The political economy of the EU Energy/Development Nexus and its contradictions

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Presentation at 'Post Lisbon: How to achieve coherence between energy security and development policies'. *Briefing Session for Parliamentarians and Policy Makers* – 9 February 2011, Residence Palace, Brussels.

Thank you very much for inviting me to this briefing session; I am honoured and looking forward to the discussions. My short presentation is entitled '**The political economy of the EU Energy/Development Nexus and its contradictions**'. In it I will argue that there are several major contradictions in the EU policies on energy and development and their joint nexus and that the vital question for the future of this nexus should be whether the EU will start to openly accept and deal with these contradictions or continue to neglect these with the real possibility that they will become starker and lead to increasingly negative outcomes for people and environments in Europe, developing countries and beyond. The presentation is based in part on my on-going research on the local effects of the geopolitics of energy in Southern Africa and in part on my reading of literature over the last 10 years or so. I must add a cautionary note and that is that since I finalised my MA thesis on EU development 10 years ago I have only erratically updated my knowledge of this dynamic field, so perhaps some of my generalizations are outdated or too blunt. The presentation will conclude by making explicit what I mean with the 'political economy' of the energy/development nexus.

Among the most profound challenges for the future of Europe, and indeed the entire globe, are the issues of energy security and sustainability. It is logical, therefore, that the EU, through the Lisbon Treaty, has put these at the heart of its policy agenda. It wants to achieve these objectives and compliment them mainly through creating a competitive Union and a competitive internal energy market within the EU. According to the EU website:

> "Europe's citizens and companies need a secure supply of energy at affordable prices in order to maintain our standards of living. At the same time, the negative effects of energy use, particularly fossil fuels, on the environment must be reduced. That is why EU policy focuses on creating a competitive internal energy market offering quality service at low prices, on developing renewable energy sources, on reducing dependence on imported fuels, and on doing more with a lower consumption of energy".[1]

While seemingly straightforward, I want to argue is that there are some major contradictions in energy security and efficiency/sustainability on the one hand and relying on the 'market' to supply these on the other.

First, what do we mean, exactly, by security? In his 1977/1978 lectures at the 'College de France', famous French philosopher Michel Foucault takes as his central objective to study technologies of security and how these have developed historically (Foucault, 2007: 11). Security, for Foucault, is a technology of governing that sets boundaries on particular behaviours and tries to guide activity within certain parameters. More specifically, Foucault argues that security relates to three mechanisms: 1) "to insert the phenomenon in question [– in this case energy –] within a series of probable events"; 2) inserting the 'reactions of power to this phenomenon' "in a calculation of cost"; and 3) to establish "an average considered as optimal on the one hand, and, on the other, a bandwidth of the acceptable that must not be exceeded" (Foucault, 2007: 6). Security, to paraphrase Foucault, is thus to do with ensuring that populations behave according to certain prescripts, or within a particular 'bandwidth' and that within this bandwidth they are allowed to follow their individual paths.[2] As such, apparatuses of security allow the free functioning of markets, and indeed involve "organizing, or anyway allowing, the development of ever-wider circuits" (p.45). The technology of governing according to security, according to Foucault, was also a response to particular scarcities and problems, most notably grain and hunger. By developing a bandwidth around acceptable (minimal) amounts of grain and allowing this grain to circulate more freely throughout larger economies, food security could be enhanced and hunger mostly prohibited.

The links to the current process of energy security should be obvious. The EU, too, has developed a bandwidth around the issue of energy (in that EU citizens and companies should have access to a minimum amount of energy in order to be 'secure') and is trying to develop

[1] http://ec.europa.eu/energy/index_en.htm. Last viewed: 6 February 2011.
[2] As opposed to his concept of discipline, which precludes such individual freedoms (p.48-49).

'ever-wider circuits' within the EU within which energy can circulate. So far so good; the current developments in the EU energy sector follow particular paths that have historical precedents and indeed positively so, as this same dynamic led to a drastic reduction of hunger within European economies. Yet, there are two crucial differences between grain in the 18th century and energy in the 21st, namely that grain was grown every year (a sustainable resource) and produced relatively close to where it was consumed, at least within the boundaries of a single or adjoining polities that respond.[3] Energy, in contrast, is mostly non-renewable / non-sustainable (and for many processes non-substitutable), and is produced predominantly outside of the EU, travelling great distances to get here. Energy security, from this perspective, is thus increasingly becoming a contradiction. Energy, after all, can increasingly *less* be put into a series of probable events. i.e., the probable events that could impact on energy security are truly many and becoming more and complex with future fossil energy scarcity (link to the current political dynamics in Egypt!). Moreover, the bandwidth of the EUs energy security is increasingly being challenged through the global capitalist market and other geopolitical factors. The EU is, for example, increasingly outpaced by the rise of China and India (and other BRICS) and their energy needs. As long as the EU can convince these and other countries to maintain an open international energy circuit it will be possible for the foreseeable future to access its energy needs. But with increasing energy shortages, the question is how long countries will play according to international market rules.

To off-set the likely intensity of this contradiction and to keep the determinants on achieving energy security as much as possible in its own hands, the EU simultaneously focuses on energy efficiency and sustainability (chiefly through technological innovation). While this makes sense as a general policy strategy, it, too, is beset by a major contradiction when combining it with the EUs adherence to market competitiveness and a focus on continued economic growth. This contradiction is known in ecological economics as the Jevons Paradox. In 1865, William Stanley Jevons published a book called 'The Coal Question: an Inquiry Concerning the Progress of the Nation, and the Probable Exhaustion of our Coal-Mines'. Jevons was concerned with the rate of coal usage in industrial Britain and predicted an impending 'end to economic growth as Britain had known it until then. As we now know, he was dead wrong in this conclusion. But Jevons had more to say and one of his arguments has in the meantime developed into a foundational insight from the ecological

[3] Although at times, grain traveled fair distances – see Bateman (2010).

economics literature (see Alcott, 2005; Polimeni and Polimeni, 2006; Polimeni et al, 2008; Sorrel, 2009; Bellamy Foster et al, 2010).

The Jevons Paradox, simply put, is that increased energy conservation leads not to less overall energy use, but the opposite: increased energy consumption. While little known outside of academia – the Stern review for example did not take the Jevons' paradox into account[4] - there seems to be increasing scientific evidence that the Jevons' Paradox holds great validity and has important implications for policy. While one has to be careful with empirical evidence on the micro-level, where increased efficiency can indeed lead to less energy or natural resource consumption, evidence on the aggregate, macro-level seems to be very convincing (Alcott, 2005; Polimeni and Polimeni, 2006; Polimeni et al, 2008; Bellamy Foster et al, 2010). Crucial here are the *indirect* effects of energy/resource efficiency whereby efficiencies in one sector are off-set by the freeing of resources to pursue consumption in other sectors, so increasing the *aggregate* ratio and scale of the economic system as a whole (Bellamy Foster et al, 2010: 9). In turn, this has to be seen within a political economy that is devoted to capital accumulation and economic growth in perpetuity. Companies, and often individuals as well, use energy efficiencies to "expand the overall scale of production" (idem) and their competitiveness rather than to celebrate these efficiency gains as they are.

What could ameliorate the energy effects of the Jevon's Paradox would of course be if fossil energy would increasingly be substituted by renewable energy. While this is of course something that the EU is very keen on, the outlook for a substantial reduction in the dependency on fossil fuels for the coming decades are not good. While investments in renewable energy are increasing rapidly across the globe and within the EU, they still form a tiny percentage of the overall energy mix.[5] Moreover, there are also signals that the renewable energy is just not competitive enough. In March 2009, Shell, for example, announced that they were stopping large investments in renewable. The Guardian noted the following:

> "The company said that many alternative technologies did not offer attractive investment opportunities. Linda Cook, Shell's executive director of gas and power, said: "If there aren't investment opportunities which compete with other projects we won't put money

[4] While Sorrel (2009: 1468) is cautious about the empirical evidence for the Jevons' Paradox, he concludes that "a prerequisite for all the above is a recognition that rebound effects matter and need to be taken seriously. Something is surely amiss when such in-depth and comprehensive studies as the Stern (2007) review overlook this topic altogether"

[5] See, for example, http://www.worldenergyoutlook.org/docs/weo2008/WEO2008_es_english.pdf, or statistics on www.bp.com.

into it. We are businessmen and women. If there were renewables [which made money] we would put money into it."”[6]

With this example illustrating the general logic of our current political economy, the Jevons' Paradox will still be with us for some time to come.[7]

Now, how does all this link to 'development'? Interestingly, there seems to be a similar paradox regarding 'development', in that in as much as development is ultimately operationalised according to dominant ideas of economic growth and incorporation into the global market economy, then increases in the overall material expansion of the world economy (including job creation) will be accompanied by rising inequality and environmental degradation that are inherent parts of that same process. China is a good example where development has been taking place on astonishing levels with less people living in absolute poverty. At the same time, however, there is more systemic inequality which worries the Chinese government tremendously. Similarly, the Chinese government has recently calculated that the environmental costs of China's 'breakneck development' 'surged to 199 Billion US$ in 2008.[8] Other BRICS countries such as South Africa, Brazil and India face similar problems. These two effects of enhanced global development - increases in inequality and the increase of material inputs into and outputs from the economy - will thus add a major impetus to the intensification of the above two paradoxes around energy.

As a practical example from my research I can mention the manner in which energy efficiency is rewarded through carbon credits under the Clean Development Mechanism. In Mozambique, the reaction in several interviews to this has been that they need to pollute more so that they can take bigger strides in off-setting this pollution and make money off of it. If one can make money by off-setting pollution and energy intensive development, then it makes sense that the more one pollutes and the more energy-intensive one is, the more possibilities open up for their off-setting. This, too, is a rational response to the incentives of the market, and I have noted many more contradictory examples like this in South Africa, Mozambique, Zambia and other Southern African countries over the last years. These are developments that are hard for EU development to mediate. After all, let us not forget that development policy

[6] http://www.guardian.co.uk/business/2009/mar/17/royaldutchshell-energy. Last viewed: 6 February 2011.

[7] And not just in energy, as a World Resources Institute report from 2000 indicated: "By its very nature, economic growth poses a fundamental challenge to sustainable development. As long as continued growth in economic output implies continued growth in material inputs to and waste outputs from the economy, there is little hope of limiting the impacts of human activity on the natural environment." (Mathews et al, 2000: v).

[8] See: http://www.mg.co.za/article/2010-12-29-china-counts-199billion-cost-of-economic-growth. Last viewed 6 February 2011.

does not *directly* focus on the interaction between energy exploration/exploitation in African settings, but rather comes aside it and rarely directly negotiates the outcomes between those doing the actual extraction and those impacted by this. Research from the University of Johannesburg department of energy studies has shown that coal mining in the country, for example, continues to be plagued by many negative effects on local developments – such as respiratory problems due to bad air quality, land degradation, poor water supplies, unhygienic working conditions – and it seems hard to for outsiders to do something about this if transnational companies all have to compete in a highly competitive international market and therefore continuously try to keep costs related to labour and the environment as low as possible.

CONCLUSION

In conclusion, if my research over the last 10 years has shown anything, it is that many contradictions – especially between rich and poor, between attention and funding for the environment and increasing resource degradation and biodiversity loss and, important for this discussion, between a focus on energy efficiency and continuous increasing energy use (the Jevons Paradox) - become ever more pronounced. These contradictions, in turn, are overshadowed by an even larger one, namely that they are less and less openly addressed in policy documents. If the EU wants to go for a structural long-term policy regarding energy security and international development, it will have to start confronting these contradictions more openly, including the political economy from which they emanate. Interestingly, while few people would deny that we live in a capitalist world where the hallmarks are 'continuous accumulation of capital' and an intense focus on economic growth, it is quite miraculous that the very word 'capitalism' is not part of the Lisbon treaty, or of hardly any other EU policies, like 'the European consensus on development'. This is important, since, as David Harvey argues, "something crucial is lost when we refuse to confront the internal contradictions of capitalism as the crux of our problems. I believe (...) that a politics that evades central contradictions can only ever address symptoms" (Harvey, 2006: xxii).

That is the first contradiction the EU will need to solve and that is why I am calling for a political economy of the EU energy/development nexus and its contradictions (see also Büscher, 2009). Whatever one's political preference, ignoring these contradictions and the political economy from which they emanate will keep us focusing on symptoms rather than making the drastic changes necessary to come to a truly sustainable and more equal world.

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