Woodfuel supply chain integration in the South West of England:
A transaction costs approach to bioenergy development

Submitted by Pedro Andrés Garzón Delvaux to the University of Exeter as a thesis for the degree of Doctor of Philosophy in Politics in September 2011.

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Pedro Andrés Garzón Delvaux: ......................................................
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Pedro Andrés Garzón Delvaux

Abstract

The wood energy market remains nascent in the UK, despite climate change policies and energy security concerns. Transaction costs have been identified as one barrier to woodfuel development. However, few studies provide explicit insights into such barriers to spontaneous exchange in this sector and how they influence its formation. The study approaches the development of woodfuel in the South West Region of England through Transaction Costs Economics (TCE) and aims to identify the appropriate governance structure of the supply chain as a response to existing transactions costs. When transaction costs increase, seamless market exchange gradually gives way to credible contracting and even to full vertical integration or unified ownership. The TCE approach provides insights to analyse friction and barriers to exchange and allows for a dialogue between economics, law and day-to-day business decision-making. Fuel procurement from woodfuel suppliers to woodfuel users is central to this project in looking at the barriers to exchange. Original data was collected through 42 in-depth interviews, mainly with suppliers themselves but also from Forestry Commission, regional agencies, NGOs and lobbies involved. The results suggest the influence of transaction costs. Also, there is some evidence that wood-energy regional actors are embracing organisational diversity from known rural business structures to less familiar ones in the UK, such as cooperatives and new partnerships as answers to, among other factors, transaction costs. The evidence suggests that not only support to demand and supply is necessary, as generally identified, but it is also needed at its interface by supporting the governance of the supply chain. Some practical implications for both public and private sectors are identified to better articulate the response to this need.

Keywords: woodfuel, wood energy, bioenergy, transaction costs, governance.
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