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Theme: Modelling

Session: FrC1 - Modelling

Title: **The Regulatory Effect on Productivity Development:
Comparison of Icelandic, Norwegian and Swedish Fisheries**

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Abstract: Several factors contribute to the productivity of nations' fisheries: (1) The biophysical conditions that determine the abundance of fish stocks, (2) government regulation of fisheries, and (3) innovation and adoption of (i.e. investments in) new fishing technologies. This paper analyzes the long-run productivity performance of three Nordic countries Iceland, Norway and Sweden. These countries offer a rich variety in fisheries management strategies. Iceland has a fully developed individual transferable catch quota (ITQ) system, Norway has since quite some time individual catch quotas (IQ) with limited transferability, while Sweden also uses TACs (Total Allowable Catch) but within a regulated open-access framework, i.e., individual fishers still race for the catch. Our paper analyzes the evolution of the industry's productive performance in light of industry structure and government policies towards the fisheries sector in these two countries. The analysis is supported by econometric productivity estimates of these countries performance using annual data from 1960 to 2003 for several competing production model specifications. Our econometric production models provide estimates of such measures as technical progress, labor productivity growth and total factor productivity growth. This analysis allows us to draw conclusions on the long-run evolution of economic performance without undue influence of shorter biological cycles in important fish stocks and other type of shocks. We find productivity gaps between the countries according to several productivity measures we employ, and discuss the evolution and sources of these differences.