

MICRO AND MACRO INDICATORS OF COMPETITION: COMPARISON AND RELATION WITH PRODUCTIVITY CHANGE

**Michael Polder, Erik Veldhuizen, Dirk van den Bergen and Eugène van der Pijll,
Statistics Netherlands**

Key words: Competition, productivity, growth accounts, Production Statistics, micro-macro

This paper investigates competition in the Dutch manufacturing sector. We look at various indicators that have been used throughout the literature and relate these to multi-factor productivity growth. Moreover, where possible, the indicators and productivity growth are calculated at both the firm and industry level. This enables us to investigate differences in competition and in its relation with productivity for both aggregation levels. Our results indicate that contemporaneous competition is associated with lower productivity, while lagged competition is positively associated with productivity. This finding is consistent between micro and macro, and robust over the various indicators and industries. The results are consistent with the idea that firms first experience negative effects of changes in competition and need time to adjust, while in the period after adjustment productivity rises again.