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Towards a theory of the Green Firm

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Abstract

The paper seeks to apply an industrial dynamic approach to the greening of industry. The paper suggests that those heterodox economic theories which take a starting point in knowledge based competition in discussing economic organisation - here termed industrial dynamics - have much to offer in analysing why firms go greener, why they go green to different degrees and whether they make each other go green.

Taking a starting point in a dynamic perspective on the market, the building of firm capabilities and timely coordination of firm activities with those of other related firms is seen as central for competitiveness in a rapidly changing world. A core understanding of the market from this perspective thus centres on linking the division of labour with the division of capabilities. Seeing firm learning as being path dependent and close-in to be effective, firms tend to centre their production around activities which are "similar", which means that they require the same capabilities. Other activities they need they access by transacting with other firms. However, this specialisation necessitates coordination between continuously changing - through technological and organisational innovations - firms activities. The division of labour requires firms to access those capabilities which they need but do not control and generally to engage in ongoing comprehensive information exchange with other firms both vertically and horizontally.

The above discussion provides a basic argumentation for a knowledge based theory of the scale and scope of the firm. To extend this into a theory of the green firm we need a definition of the particulars of green innovation processes as opposed to other innovation processes. It is here suggested that the green innovation process is distinct because it a) entails second order learning. Greening involves paradigmatic changes which challenges existing firm trajectories and thus both the existing cognition and norms as well as technologies of firms. b) entails systemic change processes. The green innovation process is inherently strongly systemic. More preventive green measures are lifecycle based which means that the entire production chain as well waste disposal issues are taken into consideration. Also, recycling forms an important element in a greener industrial society and recycling is fundamentally systemic, as it seeks to insert the waste of one unit as a resource into another unit.

It follows from the above two characteristics that the greening of industry leads to considerable coordination needs between firms, emphasising the importance of the

division of labour and generally interfirm learning and coordination. The greening of industry, then should be seen as an asymmetric process where firms to different degrees are seeking to attract green rents and where firms also are exposed to green pressures (from government and NGOs) to different degrees. Due to the interdependence of firms deriving from the division of labour and the division of capabilities, firms cannot attract green rents in isolation. The current phase in the 1990s where greening is turning into a corporate issue in some markets is resulting in an intensification of the green interfirm learning.

Firms, it is here suggested, need to bring other interrelated firms on the same green "wavelength" as their own, in order to attract green rents for three reasons: 1) either because their green capabilities are needed, 2) their technologies or practices are conflicting or 3) because the "greenness" of a firm is now being evaluated on the basis of the environmental performance of the entire chain, rather than the singly firm, with the rise of life cycle based environmental management and policy making. This means that there are great coordination (dynamic transaction) costs to attract green rents, which greatly limits the potential for the greening of markets.