



Uitnodiging CPB Workshop (19 juni 2018)

“Economics of the Circular Economy”

Het streven naar een meer circulaire economie staat volop in de aandacht. Dit komt voort uit het besef dat de huidige manier van produceren en consumeren niet duurzaam is. Als het beleid niet verandert, bestaat de kans dat grondstoffen te snel opraken. Bovendien wordt het milieu aangetast door de vervuiling bij de winning van grondstoffen, de verwerking daarvan tot materialen en producten, en het afval.

Het CPB organiseert daarom – voorafgaand aan de CPB lecture op 20 juni – een workshop over de “Economics of the Circular Economy”. Het doel van de workshop is om nieuw en inspirerend wetenschappelijk onderzoek rondom dit thema te verspreiden onder zowel beleidsmakers als onderzoekers.

Tijdens de workshop zullen toonaangevende onderzoekers Johan Eyckmans (KU Leuven), Carolyn Fischer (VU Amsterdam), Don Fullerton (University of Illinois) en Daan van Soest (Tilburg University) hun recente inzichten op dit terrein presenteren en bediscussiëren. De workshop is in het Engels en vindt plaats op **dinsdag 19 juni van 12.30 tot 17.00 uur** met aansluitend een borrel (Seminarzaal 3, Bezuidenhoutseweg 30, Den Haag). Het volledige programma is hieronder weergegeven; de abstracts van de verschillende studies zijn te vinden in de bijlage bij deze uitnodiging.

Hierbij nodigen we u van harte uit om de workshop bij te wonen. U kunt zich opgeven voor deze workshop door een e-mail te sturen met uw naam en organisatie gericht aan Jeannette Verbruggen (J.L.Verbruggen@cpb.nl). Journalisten / media dienen zich aan te melden via Suzanne van Gils (S.van.Gils@cpb.nl; 06-21560776). We zien uit naar uw komst!

Een geldige ID-pas is verplicht voor externe bezoekers. De wachttijd bij de receptie kan 5 à 10 minuten duren. Bent u in het bezit van een Rijkspas? Dan kunt u direct doorlopen naar de seminarzaal indien u het formulier InterDepartementale Toegang van te voren invult.

Program

- 12.30 - 13.00 Registration
- 13.00 - 13.10 Welcome
- 13.10 - 14.00 Daan van Soest (Tilburg University): “Habits, intrinsic motivation and environmental policy: A field experiment on household waste sorting” (discussant: Benedikt Vogt, CPB)
- 14.00 - 14.50 Carolyn Fischer (VU Amsterdam): “When the tail can wag the dog: Common-pool risk management and market power” (discussant: Thomas Michielsen, CPB)
- 14.50 - 15.20 Coffee/tea break
- 15.20 - 16.10 Johan Eyckmans (KU Leuven): “A Hotelling model for the circular economy including recycling, substitution and waste accumulation” (discussant: Ben Vader, CPB)
- 16.10 - 17.00 Don Fullerton (University of Illinois): “Vertical and horizontal redistributions from a carbon tax and rebate” (discussant: Johannes Bollen, CPB)
- 17.00 Drinks

Abstracts

Daan van Soest (Tilburg University): "Habits, intrinsic motivation and environmental policy: A field experiment on household waste sorting"

We provide evidence of how a strong, temporary incentive can be instrumental in altering habit-based, prosocial behavior, without a detrimental effect on intrinsic motivation. We study habitual behavior within the context of separating waste by households. We conducted a natural field experiment involving 70,000 households in the city of Tilburg, the Netherlands. The incentive consisted of informing households of the illegal nature of not separating waste and the fine in case of non-compliance, followed by a four-week intensive and highly salient enforcement campaign. The treatment had an instantaneous, large effect on household behavior. Most of the effect was still apparent many months after campaign had ended, suggesting a change in households' habits. Survey responses show that intrinsic motivation dropped immediately after the introduction of the incentive, but that it quickly recovered to its original levels after the incentive was removed. This latter finding does not only stem concerns about crowding out of intrinsic motivation as a result of an extrinsic incentive, but also suggests that the persistence in the behavioral effect is driven by a change in habits and not by the threat of punishment.

Carolyn Fischer (VU Amsterdam): "When the tail can wag the dog: Common-pool risk management and market power"

As the marketplace for resource-based commodities is increasingly globalized, risks related to local production can have effects on global markets. For example, disease outbreaks in aquaculture that decimate enough production can drive up global prices, as occurred with the infectious salmon anemia outbreak in Chile and the emergence of early mortality syndrome in the Southeast Asian shrimp industry. Outbreaks of listeria, cyclospora, and salmonella tied to packaged salads have prompted widespread recalls for multiple brands and safety concerns depressed demand for the products, at least for a time. High-profile environmental and health and safety disasters among suppliers (such as the 2012 garment factory fire in Dhaka, Bangladesh or scandals revealing illegal labor or environmental practices in China) can also affect the perception and profits of multiple well-known brands. Multinationals may thus have particular interests in the management of risks across a portfolio of locations. Meanwhile, regulatory regimes and enforcement can differ vastly across countries.

In this paper, we develop a model of multinational risk management, market structure, and asymmetric environmental regulation. Profit outcomes depend on both production and process measures across multiple jurisdictions. We propose a general model, but the essential components are (1) multinational (or multi-region) producers; (2) world product price consequences of major risky events in a given location (which may require spillover effects across firms within a given location to have a big enough output effect); and (3) meaningful differences in regulation across jurisdictions. The relevance is heightened for (4) industries with a high degree of market concentration. The model suggests several mechanisms that lead to suboptimal risk management behavior that could contribute to problems like disease outbreaks. The basic intuition is that, in the event of a major supply disruption in one location, multinational firms will receive some price compensation on production in other locations as long as market demand is not perfectly elastic. This possibility creates incentives to invest less in risk avoidance. Furthermore, when risk avoidance is inherently collective in nature—a common-pool problem—investments in risk management are already underprovided.

Johan Eyckmans (KU Leuven): “A Hotelling model for the circular economy including recycling, substitution and waste accumulation”

Non-renewable resources include a large variety of deposits that have been formed by geological processes over millions of years. Although extraction of such resources provides benefits as employment and economic revenues, it also contributes to negative environmental externalities and it increases resource scarcity. An important policy question is how to optimally extract non-renewable resource stocks over time while taking possible substitutes and recycling into account. The present paper adds to the literature by developing a generic numerical optimisation model that can be used to simulate non-renewable resource management regimes and the effects of different policy instruments deployed at different stages of the resource’s life cycle. By including recycling and substitution, the model extends the seminal cake-eating Hotelling model that dominates the non-renewable resource economics literature. In addition to being generically designed, the model can accommodate for non-competitive market settings, interacting policy instruments and environmental externalities at different stages of the material’s life cycle. The model’s possibilities are illustrated by means of a numerical simulation example for the extraction of sand.

Don Fullerton (University of Illinois): “Vertical and horizontal redistributions from a carbon tax and rebate”

Because energy expenditures are a higher fraction of spending for those with low income, carbon taxes are believed to be regressive. Can carbon tax revenues be used to offset these burdens? We employ data on 322,000 families in the U.S. Treasury’s Distribution Model to study vertical redistributions between rich and poor, as well as horizontal redistributions among families with common incomes but heterogeneous energy intensity of consumption (different home heating and cooling demands). Accounting for the statutory indexing of transfers, and measuring impacts on annual consumption as a proxy for permanent income, we find that the carbon tax burden is progressive, rising across deciles as a fraction of consumption. The rebate of revenue via transfers makes it even more progressive. Within low-consumption deciles, however, the standard deviation of the change in consumption as a fraction of consumption is larger than the average burden. The use of existing transfer programs to rebate revenue more than doubles that variation within each decile. Relative to no rebate, every type of rebate we consider increases consumption variation within most deciles.