

Water Affordability under the Water Reform Proposals

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Introduction

In December 2002 it was announced that Northern Ireland's water and sewerage services would become self-financing. In March 2003 the Department for Regional Development published its proposals for the reform of water and sewerage services and initiated a consultation exercise.ⁱ In October 2003 John Spellar set out the Government's initial response to the consultation.ⁱⁱ In late summer of 2004, the Government announced its preferred options for Water Reform and in November 2004 published a further consultation paper and the results of a full range of impact assessments on the proposals.ⁱⁱⁱ The aim of this paper is twofold: to consider the issue of water affordability and to present the findings of two impact assessments based on the Poverty and Social Exclusion Survey (PSEN).^{iv}

It is proposed that all households whether owned or rented will have to pay an annual charge if they are connected to the mains water supply and sewerage system. The charge will include a standard charge for maintenance of the water and sewerage system and also a variable charge based on the capital value of the property. It is proposed that the standing charge will represent approximately 35% of the total costs of domestic supply.^v The estimated water charge for properties within twenty-five capital value bands have been published and range from a minimum of £155 to a maximum of £750 per annum depending on the capital value of the house.^{vi}

The analysis in this paper is based on the actual capital values in 2003 of all owner-occupied properties in the PSEN sample and an *estimated* capital value of all rented property extrapolated from the capital value of all owner-occupied properties using the Net Annual Value, number of rooms and a Noble Index deprivation score.^{vii} The property values were then used to calculate the amount each household will pay on water charges based on the illustration of charges provided by the Government.

Water is considered to be unaffordable when households spend more than 3 per cent of their total net household income on water charges. The term 'water poverty' is used to describe this situation. In Great Britain water affordability is one of the sustainability indicators used by the Department for the Environment, Food and Rural Affairs. In 2004 some 9% of all households in Great Britain spent in excess of 3% of their household incomes on water charges.^{viii}

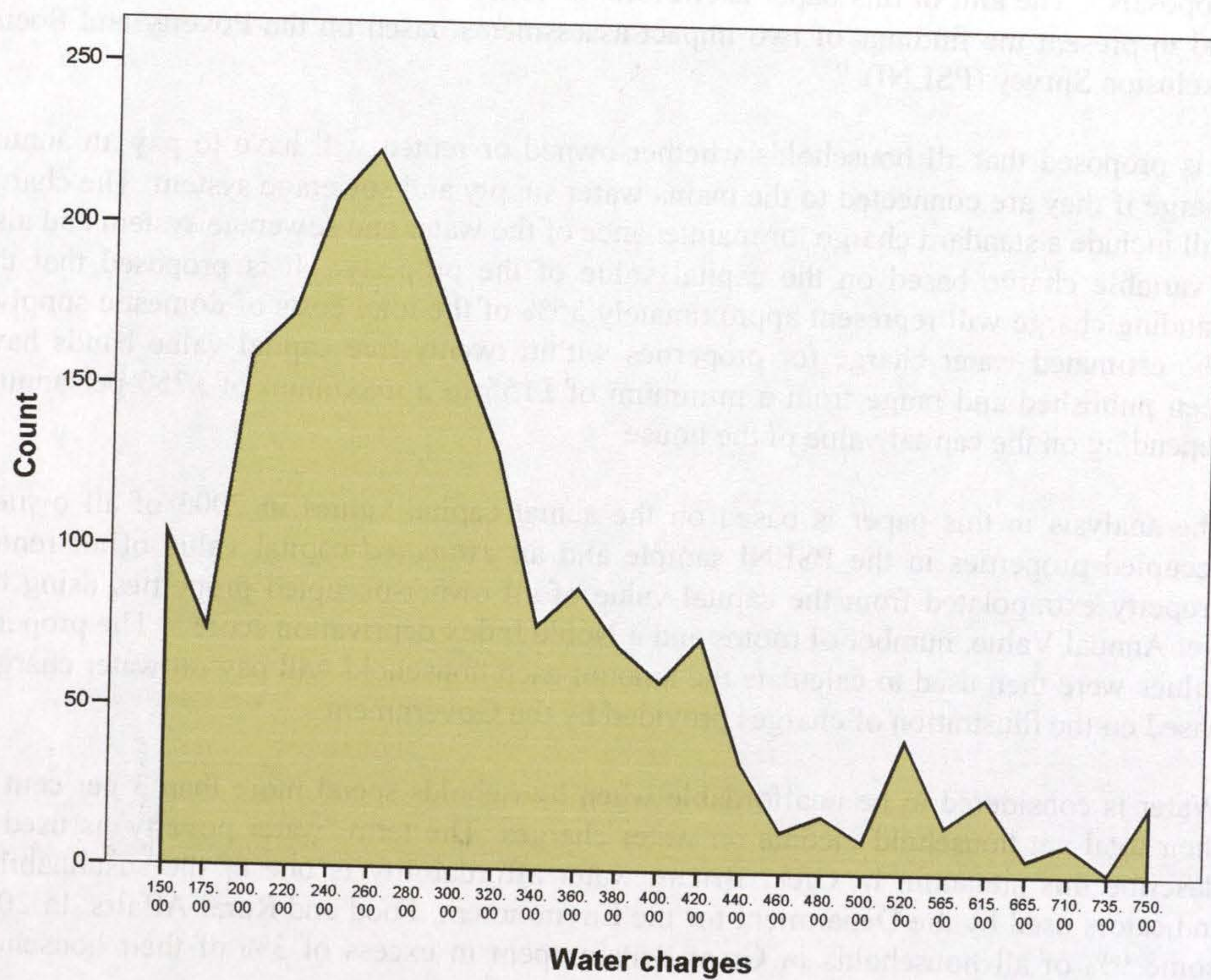
The distribution of water charges

The average discounted estimated water charge for all households in 2006/2007 will be £100. It will vary between different tenures with owner-occupiers with mortgages paying

the highest charge (£106) while those living in Housing Executive dwellings paying the lowest charge (£81). At the end of the three year period in which the charges are to be phased in the average charge will rise to £300.

As can be seen from Figure 1, which records the full charge, the distribution is skewed towards the lower end with the majority of the population paying water charges of around £270. The distribution has a long tail with only a few households paying charges of more than £450 per year. This indicates that a very high proportion of the total amount raised from the new water charge will be paid for by those living in the lower capital value house bands.

Figure 1: Estimated water and sewerage charges in 2009/2010 .



It is estimated that the proposed scheme will raise over £200 million in 2009/2010. As the majority of households live in the lower valued houses, the bulk of the £200 million will be paid for by the less well off sections of the community. More specifically, 25% of the £200 million will be paid for by those living in houses valued at under £70,000, 50% by those living in houses worth less than £100,000 and approximately 66% by those in houses worth less than £130,000.

Water affordability under the Water Reform Proposals

Water affordability will be out of reach of many households in Northern Ireland. As can be seen from Figure 2, some households in the bottom quintile of the income distribution will pay over 5% of their household income on water and sewerage charges compared with the top quintile who will pay less than 1%.

Figure 2: Estimated percentage of household income which will be spent on new charges before rebate shown by income quintile groups.

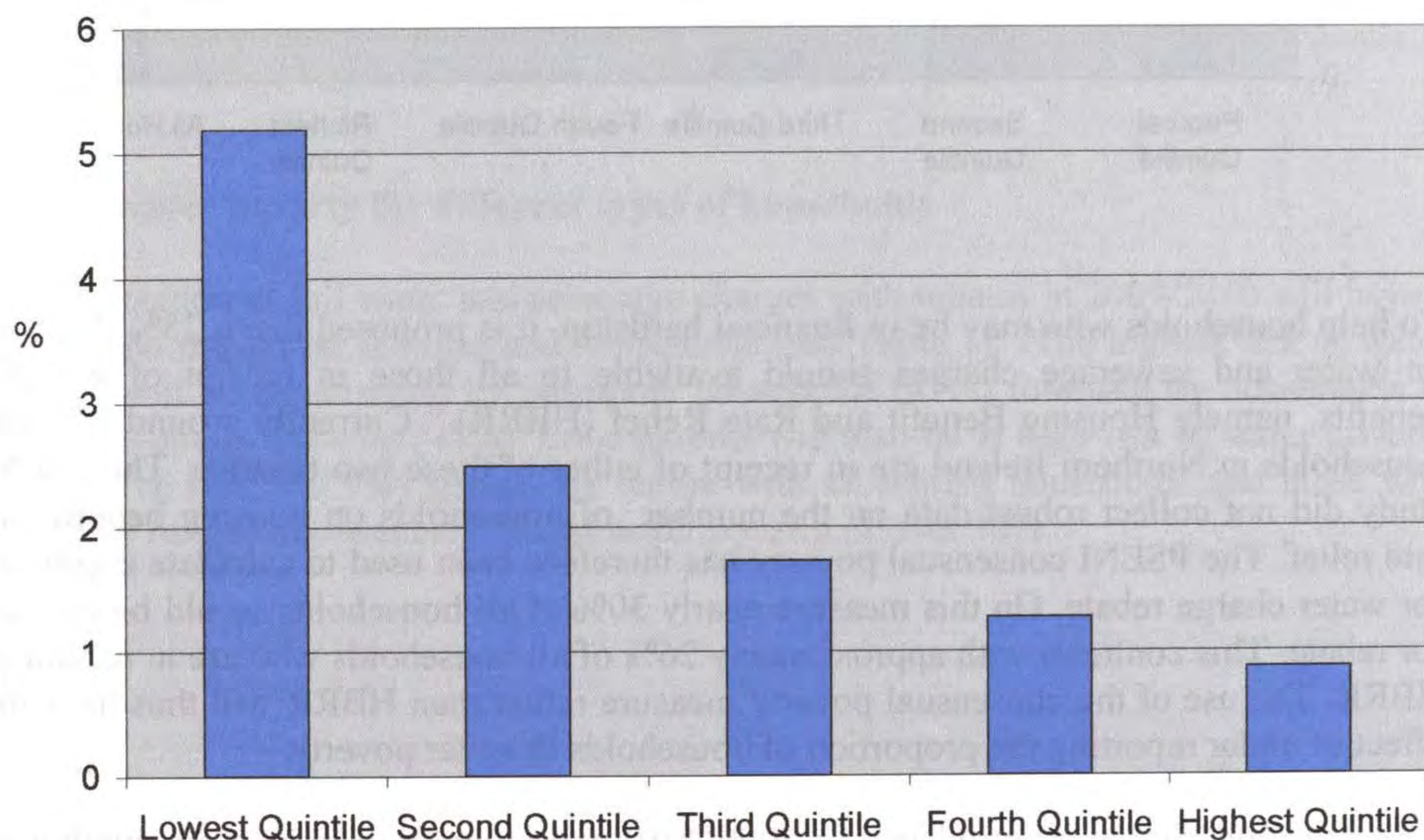
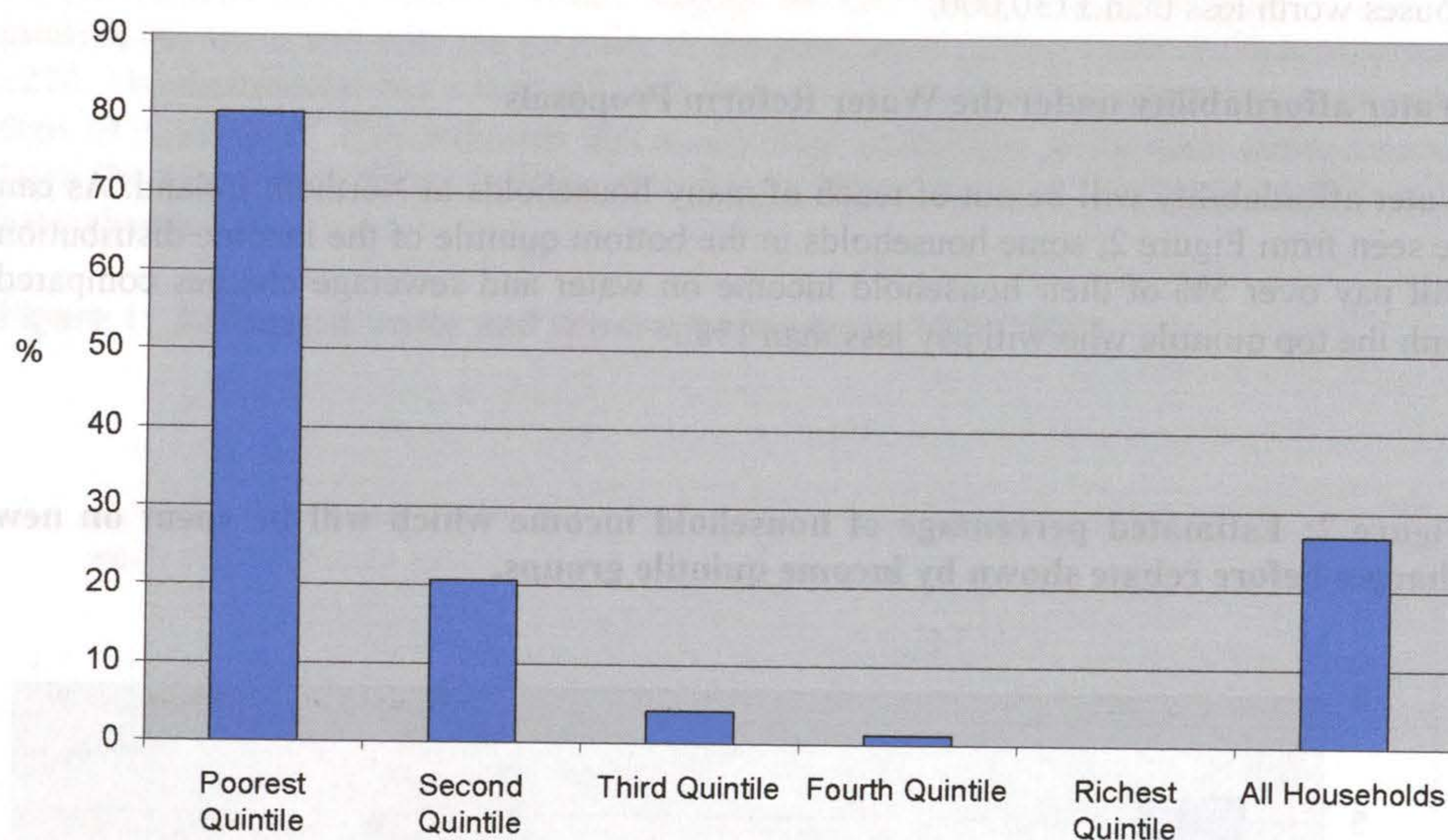


Figure 3: Estimated percentage of households in each quintile spending more than 3% of household income on water and sewerage charges.

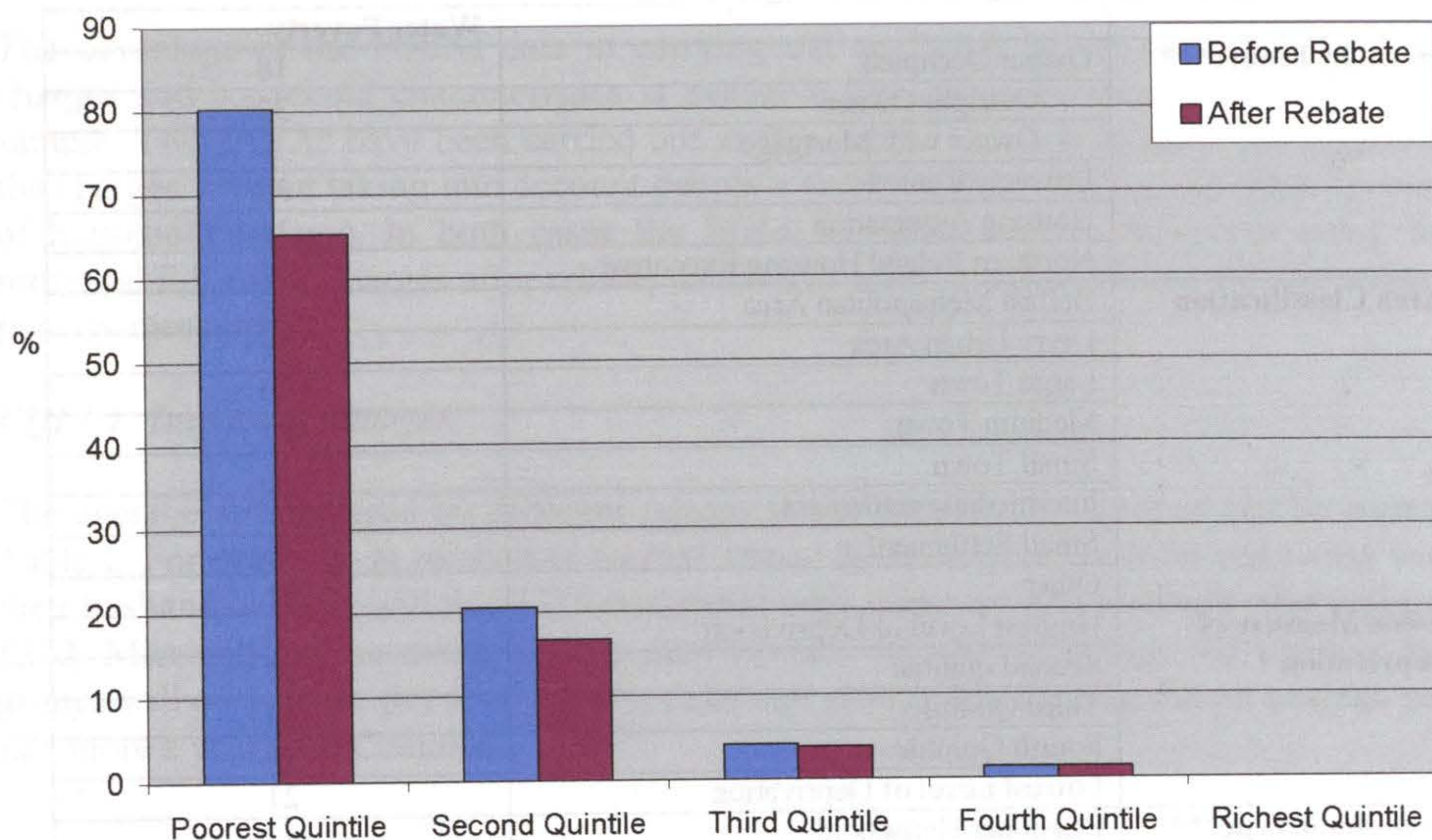


To help households who may be in financial hardship, it is proposed that a 25% discount on water and sewerage charges should be available to all those in receipt of existing benefits, namely Housing Benefit and Rate Relief (HBRR).^{ix} Currently around 175,000 households in Northern Ireland are in receipt of either of these two benefits. The PSENI study did not collect robust data on the number of households on housing benefit and rate relief. The PSENI consensual poverty has therefore been used to calculate eligibility for water charge rebate. On this measure nearly 30% of all households would be eligible for rebate. This contrasts with approximately 26% of all households who are in receipt of HBRR. The use of the consensual poverty measure rather than HBRR will thus have the effect of under reporting the proportion of households in water poverty.

When the full charge is introduced in 2009/2010, the rebate will reduce the number of people in water poverty by 5%, from 27% to 22%. However, over one in five of all households will still suffer water poverty.

The impact of the rebate on each of the quintiles is shown in Figure 4. The water poverty rate in the lowest quintile will be reduced from 80% to 65% and in the second lowest quintile from 21% to 18%.

Figure 4: Estimated percentage of households in each quintile spending more than 3% of household income on water and sewerage charges before and after the rebate.



Risk of water poverty for different types of households

The imposition of full water and sewerage charges with rebates in 2009/2010 will have a differential impact on families and households (see Table 1). The highest risk of water poverty will be experienced by pensioner households (47%) followed by households in which no-one is working (45%). Lone parents will also be at high risk of water poverty (34%). The risk will vary greatly by tenure with all renting households and those who own their houses experiencing risk of water poverty of over 30%.

Table 1: Risk of water poverty by different housing and household characteristics

		Water Poverty
Housing Tenure***	Owner Occupied	18
	- Outright Owner	32
	- Owner with Mortgage	9
	Privately Rented	36
	Housing Association	31
	Northern Ireland Housing Executive	34
Area Classification	Belfast Metropolitan Area	25
	Derry Urban Area	24
	Large Town	20
	Medium Town	27
	Small Town	21
	Intermediate settlement	18
	Small Settlement	26
	Other	21
Noble Measure of Deprivation *	Highest Level of Deprivation	24
	Second quintile	27
	Third Quintile	24
	Fourth Quintile	19
	Lowest Level of Deprivation	21
Household Type***	Pensioner Household	47
	Household with No Children	21
	Couple Household	18
	Lone Parent Household	34
	Family Household	8
Workers in Household***	No workers	45
	One worker	15
	Two or more workers	7

Significance level *p<0.05, **p<0.01 and p<0.001.

Equality Impact Assessment of the proposed charges.

The Department for Regional Development carried out an EQIA on the reforms as required under section 75 of the Northern Ireland Act 1998. It was based on a methodology which consisted of linking together data at an area level. It included the 2001 census data, recent house sales data from the Valuation and Lands Agency (VLA), earnings from the DETI 'New Earnings Survey' 2002 and household income information from the NI Household Panel Survey.^x The weakness of this methodology is that it is subject to what is known as the 'ecological fallacy'. This situation can occur when incorrect inferences are made about individuals based on aggregate or group data. It was pointed out that ideally the analysis should have been carried out by linking householders with their section 75 characteristics, income and water charge.^{xi} The final EQIA of the preferred charging option, was based on discrete capital values. It concluded that the scheme would have a marginal impact on marital status, dependants, disability and a 'substantial differential impact' on the Protestant community. The latter conclusion was

based on the assumption that there are more Protestants in electoral wards where house prices, and therefore water charges, are highest.^{xiii}

The advantage of the PSENI data in carrying out an EQIA is that the information on charges and household characteristics is available for each individual household in the sample. Two EQIAs have been carried out in this paper. The first assesses the impact of the charges without taking into account people's ability to pay. The second takes account of household income. In both cases the EQIA is based on the PSNI data using the proposed full water charges after rebate, which has been calculated using the consensual poverty measure.

EQIA 1: Impact of charges

The average amount paid by different groups in the population varies as can be seen in Table 2. For example, in relation to marital status, those who are married and living with their husband or wife, will pay £315 compared with someone who is single who will pay £242. Men will pay on average more than women. In relation to age, the younger age groups will on average pay less than the older age groups. Protestants will on average pay £23 more a year than Catholics.

Characteristic	Average Annual Payment (£)
Age	
16-24	201.21
25-34	242.30
35-44	281.68
45-54	271.19
55-64	291.92
65-74	271.81
75+	261.14
Gender	
Male	242.21
Female	238.21
Marital Status	
Single	241.78
Married and living with husband or wife	314.90
Married and living with partner or wife	232.43
Divorced	231.66
Widowed	260.21
Religion	
Catholic	231.66
Protestant	254.90

Table 2 Average Water Charge after rebate for selected groups

		Mean Water Charge (£)
Religion	Catholic	267.27
	Protestant	290.39
	Neither	292.00
Provision of Care	Caring for Nobody	276.35
	Caring for Adults in/outside the House	281.74
	Caring for Children	301.33
Gender	Male	296.54
	Female	269.32
Age	16-24	240.97
	25-34	259.19
	35-44	289.26
	45-54	302.05
	55-64	292.34
	65-74	285.15
	75 and over	265.07
Political Opinion	Ulster Unionist Party	305.06
	Democratic Unionist Party	260.91
	Other Unionist Parties	267.21
	Sinn Fein	242.59
	SDLP	283.68
	Alliance Party	378.19
	Women's Coalition	291.95
	Other	271.62
	None/No Political Opinion	261.14
Disability	No Disabled Persons in Household	282.23
	One or More disabled Persons in Household	258.57
Marital Status	Single, that is never married	241.78
	Married and Living with your husband or wife	314.99
	Married and Separated from Husband or Wife	235.43
	Divorced	237.66
	Widowed	260.27

EQIA Impact of charges taking into consideration households' ability to pay

This analysis takes account of households' ability to pay the new water charge. It is based on the estimated number of households who will be in water poverty following the introduction of the water and sewerage charges. As can be seen in Table 3 the proposal will have an adverse impact on a number of section 75 categories. It will impact more on the very youngest and the oldest age groups, women compared with men, those who are widowed and divorced. For example, people who are widowed will approximately have twice the likelihood of experiencing water poverty than the average household in Northern Ireland. It will also adversely affect, but to a lesser degree, Protestants rather than Catholics and Unionist voters compared with Catholic or Nationalist voters.

Table 5. Risk of water poverty for different Section 75 groups.

		Water Poverty
Religion*	Catholic	15
	Protestant	20
	Neither	16
Provision of Care	Caring for Nobody	22
	Caring for Adults in/outside the House	15
	Caring for Children	6
Gender*	Male	16
	Female	21
Age***	16-24	22
	25-34	9
	35-44	8
	45-54	9
	55-64	23
	65-74	45
	75 and over	45
Political Opinion*	Ulster Unionist Party	22
	Democratic Unionist Party	12
	Other Unionist Parties	30
	Sinn Fein	12
	SDLP	15
	Alliance Party	21
	Women's Coalition	21
	Other	6
	None/No Political Opinion	18
Disability*	No Disabled Persons in Household	19
	One or More disabled Persons in Household	7
Marital Status***	Single, that is never married	19
	Married and Living with your husband or wife	12
	Married and Separated from Husband or wife	19
	Divorced	21
	Widowed	52

Significance level * $p < 0.05$, ** $p < 0.01$ and $p < 0.001$.

Conclusions

The proposed scheme for water and sewerage charges will have a adverse affect on the poorest sections of the communities in Northern Ireland. Many thousands of vulnerable households, such as the elderly, those who are widowed, will suffer from water poverty. The proposals will impact directly on any poverty reduction targets which are set within the New Targeting Social Need strategy. The proposed rebate scheme will make only a slight impact on the numbers of those who live in water poverty. The bulk of the total amount raised will be paid for by those living in the houses below the average house price in Northern Ireland.

Technical appendix

The capital value of all owner occupied houses in the PSENI sample as estimated by the Valuation and Lands Agency in 2003 were added to the database by matching serial

numbers in such a way that anonymity was preserved. These values were then used to estimate the capital value of all privately rented dwellings in the sample. Using regression, mean capital values were imputed using the number of rooms, the net annual value of the property and the Noble Deprivation banded score. Some 63% of the total variance of capital value, the dependent variable, was accounted for by the three variables with the number of rooms determining over 50% of the variance. Table A1 below notes the mean capital value for each tenure.

Table A1: The mean capital value of each tenure, 2003.

		Mean
Housing tenure	Outright owner	105485
	Owner with mortgage	103443.8
	Private tenant/other	78681.04
	HA tenant	75380.93
	NIHE tenant	65406.08

ⁱ The Reform of the Water and Sewerage Services in Northern Ireland: A consultation Document, March 2003.

http://www.waterreformni.gov.uk/pdf%27s/consult_full_document.pdf

ⁱⁱ Spellar Rules out Water privatization and flat charges.

<http://www.nics.gov.uk/press/rd/031007a-rd.htm>

ⁱⁱⁱ Integrated Impact Assessment of the Government's Proposal for the Reform of the Water and Sewerage Services: Summary and Consultation Questions, November, 2004.

http://www.waterreformni.gov.uk/contman/uploads/Summary_Final.pdf

^{iv} The PSENI was designed and directed by Professor Paddy Hillyard, University of Ulster, Professor Eithne McLaughlin and Mike Tomlinson, Queen's University Belfast. The project originated and was funded by OFMDFM and HM Treasury. See: Hillyard, P. et al. (2003) Bare Necessities: Poverty and Social Exclusion in Northern Ireland – Key Findings, Belfast: Democratic Dialogue.

^v Impact assessment of the Government's Proposals for the Reform of Water and Sewerage Services, Part 1: Integrated Impact Assessment – Overview,

<http://www.waterreformni.gov.uk/contman/uploads/Part%20I%20-%20IIA%20Overview.pdf>, p.20.

^{vi} For an illustration of charges see: <http://www.waterreformni.gov.uk/charges.asp>

^{vii} See Appendix 1.

^{viii} <http://www.sustainable-development.gov.uk/sustainable/quality04/maind/04q03.htm>. For an analysis of water affordability in Great Britain see: Defra (2004) Cross-Government Review of Water Affordability Report.

^{ix} Impact Assessment of the Government's Proposals for the Reform of Water and Sewerage Services, Part 1: Integrated Impact Assessment – Overview, p. 20.

^x Impact Assessment of the Government's Proposals for the Reform of Water and Sewerage Services, Part II Equality Impact Assessment, p. 13.

^{xi} Ibid. p. 13.

^{xii} The Reform of Water and Sewerage Services in Northern Ireland: Equality Technical Appraisal, np.

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