

## **Modelling the regional labour market for midwives in Denmark with LINE, an interregional SAM-type 2-by-2-by-2 principle model**

Topic: IO modeling: Computable General Equilibrium Modeling and Social Accounting Matrices

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The Capital Region of Denmark has the highest share of inhabitants between the age of 20 and 35 in all of Denmark, representing about 24% of the total population in the region in 2016. In addition, the number of births in the Capital Region are expected to grow by 22% between 2016 and 2030. This is likely to have direct effects on the demand for midwives, gynecologists, obstetricians and pediatric specialists. Currently, there is a relatively balanced labour market for midwives in the Capital Region of Denmark. However, will the stock of qualified midwives be enough to meet higher demand in the future? How many more midwives will there be necessary to educate in order to retain a balanced labour market going out to 2035?

In order to assess the demand and supply of labor with educational qualifications in midwifery, the health version of the Local Interregional Economic model for Danish municipalities LINE has been used. The health version of LINE includes several model extensions, including an extended stock-flow demographic sub-model, a sub-model for the demand for individual governmental consumption, as well as the labour market sub-model. In order to accurately forecast the supply health care personnel, an education-graduation sub-model has been imbedded into the demographic model. For the sake of this paper, only the labour market for midwives is considered.

As reported by the Danish Ministry of Higher Education and Science, the educational capacity for midwives increased by 30 additional seats in 2018 in The Capital Region of Denmark. As an alternative scenario, this effect has been manually included in the in the model as a one-off increase of 30 additional admissions into the midwifery program. A forecast of this scenario, representing the consequences on demand and supply of labour with midwifery education, is presented.