

Evaluating the pin money hypothesis: The relationship between women's labour market activity, family income and poverty in Britain

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Abstract. In this paper we evaluate the hypothesis that the over-representation of women amongst the low paid is of little importance because women's earnings account for only a small proportion of total family income. Data from the General Household Survey (GHS), together with attitudinal evidence from three cross-sectional data sources, indicate that women's earnings are in fact an important and growing component of family income. The majority of the growth in the share of women's earnings occurs as a result of changing family labour structures; women's earnings are playing an increasingly important role in keeping their families out of poverty.

JEL classification: J16; J31.

Key words: Women's earnings, poverty, family income

'Good gracious! Lord bless me! Only think! Dear me! Mr. Darcy! Who would have thought it? Is it really true? O my sweetest Lizzy, how rich and how great you will be! What pin-money, what jewels, what carriages you will have!'

[Jane Austen, *Pride and Prejudice*, page 336]

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1. Introduction

One of the most striking changes in the labour markets of Western industrialized countries over the last twenty to thirty years has been the dramatic increase in female labour force participation. In the United Kingdom the labour force participation rate of women aged 15–64 rose from 46% in 1960 to 65% by 1991. Equally striking trends are observed in other countries: the United States saw an increase in the analogously defined female labour force participation rate from 43% to 68% between 1960 and 1991; in France, comparable figures were 47% and 57%; in Germany the rise was from 49% to 59%.¹ The female/male pay gap has also closed over this period. For instance, the ratio of women's to men's median hourly earnings in the United Kingdom in 1972 was 63%; by 1991 this had closed to 79% (Waldfogel 1994, 1995). Similar trends are also observed in other countries (see Blau and Kahn 1992, for an international comparison of the gender earnings gap).

In spite of these changes in the structure of earnings and employment there remains a tendency in some areas to dismiss women's earnings as "pin money".² That is, women's earnings are seen as being used for non-essential purchases and are not therefore thought critical to their families' well-being. In support of this view, some people point to the fact that many women in the United Kingdom work part-time. In 1991, for example, 44% of all women in employment worked part-time (Source: Labour Force Survey), a higher share than in any other OECD country.

A recent example of an application of the pin money hypothesis is the British Government's defence of the abolition in August 1993 of the system of minimum wages that used to operate in Britain (the industry-based Wages Councils) on the grounds that the majority of Wages Council workers were women, and that over 80% of these women lived in a household with another earner (see Dickens et al. 1993, 1995; Harkness and Machin 1995). As such it was argued that these women earned "pin-money", and that abolishing the Wages Council minimum pay rates would not therefore have a harmful effect on families' well-being.

Even if this hypothesis once held some legitimacy, the experience of recent years severely calls into question its relevance today. In this paper, we use attitudinal survey data and microeconomic data on earnings and income from the late 1970s through to the early 1990s to evaluate the claim that women's earnings are a relatively unimportant component of total family income. Our results cast severe doubt on this notion. We demonstrate that women's earnings have come to form an increasingly large share of family income over the decade, as a result of both increased female labour force participation, decreased male labour force participation and the closing of the gender pay gap.

In terms of offering an explanation of these shifts, it is important to note that the whole notion of pin money is based on the assumption that women are living in households with male breadwinners (usually husbands) whose earnings are the dominant source of family income. There are two reasons why this can no longer be assumed today. First, among families containing a married couple, men's earnings, while still the dominant component of family income, have become increasingly less important as a

result of a declining male employment and downward pressure on the wages of the less-skilled (see Machin and Waldfogel 1994). Second, among adult women, the proportion living with a partner has fallen, and therefore the number of women who must rely on their own earnings has risen.³

The structure of the rest of the paper is as follows. In Sect. 2 we first describe recent trends in female labour force activity in the United Kingdom, focusing specifically on women's labour supply and their relative wage performance in the labour market. We then consider some qualitative attitudinal data on the importance of women's earnings in the family budget. Sect. 3 documents what has happened to the within-family share of women's earnings in total family income between the late 1970s and the early 1990s for families headed by single women or married/cohabiting couples. In Sect. 4 we consider the relationship between changes in women's earnings and inequality in the United Kingdom from the late 1970s onwards, and in Sect. 5 we examine the link between female earnings and family poverty. Finally, Sect. 6 offers some concluding remarks.

2. Women's labour market status and the impact of their earnings on family income

Female labour force participation has risen sharply in Britain throughout the post-war period. For example, for women aged 25–49 it rose from under 60% in the late 1970s to 75% by 1991 (Source: Commission of the European Communities 1993). We observe a similar trend in the General Household Survey data that we study, with the percentage of women aged 24 to 55 in work rising from 59% in 1979 to 66% by 1991. This increase in employment amongst women is in stark contrast to employment trends for men, even within this prime-age group.⁴ In our GHS samples, male employment among 24–55-year-olds fell from 95% in 1979 to 86% in 1991.

The second noteworthy trend is the rise in female hourly earnings relative to male hourly earnings.⁵ The female-male pay gap closed most dramatically in the mid-1970's, following the implementation of the Equal Pay and Equal Opportunities Acts in December 1975. Between 1972 and 1976 the female-male pay ratio rose from 63% to 73%. Women have also made more recent gains. For women in the New Earnings Survey (full-time and some part-time workers), the female-male pay ratio reached 79% by 1991 (Waldfogel 1994, 1995). Among women aged 25–44 in the GHS, the female-male pay ratio for full-timers rose from 70% in 1979 to 75% in 1989, while the part-time ratio rose only 2 percentage points, from 55% to 57%, over the same period (Waldfogel 1995). This is consistent with the Equal Opportunities Commission's (1991) finding that virtually all the closing of the gender gap over the 1980s was due to gains made by full-time female workers.

A third important trend is the decline in the percentage of adult women who are married or cohabiting. In part, this reflects a shift toward later first marriages, and in part it reflects the rise in separation and divorce rates subsequent to marriage. The proportion of women over the age of 15 who are married fell from 63% in 1963 to 61% in 1978 and 56% in 1987 (OECD

Labour Force Statistics). Among women aged 24–55 in our GHS sample, the proportion married or cohabiting fell from 73% in 1979–1981 to 68% by 1989–1991.

Survey evidence on the importance of women's earnings

A number of surveys provide useful qualitative information on the importance of women's earnings in the family budget. In this section of the paper we review evidence from the Women and Employment Survey (1980), from several years of the British Social Attitudes Survey (an annual survey that has been carried out since 1983), and from the first wave of the British Household Panel Survey (1991).

Women and Employment Survey

The Women and Employment Survey was an interview-based survey, carried out in 1980, of 5588 women of working age (16 to 59) in Britain (see Martin and Roberts 1984, for more details on the survey). Of these women, 5295 were not students. Sixty three percent of the women surveyed were working, of which 35% worked full-time and 28% part-time. The questions of most interest to us relate to women's reasons for working and their financial dependence upon work.

The first set of questions to provide evidence with which to evaluate the pin money hypothesis concern women's financial dependence on work. A set of responses to questions regarding women's reliance on their own earnings are reported in the upper panel of Table 1. It is clear that a large proportion of working women were financially dependent on their work, with 70% stating that it was definitely or partly true that they would not be able to manage without working. On the other hand 64% said that it was not true that they did not need the money from work. Similarly, 84% of women said it was definitely or partly true that if they lost their job they would look for another straight away, while 69% said it was not true that it wouldn't bother them if they lost their job and couldn't find another.

The second set of questions of interest concern women's main reason for working. Responses to these questions are reported in the second panel of Table 1. Thirty-five percent working women stated that their main reason for working was to earn money for basic essentials, such as food, rent or mortgage.

Responses to the previous sets of questions were reported for all working women. A third set of questions relate specifically to the importance of women's earnings in families containing a married couple where the woman goes out to work. The lower panel of Table 1 reports responses to these questions. Over half of married working women (54%) state that they would have to give up a lot, or would not be able to manage at all, if they were not working. Answers to all three sets of questions, reported in Table 1, suggest that working women and their families are very dependent on their earnings.

Table 1. Survey evidence from the Women and Employment Survey

<i>A. Financial dependence on work, all working women (N=3354)</i>			
	Definitely true	Partly true	Not true
It couldn't manage unless I was earning	0.43	0.27	0.30
I don't need to work for the money	0.11	0.25	0.64
If I lost my job, I'd look for another straight away	0.66	0.18	0.16
It wouldn't bother me if I lost my job and couldn't find another	0.12	0.19	0.69
<i>B. Main reason for working (N=3354)</i>			
	Proportion of all working women		
Working is the most normal thing to do	0.03		
Need money for basic essentials such as food, rent or mortgage	0.35		
To earn money to buy extras	0.20		
To earn money of my own	0.14		
For the company of other people	0.07		
Enjoy working	0.14		
To follow my career	0.05		
To help with husband's job or business	0.01		
Other reasons	0.01		
<i>C. How well working married women would manage financial if not working (N=2435)</i>			
	Proportion of all working married women		
Get by alright	0.46		
Have to give up a lot	0.40		
Not be able to manage at all	0.14		

Note: Women and Employment Survey data as described in Martin and Roberts (1984). Sources for A, B and C are Tables 6.1, 6.11 and 8.16 of Martin and Roberts (1984) respectively.

British Social Attitudes Survey

Female respondents to the British Social Attitudes Survey were asked what their main reason for working was in two years of the survey (1984 and 1991). Table 2 reports the responses given by all women who were in employment at the time of the survey. The most frequent response was clearly that women worked to earn money for essentials. In 1984, 50% of working women stated that their main reason for working was for money to buy essentials, while the comparable figure in 1991 was 44%. Among married women analogous figures were 46 and 43% for 1984 and 1991 respectively. In families where only the women worked, 70% of women worked to earn money to buy essentials in 1984 compared with 54% in 1991.

Similarly, in 1984 the proportion of working women stating that their main reason for working was to earn money for extras was 25% among

Table 2. Women's main reasons for working from British Social Attitudes Survey, 1984 and 1991

1984	All working women (N=336)	Married (N=223)	Married, partner works (N=195)	Married, partner doesn't work (N=28)	Single (N=112)
Working is the normal thing to do	0.02	0.00	0.00	0.00	0.05
To earn money for essentials	0.50	0.46	0.42	0.70	0.57
To earn money for extras	0.16	0.23	0.25	0.07	0.01
To earn own money	0.09	0.06	0.06	0.06	0.13
For the company of others	0.02	0.03	0.02	0.04	0.01
Enjoy working	0.13	0.13	0.14	0.13	0.11
To follow career	0.08	0.06	0.07	0.00	0.10
Change from kids	0.01	0.02	0.02	0.00	0.01
other/DK	0.01	0.01	0.01	0.00	0.01

1991	All working women (N=786)	Married (N=517)	Married, partner works (N=460)	Married, partner doesn't work (N=57)	Single (N=268)
Working is the normal thing to do	0.03	0.02	0.02	0.00	0.04
To earn money for essentials	0.44	0.43	0.41	0.59	0.44
To earn money for extras	0.15	0.19	0.20	0.19	0.05
To earn own money	0.11	0.08	0.08	0.05	0.18
For the company of others	0.04	0.04	0.05	0.00	0.03
Enjoy working	0.14	0.15	0.16	0.11	0.13
To follow career	0.08	0.06	0.06	0.03	0.13
Change from kids	0.02	0.02	0.02	0.01	0.01
other/DK	0.01	0.01	0.01	0.01	0.01

married women whose partner was in work, and was much lower for both single women and married women whose partner was not in work. By 1991 the proportion of women with a partner at work who were working for extras had fallen to 20%. This survey evidence again suggests little support for the hypothesis that women typically work for pin-money.

British Household Panel Survey

The conclusions from the first two surveys are reinforced by results from the 1991 British Household Panel Survey (BHPS). The most important reason for working, given by women in employment, is again to earn money for essentials. Table 3 shows that three times more (42% compared with

Table 3. Women's main reasons for working from british household panel survey, 1991

1991	All working women (N=2487)	Married (N=1781)	Married, partner works (N=1490)	Married, partner doesn't work (N=177)	Single (N=706)	Single, kids (N=173)	Single, no kids (N=533)
Working is the normal thing to do	0.02	0.02	0.02	0.03	0.04	0.35	0.36
To earn money for essentials	0.42	0.40	0.40	0.52	0.47	0.49	0.46
To earn money for extras	0.14	0.17	0.18	0.10	0.04	0.64	0.38
To earn own money	0.13	0.11	0.10	0.12	0.18	0.19	0.18
For the company of others	0.04	0.05	0.06	0.02	0.02	0.06	0.21
Enjoy working	0.04	0.15	0.15	0.15	0.12	0.11	0.13
To follow career	0.08	0.06	0.07	0.03	0.13	0.10	0.13
other/DK	0.02	0.03	0.02	0.03	0.01	0.12	0.09

14%) women said that their main reason for working was to earn money for essentials than said that it was to earn money for extras. Results from the British Household Panel Survey are very similar to those reported in Table 2 from the British Social Attitudes Survey when conditioned on family structure.

All three of the qualitative data sources considered in this section provide evidence with which to reject the pin money hypothesis. However, given the subjective nature of the questions asked, it may be valid to question the generality of the results. To obtain further (complementary) evidence it is necessary to look at earnings and income data. In the remainder of this paper we use a large British household-level dataset to quantify the importance of women's earnings in their families' budgets, and to assess how this has changed over time.

3. Changes in the share of women's earnings in family income

For the rest of the paper we use data from the General Household Survey (GHS) to examine changes in women's earnings and family income between 1979 and 1991. The GHS is a large, representative cross-sectional survey of British families, from which consistently defined samples and variables can be constructed over time. In this section we use GHS data to examine the contribution of women's earnings to the family budget, and to assess how women's earnings contributions have changed over time.

Sample characteristics

Table 4 reports summary statistics for all women aged 24–55. These figures are based on General Household Survey data for two sub-periods (1979–1981 and 1989–1991), which covers around 3000 women aged 24–55 per year.⁶ Between 1979–1981 and 1989–1991 real monthly family income rose by about £ 470, a 40% increase on the 1979–1981 level. Families containing a married or cohabiting couple saw a much greater rise in their income than families headed by single women (couples income rose by around £ 630, or 46%, compared with £ 235, or 36% for families headed by single women). It is clear from Table 4 that married women contributed almost as much to the rise in their families income as their partners. Real monthly earnings for men at work grew by an average of £ 241 (or 23%) between 1979–1981 and 1989–1981, while the average increase for women at work was £ 219 (or 92%).

The relatively rapid growth of earnings for women in work, combined with increased female participation and the growth in the number of families headed by a single women, led to a rise in the average share of women's earnings in family income from 26% in 1979–1981 up to 31% by 1989–1991. For women living with either a husband or partner the rise was from 15% to 21%, but for single women the average earnings share fell

Table 4. Descriptive statistics from the General Household Survey

	1979–1981	1989–1991
<i>1. All married cohabiting and single woman families</i>		
Real monthly income	1188	1659
Equivalised real monthly income	1050	1342
Percentage of women in married/cohabiting families	73	68
<i>2. Married cohabiting families</i>		
Real monthly income	1387	2019
Equivalised real monthly income	1116	1540
Percentage share of male earnings in total income	73	61
Percentage share of female earnings in total income	15	21
Percentage share of non-labour income in total income	12	18
Male monthly earnings (if in work)	1030	1271
Female monthly earnings (if in work)	238	457
Male participation rate (percent)	93	90
Female participation rate (percent)	55	71
<i>3. Single woman families</i>		
Real monthly income	656	892
Equivalised real monthly income	873	917
Percentage share of female earnings in total income	54	52
Percentage share of non-labour income in total income	46	48
Female monthly earnings (if in work)	435	562
Female participation rate (percent)	68	68

Notes.

1. Based on General Household Survey.

2. Sample sizes are: 1979–1981, 10719; 1989–1991, 11058.

3. All nominal variables are expressed in real terms in January 1991 prices.

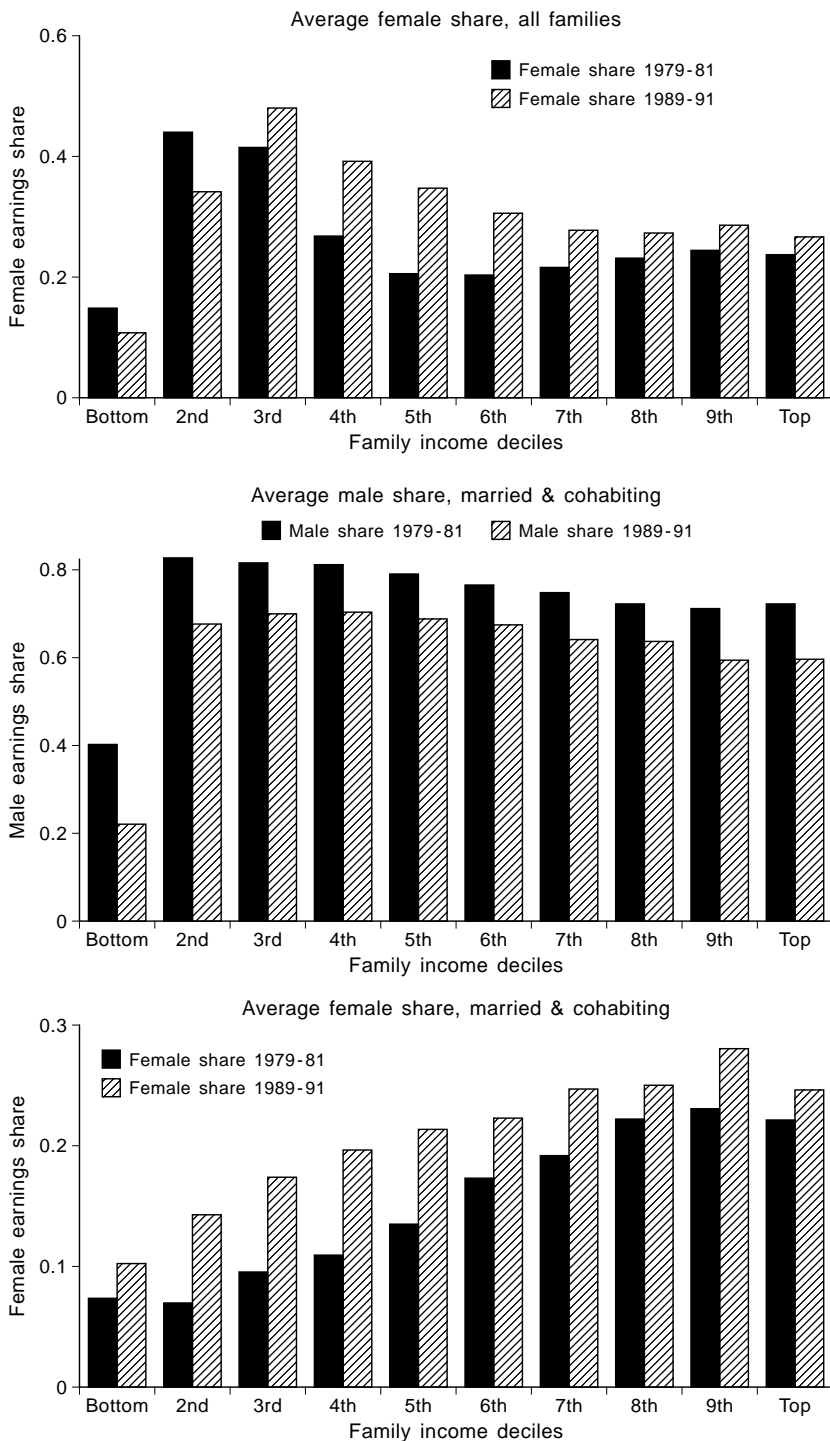


Fig. 1

slightly. The rise in the aggregate female share, and the decline in the male share, is illustrated in Fig. 1, which plots the average female share across all women, the average share for women living with a husband/partner, and the average male share for men living with a female partner.⁷ For more details on the distribution of women's shares, and on families with children as compared to those without (see Harkness et al. 1996).

Changes in family structures are also documented in Table 4. Over the period, the proportion of women living with a partner fell from 73 to 68%. Finally, there have also been marked shifts in the relative incomes of married couple and single women families: real equivalised monthly income was 28% higher for families containing a couple in 1979–1981, and 68% higher by 1989–1991.

Married cohabiting couple families

Panel two of Table 4 more fully documents the earnings and employment experience of men and women in families containing married or cohabiting couples in 1979–1981 and 1989–1991 average. In 1979–1981, 93% of married men and 55% of married women went out to work. By 1989–1991 the proportion of married men at work had fallen to 90%, while the proportion of married women at work rose to 71%. It is clear that most of the increase in female employment was in families where there was already a male breadwinner. This is made clear in Table 5, where there is a big increase in the percentage of dual earner married/cohabiting couple families.

More generally, Table 5 shows a large change in family structure defined by employment status. In 1989–1991, among married couple families, there were three times more families where both husband and wife went out to work (67% of all married and cohabiting couples) than where there was a single male breadwinner (23% of married/cohabiting couples). This compares with 1979–1981, when there were just 30% more two earner than male breadwinner families. The number of non-earner families and female breadwinner families has also risen.

Changes in female participation have been the driving force behind the increase in the average female share in the family budget. Looking at the average female share within each family type reveals that only in two earner families have women increased their share of the budget (and then by just over one percentage point). Of course, this may disguise changes in the variance of earnings shares across families. For example, in 1979–1981 only 1 in 15 women contributed more to the family budget than their partner, but by 1989–1991 1 in 5 women did so. Further, in both 1979–1981 and 1989–1991 the earnings of the average woman working full-time accounted for around two-fifths of the family budget, while the earnings of the average women working part-time accounted for around one fifth of total family income.

Single women families

The bottom panel of Table 5 more fully documents the experience of single women. There has been a significant increase in the number of families headed by single women, from 27% of all families containing a woman in

Table 5. Shares of family income components by family group

	1979–1981				1989–1991			
	Male share	Female share	Non-labour share	Percent of all families	Male share	Female share	Non-labour share	Percent of all Families
<i>1. Married cohabiting families</i>								
Dual earner	0.685	0.266	0.049	38.6	0.625	0.279	0.096	45.6
Male earner, woman not at work	0.906	0.000	0.094	29.3	0.852	0.000	0.148	15.4
Female earner, man not at work	0.000	0.570	0.430	1.5	0.000	0.521	0.479	2.8
Neither at work	0.000	0.000	1.000	3.3	0.000	0.000	1.000	4.3
All married/cohabiting couples	0.729	0.153	0.118	72.7	0.611	0.208	0.181	68.1
<i>2. Single woman families</i>								
Woman not at work	–	0.000	1.000	8.8	–	0.000	1.000	10.0
Woman at work	–	0.802	0.198	18.4	–	0.754	0.246	21.8
All single woman families	–	0.541	0.459	27.2	–	0.515	0.485	31.9
<i>3. All families</i>								
All families	0.530	0.259	0.211	100.0	0.416	0.306	0.277	100.0

Notes.

1. As for Table 4.

2. Data covers all families that have a woman aged 24–55.

3. Percentages/Proportions need not necessarily sum to 100/1 due to rounding.

1979–1981 to 32% in 1989–1991. Single women were slightly less likely to be working in 1989–1991 than before, and those women that did work were more dependent on non labour income. In 1979–1981 working single women brought home on average 80% of the family budget, but by 1989–1991 this proportion had fallen to 75%.

A decomposition of changes in the average female share

It is important to ask how much of the overall rise in the female share of the family budget, and how much of the fall in the male share, has been due to the changes in the composition of families, the *within-family component*, and how much has been due to changes in earnings shares within family types (family types being defined by marital and labour force status, as described in Table 5), the *between-family component*. We attempt to answer this question in Table 6 by performing a decomposition across six

Table 6. Decompositions of changes in shares of family income components into between and within family group changes

	Change in male share	Change in female share	Change in non-labour share
Total change, (1989–1991)–(1979–1981)	–0.114	0.047	0.066
Within family groups (percent)	–0.037 (33)	–0.005 (–10)	0.042 (63)
Between family groups (percent)	–0.076 (67)	0.052 (110)	0.024 (37)

Notes.

1. As for Table 2.
2. Based on decomposition described in text.
3. Numbers may not precisely add to zero across columns or to total changes across rows due to rounding.

family types. Of our six family types, four contain married or cohabiting couples (two earner families, single male earners, single female earners and no earner families) and two are headed by single women (working and not working). In the full sample the male share of the family budget fell by 0.114 over the decade.

The decomposition reveals that, of this fall, 0.076 (or 67%) can be attributed to changes in family structures (i.e. the rise in the number of families with no male earner, or with two earners), and 0.037 to a fall in the male share within each family type. The rise in the female share of 0.047, on the other hand, can be attributed entirely to changes in family structures. Changes in the female share within family types actually worked against the rise in the aggregate female share (as a result of a fall in the female share within both families containing a couple with a single female earner, and families headed by a single women where the women works). In sum, changes in female labour force participation have been critical to the rise in importance of female earnings in the family budget.

4. Women's earnings and inequality

In order to assess the impact of changes in female employment on family income inequality we examined changes in female employment by family income deciles. This is illustrated in Fig. 2. It shows that women from high income families, whether single or married, had relatively high rates of employment in 1979–1981. However, although rates of employment have increased for women in high income families over the decade, the rate of increase has been much slower than that for women in middle income families. Figure 3 shows the change in female rates of employment, between 1979–1981 and 1989–1991, by family income decile for all families, families headed by a couple, and families headed by a single woman.

It is clear that employment rates have risen most for middle income families, while families in the two lowest deciles have actually seen a fall

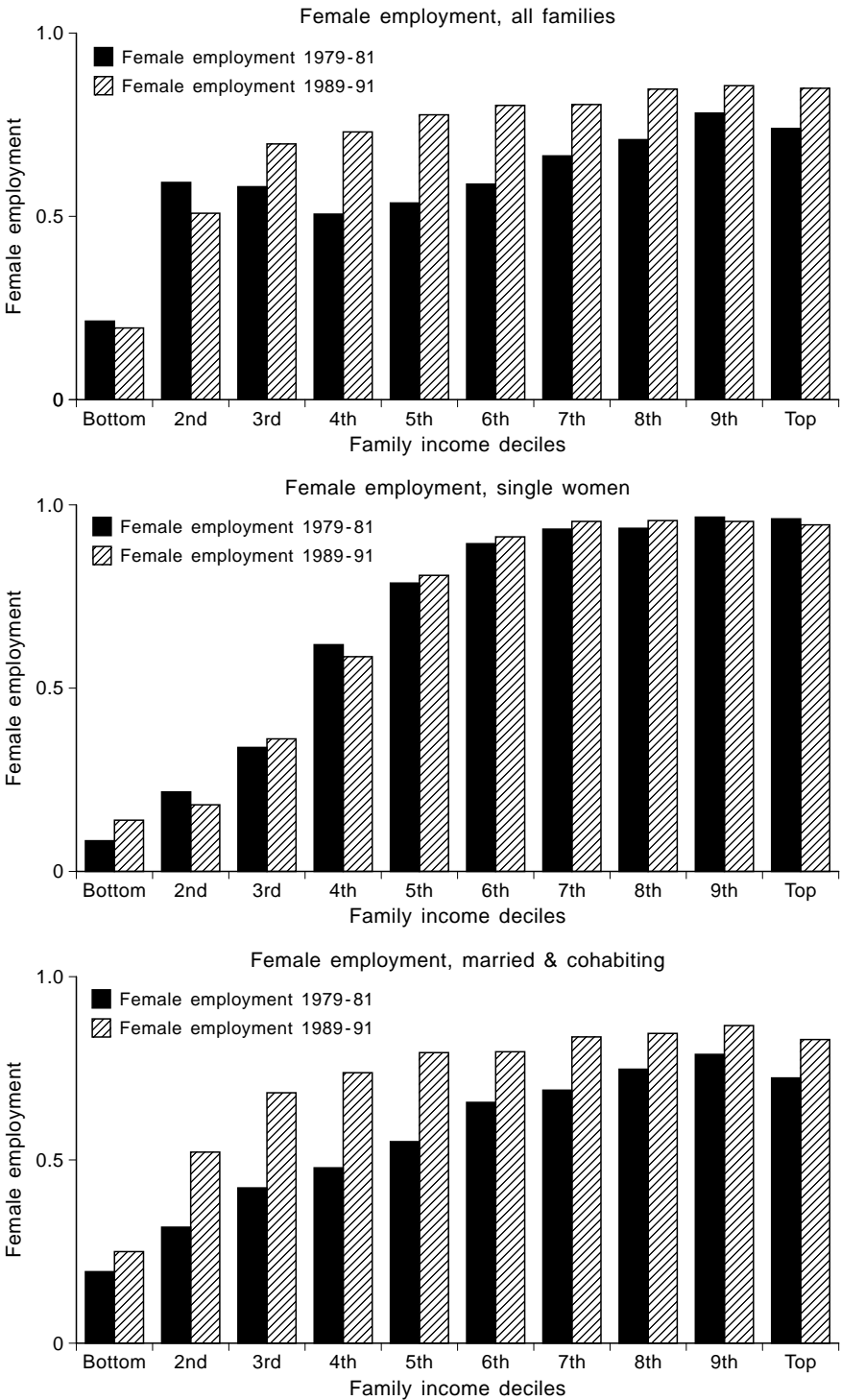


Fig. 2

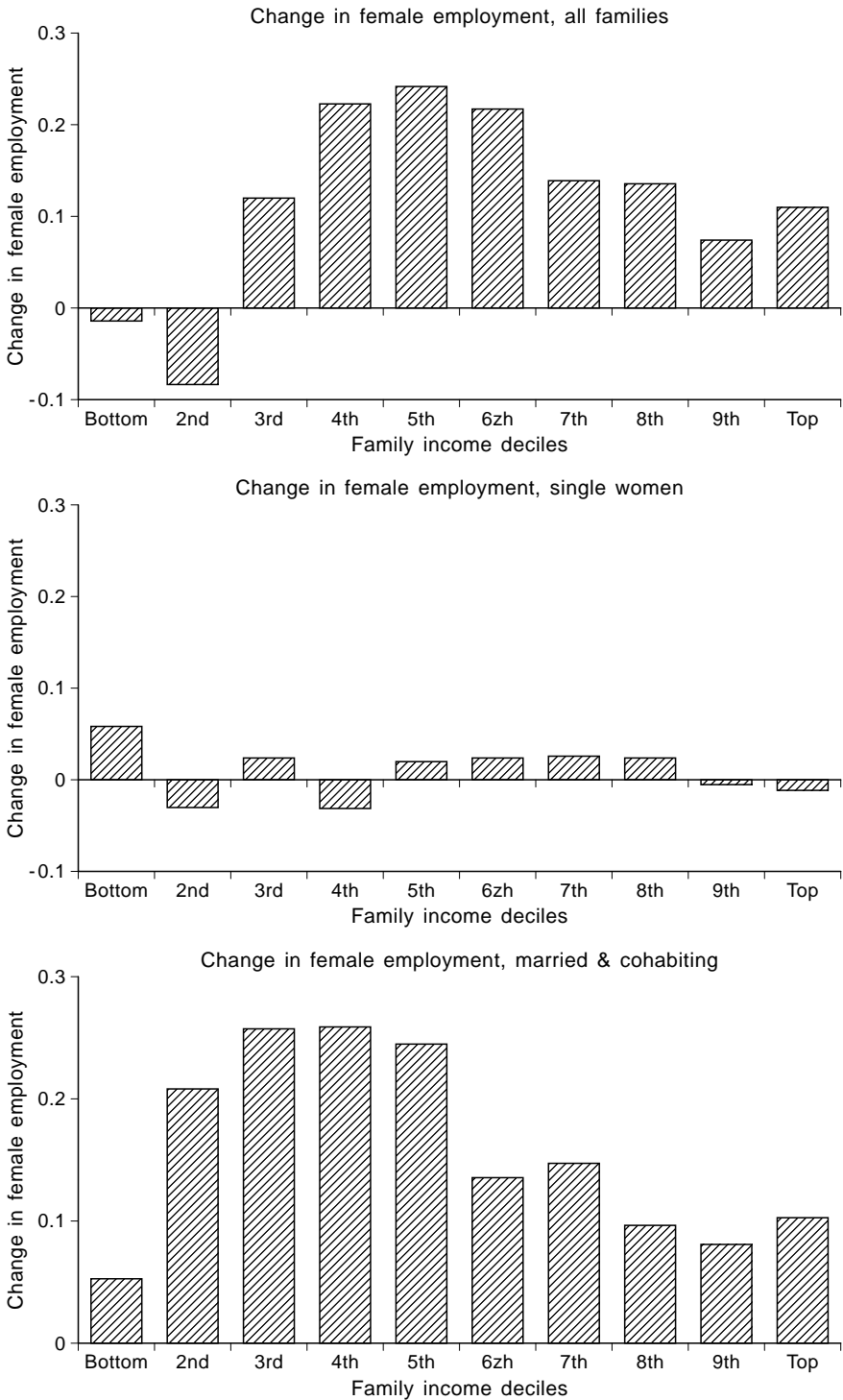


Fig. 3

Table 7. Employment rates in the top 50% and bottom 50% of the income distribution, 1979–1981 and 1989–1991

	Female employment 1979–1981	Female employment 1989–1991	Change
<i>1. All married cohabiting families</i>			
Bottom 50%	0.389	0.594	+20.5
Top 50%	0.715	0.827	+11.2
<i>2. Single woman families</i>			
Bottom 50%	0.406	0.389	-1.7
Top 50%	0.925	0.930	+0.5
<i>3. All families</i>			
Bottom 50%	0.475	0.551	+7.6
Top 50%	0.685	0.801	+11.6

in their employment rates. This is, however, mostly a result of the increase in number of single women families within the lowest income deciles. Taking families headed by couples and those headed by single women separately it is clear that, first, single woman families have had very little change in their employment rates throughout the income deciles. Second, for families headed by couples, women in the second to fifth income deciles have had the greatest increase in their employment rates. Women in the bottom decile, many of whom have a partner out of work, have had the smallest change in participation.

Table 7 shows changes in employment shares for those in the top 50% and the bottom 50% of the income distribution. In families containing a married or cohabiting couple, employment rose by 11 percentage points for the richest 50% between 1979–1981 and 1989–1991, from 72% to 83%. Employment rates for those women in the bottom half of the distribution increased by twice this amount, rising 20 percentage points to 59% in 1989–1991. For single women the difference in employment rates for the richest and poorest 50% is even starker. In both 1979–1981 and 1989–1991, 93% of the richest half of single women go out to work, compared with only around 40% percent of the poorest single women.

A more formal assessment of the impact of female earnings of family income inequality revealed that, first, female earnings had a equalising impact on the overall distribution of family income and, second, the equalising impact of women's earnings was greater in 1989–1991 than a decade previously. Table 8 shows the impact of female earnings on family inequality in 1979–1981 and 1989–1991. Family inequality grew over the decade, as indicated by the rise in the squared coefficient of variation of family income, $V(y)$, from 0.336 to 0.582. $V(y|1)$ indicates how great the dispersion of family income would have been without women's earnings. In both periods family income would have been more unequally distributed without women's earnings. Moreover, the equalising impact of women's earnings was slightly greater in 1989–1991 than a decade previously. The last row

Table 8. The impact of women's earnings on family income inequality

	1979–1981	1989–1991
<i>1. All married cohabiting families</i>		
$V(y)$	0.236	0.424
$V(y1)$	0.279	0.568
$[V(y)-V(y1)]/V(y)$	-0.181	-0.340
<i>2. Single woman families</i>		
$V(y)$	0.331	0.598
$V(y1)$	1.268	2.198
$[V(y)-V(y1)]/V(y)$	-2.833	-2.677
<i>3. All families</i>		
$V(y)$	0.336	0.582
$V(y1)$	0.567	0.987
$[V(y)-V(y1)]/V(y)$	-0.685	-0.695

indicates that in 1979–1981 women's earnings reduced the dispersion of family income by 69%, rising to 70% in 1989–1991.

Examining families containing couples and those containing single women separately shows that the effect of changes in women's earnings on family income inequality varies across family types. Taking married and cohabiting families first, it is clear that the dispersion of earnings across these families has grown over the decade, with $V(y)$ rising from 0.236 in 1979–1981 to 0.424 in 1989–1991. Without women's earnings the variance of family income across married couples would have been up to 18% higher in 1979–1981, and 34% greater in 1989–1991. Women's earnings have therefore played a forceful role in reducing income inequality between families containing married and cohabiting couples.⁸

Income inequality amongst families containing single women is significantly greater than for married and cohabiting couple families. It is not surprising that deducting women's earnings from family income produces a very high level of family income inequality amongst single women families, as the remaining income sources (benefit income, income from capital) are so diverse.

The equalising impact of female earnings on family income inequality was a result of a fall in the dispersion of female earnings, and was in spite of increased female wage inequality (see Machin and Waldfogel (1994) for further information). The squared coefficient of variation of female earnings fell by 15% across all families, and by 21% across families headed by a couple.⁹ In families headed by a single woman, however, the distribution of female earnings widened by 15%.

5. Women's earnings and poverty

Given the mitigating effect that female earnings have had on the rise in family inequality, it is also interesting to examine the impact female earn-

Table 9. Poverty rates by family group, 1979–1981 and 1989–1991

	1979–1981	1989–1991	Change in poverty rate	Change in share of family group
<i>Married cohabiting families</i>				
Dual earner	0.000	0.006	0.006	0.070
Male earner, woman not at work	0.006	0.053	0.047	-0.139
Female earner, man not at work	0.147	0.308	0.161	0.012
Neither at work	0.670	0.802	0.132	0.010
All married/cohabiting couples	0.036	0.079	0.043	-0.046
<i>Single woman families</i>				
Woman not at work	0.500	0.846	0.346	0.012
Woman at work	0.037	0.197	0.160	0.034
All single woman families	0.187	0.403	0.216	0.046
<i>All families</i>				
All families	0.077	0.182	0.105	
– change within groups	–	–	0.086	–
– within change for married/cohabiting	–	–	0.030	–
– within change for single	–	–	0.220	

Notes.

1. As for Table 2.

2. Poverty is defined as equivalised income less than 50% of the median family equivalised income.

ings have had on poverty. The ‘Households Below Average Income’ series reports a rise in the proportion of families with income below half average equivalised income from 8% in 1979 to 21% in 1990–1991. Taking half average equivalised income as our poverty line, we compute poverty rates by family type in 1979–1981 and 1989–1991. The results are reported in Table 9. In 1979–1981 about 4% of families containing a couple, and 19% of families headed by a single woman, were in poverty. By 1989–1991 the proportion of families in poverty had doubled, to 8% of couples and 40% of families headed by a single woman.

Within married couple families, those headed by a single male breadwinner were much more likely to be poor than where there were two earners. In 1989–1991 fewer than 1 in 100 families in which both partners worked were poor compared with 1 in 20 families headed by a single male breadwinner. Moreover the probability of a male breadwinner family being in poverty in 1989–1991 was nearly ten times greater than in 1979–1981. Low pay amongst women meant that in 1989–1991 one in three families supported by a single female breadwinner were poor. The majority of families without an earner were poor.

Changes in poverty rates amongst married and cohabiting couples can be decomposed into changes that occurred as a result of increased poverty within family types, and changes that occurred as a result of changes in

family structures (defined by employment status). Our decomposition suggests that, of the 4 percentage point rise in poverty amongst married and cohabiting families, 3 percentage points of the rise was a result of an increased incidence of poverty within each family type, and 1% was a result of a change in the structure of families (the increase in no earner and female breadwinner families worked against the rise in dual earner families to increase the incidence of poverty).

Poverty rates within families headed by single women rose for both women in and out of work. In 1989–1991 one in five families headed by a single working woman were in poverty (compared with one in twenty a decade before). Over 80% of families headed by a single women not at work were poor.

It is interesting to ask how many families would be in poverty were it not for women's earnings. In Table 10 women's earnings are set equal to

Table 10. To what extent do women's earnings keep families out of poverty?

	Experiments set women's earnings $W^F=0$ and estimate male labour supply response		
	1979–1981	1989–1991	Change
<i>All families</i>			
Actual poverty rate	0.077	0.182	0.105
$W^F=0$, No male labour supply response	0.240	0.356	0.116
$W^F=0$, Male works an additional hour per week	0.239	0.353	0.114
$W^F=0$, Male works an additional 5 hours per week	0.239	0.346	0.107
$W^F=0$, Male works an additional 10 hours per week	0.238	0.338	0.114
<i>All married cohabiting couples</i>			
Actual poverty rate	0.036	0.079	0.043
$W^F=0$, No male labour supply response	0.053	0.123	0.070
$W^F=0$, Male works an additional hour per week	0.052	0.117	0.065
$W^F=0$, Male works an additional 5 hours per week	0.051	0.106	0.055
$W^F=0$, Male works an additional 10 hours per week	0.050	0.100	0.050
<i>Dual earner couples</i>			
Actual poverty	0.000	0.006	0.006
$W^F=0$, No male labour supply response	0.006	0.044	0.038
$W^F=0$, Male works an additional hour per week	0.004	0.034	0.030
$W^F=0$, Male works an additional 5 hours per week	0.002	0.018	0.016
$W^F=0$, Male works an additional 10 hours per week	0.001	0.010	0.009

zero, and poverty rates are calculated under a varying set of assumptions about men's labour supply response. In 1979–1981, 8% of all families containing a woman of working age were in poverty. If women had zero earnings, and men did not change the number of hours that they worked in response to falling family income, then 24% of families would have been poor. Equivalent figures in 1989–1991 are 18% and 36% respectively. Within married and cohabiting couples only, 4% of families were poor in 1979–1981, and 5% would have been poor without women's earnings if there was no male labour market response. By 1989–1991 the number of married and cohabiting families in poverty had risen to 8%, and had women had no earnings 12% of families would have been poor if men did not increase their labour supply.

For small changes in male partner's hours responses very little difference emerges. Even if men were able to raise their weekly labour supply by 10 hours in response to their partners unemployment, the poverty rate amongst married couples would have remained as high as 10%. Among dual earner couples, the proportion of families in poverty in 1989–1991 was only 1%, but setting women's earnings to zero means that the proportion in poverty would have risen to 4% with no male labour supply response.

These results clearly show that women's earnings not only have a critical role to play in the prevention of poverty, but that women's earnings have become increasingly important in preventing families from falling into poverty over time.

6. Concluding remarks

We speculated at the outset that, even if the pin money hypothesis had some validity in the past, demographic change and changes in the labour market activity of men and women may mean that it has much less, if any, relevance today. This paper has provided three reasons for putting the pin money hypothesis to rest.

First, a declining proportion of women are living in families with a potential male breadwinner. It is no longer reasonable to assume that women workers have a partner who provides the bulk of family income. Second, for women living in married (or cohabiting) couple families, the importance of female earnings in the family budget has risen dramatically over time. This is largely due to increased labour force participation of married women. But it is also a result of downward pressure on the (relative) earnings of men, as demand shifts have exerted downward pressure on male employment and wages, particularly amongst the low-skilled (see also Machin and Waldfogel 1994). At the same time, inequality of family income among married couple families has risen sharply.

However women's earnings are increasingly exerting an equalizing effect on the distribution of family income among married couples. This is because women from lower and middle income families have increased their participation rates and earnings by more than women from high income families. This makes it all the more inappropriate to think of women

with low pay as earning pin money. Yet, as the earnings of low paid women have become increasingly important to the welfare of low income families, the abolition of the Wages Councils in August 1993, which formerly protected around one fifth of female employees, has led to a fall in the wages of these workers (see Harkness and Machin 1995).

Third, among women living in female-headed families, the dominant options seem to be either near total dependence on state benefit or near total dependence on own earnings. The proportion of female heads who are working part-time is extremely low and has fallen over time, as the design of the benefits system makes it very difficult to combine benefits and work. This means that for these female heads of households, it is virtually never the case that their earnings constitute pin money. Rather, for those who are working, their earnings tend to constitute the majority of family income. The all-or-nothing earnings pattern of these families explains the anomalous finding that female earnings among these families are disequalizing, as they of course widen the gap between those with any earnings and those with none.

Our results, in tandem with the results of some of our earlier work (Machin and Waldfogel 1994), indicate very clearly that, even in Britain where nearly half of women workers are employed part-time, it is wrong to think of men as going out to work as breadwinners, while women work only for pins. On average, while men's earnings remain the most important source of family income, women's earnings are constituting an increasingly large share of family income. The balance of male and female earnings in the family budget has changed rapidly over our period of study. It is also, however, important to note that the variance in the female share of the family budget has also risen, and that the rise in the number of families highly dependent on female earnings is far greater than the rise in the aggregate share suggests. Our results clearly show that the pin money hypothesis cannot be supported by the evidence today, and suggest that a reappraisal of old conceptions of male and female roles in the labour market is long overdue.

Endnotes

- ¹ The source for these numbers is various issues of the OECD Economic Outlook.
- ² Historically, "pin money" referred to the money provided to a wife by her husband for non-essential purchases such as pins, buttons, lace, etc. (see Kenny 1879). This amount, although minimal, was seen as distinct from the housekeeping money used to buy household essentials such as food and clothing. In fact, pin-money was seen as contributing to wives' independence: Lawrence Stone (1977) puts it as "Moreover, the introduction of the practice of inserting into the marriage contract a clause about pin money now guaranteed the wife an independent fixed income at her exclusive disposal" (p. 221). Peter Earle (1976) notes: "Much was made of the new institution of pin-money, 'that foundation of wives' rebellion', as Sir Harry Gublin put it in Steele's *Tender Husband*" (p. 27).
- ³ In the GHS the percentage of women heading their own households rose from 27% in the late 1970s to 32% in the early 1990s.
- ⁴ See Schmitt and Wadsworth (1993) for evidence on the fall in male labour force participation in Britain and Juhn (1992) for the United States: both link the fall to the declining labour market opportunities available for unskilled men.

- ⁵ See Manning (1996) for evidence on the effect of the Equal Pay Act on female earnings and employment; and Harkness and Machin (1995) for more recent evidence on the effect of the abolition of the Wages Councils on female employment and earnings.
- ⁶ In the GHS, family is defined as a couple, or single woman, and any dependent children. Any other adults in the household, and their income, are excluded. Total income is defined as total gross family income, as reported in the survey, for all years except 1983–1986 when the total family income question was not asked. For those years only, total income is the sum of all reported components of income. This results in an under-count of total income (and of non-labour income) for 1983–1986
- ⁷ Family income deciles are calculated across the relevant group. Thus in Fig. 1 deciles in the first panel (all women) are not comparable with deciles in the second and third panels (married and cohabiting families).
- ⁸ This pattern is consistent with some US work that sets up a variety of experiments based on counterfactual income distributions (e.g. Cancian and Reed 1996) though work by Burtless and Karoly (1995) has emphasised that more recent US trends (specifically in the 1980s) point to an inequality increasing effect as female earnings gains have become more concentrated in higher income families.
- ⁹ Alternative measures of female earnings inequality indicate similar changes. For example, the Gini coefficient of female earning shows a fall in the distribution of female earnings by 8% for all women, a 10% fall for married women only, and a 6% rise for single women. Taking the relative mean deviation of female earnings as a measure of earnings inequality, we find a 12% fall in inequality for all women, a 20% fall for married women, but a 42% rise for single women.

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