

Resource use capping - the solution for the rebound effect arising from resource efficiency

Budapest, Hungary –A recent data developed by Breakthrough Institute and UK Energy Research Centre draw attention to the rebound effect of energy efficiency. This phenomenon finally leads to 10-34% less net resource use savings due to decreased prices and thus stimulated consumption and economic growth. In order to tackle this contradiction, dedicated NGOs and institutions from all around Europe established a resource cap coalition in order to advocate for the limitation of resource use in debates related to resource efficiency.

Dangers of resource efficiency – the issue of the rebound effect or the so-called Jevons paradox

The so-called rebound effect¹ occurs when some of the savings from energy efficiency are cancelled out by changes in people's behaviour. On a consumer level it can be direct (turning up the heating in a newly insulated house) or indirect (spending the money saved on bills on a flight to Spain). And on a macro-economic level, improved efficiency is usually believed to lead to lower prices and more demand.

An article issued in the Guardian² collected views of scientists and scientific findings on the rebound effect. Data warn of phenomenon where some of the savings from energy efficiency are cancelled out by increases in other carbon-intensive behavior. Besides, scientists and scientific reports quoted in the Guardian article, up till now many studies have examined the Jevons paradox, but the scientific base on it is still limited.

The idea of Jevons' paradox was created by William Stanley Jevons in 1865. Jevons' paradox was noticed in the study "Raw material and the global economy: Oversights and distortions in industrial ecology"³. It found that the world economy as a whole showed significant improvements in resource efficiency recently but on the other hand the total resource consumption of the global economy continually increased.

The chapter "Energy Consumption in Transitional economies: Jevons' paradox for Romania, Bulgaria, Hungary and Poland" analyses energy data from the Energy Information Administration and proves that Jevons' Paradox exists in these countries at a macro level⁴. Main findings of the chapter includes that Jevons' Paradox may be in existence in Bulgaria, Romania, Hungary and Poland at the macro-level despite the fact that energy consumption and energy intensity have decreased for each of the countries from 1990-2003. Besides, it showed that policies promoting energy efficiency would likely not reduce energy consumption in these countries. Finally it concluded that the urbanization of the population and the liberation of the economic markets are the reasons why Jevons' Paradox may exist.

The study "Jevons' Paradox and the myth of technological liberation" indicates that natural resource consumption is constantly growing in the past 200 years despite more efficient technology improvements. It all leads to environmental destruction and causes social and economic problems⁵.

The article "Macroscopic rebound effects as argument for economic degrowth" states that economic growth is seen more often as an opportunity rather than a problem⁶. The author is

¹ <http://www.ukerc.ac.uk/support/tiki-index.php?page=ReboundEffect>

² <http://www.guardian.co.uk/environment/blog/2011/feb/22/rebound-effect-climate-change>

³ *Raw material and the global economy: Oversights and distortions in industrial ecology*, Bunker, S.G. Society and Natural Resources 9,419-429, 2006

⁴ *Energy Consumption in Transitional economies: Jevons paradox for Romania, Bulgaria, Hungary and Poland*, John M. Polimeni, Raluca I. Polimeni, Romanian Journal of Economic Forecasting, 3/2007

⁵ "Jevons' Paradox and the Myth of Technological Liberation," Polimeni, John M. and Raluca Iorgulescu Polimeni *Ecological Complexity*, Vol. 3, Number 4, Pages 344-353, 2006.

⁶ *Macroscopic rebound effects as argument for economic de growth*, Schneider Francois, *Ecological Sustainability and Social Equity*, Paris, 2008

calling to absolute reduction of material, energy and land use and economic degrowth of industrial countries.

Proper measure to tackle the rebound effect – setting limits of resource use

All of the scientific evidence shows that it is high time to develop and implement additional measures in order to avoid the harmful consequences of the rebound effect. Therefore, on the initiative of CEEweb for Biodiversity, dedicated NGOs and institutions from all around Europe established a Resource Cap Coalition (RCC) in order to advocate for the limitation of resource use.

Due to limitation, natural resources would become scarce globally, which would have several positive social consequences besides environmental ones. Limiting resource use also means limiting the use of energy, which would put a pressure on transport and use of chemicals and thus intensive agricultural practices. This inevitably results in the “glocalisation” of the economy, where production and consumption is based much more on local resources. Consequently, people would start consume locally produced goods leading also to a greater appreciation for the true cost of our daily lives. It benefits local economies and poor, marginalised areas, which are now under great pressure within the globalised economy for their natural resources. Furthermore, limiting natural resources also increases the competitiveness of human labour, as labour intensive, but material and energy poor products and services become relatively cheaper on the market. This has a positive impact on employment, while also spur innovation for higher resource efficiency and recycling. Moreover, limiting the total environmental pressure and by that stopping further environmental degradation ensures the maintenance of ecosystem services, which is the basis of local livelihood.

Limiting natural resource use can however be only effective in case of applying holistic approach. Existing measures have failed to tackle the problems also because sectoral responses are given to seemingly disconnected issues, and their effects are often contradictory in the end⁷. In our opinion holistic solutions are needed, which focus on the ultimate causes of today environmental and socio-economic problems. Therefore, the RCC brings together various organizations, which share experience, speak with common voice and take more holistic approach. This enables the RCC to influence more effectively all the ongoing processes both at European and global levels.

RCC strongly believes that in order to tackle overuse of resources, strict regulations should be put in place and indicators should be developed to measure their success. The goal of the RCC is that by 2012 all decision makers realize that capping resource use is essential and by 2014 relevant measures are taken.

About CEEweb for Biodiversity

CEEweb for Biodiversity is an umbrella organization of NGOs in the Central and Eastern European region. Our mission is the conservation of biodiversity through the promotion of sustainable development.

About the Resource Cap Coalition (RCC)

RCC is an informal coalition of NGOs and institutions dedicated to the limitation of natural resource use. It was established in the framework of a kick-off meeting 3rd November 2010. Since that time 32 organizations have joined to it.

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⁷ Case of biofuels in South-America: due to biofuel related investments local poor population had to leave their home and previous profession