of the results of empirical research, we may legitimately consider the non-market activity of women as strictly economic; either because their time and resources are devoted to work which, under other circumstances, would be the object of a market trans-action, or because their leisure constitutes a commodity, the consumption of which will vary with the fluctuations of such economic variables as the wages offered on the market, the structure of household consumption, etc. [19]/

[16]/Kenneth Strand and Thomas Dernburg, "Cyclical Variation in Civilian Labour Force Participation", Review of Economics and Statistics, Vol. 46, (1964), pp. 378 - 391.
[17]/Richard A. Easterlin, "On the Relation of Economic Factors to Recent and Projected Fertility Changes", Demography, Vol. 3, no. 1, pp. 131 - 153.
[18]/Gary S. Becker, "A Theory of the Allocation of Time" The Economic Journal, Vol. 80, no. 29, (September 1965), pp. 493 - 517.

The work-leisure dichotomy, while it offers us some
access to the real meaning of the "cost to the Canadian
economy of partial female non-employment," is not, however,
without its difficulties. Even on the level of pure theory,
the very concept of leisure is fluid, if not difficult to
grasp. Traditional analysis of labour markets distinguishes
between work and leisure by identifying leisure (or
recreation) as the activity directly producing satisfaction;
work then is, a priori, not wanted for itself, a necessary
evil.[19]

It is only recently that an attempt has been made to
reinterpret the concept of leisure so as to make it
theoretically more coherent and empirically useful. Becker [20]
emphasizes that the time available to individual and or to
families, far from constituting a separate good, is merely one
component both of the ability to earn and of consumption itself.
For example, an increase in hourly earnings will affect the time
devoted to remunerated labour not only through the effects of
the leisure-work dichotomy, but also through the type of
consumption to which the additional income will be devoted.
Technically speaking, certain types of consumption, such as
having children, demand far more time than other expenditures
of the same level, such as gambling. Similar reasoning is
obviously valid for technological changes inside or outside
the home.

In order to predict behaviour and to emerge from the
impasse constituted by the identification of leisure with
satisfaction (since the latter cannot be measured) we are
forced to limit ourselves to a continuum of activities arranged
in terms of their lack of earning power. This continuum
constitutes another of the "grey zones" of economics, along
with such dichotomies as public good/private good or competition
monopoly. This fact not only emphasizes the arbitrary nature

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[19] Allan M. Carter, Theory of Wages and Employment, Richard D.
Irwin Inc., Homewood, Ill., 1959. There are countless examples
of this, and this work is cited simply because of its broad
distribution as an intermediate text on labour economics.
[20] Becker, op. cit.

of our calculations, but also casts some doubt on any
prediction of labour force participation based primarily on
the attraction of monetary earnings. Within a framework of
analysis of this nature, participation in the labour market
also becomes a function of the evolution of the consumption
structure: in our calculations, the almost total absence
of data on the way in which the female population allocates
its time forces us to make far too great use of a simple
leisure-work model, with all the uncertainties which this
involves.

The difficulties of a simple work-leisure dichotomy
do not exist solely for the pleasure of the economic
theoretician. It is on the basis of this type of concern
that we can place, within a reasonable perspective, "the
cost to the Canadian economy of the absence from the labour
force of a major proportion of the female population." The
mere mention of the word "cost" suggests obstacles preventing
the accomplishment of certain objectives. Thus, we cannot
speak of this cost of female non-employment except to the
extent that we are referring to the over-all objectives which
society has assigned the Canadian economy. If, for example,
society clearly wants maximum military power or the highest
level of per capita income (measured by conventional means)
it is clear that the factors which induce part of the female
population to remain at least partially inactive are "harmful"
elements which involve a real cost for Canadian society. This
is just as true as if these persons were suddenly stricken
with paralysis. Within the framework of the "military" or
"productionist" approach, we may legitimately speak of a cost
to society arising out of "excessive" consumption of "leisure"
by part of the population.

This cost may be assessed on the basis of the potential
earnings of the non-employed women minus the value of the
services which they provide within the home. This, of course,
is on the one condition that we assume no difference of
productivity between the present mode of producing domestic
services and that which may replace it. Parish goes even
farther. [21] In this comparison of the utilization of highly

[21] John B. Parish, "Professional Womanpower as a National
Resource", Quarterly Review of Economics and Business, vol. 1,
(1961), pp. 55 - 63.

skilled womanpower in the U.S.S.R. and the United States, employment rates and career lengths of female university graduates are used as criteria to determine the quality of the use made of this labour pool. Implicity, he considers [22/] as lost to the nation not only "excessive leisure" but even all the time spent and activities engaged in off the labour market by women university graduates. In his opinion, we must add to the cost of leisure that of poor allocation or underutilization of a resource.

The so-called "military" or "productionist" approach is far from being limited to the military. In fact, the "waste of talent" involved in the withdrawal of women with high earning capacities is more or less an integral part of the "traditional wisdom". We have only to glance through Canadian newspapers to realize this.

On the economic level proper, the increase in the female employment rate is already accepted quite naturally as a legitimate source of growth. [23/24/]

22/John B. Parish, "Professional Womanpower as a Soviet Resource", Quarterly Review of Economics & Business, Vol. 4, (1964), pp. 55 - 61.
23/Edward F. Denison, The Sources of American Growth and the Alternatives Before Us, (New York, 1959).
24/Economic Council of Canada, Fourth Annual Review, (Ottawa, Queen's Printer, September 1967), ch. 4, pp. 91 - 108.

These views may appear simplistic and biased by
value judgments unfavourable to women's activity in the home.
The arbitrary nature of these approaches (or of the inter-
pretation which may be given them) arises from two analogies
necessary for the measurement of economic activity but of
dubious logic with regard to welfare. Specifically, any increase
in income from the monetary sector of the economy is interpreted
as an increase in the welfare of the population and, secondly,
the analogy between the female population and natural resources
in general is interpreted in terms of welfare. In the first
case, we need only refer to our earlier discussion on the
calculation of national revenue to suggest the difficulties
of such an approach. In the second case, if it is correct
to attribute a value to natural resources only when they come
on the market we must still recognize that women are consumers
as well and thus, unlike minerals, any measurement of their
welfare must take into consideration not only the income from
their labour but also the emotional gains offered by leisure
or unpaid activities. To the extent that the absence of
women from the labour market is voluntary and reflects a
preference for leisure and activities within the home, it is
difficult to claim that these decisions reduce in any way the
welfare of the Canadian people. Within a framework of perfect
competition and lack of discrimination (in hiring and
remuneration), there is no more reason to speak of the cost
of female non-participation than to view as an expense the
decision of workers to reduce the work week to 35 hours or
to shorten their careers by the early retirement of those
who so desire. In cases where individual desires and
decisions, through the market, determine the results which
we observe in women's participation in the working world,
we no longer have any basis for measuring or even mentioning
cost in terms of welfare in relation to the partial non-
employment of the female population.

We could not speak of true cost unless it was
discrimination which forced women to remain at home; either
because they were refused jobs or because the wages offered
them did not justify their entry on the labour market. But,
in the latter case, we would be measuring the cost to the
Canadian economy of discrimination against women and not the
cost of their non-employment, which would then become merely
a manifestation, a symptom.

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Since we cannot attribute to Canadian society a single economic objective (e.g., the highest monetary income or the greatest military capacity), we cannot interpret the calculations of Part Two in terms of the welfare of the Canadian population. Although everyone favours a higher level of monetary income, no one is prepared to conscript others to achieve it and the emotional welfare of the population remains beyond the reach of statistical measurement.

Thus, we must now separate economic activity, production, from welfare, total real income. By limiting the objective in this way, we can obtain a few indications as to the cost to the Canadian economy of female withdrawal from the labour force. In other words, the results of Part Two cannot be interpreted except as estimates of the potential contribution of part of Canada's female population to the production of marketable goods and services.

PART TWO

SOME MEASUREMENTS OF THE POTENTIAL CONTRIBUTION
OF THE FEMALE POPULATION PRESENTLY NON-EMPLOYED

We are attempting to measure the potential earnings
of non-employed women in terms of male employment rates. More
specifically, we wish to measure the total income which
non-employed women could receive if the male and female
employment rates for those between the ages of 15 and 64 were
identical.

Any measurement of the potential earnings of the non-
employed population must be based on available statistics
concerning the female labour force. However, any simple
extrapolation of the earnings of women already employed to
the non-employed risks seriously distorting a measurement
which is already sufficiently uncertain. Such an extrapolation
would imply that the two groups are entirely similar in
earning power. This is an extremely implausible hypothesis.
Although there are, to our knowledge, no systematic comparisons
between the earning capacities of employed and non-employed
women, we have a sufficient number of indications to allow
us to state that the two groups show differences which, in
all probability, indicate systematic divergences in their
earning ability.

On the most general level, the simple fact that the
wage rates offered women affect, to some extent, their
employment rate emphasizes the partial superiority of the
earning potential of women already employed as compared to
the non-employed. If higher wages coincide with higher
employment rates, we may assume that the women presently on
the labour market are, at least in part, those who are likely
to earn more. Such a relationship between wages and the
female rate of employment has been identified by several

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American researchers. For example, Mincer 25/26/ has shown that, even when all the other related factors remain constant, the wage levels offered to American married women retain a certain "explanatory" power as regards the employment rate.

From another point of view, a positive relationship has also been established between wages and the number of hours worked by women. 27/

Moreover, all the research carried out on the factors governing female labour force participation indicates that those employed differ in a number of aspects from the non-employed. These distinctive characteristics of the female labour force are positively associated with individual earning power. For example, it is probable that women in the labour force generally enjoy better health than the others. This is the conclusion of an American study which, in the absence of similar studies for Canada, we are using as a guide. Sheila Feld 28/ has noted, among other things, that 34 per cent of all working women stated that they enjoy good health, as opposed to only 20 per cent of those not working.

In addition, the positive relationship between level of education and female employment seems to be found constantly and at almost every level. Although education never constitutes the most important factor in the statistical explanation of the female employment rate, it is clear that, all things being

25/Jacob Mincer, Labour Force Participation of Married Women: A Study of Labour Supply. Aspects of Labour Economics, (N.B.E.R., Princeton, Princeton University Press, 1962), pp. 63 - 105.
26/Jacob Mincer, "Labour Supply, Family Income and Consumption" American Economic Review, (May 1960), pp. 574 - 83.
27/James N. Morgan, Martin H. David, Wilbur J. Cohen and Harvey E. Brazer, Income and Welfare in the United States, (New York, McGraw Hill, 1962), ch. 11, pp. 130 - 139.
28/Sheila Feld, "Feelings of Adjustment" in The Employed Mother in America, F.I. Nye, L.W. Hoffman, eds: (Chicago, Rand, McNally, 1963), pp. 331 - 351.

equal, the more education a woman has, the more likely she is to hold a paid position. In this respect, Canadian and American studies agree in their findings. [29][30][31]

In the case of Canada, the brief table below illustrates fairly clearly the relationship between the employment rate and education of the female labour force.

TABLE I

	Elem.	Second.		Attended Univ.	Univ. Grad.
EDUCATION					
		1 - 3 yrs.	4 - 5 yrs.		
Employment rate at first peak*	18.29	26.19	37.89	45.11	46.13
Employment rate at lowest point (age group 30 - 34)	17.03	21.34	23.68	25.73	21.69
Employment rate at second peak (age group 45 - 49)	22.45	29.19	34.24	40.47	35.03

* This peak occurs in the 20 - 24 age group for women having completed less than 4 years of secondary school, and in the 25 - 29 age group for the rest.

SOURCE: John D. Allingham, "Women Who Work", Part I, Special Labour Force Studies, No. 5, (Ottawa, Dominion Bureau of Statistics, 1967), p. 18.
The author indicates that these rates were calculated using unpublished data from the 1961 census.

29/Mincer, op. cit.
30/W.G. Bowen and T.A. Finegan, "Educational Attainment and Labour Force Participation", American Economic Review, (May 1966), p. 570.
31/John D. Allingham, op. cit., pp. 15 - 22.

The relationship between education and income has been
the subject of many studies over the past 10 years; the
relationship between high incomes and high levels of education
is now universally accepted at the individual level (taking
into consideration the disagreements which still divide experts
in the field as to the relative importance of the education
factor as a predictor of earnings). Table I, in addition,
shows us the extreme variability of the employment rates in
relation to age. In this case, however, it is more difficult
to speak of systematic divergencies between those working and
the non-employed. In fact, the female career cycle includes
two participation peaks. As a result of the very rapid growth
of the Canadian population between the ages of 10 and 25,
working women are now on the average, younger than those not
working. It is possible, however, that this is essentially
a passing phenomenon since it is largely dependent simply
on the demographic growth of the years 1947 - 1957.

Of all the factors which affect individual earning
ability, five are of prime importance: education, occupation,
area of residence, working experience and industry. These
are, of course, very general factors which affect the
earnings of all workers in Canada - without taking into
account all earning variations in Canada.[32] In the United
States, specifically for working wives, Morgan and his col-
leagues make conclusions about the preponderant influence of
the same elements (with the exception of the industry factor)
in their explanation of variations in wage rates. [33]

Ideally, we would have to know the effects of all these
factors when we extrapolate the earnings of employed women
to the non-employed in order to measure precisely the earning
potential of the latter. The lack of information forces us
to be more modest, for we have no idea of the occupations which
the non-employed women could fill. The same is true of the
industries in which they might work.

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[32] Frank T. Denton, An Analysis of Interregional Differences
in Manpower Utilization & Earnings: for the Economic Council
of Canada. Staff Study No. 15, (Ottawa, Queen's Printer, 1966)
[33] Morgan & al., op. cit., ch. 10.

In view of the extent of the hypothetical change whose effects we are attempting to measure, the use of projections based on past distributions of the female labour force is unlikely to offer us any additional information which will be of use. On the one hand, a simple extrapolation of the distribution of the female labour force by industry would produce results implying very considerable structural changes in the Canadian economy and, on the other hand, even assuming an extension of past trends in the female employment rates, the time required for them to match male rates would be so long that any forecast on such a long term basis becomes pure fantasy.

Therefore, of the factors mentioned above as influencing earning power, we can measure only two, i.e., age and education. In other words, our calculation assumes that if the women presently non-employed were working, they would do so in the same regions, industries and occupations as the existing labour force, or at the very least, that these three factors would not modify to any great extent the earnings estimated on the basis of a knowledge of education and age.

Although, in principle, the inclusion of the education measurement in our extrapolations poses no problem, the same is not true of age. While utilization of the latter as an approximate variable for working experience is common practice, we have reason to believe that the approximation is less valid in the specific case of the female labour force. As we pointed out earlier, a woman's working life is, in general, interspersed with withdrawals of varying lengths of time to the home. Since we also do not know how many women working today have interrupted their careers or for how long, age ceases to be a very exact approximation of working experience. This is particularly true since, in the case of temporary withdrawals, we do not know the extent to which earning ability deteriorates through non-utilization of the knowledge gained on the job or of the experience itself. If we make general hypotheses on the basis of age, we must remember that this approximation of working experience is more uncertain for the female labour force than for the male.

The increase in the production of goods and services
(measured by conventional means*) in Canada in the event of
an immediate equalization of the male and female employment
rates would be in the neighbourhood of 16 per cent.** This
figure (taking into account our standardization of the age
and education of non-employed women) seems low. This is
because a large number of working women do not work full
time and the data on earnings 34/ by age and education do
not necessarily reflect the wage rates which those now
working actually receive. The 40 per cent of the female
labour force 35/ who do not work full-time thus seriously
lowers the annual earning level which we are using to assess
the potential earnings of non-employed women.

Our results change considerably if we use a stricter
definition of equal male and female employment rates,
i.e., participation of women in the labour force equal to
that of men, as regards the amount of time devoted to work
outside the home as well as membership in the labour force.
Such a change would imply not only equality in the employment
rates as presently compiled, but also the fact that all
women entering the labour market would work as many hours per
week as men. We might mention here, however, that, in order
to make this adjustment, we no longer have any classification
of the annual earnings of full-time employees except by age-
group; we can no longer check the influence of the education
factor.

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* Details of calculations are given in the appendix.
** All figures given are for 1961.
34/J.R. Podaluk, "Earnings and Education", Advance release
from Census Monograph Income of Canadians D B S No. 91-510
(Occasional), (Ottawa, Queen's Printer, December 1965), p. 18.
35/F.J. Whittingham and B.W. Wilkinson, Work Patterns of the
Canadian Population 1964, Special Labour Force Studies, No. 2,
(Ottawa, D B S, 1967).

Our adjustment for hours worked raises the potential
contribution by women to Canadian production to 22 per cent
of the gross national product.*

Although we are unable to measure the distortions of
the above estimates, we can nonetheless indicate their pro-
bable direction.

There is every reason to believe that our results
underestimate the potential contribution of women. We have
been unable to measure the effect of the region factor and
we know, in addition, 36/ that the lowest female employment
rates in Canada are found in those provinces where wages are
also lowest. Hence, an equalization of the male and female
employment rates would in fact, lead to a more than propor-
tional increase in the labour force in the less developed
areas of the country.

Secondly, our last estimate of the potential
contribution of women does not take into consideration the
differences in education between the employed and non-
employed or between full-time and part-time workers. In the
first case, we already know that the women now employed are
generally better educated than the non-employed and that, as
a result, our calculations exaggerate the potential earnings
of non-employed women. In the second case, we have no direct
information on the specific characteristics of women holding
part-time jobs. However, we may assume that women who work
only a few hours a week or a few weeks a year do so, at least
to a certain extent, because of greater family responsibilities
than those who hold "normal" jobs. And it has been noted that
to a certain extent, the best educated women are also those
with the fewest children. 37/

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*In view of the very great variability of the share of labour
in the national income, it would be arbitrary to measure the
potential contribution of women as a percentage of the
contribution of the labour factor for 1961. Establishing this
"average" contribution at 75 per cent of the national income,
we then obtain a female contribution to income from labour of
approximately 29 per cent and 21 per cent depending on the
criterion used to define equal labour force participation.
36/Denton, op.cit.
37/Jacques Henripin, Tendances et facteurs de la fécondité au
Canada; Monographie sur le recensement de 1961 (Fertility Trends
and Factors in Canada; 1961 Census Monography) Ottawa, DBS 1968).

If our hypothesis concerning the relationship between family size and hours worked is correct* we may assume that women who work full-time have a higher earning capacity than the others. Thus our measurement would include another upward distortion. It is possible that the "privilege" of working unusual hours would be paid for, in a manner of speaking, by these workers in the form of lower wage rates. Such a possibility would introduce another upward distortion of the same type as those already mentioned into our calculations. Ignoring for once our policy of not considering classifications by industry, we have used wages relating only to non-farm labour. The distortion thus introduced does not appear to us to be either very large or very dangerous; any considerable increase in the labour force would certainly occur in sectors other than agriculture.

One possible source of an underestimation of the potential female contribution (2nd estimate) lies in the exclusive utilization of earnings from employment as the bases for calculation. It would seem however, that this distortion is quantitatively insignificant under present circumstances. First, income from investment has, in principle, nothing to do with participation in the labour force and secondly, the differences between the earnings of the wage-earning female labour force and those of the total female non-farm labour force are minimal. According to Podoluk figures, the discrepancy in 1961 was .15 per cent for women. On the other hand, this difference was 27 per cent for the male labour force, probably reflecting the income of unincorporated businesses. To increase our estimates in order to take into consideration the possibilities of greater female participation in the management of these businesses would be to assume a major modification in behaviour and would remain completely arbitrary, since we have no plausible basis for carrying out such adjustments.

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*This relationship exists for American married women, cf. Morgan et al., op.cit., p. 139. "The restraint of children at home had the most important effect on hours worked".

The comparison of our results with those obtained by
Lindahl and his associates is rather surprising. Even taking
into consideration the changes which have occurred since 1930
in the female employment rate, our method of assessment is
surely far more "generous" than that adopted by Lindahl. This
is true to the extent that the profession of domestic servant
or housekeeper is one of the lowest paid. It was however,
impossible to repeat Lindahl's calculations for Canada, because
of a lack of precisely comparable data. Similarly, the 25
per cent of the national income which Kuznets attributed to
women outside the labour markets is even higher than our
highest estimates.

Hence, because we are unable to repeat for Canada the
calculations made by Lindahl and as we do not know the method
used by Kuznets in the United States, a truly satisfactory
comparison of our results and theirs is impossible. As we
have pointed out, only the increase in female employment rates
"explains" to a certain extent the comparable results when the
methods used are quite different.

The potential contribution of women presently non-
employed has been established in terms of marketable goods
and services. We may now ask ourselves what will become of
the work formerly done in the home. In other words, that
proporation of this contribution to the Canadian economy would
have to be partially compensated for by greater commercialization
of domestic services? The same work will still have to be done
in the home and our measurement of the potential contribution
of non-employed women merely represents an increase in the work
which they will have to provide.

Unfortunately, it is impossible to answer this question
with precision. There is, to our knowledge, no measurement of
the time required in Canada for normal domestic tasks. With
the exception of a few qualitative indications as to the types
of work taking place within the home [38], we must be content
with the figures used by Morgan and his associates [39], which
are, according to the authors themselves, somewhat arbitrary.

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[38] The Employed Mother ..., op.cit., pp. 118 - 144.
[40] Morgan et al, op.cit., p. 342.

These estimates are as follows:

Type of Family and Marital Status	Hours spent on housework
Single	500
Married, no children	1,000
Married, no children under 6	1,500
Married, child(ren) under 6	2,000

After an estimated breakdown* of the non-employed female population (using the weak criterion of equal male and and female employment rates), the estimate* of the wage rate was made on the basis of the earnings of "babysitters", "housekeepers", "cooks", "maids" and similar occupations. In view of the very low hourly rates obtained by the "babysitter" category and the impossibility of weighting the figures in accordance to the number of hours spent on the various tasks, we give two estimates. The first includes the earnings of the "babysitters", the second excludes them.

Thus assessed, domestic tasks account for 10 per cent and 11 per cent, respectively, of the gross national product.

These results imply that if, in order to achieve the same employment rate as men, women entering the labour market entrusted their domestic responsibilities to "professionals", more than half the earnings calculated above would disappear.

Seen from a more questionable angle (cf. supra), we might say that the actual "leisure" of non-employed married women represents, (depending on the criterion of equality chosen) between 6 per cent and 11 per cent of the gross national product. In view of the difficulties created by the leisure-work dichotomy and the uncertainty of our last calculations, we cannot consider these "net results" as anything but extremely speculative indications.

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* Method of estimation is given in the appendix.

We might point out in closing that if, in conformity with industrial practice at the time when Lindahl made his calculations, we attribute 2,000 hours of housework to all non-employed women (as Lindahl appears to have done), we obtain a sum equivalent to 16 per cent of the gross national product. This result is close enough to that used by the Swedish researchers for us to attribute the differences in the basic data.

CONCLUSION

This brief exploration leads us first of all to an indication of our ignorance of a very broad sector of economic and social life in Canada. The time dimension of the activities involved in what is commonly termed the "family sector" is as poorly known today as it was 30 or even 150 years ago.

This gap seems particularly striking to us since other aspects of family behaviour (e.g., budget analysis and determination of the functions of consumption) are already part of a respectable tradition of economic research. In a social context in which, for many years now, workers have chosen to enjoy the fruits of greater productivity largely through greater consumption of leisure, we know almost nothing of the way in which this leisure is used, of its influence on the consumption of goods and services, of attitudes towards recreation, etc. Similarly, with the exception of scattered impressions gathered here and there, the changes which are occurring within the home as a result of technolgical progress remain "terra incognita" to us.

As regard economic policy, we could perhaps assert that a better understanding of the phenomena of allocation of time within the home would help reduce the substantial errors which occur all too often in forecasts concerning the female labour force. Lastly, by no means insignificant, a by-product of coherent statistics on time use in the home would most likely cool the heated discussions and analyses of the work done by women, both inside and outside the home.

In the meantime, we hope we have demonstrated that the importance of the resources involved in the family sector fully justifies a far greater and more systematic attempt to collect information than is presently being done.

APPENDIX

SOURCES AND METHODS

The non-employed female population, grouped by age and education, was obtained in the following manner:

a)   We applied to the total non-school female population, by age groups (Canada Census, 1961, Table 102-1, Vol. 1 - Part 3, Cat. No. 92-557) the male employment rates, by group (Labour Force, Non-Seasonal Statistics, January 1953 - December 1966) in D B S, (Ottawa, 1967), Cat. No. 71-201.

b)   The employed female population, grouped by education and age (Canada Census, 1961, Table 19-10, Vol. 3 Part 1, Cat. No. 94-513) was then subtracted from the population obtained in a).

c)   The educational categories of b) have been regrouped into only three categories, i.e.,: "Three years of secondary school or less", "Attended university or completed four or five years of secondary school" and "University graduate".

d)   The matrix obtained in c) was then multiplied by the matrix of women's annual earnings by age and education (J.R. Podoluk, "Earnings and Education" (Advance Release from Census Monography Incomes of Canadians, Cat. No. 91-510, column "Non-farm Labour Force" (Ottawa, D B S December 1965), p. 21).

e)   The correction for part-time female employment was made principally on the basis of: "Work Patterns of the Canadian Population 1964", Special Labour Force Studies, No. 2, by F.J. Whihingham and B,W. Wilkinson, (Ottawa, D B S, 1967), p. 13 and F.R. Podoluk, op.cit., p. 18.

Assuming normal distribution with these classifications of weeks worked in 1964 by women, we obtain the total number of weeks worked by the female labour force by multiplying the median points of the classifications (i.e., 13 and 38 weeks) by the number of women involved in 1961.

We then subtract the result from the number of weeks which these women would have worked if, on the average, they had worked the same number of weeks as the men. Applying to these results a vector of wage rates received, by age, on the basis of the average annual earnings compiled by Podoluk (p.18), we arrive at a preliminary estimate of the additional amount which those women already forming part of the labour force would have earned if they had worked full-time like the men.

For those women who were not employed in 1961, we apply the same wage rates as above, after estimating the number of weeks worked in the same way as in the preceding step, i.e., in terms of the male working rate. The sum of the figures thus obtained gives us, in comparison to the gross national product, the potential contribution of women both totally and partially non-employed, on the basis of the criterion of absolute equality of labour force participation by men and women.

The estimate of the value of the work now being done within the home by non-employed women was made on the basis of census data on the earnings of the following professions: "housekeepers", "cooks","babysitters", "maids", and "similar occupations". ("Earnings, hours and weeks of employment of workers by professions", 1961 Census book 94 - 539, Table 71 - 6). The transition from annual earnings (given in the census) to hourly rates is made as follows: assuming that female workers who are full-time members of the labour force, i.e., working more than 40 weeks a year and more than 35 hours a week, received the highest stated earnings, the hourly rate is calculated from the median point in that part of the distribution covered by full-time female workers. In the absence of information on the distribution of time within the home on the various tasks, we have given equal weight to the earnings of each of the four above-mentioned professions.

The distribution of the non-employed by marital status was made on the basis of "Characteristics of persons not included in the labour force" 1961 Census, Vol. 3, Part 3 Cat. No. 94-546, Table 40-1) and the (estimated) distribution of non-employed married women, by whether they had children under six, over six, or no children at home, was made on the basis of "Family Composition", (1961 Census, Vol. 2, Part 1 Cat. No. 93-515, Table 59-1). Our estimate allows mothers of children under six half the chance of employment of women with children over six and one third that of women without children.