

Sustainability and Collusion

Maarten Pieter Schinkel

University of Amsterdam and ACLE

Bergen Competition Policy Conference

BECCLE

27-28 April 2017, Norway



The National Energy Agreement (September 2013)



See: Kloosterhuis and Mulder, *JCLE* (2015)



Dutch Policy

- Minister of Economic Affairs, Policy Rule WJZ/14052830, 6 May 2014, Article 2:

“In the application of Article 6(3) of the competition law [the Dutch equivalent of 101(3) TFEU] the Authority for Consumers and Markets considers in its assessment of the conditions whether [...] in agreements that restrict competition made to enhance sustainability, a fair share of the improvements benefits "users" in the long run.”



The Chicken of Tomorrow (2015)

Biologische vleeskip

5½ week oud
940 gram

Plofkip

5½ week oud
2.900 gram



WAKKER
DIER



ACM Vision Paper, May 2014

- Four requirements:
 1. Benefits have to be objective and clearly visible
 2. A fair share of the benefits has to go to consumers – at least compensating them
 3. The restrictions must be necessary to obtain the benefits – “cartel-specific”
 4. Sufficient residual competition must remain
- Monti (2002), Townley (2009), Kingston (2011), Gerbrandy (2016)
- Consistent with 101(3) TFEU



Article 101
(ex Article 81 TEC)

1. The following shall be prohibited as incompatible with the internal market: all agreements between undertakings, decisions by associations of undertakings and concerted practices which may affect trade between Member States and which have as their object or effect the prevention, restriction or distortion of competition within the internal market, and in particular those which:
 - (a) directly or indirectly fix purchase or selling prices or any other trading conditions;
 - (b) limit or control production, markets, technical development, or investment;
 - (c) share markets or sources of supply;
 - (d) apply dissimilar conditions to equivalent transactions with other trading parties, thereby placing them at a competitive disadvantage;
 - (e) make the conclusion of contracts subject to acceptance by the other parties of supplementary obligations which, by their nature or according to commercial usage, have no connection with the subject of such contracts.

2. Any agreements or decisions prohibited pursuant to this Article shall be automatically void.



3. The provisions of paragraph 1 may, however, be declared inapplicable in the case of:
- any agreement or category of agreements between undertakings,
 - any decision or category of decisions by associations of undertakings,
 - any concerted practice or category of concerted practices,

which contributes to improving the production or distribution of goods or to promoting technical or economic progress, while allowing consumers a fair share of the resulting benefit, and which does not:

- (a) impose on the undertakings concerned restrictions which are not indispensable to the attainment of these objectives;
- (b) afford such undertakings the possibility of eliminating competition in respect of a substantial part of the products in question.

Source: TFEU, *Official Journal*, 9 May 2008



Case IV.F.1/36.718, *CECED* (1999)





COMPETITION LAW DOs AND DON'Ts FOR FWF MEMBERS COLLABORATING TO PAY LIVING WAGES

Guidance for FWF member brands that seek to push past competition law concerns and work together to make living wages a reality for garment workers. - June 2015*

DO: WHAT IS SAFE TO DISCUSS WITH OTHER BRANDS?

A brand can hold discussions with other brands about:

- » which shared factories to target for living wage implementation;
- » how to calculate the labour minute price;
- » the process for negotiating with shared factories, and what terms to accept on the labour minute price or the living wage calculation;
- » developing review mechanisms to ensure that the labour minute price calculation remains up-to-date. This will change with living wage fluctuations – taking into account inflation or other economic/social changes.

You may also share data received from one or more factories relating to employment costs and labour conditions, where this data is necessary to calculate, verify, monitor, implement and/or revise the labour minute price calculation.

DON'T: WHAT IS NOT SAFE TO DISCUSS WITH OTHER BRANDS?

DO NOT discuss with other brands:

- » the number of labour minutes that each of your respective garments will require;
- » the FOB (i.e. ex factory) price of your respective garments;
- » other commercial terms to be agreed with the factories that are not necessary



Revised Policy Rule – 5 October 2016

Article 2:

“.. In this [assessment] will be involved:

“a. ... benefits to the society as a whole...”

“b. ... quantitative and qualitative benefits for users that materialize in the long.”

Para 3.3, page 9: “With this approach, the benefits both to the current consumer in the future, as well to future consumers of the product or service concerned are taken into account: it is about a longer term than right here, right now, and others that do not themselves consume the product.”



“... allowing consumers a fair share ...”

- European Commission (2004), Guidelines on the Application of Article 81(3), recital 87:

“The decisive factor is the *overall impact on consumers of the products within the relevant market* and not the impact on individual members of this group of consumers”

- *Shaw* (2002): “the average” consumer
- ‘Fair share’ interpreted (in merger control) as ‘at least indifferent’



Some Considerations

- Cartel coordination may reduce externalities and improve upon under-provision of public good
- Companies arguably have superior knowledge how to reduce externalities
- “Sustainability” is a rather soft concept
- Hard for a competition authority to assess – in particular also ex post
- Defense possibility can undermine deterrence – collusion under the guise of green
- Horizontal agreements carry direct and indirect risks of collusion
 - Fonseca and Normann (EER, 2012), Duso *et al* (REStat, 2013), Awaya and Krishna (AER, 2016)



Two Particular Concerns

1. Would a cartel actually promote sustainability? – Schinkel & Spiegel (IJIO, 2017)
2. Can a cartel ever compensate consumers? – Schinkel & Toth (2016)



1. Can collusion promote sustainable consumption and production?

- Semi-collusion: Fershtman and Gandal (1994), Brod and Shivakumar (1999)
- Duopoly; one-shot; two-stages: sustainability level, quantities; constant marginal costs
- Sustainability is product improvement (tied): raises willingness to pay

$$\pi_1(q_1, q_2, v_1, v_2) = (a + v_1 - q_1 - \gamma q_2)q_1 - kq_1 - \frac{rv_1^2}{2},$$

$$\pi_2(q_1, q_2, v_1, v_2) = (a + v_2 - q_2 - \gamma q_1)q_2 - kq_2 - \frac{rv_2^2}{2}.$$

$$u(q_1, q_2, v_1, v_2) = (a + v_1)q_1 + (a + v_2)q_2 - \frac{q_1^2 + q_2^2 + 2\gamma q_1 q_2}{2} + m,$$

- Four regimes: competition, sustainability coordination, production cartel, full collusion



For example: Sustainability Coordination

Stage 1: firms choose sustainability levels v_1 and v_2 cooperatively

Stage 2: firms choose q_1 and q_2 non-cooperatively

Symmetric equilibria – contractible

$$v_1^{sc} = v_2^{sc} = v^{sc} = \frac{2A}{r(2 + \gamma)^2 - 2}$$

$$A \equiv a - k$$



Proposition 1: $v^{pc} > v^* > v^{fc} > v^{sc}$.

Proposition 2: *The ranking of consumer surplus is as follows:*

- (i) $CS^* > CS^{sc} > SC^{pc} > CS^{fc}$ if $r > \frac{4-\gamma}{2(2-\gamma-\gamma^2)}$,
- (ii) $CS^* > CS^{pc} > SC^{sc} > CS^{fc}$ if $\frac{4-2\gamma+\gamma^2}{2(1-\gamma)(4-\gamma^2)} < r < \frac{4-\gamma}{2(2-\gamma-\gamma^2)}$, and
- (iii) $CS^{pc} > CS^* > CS^{sc} > CS^{fc}$ if $r < \frac{4-2\gamma+\gamma^2}{2(1-\gamma)(4-\gamma^2)}$.

Since $\frac{4-2\gamma+\gamma^2}{2(1-\gamma)(4-\gamma^2)} < 1$ when $\gamma < 0.5567$ and since by construction $r \geq 1$, case (iii) can arise only when $\gamma > 0.5567$.



Answer 1.: Only (sufficiently) in hard-core cartel (if profitable and cheap)

- Allowing firms to coordinate investments leads to lower SCP and CS
- Allowing firms to coordinate output leads to higher SCP, but ...
- ... it benefits consumers only if products are homogeneous and sustainability costs low
- In fact, production cartel overinvests compared to social optimum if $\gamma > 2/3$

- Findings in stark contrast with the policy

- Extends to price competition, increases in k , (small) spill-overs, other functional forms
- Self-enforcing – in infinitely repeated setting



2. Is compensation of consumers sustainable?

- Suppose public interest benefits are there (beyond volume effects), cartel-specific
- Public interest interpreted as a public good – non-excludable, non-rivalrous
- Fair share is exact compensation, instantaneous
- Unit pricing

- Higher price for the private good *versus* willingness to pay for public good
- Can price rise finance sufficient public good in compensation?
- Samuelson (1954), Lindahl (1958), Diamond & Mirrlees (1971): taxation
- Bergstrom et al. (1986), Bernheim (1986): crowding-out...
- Kotchen (2006), Besley & Ghatak (2007): ... of corporate social responsibility



Public Goods Model with Voluntary Private Contributions

$$\max_{g_i, x_i, y_i} U_i = a_i \frac{G^{1-\theta}}{1-\theta} + b_i \frac{x_i^{1-\theta}}{1-\theta} + c_i \frac{y_i^{1-\theta}}{1-\theta},$$

$$s.t. \ g_i + p_x x_i + p_y y_i \leq w_i,$$

$$g_i \geq 0,$$

$$G = \sum_{i=1}^n g_i + g_N + g_F,$$



- Competitive equilibrium (partial): Under-provision of the public good
- No-contributors and some/all contributors equilibria
- An individual is more likely to contribute if:
 - His wealth is sufficiently high
 - Other contributions are sufficiently low
 - If he attributes a relatively high value to the public good
 - If prices of the private goods are high
- Public good provision is independent of the wealth-distribution, as long as contributors set is constant (Bergstrom et al., 1986)
- Neutrality of ‘distortionary’ taxes, provided consumption bundles do not change (Bernheim, 1986; Andreoni & Bergstrom, 1996)



Comparative Statics at Play

$(p_x, g_F = 0)$ versus $(p_x^c > p_x, g_F > 0)$

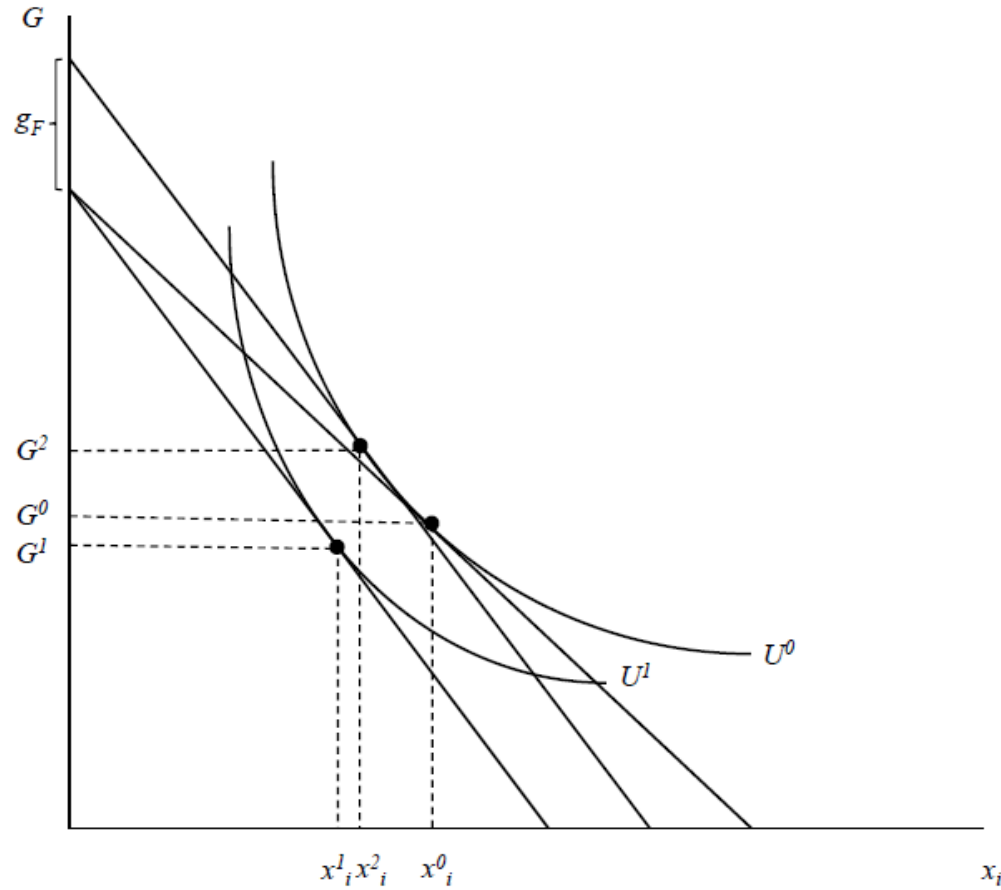
$$\Delta U_i = V_i^*(p_x^c, p_y, W, g_N + g_F) - V_i^*(p_x, p_y, W, g_N)$$

$$\Delta W = \sum_{i=1}^n \alpha_i \Delta U_i \geq 0 \quad p_g \hat{g}_F \leq \Pi(p_x^c, p_y, W, g_N + \hat{g}_F) - \Pi(p_x, p_y, W, g_N),$$

- Cartel strives at = and <, respectively
- The *higher* the WTP('s), the *less* compensation is required – contra Samuelson's rule
- Consumers with the lowest WTP for G pay the most (via highest x_i) – contra Lindahl-pricing
- Public interest cartel is often not sustainable



Compensating Variation 'paid' in g_F



Comparative Statics at Play

$(p_x, g_F = 0)$ versus $(p_x^c > p_x, g_F > 0)$

$$\Delta U_i = V_i^*(p_x^c, p_y, W, g_N + g_F) - V_i^*(p_x, p_y, W, g_N)$$

$$\Delta W = \sum_{i=1}^n \alpha_i \Delta U_i \geq 0 \quad p_g \hat{g}_F \leq \Pi(p_x^c, p_y, W, g_N + \hat{g}_F) - \Pi(p_x, p_y, W, g_N),$$

- Cartel strives at = and <, respectively
- The *higher* the WTP('s), the *less* compensation is required – contra Samuelson's rule
- Consumers with the lowest WTP for G pay the most (via highest x_i) – contra Lindahl-pricing
- Public interest cartel is often not sustainable



Two contributors, non-sustainable compensation

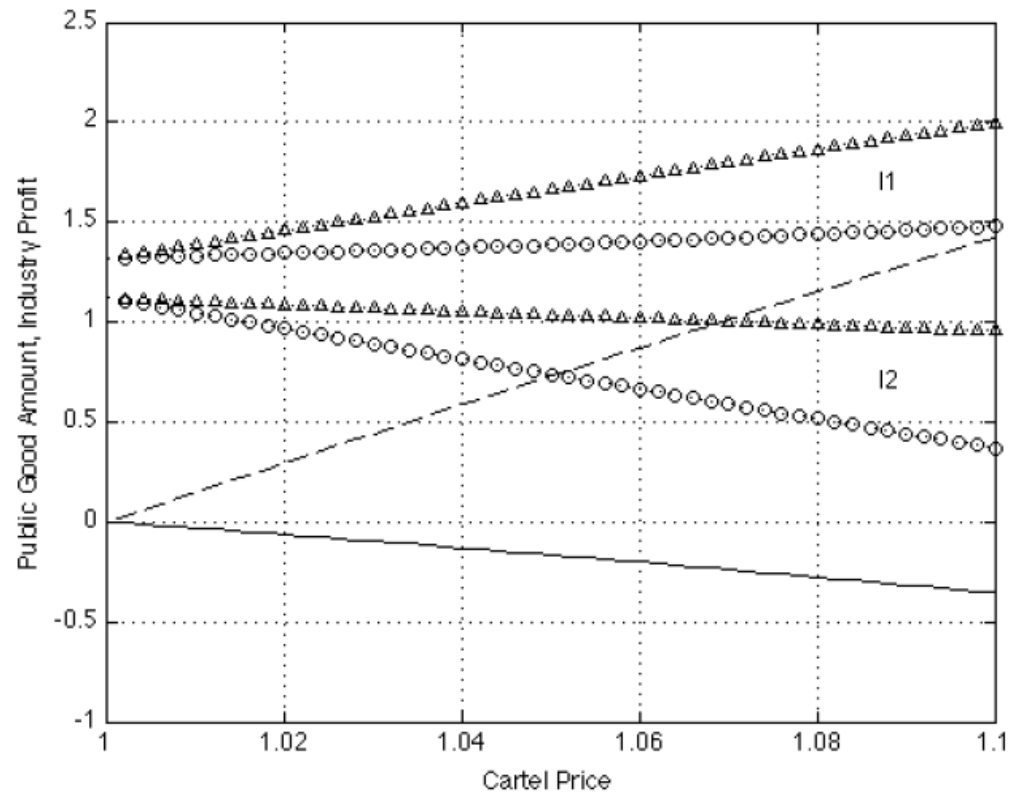
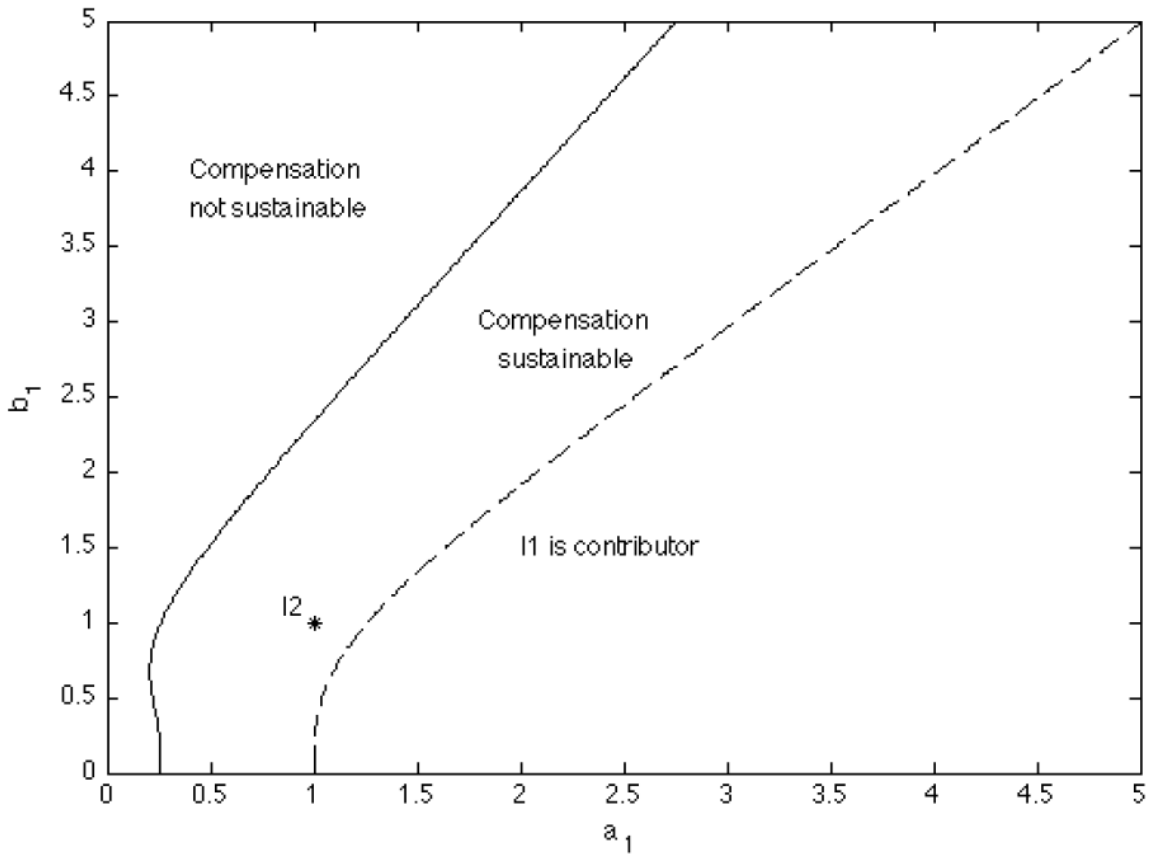


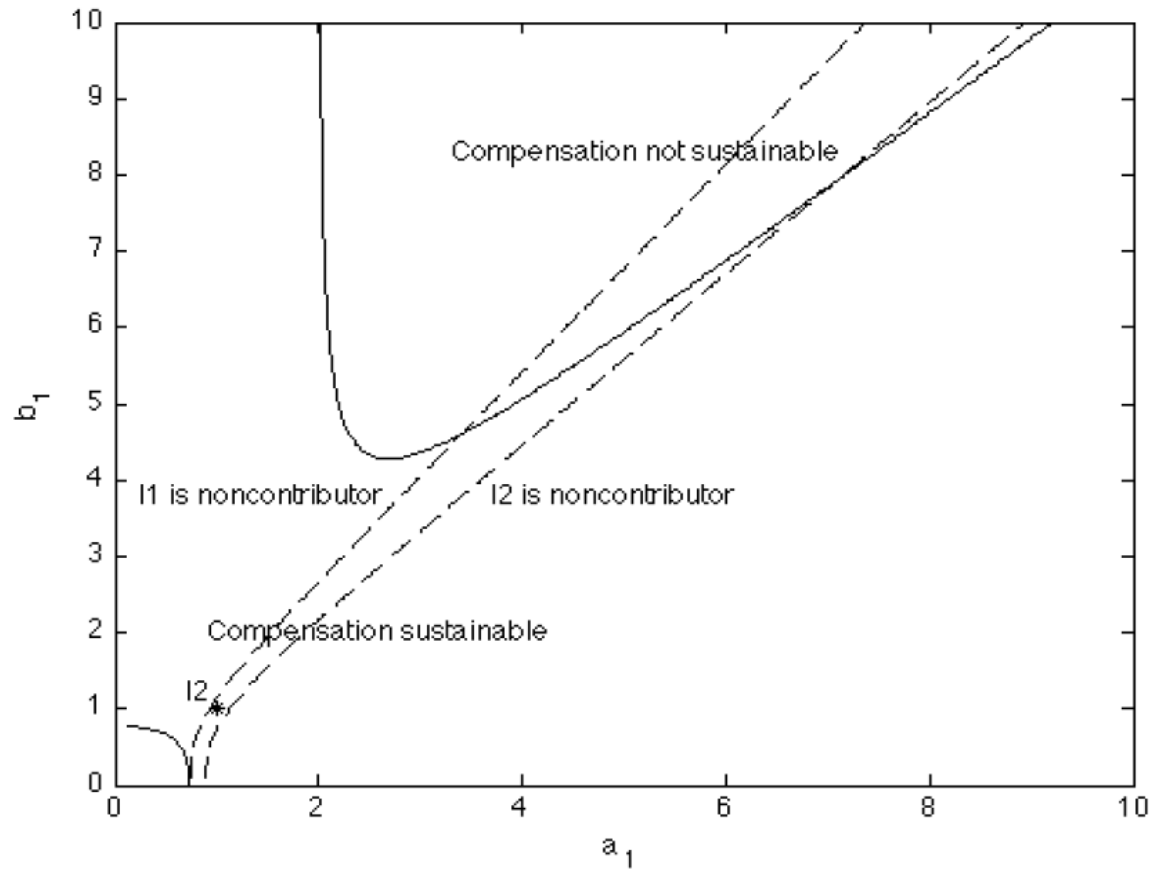
Figure 1: No sustainable public interest-defense.



No-contributors Economy



All-contributors Economy



The compensation cartel is sustainable in an all-contributor economy for an infinitesimal cartel price rise if and only if

$$\sum_{i,j}^{i \neq j} \left(\alpha_j a_j \left(\frac{b_i}{a_i} \right)^\rho + \alpha_i a_i \left(\frac{b_j}{a_j} \right)^\rho \right) \geq p_g^{\rho-1} \sum_{i,j}^{i \neq j} \frac{\alpha_j a_j - \alpha_i a_i}{a_i^\rho a_j^\rho} ((b_j c_i)^\rho - (b_i c_j)^\rho), \quad (14)$$

in which $\sum_{i,j}^{i \neq j}$ is the sum over all unique pair of two different individuals (i, j) in the total of n consumers.



Answer 2.: Only (maybe) if consumers are sufficiently ‘balanced’

- Crowding out of private contributions by cartel contributions
- Those to be compensated most have self-selected through private good consumption as low willingness to pay types ...
- ... plus they have a large exposure to harm through quantity consumed ...
- ... despite substitution away from the cartel commodity

- Policy is potentially costly without bounds – often not sustainable
- Asks those to pay for the public good (via private good), who value it least

- Compensation requirement reduces SCP investments below competitive level



Concluding Remarks

- Hard-core collusion can improve upon under-provision of public goods
- Cartel must be forced to compensate consumers – which reduces incentives to provide
- Compensating cartel-provision often unsustainable (goes against basic Public Economics)
- Prohibitively large information requirements for agency – idem self-assessment
- No unambiguous welfare measure available
- Regulation seems superior
- DG Competition in re the Commission's *Green Agenda*: competition promotes sustainability – *Ethanol benchmarks* (FI); *Trucks* (2016); *Recycling Automotive Batteries* (2017)



“I’m a great believer in corporate social responsibility. I welcome it when companies take a broader view of their role than just selling the best product at the lowest prices but also look at sustainability for example. [...] But I don’t think it’s for competition enforcers to start pursuing those objectives. [...]

The moment we turn a blind eye to a company breaking the competition rules, just because that might help to achieve other aims, we would lose the independence that makes us effective.”

Commissioner Vestager, *Competition Policy in Context*

Speech delivered at the 15th OECD Global Forum on Competition, Paris, 1 December 2016





News

ACM sets basic principles for oversight of sustainability arrangements

02-12-2016

More and more businesses make arrangements with each other concerning sustainable products or services. Many of these sustainability arrangements can be easily initiated or continued. In most cases, these arrangements comply with the Dutch Competition Act, but not in all cases. In order to help businesses draw up sustainability arrangements, ACM has established basic principles for the oversight of sustainability arrangements, next to its [2014 vision document](#).

ACM's oversight of sustainability arrangements is based on three basic principles:

1. ACM will not take action against sustainability arrangements that enjoy broad social support if all parties involved such as the government, citizen representatives, and businesses are positive about the arrangements;
2. ACM is able to initiate an investigation upon receiving complaints or indications regarding sustainability arrangements;
3. ACM helps find quick and effective solutions, should problems arise.

Document type

[News](#)

Spokesperson

[Murco Mijnlief](#)

Keywords

[Cartels](#) [Sustainability](#)

Topics

[Competition](#)

Concluding Remarks

- Hard-core collusion can improve upon under-provision of public goods
- Cartel must be forced to compensate consumers – which reduces incentives to provide
- Compensating cartel-provision often unsustainable (goes against basic Public Economics)
- Prohibitively large information requirements for agency – idem self-assessment
- No unambiguous welfare measure available
- Regulation seems superior
- DG Competition in re the Commission's *Green Agenda*: competition promotes sustainability – *Ethanol benchmarks* (FI); *Trucks* (2016); *Recycling Automotive Batteries* (2017)



Concluding Remarks

- Hard-core collusion can improve upon under-provision of public goods
- Cartel must be forced to compensate consumers – which reduces incentives to provide
- Compensating cartel-provision often unsustainable (goes against basic Public Economics)
- Prohibitively large information requirements for agency – idem self-assessment
- No unambiguous welfare measure available
- Regulation seems superior
- DG Competition in re the Commission's *Green Agenda*: competition promotes sustainability – *Ethanol benchmarks* (FI); *Trucks* (2016); *Recycling Automotive Batteries* (2017)
- ...and the Dutch? Extending by ministerial decree – public consultation from May 15

