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Ressource Competition and Climate Change

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Resource Competition and Climate Change

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Abstract

The extraction and consumption rate of fossil resources are the most crucial determinants for the speed of the accompanying process of global warming. Supplementing the literature on supply considerations of resource owners we argue that long-run competition for resource extraction rights may be another driver towards inefficiently high extraction quantities in the short-run. Western oil firms compete for extraction rights of international resource stocks whose owners do not possess the necessary experience to develop the resources themselves. We present a model in which the development of domestic oil fields is an investment towards international competitiveness since experience can be accumulated via learning-by-doing. Consequently firms with higher extraction rates gain a competitive advantage regarding the exploration of international resources over their competitors. Whenever the firms expect to be able to capitalise on the competitive advantage an inefficiently high domestic extraction rate follows. The inefficiency originates from the action of a single oil firm which tries to attract more future extraction rights while neglecting the negative effects on the other competitors which go beyond its benefit. The resulting steeper domestic extraction path implies short-run overextraction and exacerbates the problem of global warming. In a concluding analysis we propose measures to correct the market failure.

Keywords: resource competition, global warming, oil supply, learning-by-doing, competitive advantage

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