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Who pays for climate taxes on food?

- a simulation of distributional effects in Sweden.

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Abstract

In this study we investigated the distributional effect of climate taxes on food consumed in Sweden and we find that climate taxes on all foods are regressive and affect already exposed families such as single parents with several children, retired and unemployed the most. We used Compensating Variation (CV) for multiple price changes which results in sums that households need to be compensated with, not to feel their utility levels are decreased by the imposed taxes. The compensating sums were found by combining estimated hicksian demand elasticities, simultaneous price changes on 52 different food commodities and household data on food expenditures. Elasticities were calculated by the use of a three stage demand system and tax levels were based on LCA calculations of carbon equivalents from average goods consumed in Sweden. The results of the CV calculations depend on the initial consumption of the different commodities, but also on the number of commodities included in the study. The large number of commodities in this study makes it stand out in the literature, and we therefore put more weight on the relative effect between households, rather than total sums that would be needed to compensate households. The effects and the relations between households were calculated both on disposable income levels and total expenditures.

1. Introduction

The discussion about what policies are appropriate for reducing climate impact from food is ongoing and several authors discuss and investigate the use of economic policy and consumption taxes as a possible direction (IPCC; 2018 Springmann et al, 2017; Jansson & Säll, 2018). For a small country or region it would be difficult to mitigate greenhouse gases (GHGs) by the use of enforced economic policies aimed at the food producing sector. Mitigation costs would be an additional financial burden for farmers and thus threaten to decrease domestic production and lead to emission leakages when imports increase and production is allocated to regions where policies are not implemented. In addition, it might be necessary to reduce emission levels from food consumed in Sweden by two thirds, to stay within the environmental boundaries (Moberg et al, 2020). Production based policies and increased efficiency have the potential to reduce climate impact from Swedish production by 20-25% though much of what is eaten is imported and cannot be affected by policies introduced in Sweden (Swedish EPA, 2019). Consumption taxes are thus a viable option if policy makers want to introduce stricter policies to curb environmental and climate impact from food consumed in one country or region.

Consumption taxes are investigated in for example (Wirsenius et al, 2010; Springmann et al, 2017; Bonett et al, 2018, Jansson & Säll, 2018). For Swedish food consumption, the effects of taxes are studied in for example Säll & Gren (2015) and Säll et al, (2020). The first paper investigate taxes on meat and dairy, and the latter on all food in Sweden and both find possible reductions of around 10% from the consumption of the included goods. Most studies estimating the effects on consumption taxes on food in relation to environmental targets focus on animal products since the livestock sector has a high environmental impact. Säll et al., (2020) find that almost 90% of the possible GHG reductions from all food, come from meat and dairy products. There are several important questions to discuss in relation to food policies and climate change, how would consumption change, what would be the effect on pollution levels, how would nutritional intake change, and who would be most affected by additional costs on food?

In this study we attempt to answer the question of who would be most affected if climate weighted consumption taxes were to be imposed on all food in Sweden. The distributional effects of taxes depend on who is the initial consumer and how much of households disposable income or total expenditures is spent on the taxed good. For example, energy taxes effects households in the Swedish countryside more than urban households. Due to rural households' dependence on for example cars for transportation, their expenditures on fuel and taxes are higher than for households where public transportation is more frequent. In addition, people in the countryside often live in houses instead of apartments and thus pays more for energy taxes when heating their homes (SOU, 2004). In Säll (2018) it was found that environmental taxes on meat would affect middle class households the most, though the difference between income groups was not large in relative terms. In this study we extend the work done in Säll (2018) by introducing taxes on all food instead of only meat, and increasing the types of households that are included in the analysis.

In Säll et al, (2020) the authors estimate a demand system and marshallian price elasticities to simulate weighted climate taxes on food products consumed in Sweden. Taxes were based on GHG emissions per kilo product and priced by the year 2015 carbon tax per kilo CO2/e (corresponding to close to EURO 0.12 per kilo of emissions). In this paper we use the same commodities and taxes introduced in that paper and estimate the distributional effects on Swedish households. By the use of prices and quantities consumed in Sweden, combined with household data on food expenditures (SCB, 2020) we estimate Hicksian elasticities and calculate the compensating variation (CV) for multiple price changes for households after climate taxes are introduced (Huang 1993). CV is a welfare measure where the result show what level of compensation would be necessary for households to receive, not to feel their utility level is decreased by the higher price levels.

We compare the found CV levels to both disposable income levels and total expenditures to show different views on distributional effects. The two measures, income and expenditures, are assumed to give very different results. When comparing to income levels, unit taxes are likely to be regressive, while compared to expenditures the results might vary more over household groups (Kosonen, 2012). Income levels might however differ more in a short run perspective, while expenditures are viewed upon as a more reliable proxy for life time income, since households have the possibility to smoothen consumption, i.e, expenditures over time by using for example loans and savings (Hall, 1978; Poterba, 1991). The households included in this study range from low-income to high-income households and include single adult household with and without children, couples, families in the cities, outside cities and rural households. We also include the types of work households engage in, students, retired and unemployed as well as where households origin from, Sweden, Nordic countries, EU-27 or from outside of the EU.

2. Households and food consumption

The food products included in this paper are from Säll et al, (2020) and include 52 food products consumed in Sweden. In Table 1 we present the included commodities divided into groups used for estimating demand elasticities. In Säll et al, (2020) the setting was used for estimating uncompensated Marshallian elasticities and the effects of GHG emission reductions from taxes. In this paper, the same setting is used for estimating compensated Hicksian elasticities and the distributional effects of taxes. For all food products we use time series data on consumed quantities and price indexes (SCB, 2018; Swedish Board of Agriculture, 2018;

FAO, 2018) and the elasticities are estimated in a three stage demand system which is presented in Section 3 of the paper.

Upper Stage	**Animal products**	**Grain products and carbohydrates**	**Fruit and vegetables**	**Fats**	**Drinks**	**Snacks**
Middle Stage	Meat Other protein sources Dairy	Hot carbs Sweet bread Bread and grain	Fruit Fibrous vegetables Kitchen vegetables	Fats	Hot drinks Cold drinks	Snacks Sweeteners
Lower Stage	**Meat:** Beef Pork Chicken Other meats	**Hot carbs:** Rice Pasta Potatoes and root vegetables	**Fruit:** Pear Apple Orange Banana Exotic fruit Small citrus	**Fats:** Butter Vegetable oils Margarine Low fat margarine	**Hot drinks:** Coffee Tea Chocolate	**Snacks:** Ice cream Confectionary Crisps
	Other protein sources: Eggs Fish and seafood Cheese	**Sweet bread:** Buns Cookies Pastries	**Fibrous vegetables:** Carrots Brassica Onions Leek		**Cold drinks:** Mineral water Soft drinks and ciders Juice and squash Milk	**Sweeteners:** Sugar Honey Syrup
	Dairy: Fermented products Cream products Cream fraiche and sour cream	**Bread and grain:** Soft bred Hard bread Flours Grains	**Kitchen vegetables:** Tomatoes Cucumber Lettuce Avocado Lemon			

Table from Säll et al., 2020.

Additional data used in this paper are household expenditures (HUT) on food (SCB.2020). Almost all commodities in the demand system presented in Table 1 can be matched to household expenditures in the household expenditure survey. In the few cases our included commodities are not available in HUT or commodities are aggregated, the weights for the CV are added up or redirected. For example is expenditures for leek and onions presented as one data point in HUT, thus the weights calculated from the Hicksian elasticities are added up when calculating the CV. Charkuteries is another food group that has to be considered. The data used for estimating meat elasticities are based on total consumption where consumption levels include meat that will later be processed or mixed. This was done such that each meat could be assigned a tax level based on the emission levels from each animal (Säll et al., 2020). The modification done in this paper use the weights of the differences between total consumption of meat, and direct consumption which takes into account charkuteries. The weights are used to divide expenditures on processed meat to beef, pork, chicken and others (i.e sheep and wild game) as done in Säll (2018).

In Figure 1, we present households divided in income deciles and present expenditures on food consumption as a percentage of total expenditures, and total expenditures on meat out of food expenditures. We show meat separately for several reasons, meat is at the center of the climate discussion around food, it is also the most expensive foods which is highly taxed in previous studies, and lastly it is the food group that households spend the most money on.

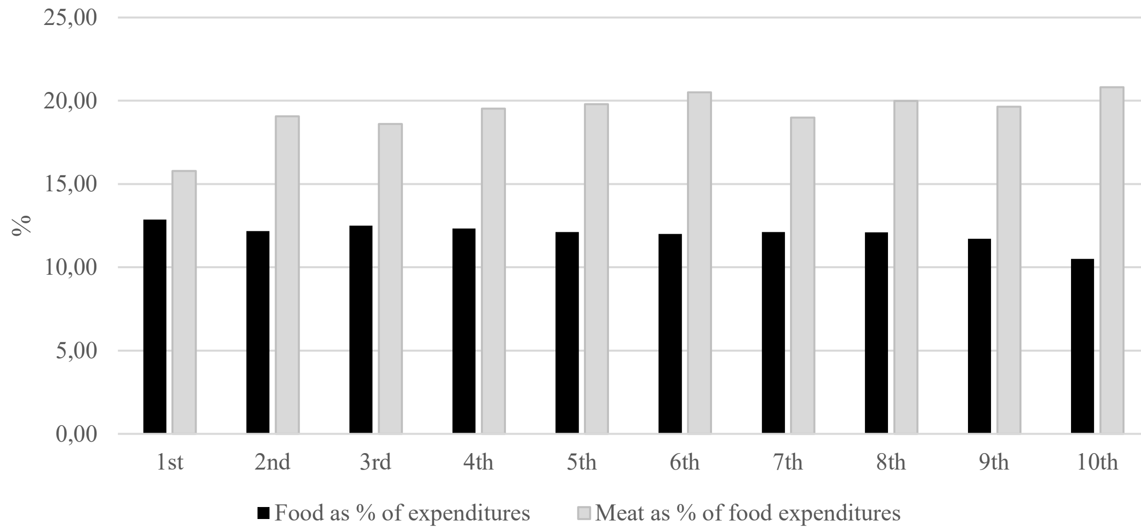

Figure1: Expenditure on food in relation to disposable income levels and expenditures on meat in relation to household's food expenditures, income deciles where the 1st are the poorest households and the 10th the richest. From SCB (2020)

As households become richer, a smaller share of their total budget is spent on food, but a higher share of the food budget is spent on meat. When analyzing the income groups on a more detailed level we find that the households whom spend most money on food are single households with three or more children, followed by households with two adults and three or more children and single households with fewer children. Other households with high expenditures on food are unemployed, the lowest income group and retired. The ones that spend the least on food are single men.

3. CV calculations and elasticity estimations

When taxes are introduced, CV is the amount households are willing to accept (WTA) as compensation to adjust consumption to new relative prices and not to feel their utility level has decreased after prices increase. The calculations are based on the expenditure function (E) which is minimized to reach a set utility level, before and after prices (p) changes. CV is thus the monetary difference in the minimized expenditures as a function of initial utility (U^0), initial prices and the new prices such that $CV = E(p_1^1, p_2^1, \dots, p_n^1, U^0) - E(p_1^0, p_2^0, \dots, p_n^0, U^0)$.

The expenditure function is based on hicksian demand where only relative prices and initial utility effect consumption choices. The expenditure function is thus the sum of expenditures $E = \sum_{i=1}^{n} p_i q_i^H(p_1, p_2, \dots, p_n, U^0)$ and CV as

$$CV = \sum_{i=1}^{n} (p_i^1 q_i^H - p_i^0 q_i^0) \quad (1)$$

Initial consumption $q_i^0$is observable and equal for marshallian and hicksian demand. Changes in hicksian consumption levels however cannot be observed due to subjectivity in utility levels. To estimate the changes in hicksian demand dq_i^Hwe define the change as $q_i^H - q_i^0$ and the change in prices as $dp_i = p_i^1 - p_i^0$. Demand is dependent on relative price changes and by taking the percent change in demand times the percent change in prices and rewriting we can define the change in hicksian demand as

$$\frac{dq_i^H}{q_i^0} = (dq_i^H/q_i^0)(dp_j p_j^0/dp_j p_j^0) = \sum_{j=1}^{n} \varepsilon_{ij}^{H*} \frac{dp_j}{p_j^0} \quad (2)$$

where $\varepsilon_{ij}^{H*}$is the Hicksian elasticity of demand. This setting also takes multiple commodities into account and thus the cross price elasticities of all included goods (Huang, 1993).

Hicksian elasticities were calculated by using a three stage QAIDS model (Quadratic Almost Ideal Demand System). The model is

$$s_i = \alpha_i + \sum_{j=1}^{n} \gamma_{ij} \ln p_j + \beta_i(\ln X - \ln P) + \frac{\mu_i}{Q} (\ln X - \ln P)^2 \quad (3)$$

The model is regressed on s_i which are shares of total expenditures $s_i = p_i\, q_i/X$ where X are expenditures $X = \sum_{i=1}^{n} p_i\, q_i$. P is a price index $\ln P = \alpha_0 + \sum_{i=1}^{n} \alpha_i \ln p_i + \frac{1}{2}\sum_i^n \sum_j^n \gamma_{ij} \ln(p_i + p_j)$ and $Q = \prod_i^n p_i^{\beta_i}$. The restrictions on parameters are $\sum_i^n \alpha_i = 1, \sum_i^n \beta_i = 0$ and $\sum_i^n \mu_i = 0$. Homogeneity conditions implies $\sum_{j=1}^{n} \gamma_{ij} = 0$ and symmetry conditions $\gamma_{ij} = \gamma_{ij}$.

The model was set up in the three stages presented in Section 2, Table 1 and similar estimations are done for each group within each level of the demand system, only the index change. i and j denote commodity level, r and s are the middle stage food groups and a and b are the indexes for the upper stage aggregated groups of food.

The final Hicksian elasticities were calculated as $\varepsilon_{ij}^{H*} = \varepsilon_{ij}^H + s_{ij}\varepsilon_i^I \varepsilon_{rs}^H + s_{ij}s_{rs}\varepsilon_i^I \varepsilon_r^I \varepsilon_{ab}^H$ were each stage elasticities were $\varepsilon_{ij}^H = (\gamma_{ij}/s_j) + s_i - \delta_{ij}$ and the income elasticity for each stage $\varepsilon_i^I = 1 + \beta_i/s_i$.

Returning to the equations for CV and the change in Hicksian demand (equations 1 and 2), we can rewrite CV with $\frac{dq_i^H}{q_i^0} = \sum_{j=1}^{n} \varepsilon_{ij}^{H*} \frac{dp_j}{p_j^0}$ as a fraction of initial of initial expenditures (Azzam & Rettab, 2012).

$$CV = \sum_{i=1}^{n} p_i^0 q_i^0 \left(\frac{dp_i}{p_i^0} + \frac{dq_i^H}{q_i^0} + \frac{dp_i}{p_i^0}\frac{dq_i^H}{q_i^0}\right) \quad (4)$$

Following Azzam & Rettab, (2012, Table 6) and Säll, (2018), the parenthesis in the previous equation are used as a welfare weights w_i for each commodity and $\sum_i^n w_i = 1$. w_i is weighted with initial expenditures for each household k on commodity i. A household specific CV is thus defined as following $CV_k =$

$\sum_{i=1}^{n} p_{ki}^{0} q_{ki}^{0} w_i$. CV_k is compared to total expenditures and income levels of households and a measure of total welfare change for each income group k is found.

4. The effect of climate taxes on households

In the following section we present the results of the distributional analyses. Final elasticities and tax levels are shown in Appendix Table A.1 and A.2. In Figure 2 the effects on households divided in income deciles are presented. Climate taxes on food is as expected affecting the group with the lowest levels of disposable income the most in relation to income, and the effect is reduced as income levels increase. However, with regard to actual expenditures taxes are slightly regressive with tops on the 3rd and 4th income group (dotted line in Figure 2). Households in the lowest decile spend a higher share of their money on food, compared to the higher income groups, but a smaller share on meat which is the highest taxed food group. This consumption pattern explains the small differences between income groups when actual expenditure are used as a measure for comparisons.

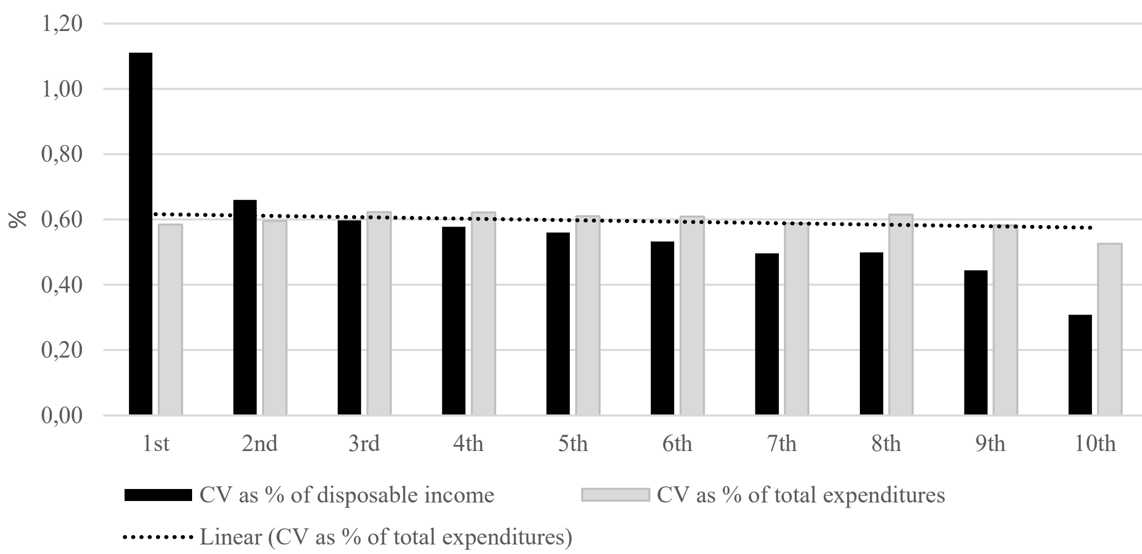

Figure 2: The effect of climate taxes on households divided by income deciles. The dotted line show a small negative correlation (i.e regressive) effect between total expenditures and taxes.

Assessing only income groups does not give the full picture of how households are affected by price changes. We therefore expanded the analysis to include several types of households presented in Figure 3. Households were separated by different locations in the country, origin of birth (Sweden, Nordic countries, EU-27 or outside of EU), the types of work households do, how many children they have and whether or not they are single. In Figure 3, households are ranked by the effect of taxes on expenditures, with households that face the smallest effects in the top of the graph, though the effect on both expenditures and income is presented.

Most households are affected most in relation to expenditures, showing that households can save money or spend money on consumption that is not included in the HUT survey. We find that single men are least affected both when taxes are compared to expenditures and to income levels. This might come as a surprise since men in general are known to eat more meat than women. However, it might be worth pointing out that the analysis is done on expenditure levels and not on actual consumption volumes. This result might therefore indicate that single men buy cheaper meat compared to other households, but not necessarily less in volume. Single men are however the type of household that spend the least share of their money on food which is the main driver of the result. The men are followed by households in the big cities, single women and higher officials who all spend relative little on food.

Students are one of the groups that are little affected in relation to expenditures, though stand out in relation to income levels. Students and farmers and small business owners stand out when CV is related to income levels. Both household groups are on the top half of the graph, meaning that in relation to expenditures they are relatively little affected by increased food prices. When comparing to income levels however, the effect is much higher. For students, this can be explained by their dependence on student loans, thus a low income level. They are also among the groups that spend the least on meat which is the highest taxed goods. This consumption pattern place them on the top half due to small effect of taxes on expenditures. Farmers and small business owners on the other hand might not take out salaries for all their time of labor thus income levels might not reflect the work effort, and taxes on food have a high effect in relation to income levels.

Households in the big cities were the least affected by taxes when regions are compared, the effects increase the further away from the big cities people live. Suburban household are second least affected followed by household in smaller cities, commuting regions and most affected are the households in rural areas. The effects of taxes are thus increasing as the distance from the big cities increase, in both disposable income and expenditure levels. This can be explained with higher salaries and general expenditure levels in and close to the big cities, a lower share of total expenditures is used to buy food and less money is spent on meat per person in big cities. The last statement is also true for households that have their origin from outside of the Nordic countries and the EU-27. Less money is spent per person on beef and pork thus the effects of the taxes are at a smaller level than for households that originate from Sweden and other Nordic countries.

The most affected both compared to expenditures and income are single households with three or more children. This is however not surprising since these households feed four or more people on one salary, and spend the largest share of their money on food among the households. Other households with children are also relatively highly affected.

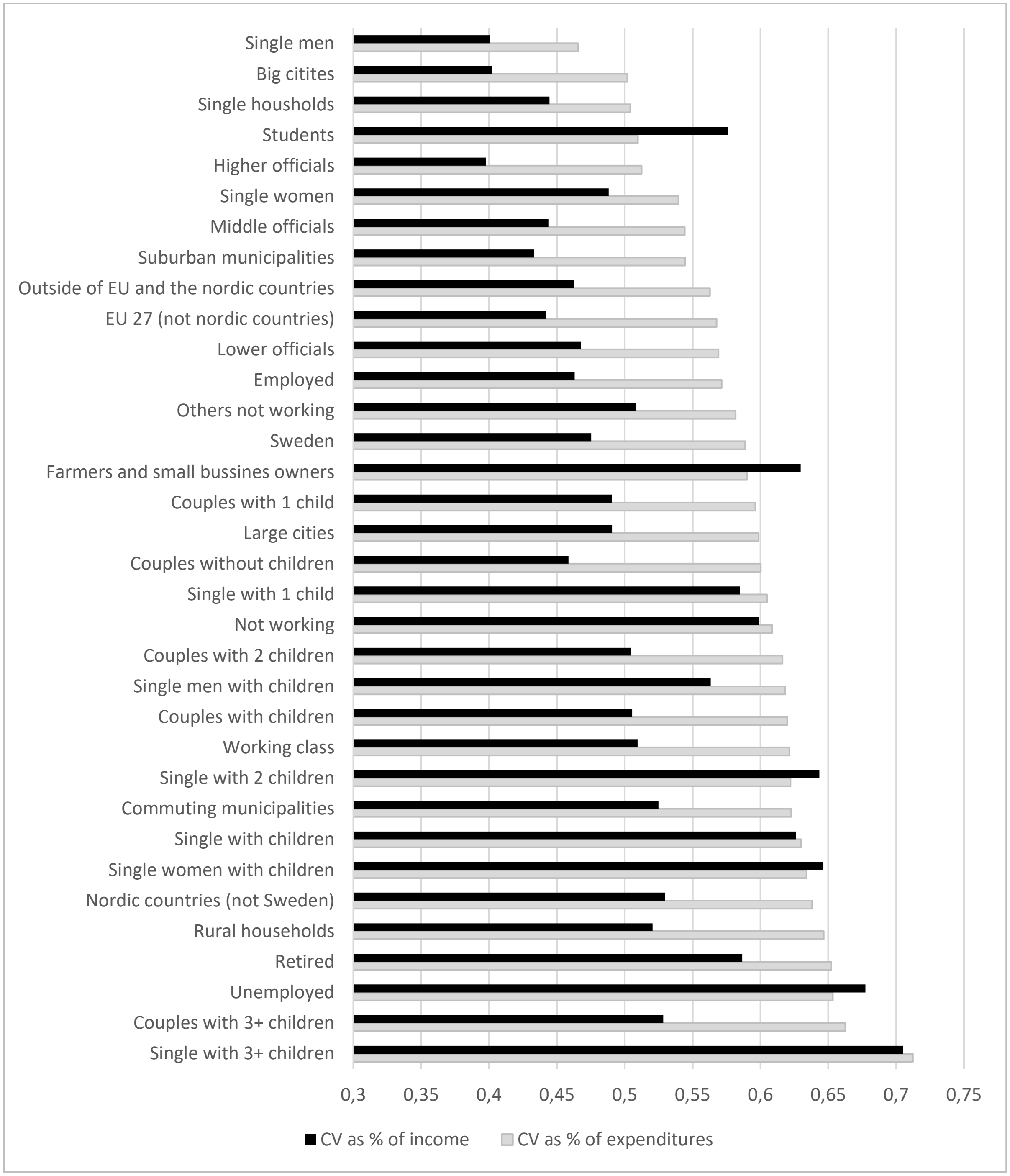

Figure 3: The effect of taxes on households in relation to expenditures and income levels.

When separating the households on a more detailed level it becomes clear that even though we found only a slight regressive result when comparing income deciles, climate taxes on all food has a higher effect on households that are already in an exposed situation. Single parents with several children, unemployed, retired and rural households would be most affected by increased food prices.

The sum of CV is in general smaller than the results in Säll (2018) where only meat taxes were considered. This comes as no surprise since meat has a smaller share of expenditures and thus CV-weight when all food is accounted for. In addition, the property of the model and the weighting of CV as shares of expenditures means that for each commodity added in the analysis, the weight for each commodity becomes smaller. The sum of the main food groups thus become less. At the best of our knowledge, the model has not been implemented on such a large number of commodities as in this study before. The implication of this is that the main results of these types of studies are not the actual sum of the CV, but the relation between household groups in terms of how they are affected by price changes.

5. Summary and policy relevance

In this study we investigated the effects of weighted climate taxes imposed on food consumption in Sweden. Consumption taxes are a viable option when aiming to decrease the climate effects from food, since it has been found that production side measures will not be enough to reduce GHG emissions as much as might be necessary. In addition, it is difficult to introduce production policies in a small country or region due to competition from production in countries where policies might not be as directing. Consumption taxes are thus a way to steer consumers away from the most emission intense goods and at the same time charging for negative external effects such that people who want to consume goods related to high emissions levels pay for the related damage costs.

When increasing prices of necessary goods such as food, the distributional effects are important to understand. No one can stop consuming food and no one can thus avoid to pay for taxes. The most important result we found in this study was that households with children, retired and unemployed would be most affected by climate taxes on food consumption. For most policy makers this might not be a wished for result when taxes are discussed. To continue the discussions on climate taxes imposed on food consumption, the result in this study highlights the importance of designing tax schemes such that exposed households do not suffer great losses and decrease in utility levels. One way to make sure that does not happen could be to compensate the most affected households. This can be done in several different ways, reduced income taxes for low-income households, increased child support, increased unemployment benefit or something else. What is most appropriate is outside of the scope for this study.

In theory all goods should carry its own external burden, and increased food prices have the potential of reducing emissions, reducing food waste and improve population health by reducing consumption of the most harmful products. However, due to the found distributional effects of taxing all food, and results in previous studies that find i) taxing only animal products could have almost the same effect on emission reductions, and ii) taxing only meat might not give the same regressive result among households, one might consider taxing only meat or meat and dairy products instead of all food (Gren et al., 2021; Säll, 2018). By doing so, almost similar emission reductions can be achieved without affecting poorer households to the same extent and from both climate and health perspectives it is not wished for to decrease consumption of for example fruit and vegetables, which could be the result of taxes on all foods.

A limitation of the study is that all households have the same estimated demand elasticities as the household data does not allow for estimations of individual elasticities. This might not be the case and there might be cause to assume that low income households and other households found to be most affected in the study are more sensitive to price changes than high income households. With this in mind it would be reasonable to assume that the regressive results are in fact stronger than what we find here.

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Appendix

A.1 Hicksian elasticities

Vara

	Beef	Pork	Chicken	Others
Beef	-0,51172	-0,04941	0,123007	-0,05631
Pork	0,075604	-0,23596	-0,00361	0,031299
Chicken	0,147546	-0,34431	-0,92993	0,303938
Others	-0,11862	0,163742	0,660415	-0,89433

	Eggs	Fish	Legumes	Cheese
Eggs	-0,10977	-0,25913	-0,08502	0,153946
Fish	-0,22304	-0,36992	0,066197	0,068217
Legumes	-0,66893	0,374325	-0,13774	-0,48527
Cheese	0,218231	0,250865	-0,04738	-0,51591

	Fermented	Cream	Sourcream
Fermented	-0,12039	0,013579	0,022636
Cream	0,072338	-0,12245	0,003845
Sourcream	0,53825	0,026853	-0,60987

	Pear	Apple	Orange	Banana	Exotic fruit	Small citrus
Pear	-0,38923	-0,16337	0,277594	-0,25179	-0,03136	-0,20421
Apple	-0,02988	-0,48821	-0,00887	-0,07413	-0,02215	-0,10133
Orange	0,101831	0,067564	-0,72941	-0,12897	0,030114	0,229763
Banana	-0,03945	-0,07359	-0,12775	-0,43206	-0,00268	-0,10605
Exotic fruit	-0,08255	-0,38032	-0,10537	-0,32448	-0,76721	0,012764
Small citrus	-0,08713	-0,15212	0,481921	-0,19254	0,076872	-0,3152

	Carrot	Brassica	Onion	Leek
Carrot	-0,07322	0,078812	-0,17741	0,033804
Brassica	0,118631	-0,45874	0,242779	-0,00061
Onion	-0,2406	0,243804	-0,06924	-0,06543
Leek	0,257968	0,003353	-0,31511	-0,02137

	Tomato	Cucumber	Salat	Avocado	Lemon
Tomato	-0,1257	0,052133	-0,02631	0,024298	0,008839
Cucumber	0,094525	-0,01921	-0,14888	-0,03633	0,015414
Salat	-0,04528	-0,1156	-0,0469	0,076363	-0,04781
Avocado	0,170146	-0,22436	0,459968	-0,7598	0,098901
Lemon	0,033083	0,037247	-0,15764	0,054544	-0,05985

	Butter	Vegetable oil	Margarine	Low fat margarine
Butter	-0,45212	-0,19555	-0,35443	0,350757
Vegetable oil	-0,32291	-0,68504	0,184134	0,158289
Margarine	-0,09265	0,026848	-0,46661	-0,14871

Low fat margarine	0,166239	0,045376	-0,29052	-0,60559

	Coffee	Tea	Chocolate drink
Coffee	-0,35508	-0,00405	-0,02408
Tea	-0,01343	-0,48079	0,217759
Chocolate drink	-0,19544	0,039265	-0,3143

	Mineralwater	Soft drinks and cider	Juice and squash	Milk
Mineralwater	-0,3906	-0,2238	0,064176	0,436444
Soft drinks and cider	-0,0308	-0,05561	0,006503	-0,03075
Juice and squash	0,030543	0,020506	-0,11874	-0,04935
Milk	0,034845	-0,00911	-0,00506	-0,1055

	Ice cream	Confectionary	Crisps
Ice cream	-0,58277	0,023629	0,079216
Confectionary	0,038552	-0,4198	-0,06768
Crisps	0,988164	-0,54315	-0,57132

	Sugar	Honey	Syrup
Sugar	-0,68472	-0,00474	0,002346
Honey	-0,23689	-0,4784	-0,15796
Syrup	0,257588	-0,30462	-0,4336

	Rice	Pasta	Potatoes and root vegetables
Rice	-0,1826	-0,08292	0,047998
Pasta	-0,05209	-0,16431	0,081735
Potatoes and root vegetables	0,000165	-0,00389	-0,26882

	Soft buns	Cookies	Pastries
Soft buns	-0,49154	0,563834	-0,56859
Cookies	0,567827	-1,06711	0,282399
Pastries	-0,55717	-0,02059	-0,42657

	Hard bread	Soft bread	Flour	Grain
Hard bread	-0,77083	-0,21276	0,026524	0,068495
Soft bread	-0,09904	-1,39758	-0,31134	-0,03082
Flour	0,049305	0,054495	-0,56104	0,085062
Grain	0,154233	0,430264	0,425977	-1,29197

A.2 Tax levels. From Säll et al., (2020)

CO_2 e per kilo product/ tax per kilo product	**CO_2e**	**Tax SEK**		**CO_2e**	**Tax SEK**		**CO_2e**	**Tax SEK**
Meat **- average**		**12.8**	**Bread and grain** **- average**		**1.2**	**Fats** **- average**		**4.30**
Beef	23,5	27,0	Hard bread	1.1	1.3	Butter	12.7	14.6
Pork	4,6	5,3	Soft bread	1.0	1.2	Vegetable oils	2.4	2.8
Chicken	4,2	4,8	Flours	1.0	1.2	Margarine	2.4	2.8
Other meats	22,3	25,6	Grains	1.0	1.2	Low fat margarine	1.3	1.5
Other prot. sources **- average**		**7.3**	**Fruit** **- average**		**0.8**	**Hot drinks** **- average**		**6.5**
Eggs	2.5	2,9	Pear	0.4	0.5	Coffee	6.4	7.4
Fish and seafood	6.1	7.0	Apple	0.4	0.5	Tea	6.4	7.4
Cheese	10,5	12.1	Orange	0.7	0.8	Chocolate	2.8	3.2
			Banana	0.7	0.8			
			Exotic fruit	1.2	1.4			
			Small citrus	0.7	0.8			
Dairy **- average**		**3.2**	**Fibrous vegetables** **- average**		**0.4**	**Cold drinks** **- average**		**1.0**
Fermented products	1.5	1.7	Carrot	0.3	0.3	Mineral water	0.3	0.3
Cream products	6.5	7.4	Brassica	0.5	0.6	Soft drinks / ciders	0.4	0.5
Cream fr. / sour cr.	5.7	6.6	Onion	0.4	0.5	Juice and squash	1.2	1.4
			Leek	0.4	0.5	Milk	1.4	1.6
Hot carbs **- average**		**1.1**	**Kitchen vegetables** **- average**		**1.0**	**Snacks** **- average**		**4.7**
Rice	3.6	4.1	Tomato	1.4	1.71	Ice cream	2.8	3.2
Pasta	1.8	2.1	Cucumber	0.7	0.87	Confectionary	5.1	5.8
Potatoes / root veg.	0.4	0.5	Lettuce	0.3	0.38	Crisps	2.9	3.3
			Avocado	1.1	1.10			
			Lemon	0,5	0,6			
Sweet bread **- average**		**1.5**				**Sweeteners** **- average**		**1.7**
Buns	1.4	1.6				Sugar	1.4	1.6
Cookies	1.1	1.3				Honey	1.8	2.1
Pastries	1.4	1.6				Syrup	1.4	1.6

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