

Equity concerns: Gordian knot of environmental fiscal reforms ?

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Reasons for carbon tax failure in France:

- Supreme court: Inequality between households and businesses
- Opinion: Inequality among households reality, perception?

Equity concerns: Gordian knot of environmental fiscal reforms ?

1. Are green taxes regressive?

1.1 Evidence in France and in Europe

1.2 Double dividend, recycling & equity

2. Solving the efficiency / equity dilemma

2.1 How to identify vulnerable households?

2.2 Internal vs. external compensation

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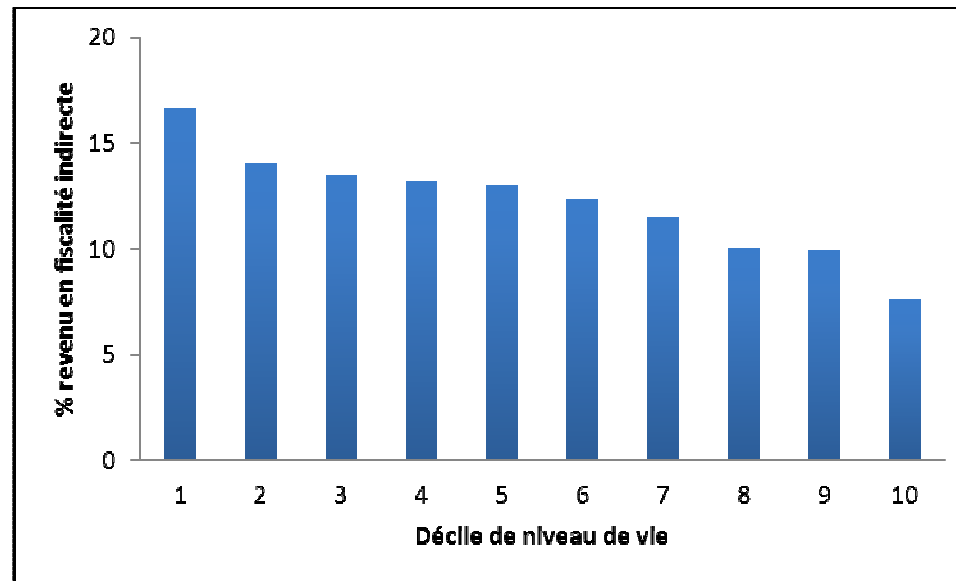
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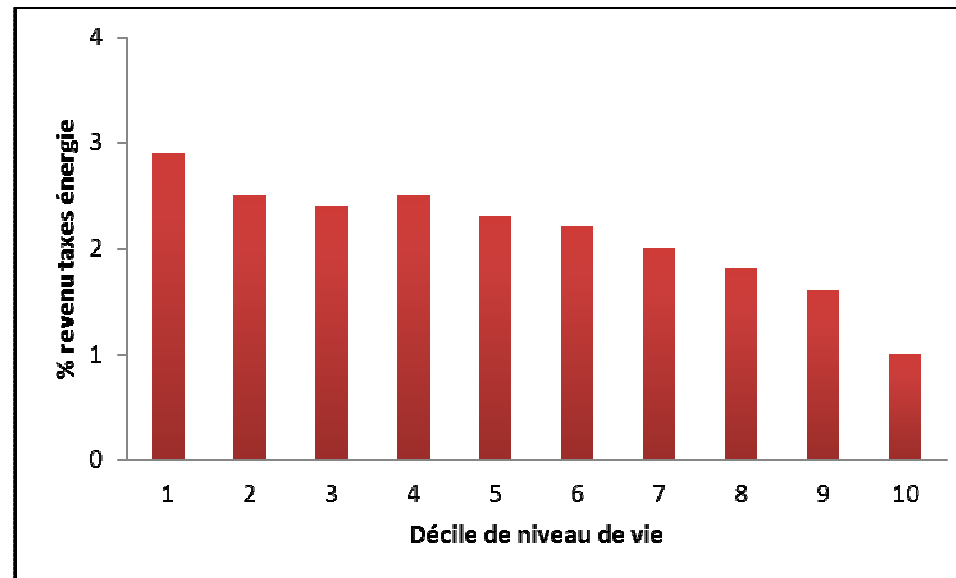
Consumption taxes are regressive...



Share of income spent on consumption taxes, France

Key: the first decile spends 16% of its income in consumption taxes, against 8 % for the 10th decile. Source: BdF 2001.

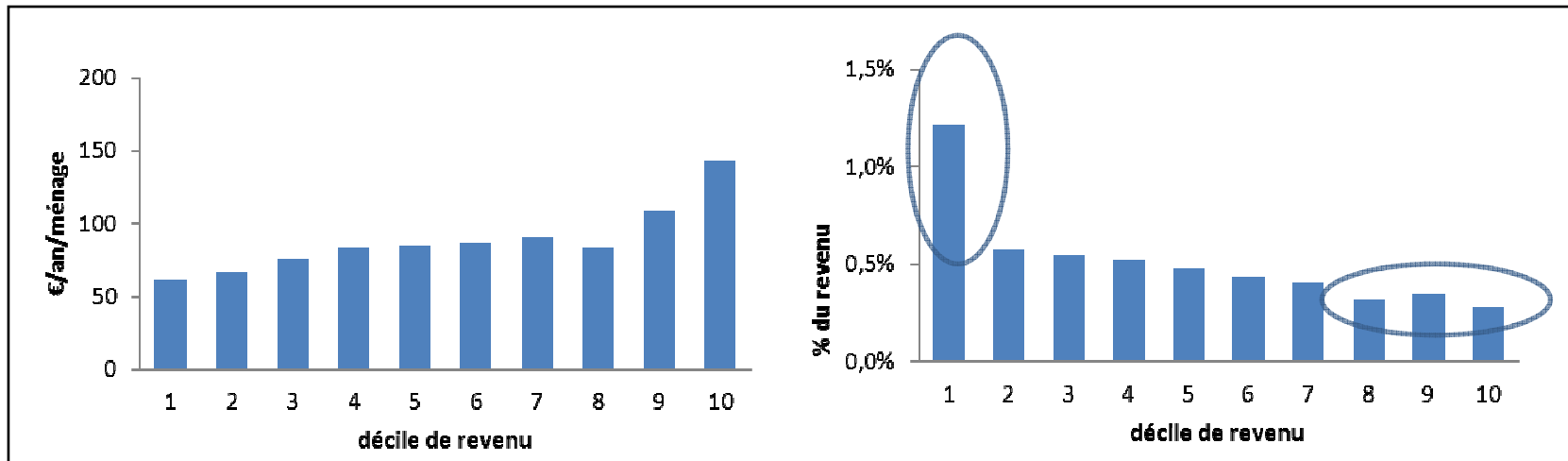
... energy taxes are no exception...



Share of income spent on petroleum products taxes, France

Key: the first decile spends 3% of its income in consumption taxes, against 1.3 % for the 10th decile. Source: BdF 2001.

...this would also hold for a carbon tax



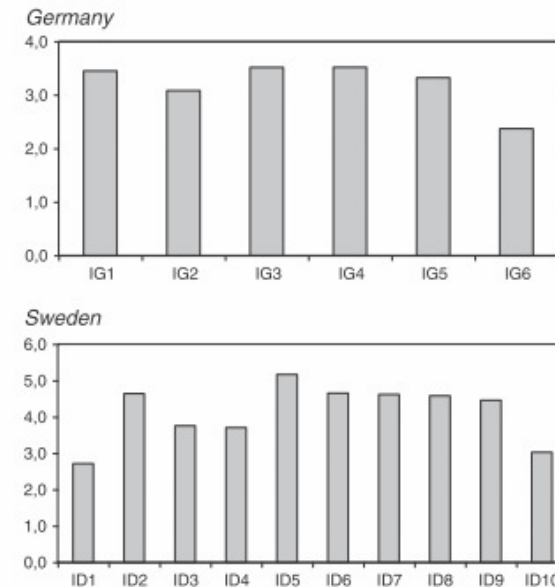
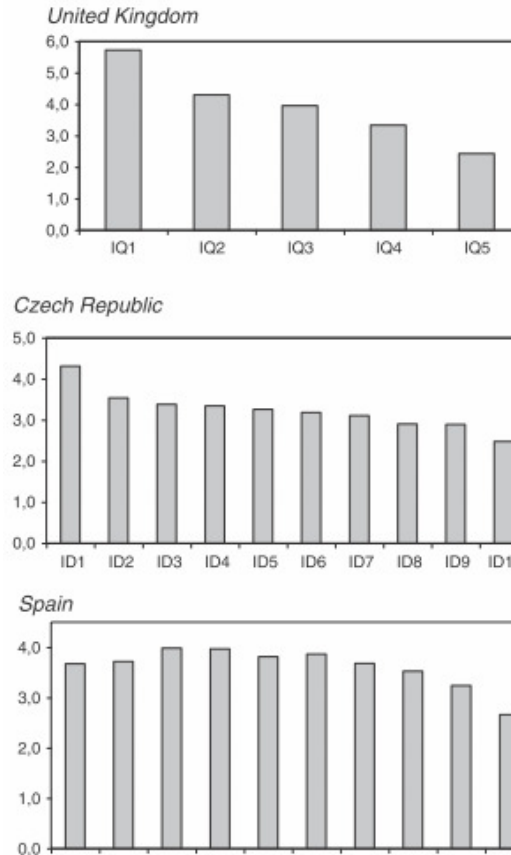
Cost of the 2009 carbon tax proposal for french households– without recycling

Left: € per year; Right: share of revenue

Key: the first decile spends 60€ per year for the carbon tax, i.e. 1.2% of its annual revenue

Distributional patterns accross Europe

- Regressive nature over most MS, but disparities
- Household energy taxation clearly regressive
- Transport energy taxation less clear



Share of environmental taxes in household budget, 6 european countries

Leipprand et al. 2007

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Double dividend & equity

Verdissement de la fiscalité À qui profite le double dividende ? *

Mireille Chiroleu-Assouline
Mouez Fodha
Paris School of Economics
Université Paris 1 Panthéon-Sorbonne (Centre d'Économie de la Sorbonne)

La Revue de l'OFCE est ouverte aux chercheurs et à tous les spécialistes en économie et en sociologie. La revue s'autore de la rigueur des propos qui sont tenus mais les jugements et opinions exprimés par les auteurs, y compris quant ils appartiennent à l'OFCE, n'engagent qu'eux-mêmes et non les institutions auxquelles ils appartiennent.

* Ce travail a bénéficié du support financier de l'Agence Nationale de la Recherche ANR-09-BLAN-0350-01.
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La littérature sur le double dividende étudie la poursuite simultanée de deux objectifs – l'amélioration de la qualité de l'environnement par l'instauration ou l'augmentation d'une taxe environnementale (premier dividende) et l'augmentation du bien-être social grâce à la diminution des distorsions provoquées par le reste du système fiscal (second dividende). Nous proposons d'aller au-delà des résultats usuels de la littérature, où le second dividende ne peut être atteint qu'au détriment d'un groupe d'agents qui doit supporter la charge de la taxe, en étudiant les conditions à réunir afin de concilier le double dividende avec des critères d'équité. La réforme doit donc atteindre trois objectifs : la qualité de l'environnement, l'efficacité économique (i.e. le gain macroéconomique) et la Pareto amélioration. Cet objectif triple nécessite donc trois instruments : la taxe environnementale, la taxe sur les salaires et l'indice de progressivité fiscale. Nous montrons que les propriétés redistributives de la fiscalité sur les salaires sont un outil de correction des distorsions sociales induites par la politique environnementale. Nous proposons ainsi de recycler les recettes de la fiscalité carbone par une baisse non linéaire de l'impôt sur le revenu qui combine une réduction du taux d'imposition de la première tranche de l'impôt sur le revenu (ce qui bénéficie à tous les agents) et une hausse du taux des tranches supérieures (dont le coût sera supporté par les hauts revenus). Ce dernier mécanisme permet de compenser le caractère régressif de la fiscalité carbone.

Mots clés : Fiscalité, Écotaxe, Double dividende, Agents hétérogènes, Bien-être, Progressivité de l'impôt.

- Double dividend, Goulder (1995), weak vs. strong version
- Three types (Ekins, 1997):
 1. *Employment*
 2. *Efficiency*
 3. *Equity*
- First dividend vs. second?
- Employment/efficiency dividend vs. equity ?
- Importance of recycling mode, characteristics of labour markets and fiscal system

What recycling option for what kind of dividend?



Carbon Tax and Equity The importance of Policy Design

Emmanuel Combet
Frédéric Gherzi
Jean-Charles Hourcade
Daniel Théry

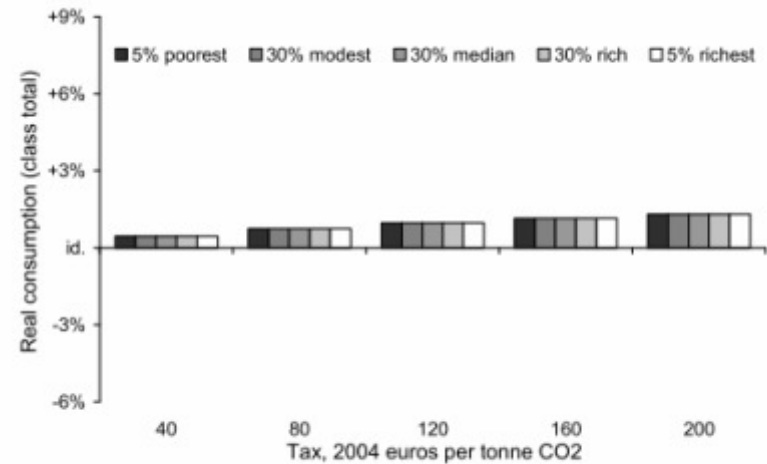


Figure 8 General equilibrium distributive impact, reform R4

Combet et al. (2010) Opposition between efficiency and equity is not automatic, smart tax architecture and recycling option can address both concerns.

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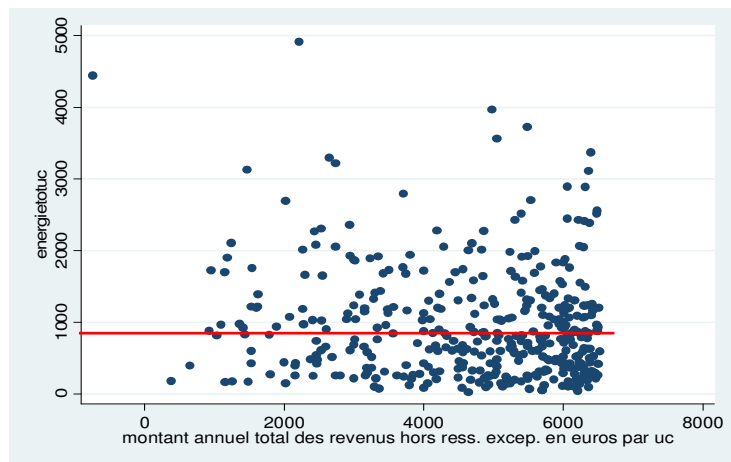
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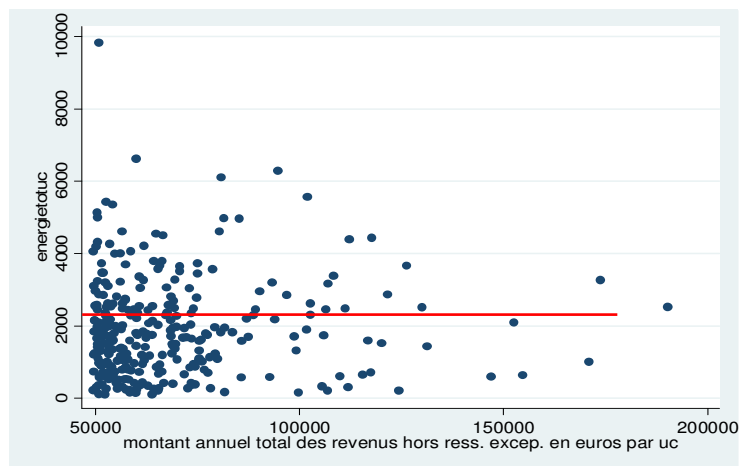
2.1 How to identify vulnerable households?

2.2 Internal vs. external compensation

What do we mean by income groups?



Revenue alone not sufficient to identify households in need (Ekins et al., 2011).



Importance of household type, urbanization, professional status, work location

Need to look at intradecile dynamics

Environmental fiscal reform and broader reform processes



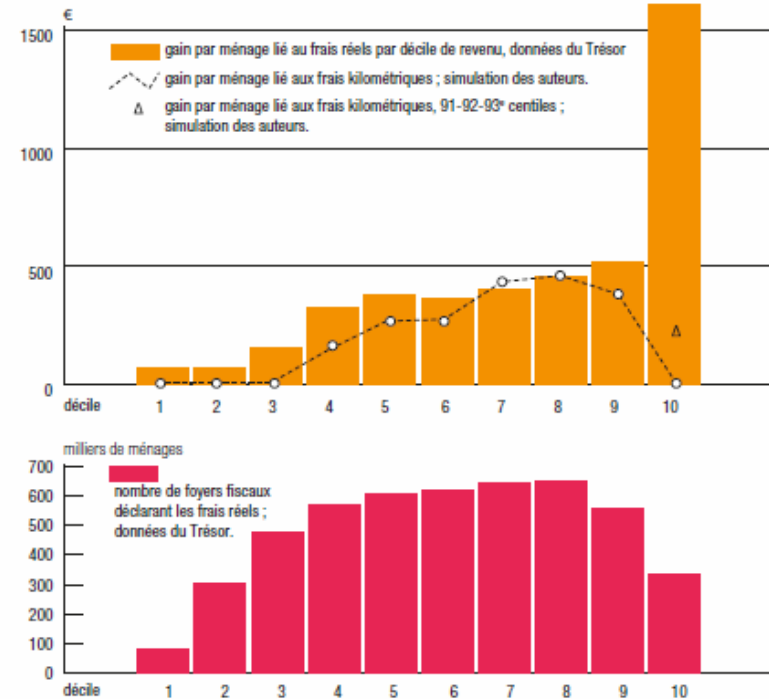
WORKING PAPER

N°19/12 OCTOBRE 2012 | CLIMAT

Les « frais réels » : une niche fiscale inéquitable et anti-écologique ?

Lucas Chancel, Iddri-Sciences Po,
Mathieu Saujot, Iddri-Mines de Paris

Figure 1. Gain annuel moyen par ménage déclarant les frais réels, par décile de niveau de vie



- Need to look at environmentally harmful subsidies
- **The measure « frais réels » is both environmentally harmful and regressive**

2. How to solve the equity/efficiency dilemma?



« Alexandre tranche le nœud gordien »
Jean Simon Berthélémy, Musée de l'école des Beaux Arts de Paris

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2.1 « Internal » compensation

The measure is tailored to protect vulnerable households

Measure	Example
Tax rebates	-Reduced tax rate for targetted users: <i>Night heating devices (used mostly by the poor) in Germany</i> <i>Lower tax rates for public transport in Germany</i>
Progressive taxation	-0% taxation on basic consumption : <i>Electricity in the Netherlands</i>
Tax base selection	-Taxes on air transport: <i>50% air travels done by 2% richest in France</i>

2.1 « External » mechanisms

A. Within the fiscal framework

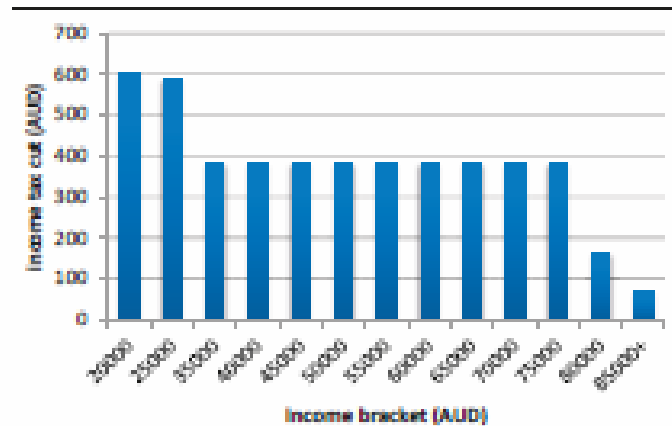
Measure	Example
Tax shifts	-Decrease in payroll taxes: Denmark
Negative tax or « green cheque »	-French 2009 proposal
Modification of income tax rates	-Progressive reduction in tax rates: <i>Sweden ; Australia ; Assouline (2011)</i>

2.1 « External » mechanisms

A. Within the fiscal framework



Figure 4. Total income tax cut in AUD per income bracket, 2012-2015



Source: Australian Government, 2011c.

- Australian example: reduction in income tax rate and increase in social transfers (+1.5% on each transfer type).

2.1 « External » mechanisms

B. Via a larger set of public policy instruments

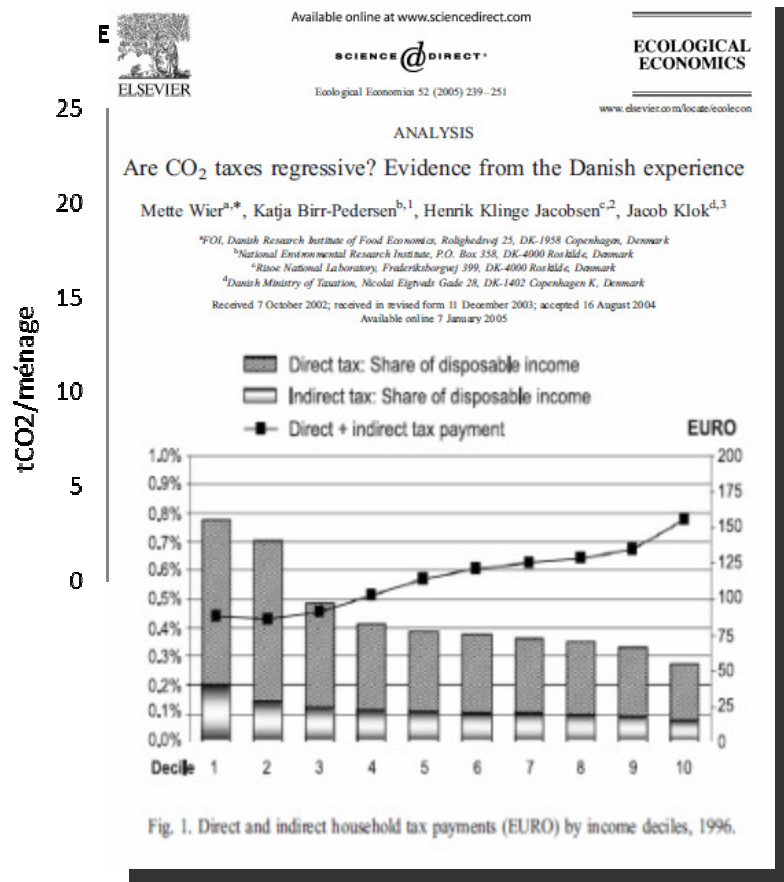
	Mesure	Exemple
Short term	Reduced energy tariffs	TPN, TSS en France
	Targetted subsidies	The reduced tax rate was transfored into subsidies to replace home night heating devices in Germany
	Increased social transfers	Pension, student, unemployed transfers increased in Australia
Long term	Urban planning	Densifying urban areas, increase public transport availability
	Household retrofit	SEM Ile de France

Conclusion

- Equity: ethical and pragmatic issue.
- Environmental taxes are regressive when implemented without any form of recycling. Intelligent recycling can solve equity efficiency opposition.
- Cutting the gordian knot thus implies introducing EFR within larger tax system reform packages.
- But this is not sufficient, need to look at tailored support mechanisms for vulnerable households.
- Question is how we define, through public debate, who should be supported.

2.2 Identifying vulnerable households

Importance of what we don't see!



■ Emissions indirectes

■ Emissions directes

➤ Indirect emissions (those necessary to production of goods and services) need to be looked at

➤ Taxing them also impacts households through increase in consumer prices

➤ In Denmark, indirect taxation shown to be less regressive than direct taxation

Normes sociales, prix de l'énergie et élasticités



The screenshot shows the VOX website interface. At the top, the VOX logo is on the left, and a 'Create' button is on the right. Below the logo is the tagline 'Research-based policy analysis and commentary from leading economists'. A navigation bar contains links for 'Columns', 'Vox Talks', 'People', 'ePubs', 'Debates', 'Events', 'Jobs', and 'About'. Below this is a secondary navigation bar with 'By Topic', 'By Date', 'By Reads', and 'By Tag'. The main content area features the article title 'Greasing the wheel: Oil's role in the global crisis' in a large blue font. Below the title, the authors 'Lucas Chancel, Thomas Spencer' and the date '16 May 2012' are listed. A short summary paragraph follows, starting with 'Between January 2002 and August 2008, the nominal oil price rose from \$19.7 to \$133.4 a barrel...'. Below the summary is a row of social media sharing icons (Facebook, Print, Email, Twitter, Plus) and a '10' comment count. To the right of these icons are two 'A' icons for font size adjustment. The full text of the article is visible below, starting with the same summary paragraph.

➤ Effet Veblen (1889): la consommation des plus aisés tire vers le haut la consommation des moins riches

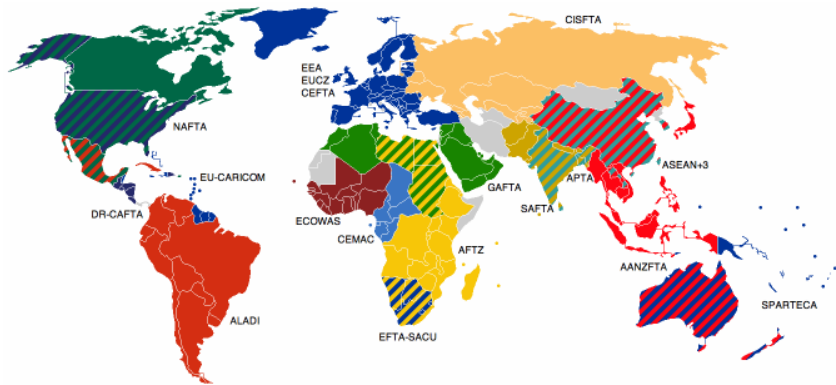
➤ Ménages aisés moins réactifs au prix

➤ Les ménages modestes s'endettent plutôt que de réduire leur consommation (cf. USA avant la crise des subprimes).

Réforme Allemande

Industries: baisse des cotisation retraite et exemption de la taxe. Transfert charge des industries vers les ménages.

Rappel: débat sur les gains liés au commerce 1980s



➤ Gains liés au commerce positifs (80s, 90s)

➤ Approche plus nuancée depuis 00s avec étude des conséquences en terme d'équité à l'intérieur des pays

The New York Times

OP-ED COLUMNIST

Trouble With Trade

By **PAUL KRUGMAN**

Published: December 28, 2007

Nombre de foyers bénéficiaires des tarifs sociaux de l'énergie

	2005	2006	2007	2008	2009	2010	Objectif
TPN	358 000	460 000	629 000	716 000	940 000	615 000	1 500 000 à 2 000 000
TSS	-	-	-	132 000	298 000	307 000	800 000