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Productivity, Technology and the Norwegian model





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This report examines productivity development in Norway within the framework of the Norwegian model and industrial relations. We focus on three different sectors with distinct characteristics: manufacturing, retail and construction. Using detailed data at establishment level from 2008 to 2021, we analyse developments in productivity, technology and industrial relations.

First, we examine the extent to which productivity development during the period of analysis is due to creative destruction. The research question is explored through a decomposition of productivity trends in the different industries. We find that creative destruction – the continuous process of investing in new, more productive technology, improving work processes and developing new ideas – appears to be a key source of growth in both manufacturing and retail. This is not the case in construction. Within construction of buildings and specialised construction activities, new market entrants have, on average, contributed negatively to productivity growth in the sector. These establishments also tend to employ a higher proportion of labour migrants. Thus, the findings support the hypothesis that increased labour migration has been a contributing factor to the weak productivity growth observed in this sector.

Although creative destruction is a key driver of productivity growth in most sectors, our findings also highlight the importance of productivity improvements within workplaces to overall productivity growth. However, productivity improvements within workplaces reflects an important dimension of creative destruction, namely that establishments that aim to survive in the market must remain competitive.

The Norwegian model is often cited as one of the reasons why Norway is one of the most productive countries in the world. Previous studies have shown how the model contributes to growth by facilitating creative destruction through coordinated wage bargaining. However, the model also aims to ensure that industrial relations contributes to increased productivity at the workplace level, with the parties committing to cooperate on growth and development through the collective agreements. To explore this further, this report examines the relationship between productivity development in Norwegian workplaces and changes in the strength of industrial relations. We explore the research problem through various forms of regression analysis, controlling for capital intensity and structural changes in the labour market due to technological changes. We find that entering into collective agreements generally is associated with increased productivity. In several model specifications, we also find support for a positive interaction effect between the presence of collective agreements and local support for the agreement, as measured by the workplace union density.

Overall, our findings support the idea that both creative destruction and collective presence at the workplace contribute to productivity growth in the Norwegian private sector. Creative destruction *can* be viewed as a consequence of the Norwegian model, where high wage floors and low wage inequality incentivise companies to invest in new technology and highly educated workers who complement the new technology.

The positive correlation observed between collective agreements and productivity development at organisation level also supports the hypothesis that collective presence

can improve productivity within companies, even though the analyses do not establish definitive causal relationships.

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