



European Week of
Regions and Cities

Brussels
10-13 October 2016

Regional forecasting of labour supply and demand

Use of input-output model for
Norwegian counties



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Case background

- Gvt funded pilot asked to give examples of how to (better) balance future supply and demand for competent labour
- Norwegian counties and MLGM own a regional demographic and -economic forecasting tool, *PANDA*
 - » (PANDA = *Plan- and Analysis system for Business [Næring], Demographics and the Labour market [Arbeidsmarked]*)
 - » Mostly used for demographic forecasting (REGBEF)
 - » REGNA = Input-output model with employment and production output from regional expectations for growth in export, investments, consumption, production and productivity. Matrix with 50 industries, 428 municipalities.
 - » Concern: very little coordinated use of this tool, especially of REGNA



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Challenge

- Sources, methods, models and tools are to be utilized, analyzed, discussed and implemented at regional level
- Which means
 - » different regions will have different conditions
≠ single models or coherent outcomes
 - » analysts, advisers, stakeholders, decision makers are regional generalists, not ntl specialists
≠ shared understanding
 - » different regions *will* conduct these operations at different times
≠ coordinated use and interpretation
- Thus, models have to be accessible for unsynchronized updates and uses, and need to be
 - » Low cost
 - » Easy to run and update
 - » Easy to explain
 - » Easy to understand



STARTDETALJER OG HOVDRESULTAT

VENTA OVER-/UNDERDEKNING I ARBEIDSMARKNADEN

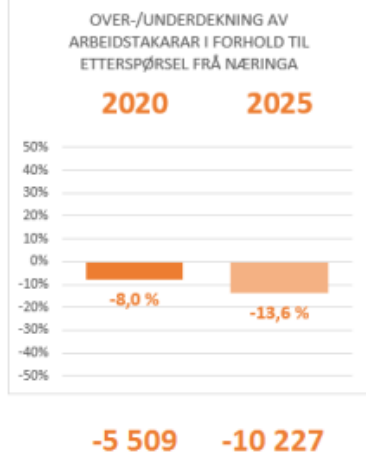
ØKONOMISK REGION: **0391 Oslo** | STARTÅR FOR TREND: **2008** | INTERPOLERT ÅR I TREND: **INGEN**

NÆRINGSGRUPPE
50 Statleg tenesteyting

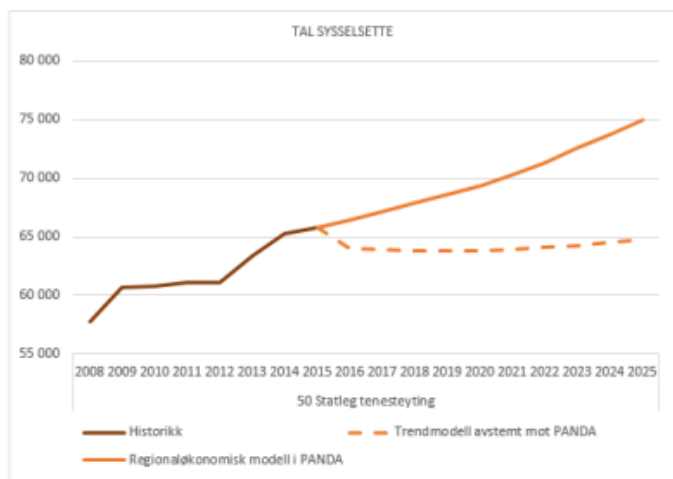
REFERANSEFRAMSKRIVING
Trendmodell avstemt mot PANDA

Det er ubalanse i tilbud og etterspørsel i 2020!

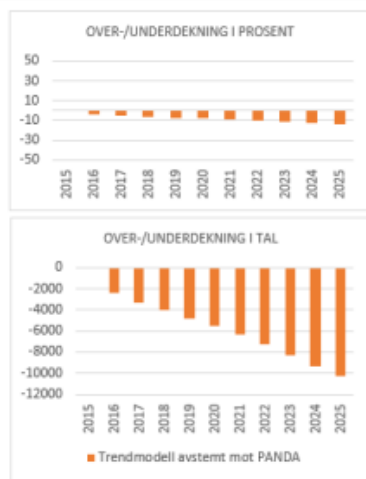
Det er venta tilbod av 5509 FÆRRE arbeidstakarar i 0391 Oslo enn «næring 50 Statleg tenesteyting» er venta å etterspørre i 2020



HISTORIKK OG ALTERNATIVE FRAMSKRIVINGAR FOR VALT NÆRING I 0391 OSLO



ALTERNATIVE FRAMSKR. AV OVER-/UNDERDEKNING



Result

Show the relationship (match or mis-match) between

a) Regional-economic expectations for growth in export, investments, consumption, production and productivity

b) Future possible labour-market clearance, based upon historic trends, the relationship between industries, and expected total employment

Spreadsheet panel

» Gives instant output from a choice of more than 150,000 model specifications (choose region, industry, start year, eventual interpolation of outlier)



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Benefits to regional analyses from national pilot project

- Increased efficiency, cost effectiveness
- Standardizes use of shared modelling tool
- Gives analysts a common tool and shared analytical environment
- Gives stakeholders shared expectations towards regional analyses
- «Mythbusting»
- Shows limitations with existing framework