

Table S1. Quantile effect of social expenditure on household welfare, 2012/2013.

Variable	Welfare Quantiles									
	10th		25th		50th		75th		90th	
	Actual (C)	Elasticity	Actual (C)	Elasticity	Actual (C)	Elasticity	Actual (C)	Elasticity	Actual (C)	Elasticity
Social expenditure	640.4*	0.646*	895.5	0.517*	1130.	0.377*	1325.	0.392*	1432.6	0.324*
	**	**	***	**	5***	**	7***	**	***	**
Age	3.365		10.42		7.775		9.091		13.92	
			**							
Square of age	-		-		-		-		-	
	0.039		0.094		0.064		0.060		-0.109	
	4		4**		2		4			
Household size	-		-		-		-		-	
	70.26*		134.1		291.0		609.5		1119.1	
	**		***		***		***		***	
Square of household size	3.165*		7.095		16.28		34.80		66.14*	
	*		***		***		***		**	
Sex of household head (Base=Female)										
Male	50.05		10.73		-7.505		-55.99		128.0	
Marital status of household head (Base=Never married)										
Married/co-habiting	-		-		-		-		-	
	10.85		126.6		282.1		-145.4		75.10	
			**		***					
Divorced/separated /Widowed	-		-		-		-		-	
	31.73		203.2		370.7		337.3		-24.20	
			***		***		**			
Education of household head (Base=No education)										
Basic	4.040		12.64		26.68		99.78		198.4*	
	82.44		119.6		213.9		450.5		725.0*	
Secondary	**		***		***		***		**	
Tertiary/Higher	409.5		687.8		1222.		2288.		3806.7	
	***		***		5***		3***		***	
Non-formal	51.95		62.06		88.91		151.8		125.4	
					*		*			
Industry of household head (Base=Agriculture)										
Mining	129.6	0.656*	180.8	0.632*	280.3	0.592*	437.3	0.482*	768.4*	0.381*
		**		**		**		**	**	**
Manufacturing	72.85		84.32		135.1		244.2		250.4	
							*			
Electricity and utilities	-		45.29		14.45		768.6		568.1	
	69.74									
Construction	54.03		62.65		54.96		10.64		-135.6	
Commerce	115.2		150.3		325.7		415.3		675.3*	
	***		***		***		***		**	

Transportation, storage and communications	- 50.12	- 50.40	104.6	53.07	429.6
Financial, insurance and real estate	- 49.86	713.2 **	753.3	2956. 7	10128. 2***
Services: public administration	5.815	100.4	421.5 *	464.0 *	891.7
Others	30.32	-8.610	150.1*	398.6* *	545.5**
Household head owns a house (Base=No)	-	-			
Yes	53.65 *	61.92 **	17.59	80.68	105.6
Household head owns a car (Base=No)					
Yes	96.88 ***	73.07 *	105.1*	272.8* **	450.1**
Locality of household head (Base=GAMA)					
Other Urban	- 438.2* **	- 533.7 ***	- 732.8* **	- 1095.7 ***	- 1360.3 ***
Rural Coastal	- 553.1* **	- 673.0 ***	- 938.3* **	- 1399.1 ***	- 1664.2 ***
Rural Forest	- 557.1* **	- 679.2 ***	- 933.1* **	- 1404.3 ***	- 1910.2 ***
Rural Savannah	- 660.5* **	- 737.6 ***	- 964.7* **	- 1378.0 ***	- 1875.5 ***
Constant	- 3127. 4***	- 4412. 2***	- 4733.2 ***	- 4143.1 ***	- -2382.8

GAMA is the Greater Accra Metropolitan Area which comprises the capital city, Accra, and the adjoining areas

Table S2. Quantile effect of social expenditure on household welfare, 2005/2006.

Variable	Welfare Quantiles									
	10th		25th		50th		75th		90th	
	Actu al (C)	Elasti city	Actu al (C)	Elasti city	Actu al (C)	Elasti city	Actu al (C)	Elasti city	Actu al (C)	Elasti city
Social expenditure	15.86 ***	0.203* **	18.09 ***	0.194* **	24.12 ***	0.194* **	28.53 ***	0.177* **	32.46 ***	0.111* **
Age	0.010 9		- 0.008 41		0.203		1.211		3.413 **	
Square of age	- 0.001 01		0.000 647		- 0.002 40		- 0.012 4		- 0.031 1*	
Household size	- 13.05 ***		- 19.84 ***		- 32.90 ***		- 58.33 ***		- 92.41 ***	

Square of household size	0.524 ***	0.899 ***	1.688 ***	3.164 ***	5.197 ***
Sex of household head (Base=Female)					
Male	- 4.405	- 9.989 **	- 10.84 *	- 15.18 *	- 17.19
Marital status of household head (Base=Never married)					
Married/co-habiting	- 0.859	-12.37	- 20.80 **	- 32.03 **	- 34.96
Divorced/separated/ Widowed	- 12.86	- 29.46 ***	- 39.86 ***	- 55.71 ***	- 63.89 **
Education of household head (Base=No education)					
Basic	5.721	6.886 **	5.946	6.785	2.103
Secondary	14.46 ***	23.09 ***	20.25 ***	21.39 ***	24.06 **
Tertiary/Higher	58.00 ***	85.58 ***	106.7 ***	166.5 ***	234.9 ***
Non formal	7.056 *	9.169 **	7.086 *	8.849	10.50
Industry of household head (Base=Agriculture)					
Mining	11.70	18.28	36.15 **	37.13 **	120.5
Manufacturing	12.77 **	14.24 ***	21.71 ***	21.57 *	30.04 *
Electricity and utilities	43.56 *	31.21 *	34.90	90.88	45.82
Construction	18.59 **	15.49 **	10.01	4.510	- 6.154
Commerce	21.02 ***	23.16 ***	32.69 ***	38.31 ***	52.00 ***
Transportation, storage and communications	7.867	11.51	23.29 *	12.47	29.95
Financial, insurance and real estate	7.645	27.17 *	58.70 *	80.14 ***	62.85
Services: public administration	6.976	17.09	33.03 **	27.98	71.54 **
Others	12.92	12.87*	25.19 ***	14.43	32.62
Household head owns a house (Base=No)					
Yes	2.072	-0.801	2.492	13.13 ***	20.44 **
Household head owns a car (Base=No)					

Yes	102.2 ***	127.3* **	205.6 ***	348.3 ***	656.9 ***
Locality of household head (Base=GAMA)					
Other Urban	8.698	16.64* *	29.78 ***	33.61 **	47.30 **
Rural Coastal	- 8.352	- 15.24* *	- 21.62 **	- 41.24 ***	- 44.93 *
Rural Forest	- 8.994	- 14.35* *	- 23.59 ***	- 46.32 ***	- 55.51 **
Rural Savannah	- 32.10 ***	- 37.31* **	- 46.01 ***	- 65.47 ***	- 69.28 ***
Constant.	- 96.82 ***	- 64.04* *	- 60.60 *	- 17.59	- 83.84

GAMA is the Greater Accra Metropolitan Area which comprises the capital city, Accra, and the adjoining areas

Table S3. Quantile effect of social expenditure on household welfare, 1998/1999.

Variable	Welfare Quantiles									
	10th		25th		50th		75 th		90th	
	Actu al (C)	Elasti city	Actu al (C)	Elasti city	Actu al (C)	Elasti city	Actu al (C)	Elasti city	Actu al (C)	Elasti city
Social expenditure	8.315 ***	0.160* **	11.40 ***	0.124* **	12.32 ***	0.133* **	13.96 **	0.103* **	9.334	0.0093 4
Age	- 0.407	-	- 0.070 0	-	- 0.380	-	- 0.740	-	- 2.867 *	-
Square of age	0.004 47	0.002 05	0.002 05	0.005 46	0.005 46	0.006 32	0.006 32	0.025 8	0.025 8	0.025 8
Household size	- 12.59 ***	-	- 21.94 ***	-	- 38.99 ***	-	- 66.64 ***	-	- 111.6 ***	-
Square of household size	0.641 ***	1.184 ***	1.184 ***	2.213 ***	2.213 ***	4.046 ***	4.046 ***	7.197 ***	7.197 ***	7.197 ***
Sex of household head (Base=Female)										
Male	- 6.256 *	-	- 9.459 ***	-	- 13.70 ***	-	- 17.76 **	-	- 15.53	-
Marital status of household head (Base=Never married)										
Married/co-habiting	- 10.57	-	- 11.23	-	- 3.491	-	- 17.82	-	- 7.624	-
Divorced/separated/ Widowed	- 18.00 **	-	- 22.34 **	-	- 22.16 *	-	- 37.87 *	-	- 6.104	-
Education of household head										

(Base=No education)					
Basic	1.077	6.212 *	8.352 *	6.257	12.61 *
Secondary	9.617 ***	15.27 ***	19.19 ***	24.04 ***	36.59 ***
Tertiary/Higher	24.63 ***	33.79 ***	44.90 ***	67.97 ***	87.03 ***
Non-formal	- 0.193	3.310	3.816	0.965	21.53
Industry of household head (Base=Agriculture)					
Mining	48.10 *	66.48 ***	97.38 ***	106.5 ***	102.4
Manufacturing	11.18 **	14.31 ***	30.27 ***	52.35 ***	53.47 ***
Electricity and utilities	37.91 ***	33.30 *	24.65 *	- 7.499	- 15.73
Construction	5.952	- 1.309	6.627	5.372	3.711
Commerce	11.45 ***	16.13 ***	28.09 ***	45.27 ***	62.03 ***
Transportation, storage and communications	25.12 **	32.41 ***	43.84 ***	49.72 ***	38.99 **
Financial, insurance and real estate	38.47 **	46.43 **	63.90 **	112.4 *	161.5
Services: public administration	22.86 ***	31.41 ***	48.41 ***	51.60 ***	70.87 *
Others	14.23 ***	13.20 **	23.77 ***	30.53 ***	47.65 ***
Household head owns a house (Base=No)					
Yes	0.409	1.412	6.345 *	10.91 **	19.10 **
Household head owns a car (Base=No)					
Yes	63.09 ***	63.15 ***	103.5 ***	174.3 ***	253.3 ***
Locality of household head (Base=GAMA)					
Other Urban	- 37.00 ***	- 45.44 ***	- 43.27 ***	- 30.53 **	- 3.274
Rural Coastal	- 48.76 ***	- 59.89 ***	- 66.59 ***	- 62.42 ***	- 54.53 ***
Rural Forest	- 40.90 ***	- 51.76 ***	- 55.42 ***	- 52.77 ***	- 45.79 ***
Rural Savannah	- 55.46 ***	- 70.85 ***	- 82.78 ***	- 84.43 ***	- 76.99 ***
Constant	47.91	58.91	135.1 ***	263.7 ***	518.7 ***

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