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Gender Difference in Household Consumption: Some Convergence over Three Decades

Cathal O'Donoghue
University of Galway

Karina Doorley
Economic and Social Research Institute, Dublin, Trinity College Dublin and Institute of Labor Economics, Bonn

Denisa M. Sologon
Luxembourg Institute for Social and Economic Research

Abstract: The cost-of-living crisis has increased attention on consumption and how it differs for particular societal groups. There is much theoretical evidence that consumption patterns of men and women should differ, but the empirical evidence is scant, due in part to the availability of individual-level consumption data. This paper tackles the question of consumption differentials between men and women over nearly three decades in Ireland. Using harmonised survey data, we show how patterns of consumption of male- and female-headed households have changed over this period of significant economic turmoil and growth.

I INTRODUCTION

Globally, there is a substantial interest in gender differences in consumption (Malghan and Swaminathan, 2021). Gender consumption differentials influence public policy such as the allocation of child benefits to the care-giver, which has an implicit gender dimension given that women are predominantly care-

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Corresponding author: cathal.odonoghue@universityofgalway.ie

givers. While much of this literature is focused on developing countries (Case and Deaton, 2003), the question is of increasing relevance in OECD countries. This paper examines gender differentials in consumption over time.

The marketing literature provides insights into product-specific consumption, such as brands (Tifferet and Herstein, 2012) or luxury goods (Stokburger-Sauer and Teichmann, 2013). However, this paper focuses on consumption associated with welfare and well-being, encompassing total consumption, savings and broad categories of goods (De Vreyer and Lambert, 2021).

Consumption is strongly related to household income. Within couple households, the relative consumption of spouses has been linked to their relative incomes (Browning *et al*., 1994; Lundberg *et al*., 1997). Gender differences in consumption affect the allocation of resources within households (Lise and Seitz, 2011) and consumer demand, regarding sustainability (Hawkins, 2012; Bloodhart and Swim, 2020), public health-related consumption (Wilsnack and Wilsnack, 2013; Esper and Furtado, 2013) and nutrition (Cardoso *et al*., 2013; Rosenfeld and Tomiyama, 2021). Consumption differentials are also one of the key channels through which gender affects macro-economic outcomes (Stotsky, 2006; Morrison and Morrison, 2007; Elborgh-Woytek *et al*., 2013). Consumption differentials have gained more recent attention in the context of the cost-of-living crisis and its effect on different societal groups (Sologon *et al*., 2024).

Ireland is an interesting case study given both the significant economic changes that have occurred over the past 40 years and the substantial change in relation to the position and power of women in Irish Society (Sheehan *et al*., 2017). The existing studies on consumption in Ireland offer varying insights, but there is a notable gap in understanding gender-differentiated consumption patterns. Gerlach-Kristen (2012) examined aggregate consumption patterns before the financial crash, accounting for the gender of the household head, but did not report or discuss gender differentials. Other studies have focused on specific goods. For instance, Eakins (2013) explored gender differences in asset ownership and the rising share of female-headed households in a study on the lottery. McCormack (2007) looked at healthy eating options, highlighting higher nutritional requirements for males. Newman *et al*. (2003) found a higher consumption profile for female-headed households for prepared meals. Loughrey and O'Donoghue (2012) conditioned on gender within budget share equations within a welfare analysis of prices, but did not review gender differential expenditures in detail. Coffey *et al*. (2020) considered the impact of the pandemic on expenditures, but did not differentiate by gender. Sheehan *et al*., (2017) considered the changing role of women in Ireland and assessed the implications for marketing and consumption, drawing conclusions based on a literature review rather than quantifying the impact.

Given the importance of gender in consumption, there is a gap in the literature in relation to gender-differentiated consumption patterns in Ireland. This paper aims to fill this gap by analysing the change in the circumstances of women in economic

terms over nearly three decades of Household Budget Survey in Ireland (1987-2015), focusing on total consumption, income, savings, and expenditure shares across different commodity groups. We consider the growing economic power of women, in particular as measured by the share of female heads of household, a metric that reflects the degree of asset ownership and earnings of women compared to men.

The study of gender differences in consumption is complicated by the fact that most expenditure data are collected at the household level and are difficult to attribute to a particular member of the household. Some studies have exploited exogenous changes to the income of men or women and estimated how this passes through to household consumption (Lundberg *et al*., 1997). Other studies have compared single female households to single male households (Räty and Carlsson-Kanyama, 2010). Clear lessons can be drawn from research in developing countries that studies the link between gender composition and expenditure profiles (Case and Deaton, 2003). In this approach, the gender composition of children is often used to determine if household expenditure on girls is systematically different from household expenditure on boys. The use of structural models of individual expenditure which rely on one or more categories of goods being "assignable" to male or female members of the household is also gaining prominence (World Bank, 2018).

In our study for Ireland, we use the relatively long series of available data to consider the growing economic power of women, as measured by the share of female heads of household, a metric which, admittedly imperfect, reflects some of the degree of asset ownership and earnings of women compared to men. As argued by Doss (2013), the income and assets of women are important aspects of their bargaining power and can affect outcomes such as health, labour and well-being. The relative bargaining power in turn influences life-satisfaction and consumption choices (Ma and Piao, 2020). This approach does not provide a picture of how resources are shared within a household although the most recent evidence on this for Ireland points to a substantial amount of income pooling for couple households (Watson *et al*., 2013). Our approach does however provide new evidence on the prevalence and economic advancement of households headed by women in Ireland by investigating how their consumption patterns differ from that of households headed by men.

In exploring this question and taking into account the change in the circumstances of women in economic terms, the full series of publicly available Household Budget Surveys from 1987 until 2015 are utilised. The aim is to consider not only total consumption, income and savings but also the shares of different types of expenditure. From a living standards and inequality point of view, it is of interest to explore changing gender differentials for budget shares of particular commodity groups, such as food. As the economic power of women has increased, have these differentials changed?

Our contribution to the existing literature is threefold. First, we document how the number of female-headed households, and their economic position, has changed over nearly three decades in a country which underwent tumultuous economic change, coupled with increased female labour market participation and income (Russell *et al.*, 2017). Second, we show how the consumption and savings of male- and female-headed households differs and how this difference has changed over the same time period. Third, we delve into the composition of the consumption baskets of male- vs. female-headed households and shed some light on the drivers of gender differentials in consumption. Our results have implications for the gender impact of inflation during the cost-of-living crisis, especially given the heterogeneous inflation rates associated with different types of consumption. Our findings may also be useful in terms of the national and global push for more sustainable consumption, by highlighting how the propensity to consume might differ for men and women or, for couple households, how it might vary given the relative income or economic power of spouses.

Section II provides a brief theoretical framework in which to inform the model choices, variables used and functional forms. Section III describes the data and methodology used. The results are explored in Section IV, with Section V concluding and providing some policy implications.

II THEORETICAL FRAMEWORK

To consider how gender might impact consumption, let us consider the following budget constraint equation assuming n expenditure categories, expressing total expenditure, m, as a function of consumption c, volume x_i or budget share (expenditure as a share of total expenditure) w_i and price p_i:

$$m = \Sigma_{i=1}^{n} c_i = \Sigma_{i=1}^{n} x_i p_i = \Sigma_{i=1}^{n} m w_i p_i \tag{1}$$

Furthermore, it can be expressed in terms of income y and savings s:

$$y = s + \Sigma_{i=1}^{n} x_i p_i = \Sigma_{i=1}^{n} m w_i p_i \tag{2}$$

Savings influence the capacity to accumulate wealth, which allows for consumption to be spread and to insulate a family against future shocks. They are driven by differences in capacity to save, preference for savings and wealth transfers. Thus gender gaps in incomes and expenditures can result in gender gaps in wealth (Deere and Doss, 2006). The presence of wealth and gender gaps in wealth can also influence expenditure patterns (Doss, 2006).

The volume of expenditure on a good depends itself on both income and total expenditure (assuming fixed savings) through the budget elasticity, which is the rate by which the budget share changes and total expenditure increases (a "normal" good will see an increase in expenditure as incomes rise, with luxuries increasing at a faster rate than necessities, which are less dependent upon income) and prices through the price elasticity:

$$y = s + \Sigma_{i=1}^{n} mw_i(m, p_j|\mathrm{j} = 1\ldots\mathrm{n}).p_i \quad (3)$$

Case and Deaton (2003) detail some reasons for differences by gender in total consumption. In a development context, they find income, life expectancy and fertility important determinants. Many studies have considered gender differences for individual consumption groups. Many focus on necessities such as food (Emanuel *et al*., 2012; Rosenfeld and Tomiyama, 2021), energy or "bads" such as alcohol and cigarettes (Yen, 2005). Men are likely to consume more energy and red meat (Räty and Carlsson-Kanyama, 2010), and devote less of their budget to energy saving investments (Trotta, 2018). There are significant variations in the consumption of leisure activities (Bihagen and Katz-Gerro, 2000). Men consume more alcohol than women, but with differences in the nature of consumption (Dawson and Archer, 1992). However, this ratio shrinks once differential body weight is taken into consideration.

Furthermore, there is likely to be to be a gender difference in savings. This may result from differences in labour market outcomes and incomes (Agunsoye *et al*., 2022) or be due to gender differences in risk-taking (Sunden and Surette, 1998). Seguino and Floro (2003) find, for example, that as the income of women increases and their economic power increases, so does the savings rate.

Given these differences, we need to consider gender differences in our parameters. Taking f as the taste parameter for the relative preference of women versus men, in this model, gender can impact a number of dimensions:

- The inter-temporal preference for consumption in terms of the differential savings rate $s(f)$
- The budget share and associated budget elasticity, $w_i(m(f), p_j|\mathrm{j} = 1\ldots\mathrm{n})$
- The price responsiveness of the budget share and the associated price elasticity $w_i(m, p_j(f)|\mathrm{j} = 1\ldots\mathrm{n})$

In order to assess the heterogeneous gender differential in these parameters, we derive regression-based budget share equations and an Engel curve with heterogeneous gender interacted with consumption and income. These models contain the chief theoretical drivers of budget shares including consumption, demographic, household and economic characteristics.

III DATA AND METHODOLOGY

3.1 Data

The Household Budget Survey (HBS) collected by the Central Statistics Office is the most useful dataset for an analysis such as this. Historically it was collected every seven years and then later, from 1994/95, every five years. From 2024, it will be collected on an annual basis using the same sample as the Survey of Income and Living Conditions. The 2020 wave was not collected due to the COVID-19 pandemic. The HBS is a survey conducted on a representative random sample of all private households in the State and has been collected at various points since 1951. The survey is a repeated cross-section survey, with the sampling frame being renewed each time.[1] There are three elements of the survey; a household questionnaire, a personal questionnaire of all those aged 16 or more in the household, and an expenditure diary.

The definition of the reference person in the Household Budget Survey (HBS) collected by the Central Statistics Office, which depends (since 2009/10) upon the name of the homeowner or renter or person with the highest income,[2] while in 2004/05 and earlier no specific direction is given as to who is to be taken as the reference person of the household. The definition of the reference person has therefore changed over the period.

The final rows of Table 1 and Figure 1 undertake a comparison between the share of female-headed households in the Household Budget Survey and other household surveys collected at a similar time (1987 ESRI Poverty Survey; 1994

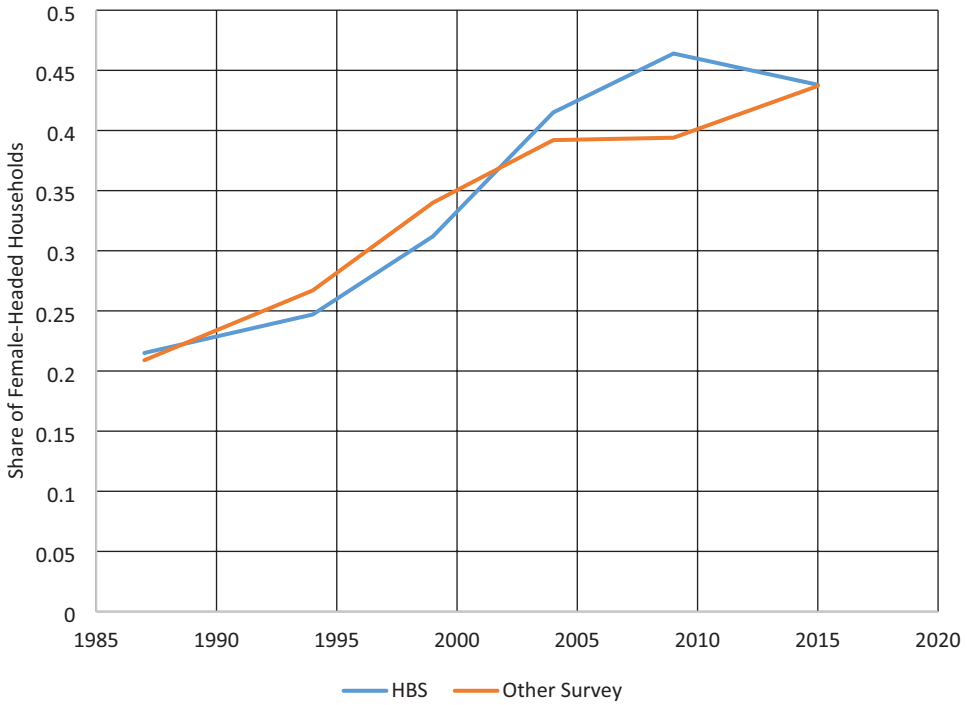
Table 1: Share of Female-Headed Households

	1987	*1994*	*1999*	*2004*	*2009*	*2015*
HOH not married	0.582	0.577	0.624	0.613	0.604	0.584
HOH married	0.062	0.110	0.177	0.309	0.332	0.324
Total	0.215	0.247	0.312	0.415	0.464	0.438
Other Survey	0.209	0.267	0.340	0.392	0.394	0.437

Source: Own calculations using the HBS data from the Irish Social Science Data Archive.
Note: As a validation, the authors manually calculated the share of female-headed households in a series of other surveys (1987 ESRI Poverty Survey; 1994 and 1999 Living in Ireland Survey; the Survey of Income and Living Conditions for other years) using the person with highest income or where the same income was held, the oldest person.

[1] For a period the farm households in the HBS were drawn from the Teagasc Farm Management Survey, which is a panel survey, re-interviewing these farms on an annual basis. Some of these farm households would thus have been re-interviewed in the HBS as well.
[2] In cases where household members receive an equal salary, the eldest member is taken as the reference person. Prior to this, the definition of head of household or reference person was self-defined.

Figure 1: Share of Female-Headed Households, Comparing the Household Budget Survey



and 1999 Living in Ireland Survey; the Survey of Income and Living Conditions for other years). The HBS uses the definitions reported above, while the other surveys, as they have an individual unit of analysis, allow us to compare the share of female-headed households using a consistent definition; in this case based on the person with the highest income in other household surveys collected at the same time.

Except for 2009/10 when the methodology in the HBS changed, both surveys exhibit similar levels and the same trend. Given the similarity in the trend between the self-defined prior to 2009/10 and the defined post 2009/10, with the trend manually calculated in other surveys, we think it is reasonable to make comparisons over time. If the reader doubts this interpretation, then one could of course consider trends in two sub-periods 1987-2004/05 and 2009/10 onwards.

The primary objective of the HBS is to use household spending patterns as the basis for forming weights for the Consumer Price Index. Respondents maintain a detailed diary of their expenditures over a two-week period and in addition complete a questionnaire on all sources of household income and various household facilities. It is important to note that certain types of expenditures (such as alcohol and

tobacco) and some income categories are often underestimated in surveys of this nature. The data files that are used in this study are the databases stored by the Irish Social Science Data Archive. The sample size varies from 6,000 to 7,000 households. The Household Budget Surveys used were collected over two calendar years, with most of the waves collecting information over six quarters of those two years.

The disposable income variable used in the survey contains all market incomes from the labour market (employed and self-employed), capital income (investments, property and retirement), other direct incomes plus social transfers, and net of household taxes and social insurance contributions. Household income excludes certain incomes which are of an irregular and non-recurring nature, money drawn down from savings and other windfalls. Like most expenditure surveys, the income information collected as part of the Irish HBS survey is not as reliable as that collected by, for example, the Survey of Income and Living Conditions (SILC) (Sutherland *et al*., 2002; CSO, 2012). Savage (2017) imputed expenditure from the HBS to the SILC data and found that the resulting distributions were similar, with the exception of the bottom income decile which, for a variety of reasons, can be more volatile in terms of composition than other income deciles.

The demographic and economic variables that are collected have had a reasonably standard definition over the entire period. Most waves have some variability in how expenditures are classified as a result of changing spending patterns, and new spending categories link internet mobile phone services or electric cars that were not available historically, or historic expenditures like cassette tapes and DVD rentals that are not so frequent today. Between 1987 and 2004/05, the changes were relatively minor. However, the 2009/10 survey had a substantially different classification of expenditures with further changes in 2014/15.

Given both these changes and the need to keep the analysis manageable, this paper describes expenditures in a grouped classification. In particular, the paper uses an adjusted classification of individual consumption by purpose (COICOP), extending the international 12-item classification to incorporate some additional expenditure categories of interest, such as childcare expenditure and disaggregated fuels and rent, to form a 19-category set of expenditure groups. This approach enriches the analysis without incorporating the heterogeneity of the more detailed categorisation. The categorisation used here is described in the Appendix.

It would be interesting to understand the internal consumption within a household to assess the true gender differential. However, the data do not allow that and are only disaggregated on a gender basis in relation to clothing. The closest we can approximate gender differences in expenditure is via the gender of the head of household or household reference person. The household reference person is the person in whose name the accommodation was owned or rented. Where the mortgage/rent is jointly paid, the respondent with the highest income is taken as the reference person. In cases where household members receive an equal salary,

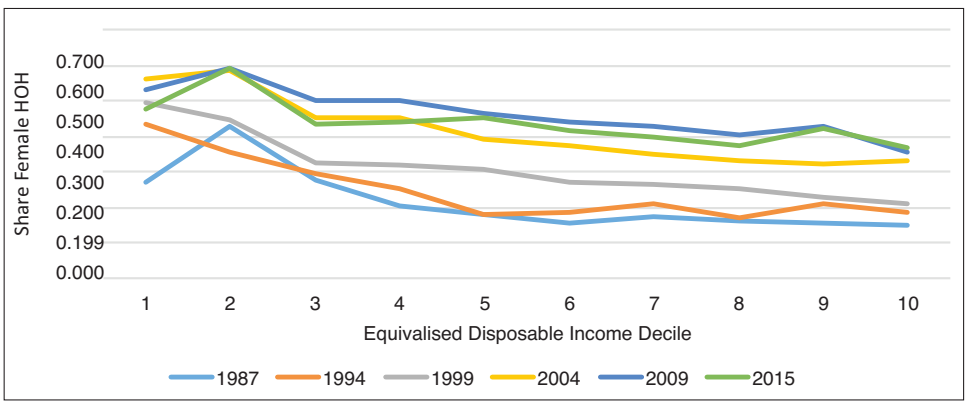
the eldest member is taken as the reference person. As a result, gender-based consumption differences are evaluated from the perspective of gender related head of household. Increased incomes and homeownership are the drivers of changes in headship/reference person, and these margins are consistent with the question posed in this research.

Table 1 describes the trend in female-headed households between 1987 and 2015. The share increased from 21.5 per cent in 1987 to a peak of 46.4 per cent during the financial crisis in 2009, before falling back slightly in 2015. The financial crisis saw the employment rate of women aged 35 and younger exceed that of males for the first time due to the concentration of males, particularly younger males as the construction sector suffered a major contraction. There was a particularly large jump between 1999 and 2004 which may have been due in part to the introduction of National Minimum Wage which benefitted relatively more women than men, and the partial individualisation of the income tax system, which substantially increased the labour supply of married women (Doorley, 2018), as well as general employment gains associated with the Celtic Tiger (Barrett *et al*., 2022).

There have been consistently more not-married households with a female head than not married households with a male head. This can be attributed to the fact that most lone parents in Ireland are women (Redmond *et al.*, 2023) and women tend to live longer than men, leading to a relatively higher share of widow households compared to widower households.

Figure 2 describes the pattern of female-headed households across the income distribution. Female-headed households are present throughout the income distribution. The pattern across the distribution is similar over time, with a higher

Figure 2: Female-Headed Households in the Income Distribution



Source: Own calculations using the HBS data from the Irish Social Science Data Archive.
Note: Deciles are constructed using equivalised household disposable income. Income is equivalised using the square root of the number of persons.

share of female-headed households at the bottom of the income distribution, which declines moving up the income distribution. In most years, there is a peak in decile 2, due in part to the fact that many old age pensioners are located in the second decile. With a higher life expectancy, widows form a large proportion of female-headed households. As female employment patterns and homeownership have increased, the share of female-headed households has increased since 1987. However, the gradient has flattened only slightly, indicating that female-headed households are still disproportionately low-income.

Table 2 reports summary statistics for the main variables that will be used in the analysis in the Results section. There are quite substantial differences between male- and female-headed households. However in general, the differential declines over time.

3.2 Methodology

In line with the theoretical framework, the analysis involves three steps. Firstly, incorporating income, expenditure and savings, the first model is defined as:

$$\log c = f(\log y, female, \log y * female, Z) + \varepsilon_1 \tag{5}$$

The functional form contains a female head of household dummy, *female* to capture the gender differentiated intercept. Interacting with the log of income ($\log y * female$), gives the income gradient for the gender differential, which will allow us to examine how the gradient is influenced by income.

In addition to total consumption, the budget share for individual expenditure groups is important. Is there a gender differential for the consumption of necessities like food or heating energy or "bad" like alcohol and tobacco. The budget share equation is defined as follows:

$$w_i = g(\log c, female, \log c * female, Z) + \varepsilon_2 \tag{6}$$

Where the budget share w_i is the ratio of the group consumption c_i, to total consumption C.

$$w_i = \frac{c_i}{C} \tag{7}$$

The next section first profiles male- and female-headed households from an income, demographic and savings perspective. We then report estimates for each of these regressions for the 19 expenditure categories.

Table 2: Summary Statistics

	ln (Income)	*ln Expenditure*	*# Earners*	*Age (Adjusted)*	*Married*	*Employee*	*Unemployment*	*Upper Secondary*	*University*	*#Children (0-4)*	*#Children (5-15)*	*#Children (16-24)*	*#Adults*	*Rural*
1987														
Male	5.206	5.320	1.369	0.465	0.844	0.444	0.138	0.200	0.116	0.378	0.793	0.575	1.845	0.596
Female	4.692	4.745	0.787	0.320	0.205	0.204	0.044	0.249	0.111	0.125	0.245	0.325	1.059	0.729
Ratio	1.11	1.12	1.74	1.45	4.12	2.18	3.11	0.81	1.05	3.02	3.24	1.77	1.74	0.82
1994														
Male	5.526	5.633	1.307	0.426	0.835	0.415	0.109	0.192	0.125	0.278	0.676	0.556	1.808	0.585
Female	5.079	5.104	0.792	0.382	0.315	0.291	0.044	0.210	0.124	0.144	0.332	0.327	1.077	0.734
Ratio	1.09	1.10	1.65	1.12	2.65	1.42	2.47	0.91	1.01	1.92	2.04	1.70	1.68	0.80
1999														
Male	6.181	6.257	1.516	0.373	0.834	0.480	0.054	0.218	0.219	0.251	0.520	0.482	1.832	0.600
Female	5.762	5.826	1.075	0.393	0.395	0.401	0.034	0.255	0.184	0.171	0.349	0.339	1.236	0.716
Ratio	1.07	1.07	1.41	0.95	2.11	1.20	1.61	0.86	1.19	1.47	1.49	1.42	1.48	0.84
2004														
Male	6.582	6.621	1.436	0.366	0.770	0.469	0.035	0.233	0.281	0.210	0.379	0.297	1.684	0.663
Female	6.254	6.328	1.082	0.377	0.486	0.389	0.020	0.252	0.272	0.154	0.315	0.304	1.316	0.765
Ratio	1.05	1.05	1.33	0.97	1.59	1.20	1.72	0.92	1.03	1.36	1.20	0.98	1.28	0.87
2009														
Male	6.629	6.540	2.381	0.433	0.641	0.436	0.138	0.169	0.443	0.251	0.350	0.329	1.723	0.598
Female	6.432	6.368	1.799	0.505	0.368	0.448	0.088	0.174	0.434	0.208	0.372	0.338	1.468	0.663
Ratio	1.03	1.03	1.32	0.86	1.74	0.97	1.56	0.97	1.02	1.21	0.94	0.97	1.17	0.90
2015														
Male	6.662	6.510	2.351	0.382	0.935	0.491	0.081	0.192	0.486	0.226	0.375	0.253	1.651	0.698
Female	6.488	6.347	1.863	0.396	0.792	0.495	0.079	0.176	0.512	0.175	0.332	0.248	1.441	0.724
Ratio	1.03	1.03	1.26	0.96	1.18	0.99	1.03	1.09	0.95	1.29	1.13	1.02	1.15	0.96

Source: Own calculations using the HBS data from the Irish Social Science Data Archive.

IV RESULTS

4.1 Income of Male- and Female-Headed Households

We now present results on the income differentials between male- and female-headed households. Table 3 reports the ratio of the mean disposable income by gender differentiated head of household relative to the overall mean. As the share of female-headed households increased, the relative income of male-headed households increased slightly; but as the weight of the female-headed households increased, so too did their relative income. The net impact was that the ratio between the male and the female average fell from a 21 per cent gap to a 12 per cent gap between 1987 and 2015. However most of the change occurred between 2004 and 2015. Figure 3 reports how this difference is manifested over the income distribution, with the gap typically narrowest at the bottom and widest at the top (except 1994).

Table 3: Mean Disposable Income of Male-Headed Household versus Female-Headed Household Relative to Overall Mean

	1987 Male	*1987 Female*	*1994 Male*	*1994 Female*	*1999 Male*	*1999 Female*	*2004 Male*	*2004 Female*	*2009 Male*	*2009 Female*	*2015 Male*	*2015 Female*
Mean	1.04	0.86	1.04	0.88	1.06	0.86	1.08	0.89	1.07	0.92	1.05	0.94
Ratio	1.21		1.18		1.24		1.21		1.16		1.12	

Source: Own calculations using the HBS data from the Irish Social Science Data Archive.
Note: There is a statistical difference between males and females for each year.

Figure 4 reports the mean income in real terms across the income distribution over time. We see two trends. While the mean income rises over the distribution, for both male- and female-headed households, the real gap between top and bottom has widened over time, with the (90:10) decile ratio increasing over time (Table 4). For male-headed households, this ratio, which captures inequality between the top and bottom decile of income, peaked in 2009, before declining in 2015 to a level similar to that observed between 1994 and 1999. For female-headed households, it peaked in 2004, before also declining in 2015 to a level similar to that observed between 1994 and 1999.

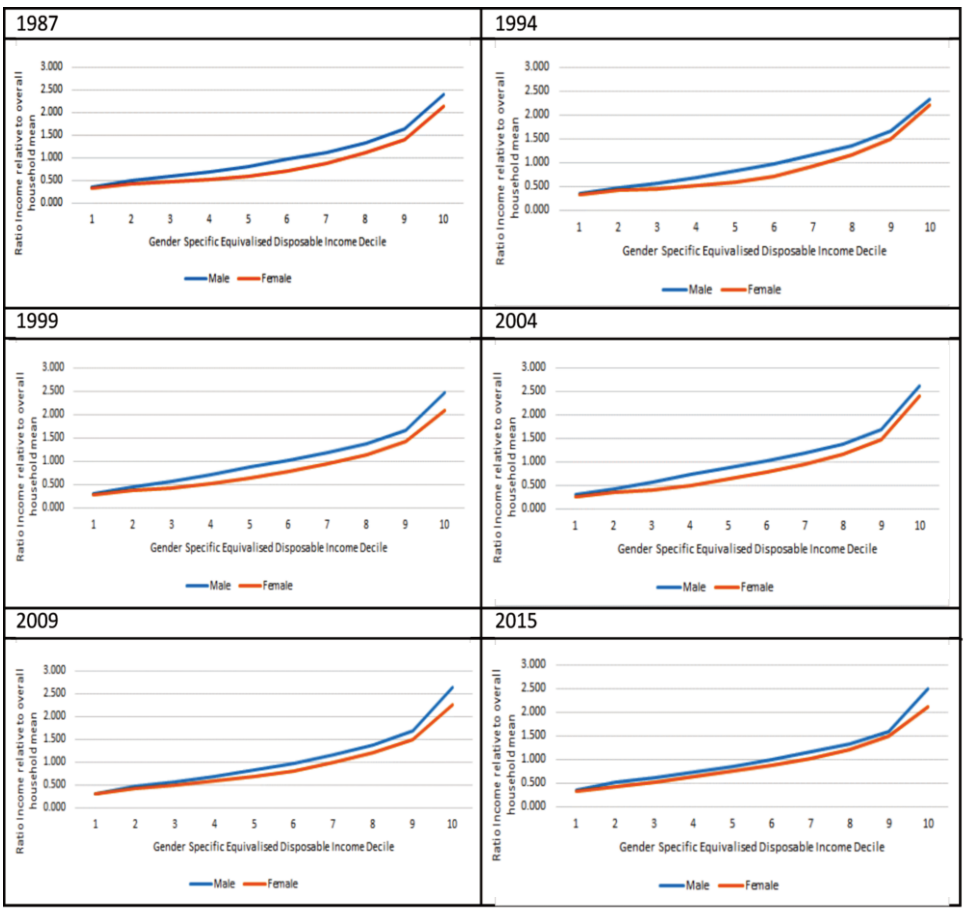
The second trend is that the purchasing power of the bottom decile in 2015 was higher in real terms than that of the top decile in 1987. In 1999, for both male- and female-headed households, the average income of the top decile in 1987 was equivalent to the 3rd decile in 2015, jumping to the 8th decile in 1999, and thereafter just marginally below the top decile in 2015. This highlights the significant increase in real living standards by the start of the economic growth period known as the Celtic Tiger between 1994 and 2007. From 2004 to 2015, the biggest change was a reduction in the gap between the top and the bottom of the income distribution.

Table 4: Decile Ratio (90:10) for Male- and Female-Headed Households

	1987	*1994*	*1999*	*2004*	*2009*	*2015*
Male	6.9	6.6	7.8	8.7	8.8	7.3
Female	6.4	6.5	7.3	9.1	7.5	6.6

Source: Own calculations using the HBS data from the Irish Social Science Data Archive.
Note: Deciles are constructed using equivalised household disposable income. Income is equivalised using the square root of the number of persons.

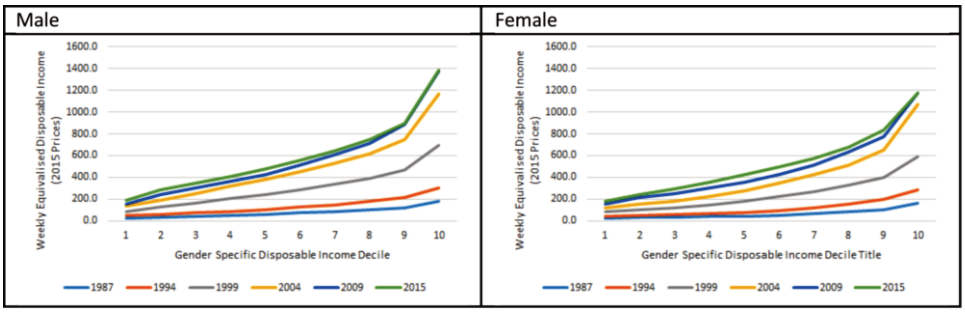
Figure 3: Average Income of Male- and Female-Headed Households (Relative to Mean)



Source: Own calculations using the HBS data from the Irish Social Science Data Archive.
Note: Deciles are constructed using equivalised household disposable income. Income is equivalised using the square root of the number of persons.

4.2 A Profile of Male- and Female-Headed Households

Figure 4: Average Income of Male- and Female-Headed Households Across the Income Distribution (in 2015 Prices)



Source: Own calculations using the HBS data from the Irish Social Science Data Archive.
Note: Deciles are constructed using equivalised household disposable income. Income is equivalised using the square root of the number of persons.

Table 5 summarises our estimates of the association between household characteristics and the probability of the household being led by a female. After testing various specifications to account for potential multicollinearity using a Variance Inflation Factor (VIF), we converged on a functional form where the VIF was between 1-5, indicating some moderate correlation, but where the signs made sense.

Consistent with the story about increased shares of female-headed households, but with a low share of married households, we see a negative sign on the number of adults and on being married. For the married variable, the coefficient falls over time (except for 2015). Considering income per capita, female-headed households are poorer, which is consistent with Figure 4 which shows that female headship declines over the income distribution.

In general, married households have been less likely to have a female head, although this effect moderated during the financial crisis. In earlier years the presence of older children, particularly for lone parents, was associated with a higher probability of female headship when considered together with the marital status variable. However, by 2015, this significance had disappeared, reflecting greater cohabitation rates.

Overall, another striking trend is the decline in the pseudo R2 of the models. In 1987, the pseudo R2 was 43.4 per cent, with observable factors being strong drivers of headship. However, this declined rapidly, particularly during the economic take-off between 1994 and 1999, so that by 2015, the pseudo R2 has declined to 11.1 per cent with unobservable factors and personal decisions (or preferences) being more important drivers of which households have female heads.

Table 5: Logit Model Female-Headed Household

	1987 Coefficient	*1987 S.E.*	*1994 Coefficient*	*1994 S.E.*	*1999 Coefficient*	*1999 S.E.*	*2004 Coefficient*	*2004 S.E.*	*2009 Coefficient*	*2009 S.E.*	*2015 Coefficient*	*2015 S.E.*
Log Income per person	–0.475***	0.076	–0.453***	0.075	–0.386***	0.064	–0.419***	0.060	–0.327***	0.066	–0.301***	0.059
Number of Earners	0.509***	0.116	0.33***	0.088	0.464***	0.083	0.194***	0.073	0.118	0.078	0.347***	0.072
Age (Standardised)	–1.252***	0.112	–0.232***	0.090	0.01	0.080	–0.175**	0.070	0.147*	0.085	0.382***	0.077
Age (Standardised) Squared	–1.827***	0.174	–1.133***	0.151	–0.719***	0.182	–0.896***	0.196	–0.797***	0.110	0.086	0.119
Married	0.658***	0.095	0.626***	0.090	0.44***	0.078	0.426***	0.074	0.19**	0.093	0.046	0.083
Employee	0.103	0.147	0.485***	0.111	–0.064	0.094	0.412***	0.079	0.165**	0.074	0.271***	0.072
Self-Employed	–0.067	0.080	–0.103	0.068	–0.077	0.065	–0.086	0.056	–0.078	0.060	–0.294***	0.061
Unemployment	–0.103**	0.051	–0.007	0.042	–0.018	0.041	0.002	0.037	0.109**	0.047	–0.101***	0.039
Upper Secondary	0.136***	0.052	0.061	0.046	0.125***	0.043	0.156***	0.045	0.084	0.060	0.019	0.046
University Educated	1.236***	0.087	0.882***	0.073	0.546***	0.065	0.485***	0.064	0.154**	0.069	0.07	0.063
Number of Children (0-4)	4.016***	0.668	4.04***	0.676	3.958***	0.617	2.352***	0.334	2.171***	0.381	2.543***	0.346
Number of Children (5-13)	0.3711		0.2509		0.1861		0.0897		0.075		0.0488	
Number of Children (16-24)	–0.475***	0.076	–0.453***	0.075	–0.386***	0.064	–0.419***	0.060	–0.327***	0.066	–0.301***	0.059
Number of Adults	–0.101**	0.050	–0.289***	0.046	–0.225***	0.039	–0.072**	0.035	–0.098**	0.044	–0.165***	0.036
Rural HH	0.509***	0.116	0.33***	0.088	0.464***	0.083	0.194***	0.073	0.118	0.078	0.347***	0.072
Constant	–3.092***	0.103	–2.351***	0.083	–2.049***	0.076	–1.273***	0.071	–1.155***	0.072	–1.423***	0.093
N	7,698		7,861		7,640		6,874		5,877		6,839	
Pseudo R2	0.4337		0.388		0.3026		0.1722		0.137		0.1105	0.4337

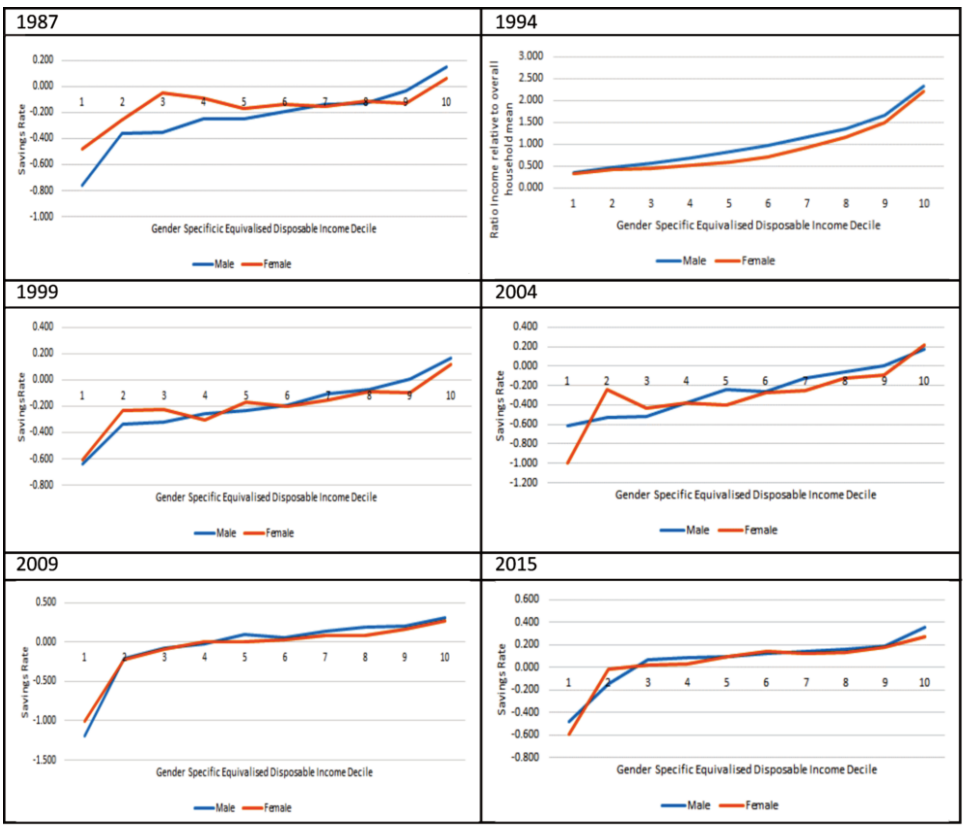
Source: Own calculations using the HBS data from the Irish Social Science Data Archive.

Note: The dependent variable is a dummy for the household being headed by a female. Family type group dummies were also included in the model, but not reported here for brevity reasons. The base category for the employment status variable is other non-employed (e.g. retired, home caring, disabled, student). The base category for education is Lower Secondary or younger. A small number of cases have been dropped due to missing explanatory variables. The demographic variables refer to the head of household.

4.3 Consumption and Savings of Male- and Female-Headed Households

We now report results on the consumption and savings differentials between male- and female-headed households. We calculate savings as the difference between reported household income and expenditure and report the gender differential rate in Figure 5. The distributions exhibit a typical profile of dissaving at the bottom of the distribution and saving at the top. At the start of the period considered (1987 and 1994), low-income female-headed households had a lower level of dissaving than male-headed households. This suggests a more risk averse perspective for female-headed households or lower access to credit. This may also be due to reasons such as lack of collateral due to wealth gaps (Deere and Doss, 2006) or in access to financial services (Morsey, 2020). However, this pattern has disappeared as

Figure 5: Average Savings Rate of Male- and Female-Headed Households Across the Income Distribution



Source: Own calculations using the HBS data from the Irish Social Science Data Archive.
Note: Deciles are constructed using equivalised household disposable income. Income is equivalised using the square root of the number of persons.

incomes rose during the subsequent period. Between 1987 and 2004, the average overall savings rate declined as the country became richer, with average savings rates shrinking dramatically by 2004/05, consistent with the consumer led boom of the end of the Celtic Tiger (Kirby, 2016). During the biggest income jump between 1994 and 1999, savings rates of female-headed households fell faster than those of male-headed households, with the gender gap in dissavings at the bottom of the income distribution disappearing. After the financial crisis of 2008-2012, the savings rate recovered significantly as general risk aversion increased following the scarring effect of the financial crisis. However, the gender differential did not reappear, with little difference currently visible between male- and female-headed households.

We now present total consumption regressions. Table 6 summarises our estimates of OLS regressions of consumption against income, capturing this savings relationship. The coefficient on log income is negative, but positive in the square, reflecting the non-linear relationship with income. However when evaluated at average income, the income elasticity of consumption is positive (Table 7). The elasticity is higher for females than males, however. For both men and women, the elasticity falls over time, consistent with rising income, and changes direction after the financial crisis. The elasticity is initially higher for women than men but falls faster as incomes catch up.

Except for 2004, where the gender coefficients were not significant, female-headed households had lower consumption, conditional on their income, with the gap shrinking as incomes rise. In general the differential has fallen over time. However, during the latter Celtic Tiger years, the female differential in consumption disappeared. Significance improved for this relationship during the economic crash as savings rates recovered.

Table 8 contains the gender-differentiated coefficients of the budget share (OLS) equations.[3] The models highlight important gender differentials for different groups. For brevity, only a subset of the coefficients is discussed. In general, female households have a higher budget share for food. However, this reversed during the financial crisis as the economic position of men deteriorated by relatively more than that of women. Conversely, for both the presence of and the level of the budget share for alcohol and tobacco, the opposite is found. Female-led households had lower budget shares of both tobacco and alcohol up to the financial crisis. The gender differential for tobacco disappeared in 2015, consistent with overall falls in tobacco consumption. Female-led households still had lower budget shares of alcohol, conditional on some consumption, in the most recent year of the analysis.

In the earlier period, female-headed households were more likely to purchase clothes, but this gender differential disappeared by 2004, with limited differences for the budget shares conditional on some consumption. However, we see very little

[3] The other coefficients are available from the authors on request.

Table 6 Regression Model – Log Expenditure versus Log Income

	1987 Coefficient	*1987 S.E.*	*1994 Coefficient*	*1994 S.E.*	*1999 Coefficient*	*1999 S.E.*	*2004 Coefficient*	*2004 S.E.*	*2009 Coefficient*	*2009 S.E.*	*2015 Coefficient*	*2015 S.E.*
Female HOH	–1.913***	0.220	–1.02***	0.195	–0.569***	0.206	0.113	0.141	–0.315**	0.153	–0.284**	0.129
Female HOH x Log Income	0.2***	0.023	0.1***	0.020	0.054***	0.019	–0.02	0.021	0.048**	0.023	0.041**	0.019
Log Income	–1.066***	0.170	–0.944***	0.207	–0.557**	0.246	0.067	0.192	–0.653***	0.119	–0.449***	0.141
Log Income^2	0.081***	0.009	0.075***	0.010	0.052***	0.012	0.037**	0.015	0.088***	0.009	0.077***	0.010
Number of Earners	0.029***	0.009	0.016*	0.009	–0.009	0.009	–0.044***	0.014	–0.003	0.008	0.003	0.007
Age (Standardised)	0.058***	0.015	0.099***	0.015	0.105***	0.017	0.112***	0.022	0.177***	0.020	0.058**	0.027
Age (Standardised) Squared	0.015	0.017	0.034**	0.016	0.045***	0.017	0.055**	0.022	0.101***	0.023	0.022	0.026
Married	0.254***	0.017	0.217***	0.016	0.208***	0.016	0.203***	0.021	0.164***	0.016	0.141***	0.021
Employee	–0.016	0.014	–0.001	0.013	0.016	0.013	0.029	0.018	0.004	0.017	–0.026	0.017
Unemployment	–0.175***	0.019	–0.172***	0.020	–0.111***	0.030	–0.052	0.048	–0.06**	0.029	–0.24***	0.028
Upper Secondary	0.154***	0.013	0.151***	0.014	0.176***	0.014	0.131***	0.020	0.052***	0.019	0.114***	0.017
University Educated	0.271***	0.019	0.21***	0.017	0.217***	0.015	0.241***	0.020	0.144***	0.016	0.205***	0.015
Number of Children (0-4)	0.012	0.007	0.018**	0.009	0.013	0.009	0.053***	0.013	0.014	0.012	0.029***	0.010
Number of Children (5-13)	0.015***	0.005	0.011**	0.005	0.024***	0.006	0.057***	0.009	0.025***	0.010	0.028***	0.007
Number of Children (16-24)	0.069***	0.006	0.092***	0.006	0.079***	0.007	0.136***	0.012	0.121***	0.013	0.115***	0.009
Number of Adults	0.122***	0.009	0.145***	0.008	0.167***	0.009	0.161***	0.013	0.133***	0.013	0.125***	0.012
Rural HH	0.023**	0.011	0.043***	0.011	0.058***	0.011	0.066***	0.016	0.024*	0.014	0.003	0.013
Constant	11.957***	0.823	11.445***	1.023	10.078***	1.308	3.905***	0.612	6.383***	0.399	5.531***	0.472
N	7,698		7,855		7,640		6,874		5,877		6,839	
R2	43.4		44.0		45.2		56.3		59.1		43.9	

Source: Own calculations using the HBS data from the Irish Social Science Data Archive.
Note: The dependent variable is the log of household consumption. Family type group dummies were also included in the model, but not reported here for brevity reasons. The base category for the employment status variable is other non-employed (e.g. retired, home caring, disabled, student). The base category for education is Lower Secondary or younger. A small number of cases have been dropped due to missing variables (i.e. Log of zero). The demographic variables refer to the head of household.

difference between male- and female-headed households in relation to the share of female clothing purchases over time (Table 9). More is spent on female than male clothes within the household, but the headship has no bearing on this share. Similarly, in the earlier period, when incomes were lower, female households were both more likely to consume home heating fuels and electricity and, when purchased, to have a higher budget share. However, the differential disappeared for higher income households in 2004 and 2009, but reappeared in 2015.

For most of the period, female-headed households were more likely to purchase household goods and services and durables. Female-headed households are less likely to have private transportation and motor fuel expenditures and, in more recent years, less likely to use public transport, with the impact disappearing for higher income households. In lower-income female-headed households, there are lower associated childcare costs. This finding combines the lower employment participation rate of lone parents with growing participation of married women. Of the remaining categories, the coefficients are not consistent or important.

Table 7: Income Elasticity of Consumption for Males and Females at the Average Income

	1987	*1994*	*1999*	*2004*	*2009*	*2015*
Male	0.56	0.61	0.59	0.57	0.56	0.61
Female	0.68	0.65	0.60	0.53	0.57	0.63

Source: Own calculations using the HBS data from the Irish Social Science Data Archive.
Note: Elasticity calculated by differentiating lc wrt lc and evaluated at the average ly separately for males and females for each year.

Table 8: Gender Specific Components on Budget Share Equations

	1987	*1994*	*1999*	*2004*	*2009*	*2015*
1 Food and Non-alcoholic beverages						
female	0.0236	0.1046***	0.0639*	0.0448*	–0.0879***	0.0716***
femalelc	–0.0022	–0.0097***	–0.0063*	–0.007*	0.0129***	–0.0104***
femalehasch	0.0122**	0.0069	0.0155***	0.0097***	–0.0002	0.0051*
2 Alcoholic beverages						
female	–0.2128***	–0.2216***	–0.2762***	–0.1135***	–0.099***	–0.0678***
femalelc	0.0176***	0.0191***	0.0238***	0.0147***	0.0135***	0.0093***
femaehasch	0.0159***	0.0132***	0.0071**	0.0049**	0.0113***	0.0022
3 Tobacco						
female	–0.201***	–0.1249***	–0.1182***	–0.0343**	–0.0095*	–0.0231**
femalelc	0.0194***	0.0119***	0.0109***	0.0049**	0.0012	0.0038**
femaehasch	0.0159***	0.0099***	0.0068***	0.0028	0.0043***	0.0004

Table 8: Gender Specific Components on Budget Share Equations (Contd.)

	1987	*1994*	*1999*	*2004*	*2009*	*2015*
4 Clothing and footwear						
female	0.0107	–0.0247	–0.0124	0.0284**	0.0802***	0.0201
femalelc	0.0007	0.0042*	0.0028	–0.0019	–0.0106***	–0.0019
femaehasch	0.004	–0.0071*	–0.0063*	–0.0058*	0.003	–0.0014
5 Home fuels						
female	0.0961***	0.0692***	0.0854***	0.0222	–0.0107	0.0689***
femalelc	–0.0088***	–0.006**	–0.0077***	–0.0034	–0.0022	–0.0101***
femaehasch	–0.0163***	–0.0096***	–0.003*	0.0021	0.0295***	–0.0007
6 Electricity						
female	0.0158	0.0261**	0.0596***	0.0102	–0.0018	0.0012
femalelc	–0.0014	–0.0027**	–0.0055***	–0.0017	0.0016	–0.0003
femaehasch	0.0019	0.0076***	0.0034***	0.0026***	–0.0296***	–0.0009
7 Rents						
female	0.0147	–0.0308	0.032	0.0122	0.0215**	–0.0567
femalelc	–0.0011	0.0032	–0.0034	–0.0029	–0.0028**	0.0078
femaehasch	–0.0039	0.0061	0.0121**	0.0035	–0.0028***	–0.0059
8 Household services						
female	0.0607***	0.024	0.0431**	0.027**	0.039**	0.0474***
femalelc	–0.0065***	–0.0025	–0.0037**	–0.0037**	–0.0049**	–0.0062***
femaehasch	–0.0057***	–0.0072***	–0.0108***	–0.004***	–0.002	0
9 Health						
female	0.016	0.0366**	–0.059**	–0.0232*	–0.0562***	0.0048
femalelc	–0.0014	–0.0043**	0.0056**	0.0035	0.0083***	–0.0002
femaehasch	–0.0047	–0.0015	–0.0095***	–0.0023	–0.0007	–0.004*
10 Private transport						
female	–0.1035***	–0.1071***	–0.0782***	–0.0632***	–0.0219**	–0.0504***
femalelc	0.0103***	0.0101***	0.0071***	0.0094***	0.0032*	0.0072***
femaehasch	–0.005*	–0.004*	–0.0039*	–0.001	–0.0013	0.0029
11 Public transport						
female	0.00004	–0.00904	–0.00658	0.00239	0.02201*	–0.0499***
femalelc	0.0005	0.0012	0.0006	–0.0005	–0.0034*	0.0069***
femaehasch	0.0045**	0.0067***	0.0048**	0.0021	0.0006	0.0021
12 Communication						
female	0.111***	0.0856***	0.1096***	0.0332***	–0.0015	0.0419***
femalelc	–0.0102***	–0.0075***	–0.0098***	–0.0049***	0.0002	–0.0061***
femaehasch	–0.0123***	–0.0056***	–0.0014	0.0034**	0.0003	0.0021

Table 8: Gender Specific Components on Budget Share Equations (Contd.)

	1987	*1994*	*1999*	*2004*	*2009*	*2015*
13 Recreation and culture						
female	–0.0054	–0.0213	–0.0373**	–0.0165	0.0351**	–0.0058
femalelc	0.0002	0.002	0.003*	0.002	–0.0055***	0.0001
femaehasch	–0.0005	–0.0042*	–0.0014	–0.0005	0.0046**	–0.0025
14 Education						
female	0.0283***	0.0288**	0.0162*	0.0065	0.0162	0.0084
femalelc	–0.0031***	–0.0032**	–0.0016*	–0.0013	–0.0025	–0.0014
femaehasch	0.0036*	0.0108***	–0.0001	0.0037*	–0.0037	0.0016
15 Restaurants and hotels						
female	–0.0019	0.0272	–0.0389	0.047	0.0436***	0.0214**
femalelc	0.0005	–0.0032	0.0033	–0.0058	–0.0065**	–0.0028*
femaehasch	–0.0066	–0.0034	–0.0139***	–0.0196**	–0.0076**	–0.003
16 Other goods and services						
female	0.0226	0.0564**	0.1249***	0.0892***	–0.0092	–0.0166
femalelc	–0.0006	–0.0041	–0.0104***	–0.0114***	0.003	0.0036
femaehasch	–0.0001	–0.0103***	–0.0045	–0.0018	–0.003	–0.0174***
17 Childcare						
female	–0.0215***	–0.0157***	–0.0152***	0.0023	–0.0066	–0.0067*
femalelc	–0.0003	–0.0103	0.0017	–0.0091	0.0033	0.0075
femaehasch	0.1133***	0.0896***	0.1111***	0.0546***	0.0449***	0.0739***
18 Motor Fuels						
female	–0.0835***	–0.1***	–0.088***	–0.065***	–0.0011	–0.0511***
femalelc	0.0077***	0.0095***	0.0081***	0.0097***	0.0008	0.0073***
femaehasch	–0.0027	–0.0041**	–0.0048***	–0.0008	–0.0046	0.0005
19 Durable goods						
female	0.2086***	0.1592***	0.1631***	–0.0175	0.0431	0.0377
femalelc	–0.0215***	–0.0157***	–0.0152***	0.0023	–0.0066	–0.0067*
femaehasch	–0.0003	–0.0103	0.0017	–0.0091	0.0033	0.0075

Source: Own calculations using the HBS data from the Irish Social Science Data Archive.
Note: The dependent variable is the share of the particular consumption group in total expenditure (including zeros). A full set of explanatory variables (similar to Table 5) was also included in the model, but is not reported here for brevity reasons. femalelc: femalexlog expenditure; femaehasch femaehasch – female x has child; The full functional form of the model is female femalelc femalehasch lc married #earners age age2 employee upper_secondaryed university nch04 nch513 nch1624 #adult rural. The demographic variables refer to the head of household.

Table 9: Female Clothing Purchases as a Share of Total Clothing Purchases

	1987	*1994*	*1999*	*2004*	*2009*	*2015*
Ratio Female to Male	0.990	1.000	0.949	0.983	1.014	1.129

Source: Own calculations using the HBS data from the Irish Social Science Data Archive.

V DISCUSSION AND CONCLUSIONS

Our analysis of gender differences in household consumption over nearly three decades in Ireland (1987-2015) reveals several significant trends and provides insights into the evolving economic position of women. These findings align with and contribute to the broader international research context as discussed in the introduction. This period reflects a huge transition in living standards and the differential position of men and women. While not reflecting intra-household sharing of resources, the use of the reference person can provide some interesting insights in relation to the changing position of women in households and consequentially the consumption patterns of households.

Reflecting these trends, the share of female-headed households increased markedly from 21.5 per cent in 1987 to a peak of 46.4 per cent during the financial crisis in 2009/10, when female employment rates for under 35s exceeded that of males. Female-headed households were present throughout the income distribution in all data waves, representing all types of household. Typically, however, across all waves of the HBS, female-headed households were disproportionally in the lower half of the income distribution. Of particular note is the increasing purchasing power in the income distribution, particularly between 1994 and 1999 and between 1999 and 2004, where Ireland experienced the so-called Celtic Tiger. In real terms, the top decile of the income distribution in 1987 had lower disposable income than the bottom decile of the income distribution in 2015, highlighting this enormous increase in purchasing power across the income distribution.

Consumption patterns were considered in relation to four dimensions, total expenditure, the difference between income and expenditure (or savings), the existence of the expenditure for a particular expenditure group (or non-zero budget share) and the budget for a particular expenditure group relative to total expenditure (budget share).

At the start of the period considered, dissavings rates were lower for low-income female-headed households compared to low-income male-headed households, suggesting more risk aversion or lower access to credit for female-headed households. This pattern, however, disappeared as the country became wealthier over the course of the 2000s. In fact, the savings rates for female-headed households fell faster than for the overall population during the consumer boom at

the end of the Celtic Tiger era. The post-crash increase in savings applied to both male- and female-headed households.

In this paper, we report gender differentials for 19 expenditure groups and for the presence of these expenditures over the whole period. The dominant theme of the results is that poorer female-headed households were more likely to have a higher budget share for necessities such as food and heating, while poorer male-headed households had higher budget shares for tobacco, alcohol and motor fuels. This differential diminished for higher income households.

Moreover, our observation that female-headed households allocate a higher budget share to food and non-alcoholic beverages, particularly in lower-income brackets, resonates with the findings of Emanuel *et al*. (2012) and Rosenfeld and Tomiyama (2021), who highlighted gender-specific preferences in nutritional consumption, which our results corroborate within the Irish context. Contrastingly, the lower allocation to "bads" such as alcohol and tobacco among female-headed households aligns with the patterns reported by Yen (2005) and Trotta (2018), who noted similar trends in other developed countries. This indicates a broader, perhaps culturally influenced trend, where women exhibit more health-conscious consumption behaviours. As living standards have risen over time, smaller gender differentials in the budget shares of food and alcohol are observable, while the gender differential disappears completely for tobacco and heating fuels.

Thus, there appears to be some evidence of increased female economic power over the period, leading to reduced gender differentials in consumption patterns. We present no evidence here about the direction of causality as to whether the economic developments drove differences in gender outcomes or vice versa. Equally, we cannot isolate the impact of compositional changes to the group of female-headed households from behavioural changes to consumption. Our measure of household head may also be slightly noisy due to changing survey definitions, although we find a similar proportion of female-headed households in external sources. However, on the substantive issue of gender differentiated consumption patterns over the income distribution, the consistency between the historic pattern within the income distribution and the reduction in gender differentials as the country became richer, provides evidence of converging economic power between men and women, particularly in poor households.

The increase in female-headed households and their rising economic power supports the findings of Doss (2013), who argued that the economic empowerment of women is a crucial determinant of household bargaining power and well-being. Our results extend this by showing a marked improvement in the relative income and consumption patterns of female-headed households over time, particularly during the economic boom periods.

The narrowing of gender differentials in consumption patterns over time suggests a convergence, possibly influenced by policy changes in addition to income growth. Reforms such as the individualisation of the income tax system

(Doorley, 2018) and the introduction of the National Minimum Wage (Bargain *et al*., 2018) may have facilitated greater economic participation and financial independence for women, a trend that may hold valuable lessons for other OECD countries experiencing similar socio-economic transitions.

Our findings show that female-headed households in Ireland were more resilient in terms of maintaining consumption levels during the economic crisis, adding a new dimension to the work of Seguino and Floro (2003) and Agunsoye *et al*. (2022), who highlighted the importance of economic power in mitigating financial shocks.

Although gender differentials in consumption have declined, the remaining differentials have implications for important questions such as the gender-differentiated impact of the cost-of-living crisis, a question tackled by Sologon *et al*. (2024) for six European countries. The persistence of these differences in consumption suggests that, while the effect may have moderated over time, changes to benefit payments primarily received by women (i.e. Child Benefit or the One Parent Family Payment) might have different aggregate implications for consumption and welfare than changes to tax or other types of social welfare.

Our results also highlight the need to investigate the international literature suggesting that women consume more sustainably than men within an Irish context, considering the sensitivity of this pattern to income levels. Additionally, gender differences in nutrition patterns, which are vital for both environmental and public health, fall outside the scope of this research due to the aggregation of consumption bundles. These topics merit further study. The dramatic fall in male employment between 2009-2011 provides an interesting natural experiment in differential gender power that warrants deeper exploration.

Although our dataset ends in 2015, we can infer potential future trends based on the observed patterns and the broader economic context. Given the ongoing cost-of-living crisis, we expect that gender differences in consumption patterns will continue to evolve. Specifically, female-headed households, which historically allocate a higher proportion of their budgets to necessities, may experience increased financial pressure due to inflation. This expectation aligns with the findings of Sologon *et al*. (2024), who highlight that female-headed households in Ireland face higher inflation rates due to their consumption patterns, particularly for essential goods such as food, heating and electricity.

The question of sustainability, which is increasingly critical in public policy discourse, can be partially addressed through our analysis of travel-related consumption. Female-headed households, which historically spend less on private transportation and motor fuels, may inherently exhibit more sustainable consumption patterns. This aligns with the findings of Trotta (2018), who noted gender differences in energy-saving behaviours. Policies aimed at promoting public transportation and reducing carbon footprints could leverage these existing patterns to achieve broader sustainability goals. Targeted interventions such as subsidies for

public transport or incentives for low-emission vehicles could enhance these sustainable practices, supporting both environmental policy and gender equity by improving the mobility and economic participation of women.

Housing and childcare are critical areas with substantial policy implications. Our study reveals that female-headed households have distinct consumption patterns in these areas, which warrant targeted policy interventions. For instance, female-headed households are more likely to rent and allocate a significant portion of their budget to childcare, reflecting both economic necessity and societal roles. Policies that support affordable housing initiatives and accessible childcare services could significantly alleviate the financial burden on female-headed households. By reducing the cost burden of housing and childcare, such policies can enable greater savings and investment in other areas, thereby improving living standards and economic resilience.

In summary, our results not only align with but also extend the existing literature by providing a detailed, longitudinal perspective on gender-differentiated consumption within Ireland. This contextualisation within the broader international research highlights the dynamic interplay between gender, economic policy, and household consumption patterns.

While our findings offer significant insights into gender differences in household consumption, the external validity of these results for understanding gender differences across the entire Irish population needs careful consideration. Statements about converging economic power between men and women, particularly in poor households, must be framed carefully due to the "missing middle" of the income distribution for women in this analysis. Female-headed households comprise heterogeneous subgroups, which adds complexity to the analysis.

The limitations of this study include the lack of data on intra-household sharing of resources, which could affect the observed consumption patterns. Additionally, the aggregation of consumption bundles limits our ability to explore specific gender differences in nutrition patterns comprehensively. Future research should address these limitations by employing more granular data and exploring different models to enhance our understanding of gender differences in consumption. Comparative studies using similar and different methodologies across various international contexts would provide a broader perspective on the findings presented here.

Overall, our study underscores the dynamic interplay between gender, economic policy, and household consumption patterns in Ireland, highlighting the necessity for continued research and targeted policy interventions to promote gender equity and economic resilience.

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APPENDIX EXPENDITURE CATEGORIES (COICOP ADJUSTED)

1. Food and Non-alcoholic beverages
2. Alcoholic beverages
3. Tobacco
4. Clothing and footwear
5. Home fuels
6. Electricity
7. Rents
8. Household services
9. Health
10. Private transport
11. Public transport
12. Communication
13. Recreation and culture
14. Education
15. Restaurants and hotels
16. Other goods and services
17. Childcare
18. Motor Fuels
19. Durable goods