

Strategic cost shifting in the Swedish district heating and electricity markets

*Magnus Söderberg*¹

Executive Summary

Firms that operate Combined Heat and Power (CHP) plants in Sweden face strong incentives to let their district heating customers subsidise the sales of electricity. This study investigates if firms exploit the variation in competitive intensity across the two markets and 1) shift costs from electricity to DH, and 2) pass on any cost increase to consumers.

A major empirical challenge is that firms endogenously decide whether to operate a CHP plant or not. Two different matching procedures are used to circumvent this problem: nearest-neighbour matching and propensity score matching. The two approaches turns out to give practically the same results, but the propensity score is relatively more sensitive to small sample sizes.

Results show that 1) the average CHP-firm reports a DH-cost that is 20-25% higher than what a similar non-CHP firm does, 2) the extra cost that CHP-firms report is fully passed on to consumers in the form of higher prices, and 3) with reported costs the price-cost margin is 8% for both groups and with imputed costs the margin increases to 30-35% (depending on matching procedure) for the CHP-firms. The results are consistent with the presence of strategic cost shifting.

Policy implication in the presence of strategic cost shifting is to either apply stricter accounting rules or to implement DH price regulation.

Keywords district heating, CHP, electricity, cost allocation, matching.

¹ Corresponding author. Energy Management Centre, University of Southern Denmark, Niels Bohrs vej 9, 6700 Esbjerg, DENMARK. E-mail: mags@sam.sdu.dk. Telephone: +45 65 50 12 65