



# **Firm dynamics and competition in the electricity market**

av

**Aili Tang**

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Örebro universitet  
Handelshögskolan vid Örebro Universitet  
701 82 ÖREBRO

## Abstract

Aili Tang (2018): Firm dynamics and competition in the electricity market. Örebro Studies in Economics 39.

This thesis consists of four independent essays that deal with the firm dynamics and competition in the electricity market. Specifically, it addresses two important facets of firm dynamics, namely, firm performance (growth and profitability) and the change in competition intensity that Swedish electricity firms face, brought by the process of deregulation in Swedish electricity market.

Essay 1 investigates whether Gibrat's law holds for individual firms. The results support the claim that Gibrat's law is more likely to be rejected *ex ante* when an entire firm population is considered, but more likely to be confirmed *ex post* after market selection has "cleaned" the original population of firms or when the analysis treats more disaggregated data.

Essay 2 examines the determinants of firm growth in the Swedish electricity sector. The results indicate that large firms do not grow faster than do other firms in the sector, and that electricity firms' internal resources are indeed the key determinants of firm growth in the Swedish electricity industry.

Essay 3 shows that although multi-plant firms are more prevalent than single-plant firms in industries characterized by scale economies and imperfect competition, multi-plant electricity firms on average have a one percentage-point lower return on total asset than their single-plant counterparts as they reach a 'steady state' firm size when an optimal size is identified. The potential reasons could be loss of control across hierarchical levels within multi-plant firms or the adaptation to technological changes lag behind in comparison to single-plant firms.

Essay 4 compares competition intensity before and after the launch of Internet electricity price comparison sites (IEPCS). The heterogeneous effects on competition intensity are found, with the largest effect on competition found in parts of the market that were already characterized by high levels of competition before the launch of IEPCS.

*Keywords:* Firm growth, profitability, steady-state, market power, competition, Boone indicator.

Aili Tang, School of Business  
Örebro University, SE-701 82 Örebro, Sweden, aili.tang@oru.se