A New Framework for Identifying the Drivers of Change in the Labor Market

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Statistics Norway

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Change

- Statisticians often refer to **changes** in:

Change

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  - Average productivity

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  - Labor force participation rate

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  - Labor force participation rate
  - **Average earnings**
  - Sickness absence rate

Drivers of change

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  - The change in earnings for individuals present in the population both years
    - Price effect
  - The earnings of individuals who are only present in the population one of the years
    - Compositional effect

Identifying the drivers of change

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Identifying the drivers of change

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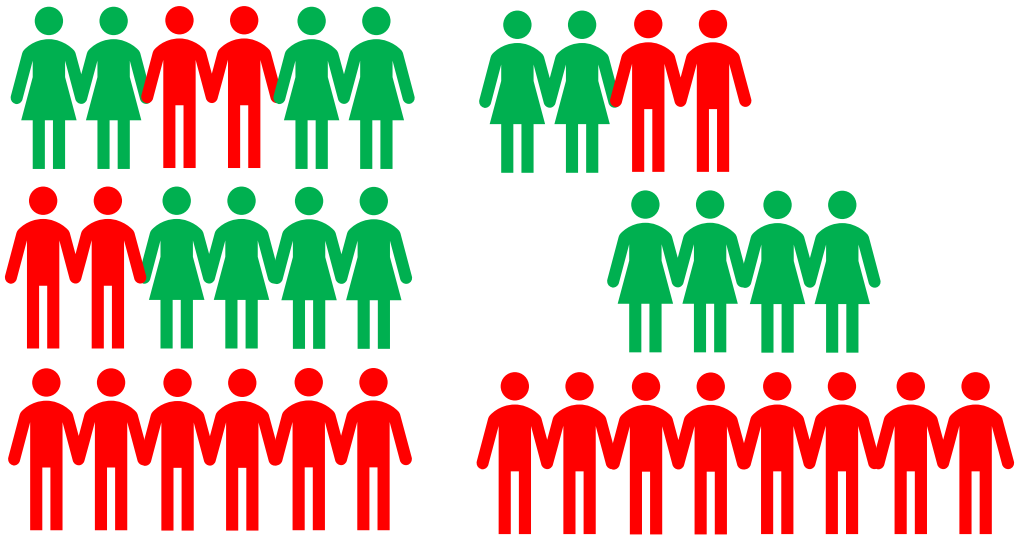
  Change in average earnings = price effect + compositional effect

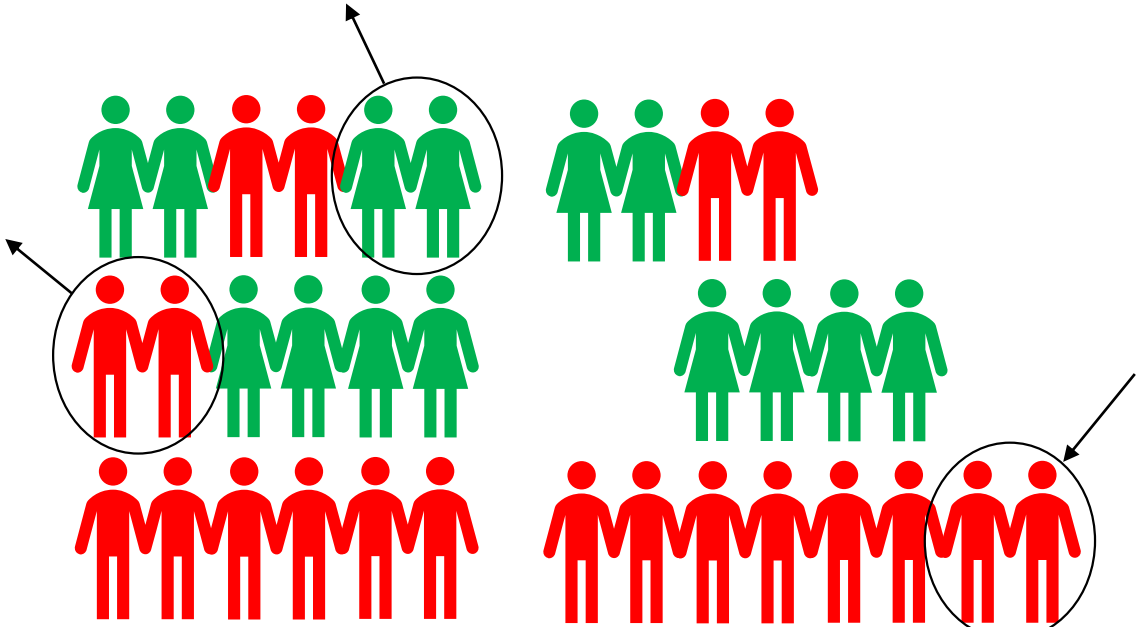
Populations change



Population in 2020

Population in 2021

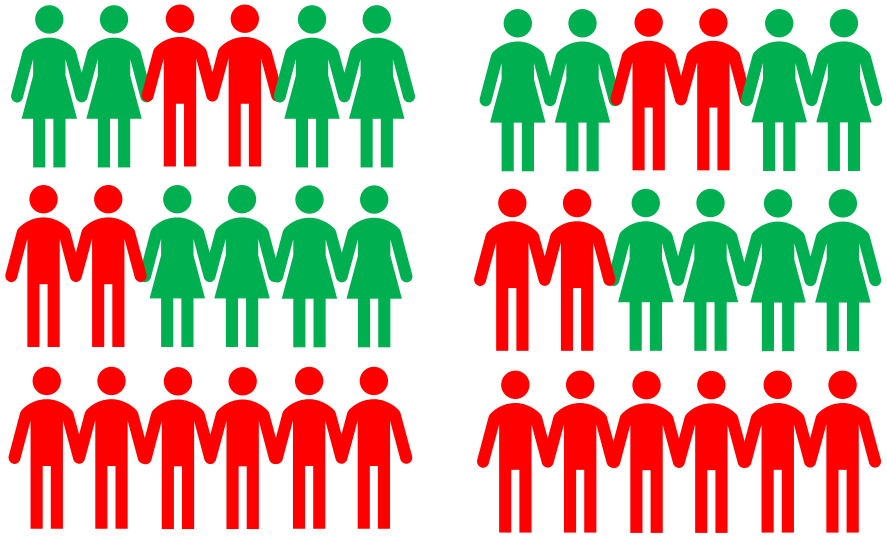
Some retire, some enter



Population in 2020 Population in 2021

Calculating the price effect

- Change in average earnings = **price effect** + compositional effect



Population in 2020

Counterfactual population in 2021

Calculating the compositional effect

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Why care about compositional effects?

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- Important for statisticians when **communicating** the driving factors behind changes in the labor market:
  - **Short-run shocks** to the economy
  - **Long-run trends** in the economy

Application: Change in monthly earnings

- We look at changes in average monthly basic earnings per full-time equivalent from 2020Q4 to 2021Q4

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- Allow for compositional effects across 16 industries

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  - Price effect = NOK 2 074
  - Compositional effect = NOK -33

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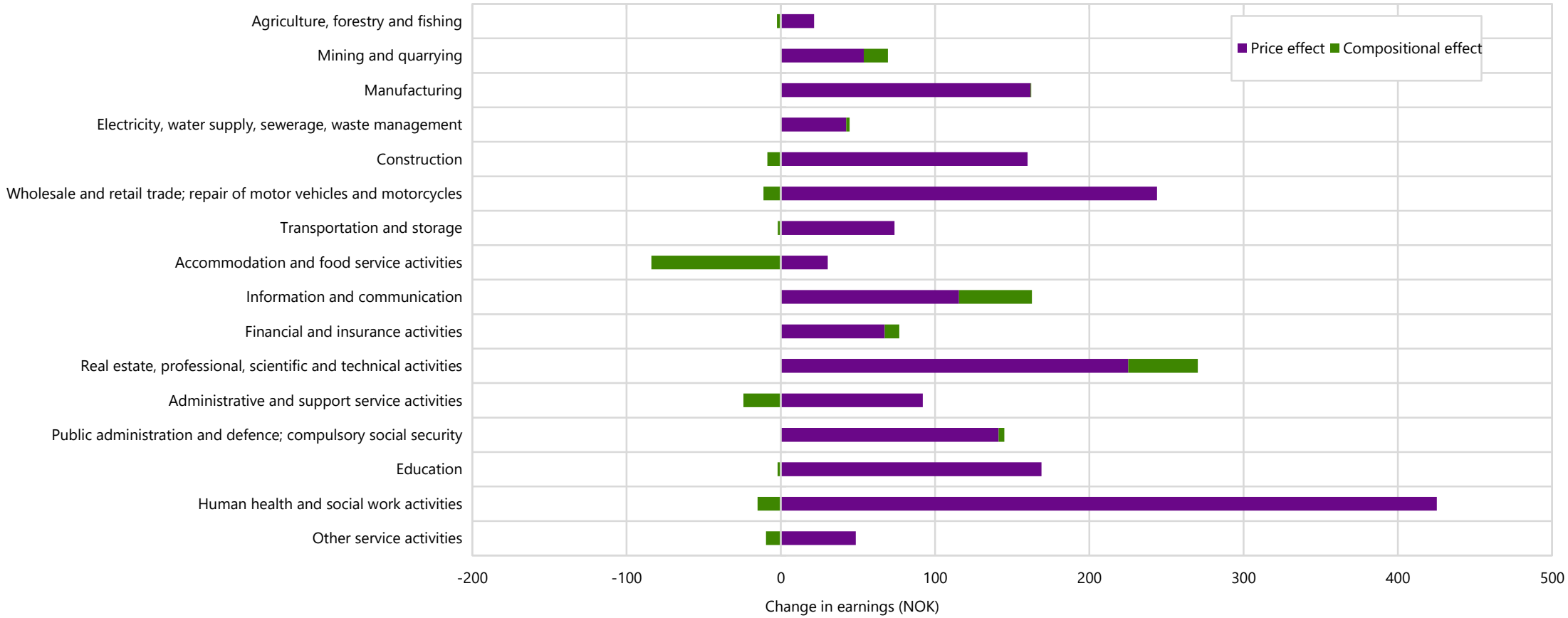

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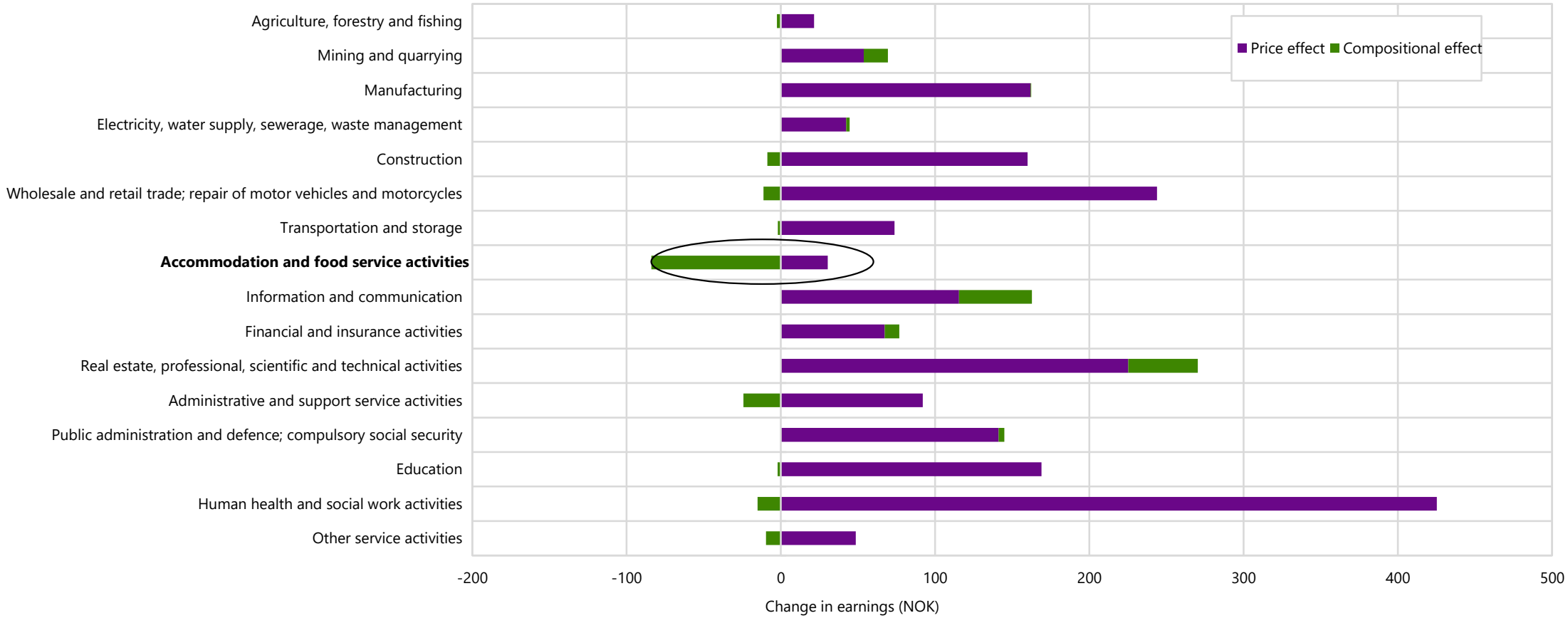

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  - Price effect
  - Compositional effect
- Useful for **understanding** and **communicating** official statistics
- Several internal and external **users**