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## Arbetsförmedlingen

Swedish Public Employment Service

- Government agency under the Ministry of employment
  - Our goals and assignment



# **Department of Analysis**

- Statistics
- Evaluations
- Forecasts



### **Available data sources**

- Data on registered unemployed
- Data on job postings
- Register data from Statistics Sweden
  - Matched employer-employee data since late 80's
- Centralised system of notifications



### **Evaluations**

- Recent examples:
  - Effects of subsidized employment on learning and integration
  - Effects of three labor market policy programs 2010–2020



### Four different forecasts

- National labor market outlook
- Regional labor market outlook
- Long term forecast (for the government)
- Occupational forecasts





# Purpose of our forcasts Internal

Improve knowledge of the labor market – nationally, regionally and locally

- Provides added value for jobseekers through increased quality in the information to jobseekers about recruitment needs and demand for various occupations, now and in the future.
- Provides added value for employers through increased quality in the information to employers regarding the lack or surplus of job seekers with different skills.
- Creates the opportunity for a needs analysis for planning the size and focus
  of the labor market policy programs.



# Purpose of our forcasts External

Inform and influence external actors

- Schools and universities (teachers and guidance councelors)
- People who are faced with a study/career choice
- Government, parliament, municipalities and regions
- Employers
- Employers' organizations and trade unions
- Other agencies and organizations at regional, national and local level
- Media
- Public



## The traditional forecasting method (PES-method)

- A PES model –on local employment offices
- Knowledge of the local labor market; familiar with corporate recruitment needs and abilities of job seekers
- Make added values for companies and job seekers
- The local employment offices develop a strong network of employers.
- Network of employers gives better opportunities to help job seekers with difficulties in entering the labor market
- Good platform for efficient matching, but also for a solid planning and development of labor market policy instruments



### Methods under developement...

- The reform of the agency requires reorganization
- New data collection method digital survey together with Statistics Sweden
- Occupational forecasting method based on register data
- A more data-driven and automated way of working
- Larger datasets and new models
- Role-assigned teams with analysts and data scientists



# Labor markets forecasts—sample of establishments

- A sample of establishments with 5-99 employees:
  - County
  - Industry
  - Establishment size
- Full population study of larger establishments
- Full population study of municipal and regional employers and a sample of employers that are state owned



# Labor markets forecasts— digital survey

- Survey questions about:
  - Demand for goods and services (private employers)
  - Business development (public employers)
  - Firms' capacity utilization
  - Recruitment needs
  - Labor shortage and its consequences



## Labor markets forecasts—other sources

- The results from our own survey are complemented with data from other sources, such as:
  - PES data
  - The National Institute of Economic Research (KI)
  - Purchasing Managers Index (PMI)
  - Statistics Sweden
  - The central bank Riksbanken
  - Commercial banks
  - International data



## Five steps in the analysis

- 1. Summarize and analyze the results of the survey
- 2. Access to labor? >> skills in demand/regional differences?
- 3. Analyze trends in various statistical sources
- 4. Other forecasters
- 5. Draw conclusions >> recommendations for action

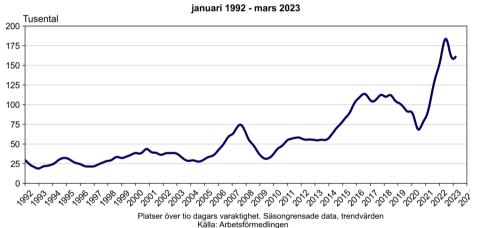




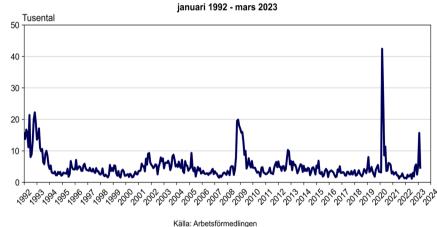


# Indicators for demand for labor PES - data

#### **Job postings**

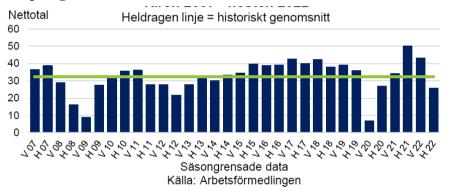


#### Number of individuals affected by notice of dismissal

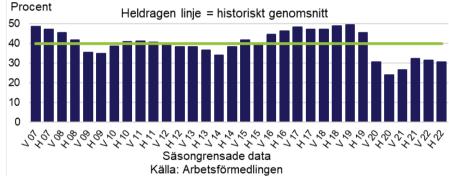


## **Indicators for demand for labor** Survey data

Employers planning to expand the workforce in the coming year Spring 2007- autumn 2022

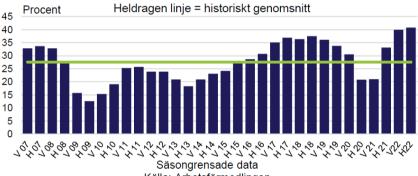


Employers who can increase production with at most 5% before hiring Spring 2007- autumn 2022



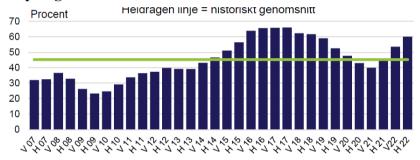
# Increase in recruitment problems in both private and public sector

#### Labor shortage, private employers **Spring 2007- autumn 2022**



Källa: Arbetsförmedlingen

#### Labor shortage, public employers **Spring 2007- autumn 2022**



Säsongrensade data Källa: Arbetsförmedlingen



# How labor shortages affect recruitments

- Recruitment failed (50%)
- Recruitment took longer time than usual (49%)
- We had to lower the requirements regarding professional experience (30%)
- We had to lower the requirements regarding education(19%)

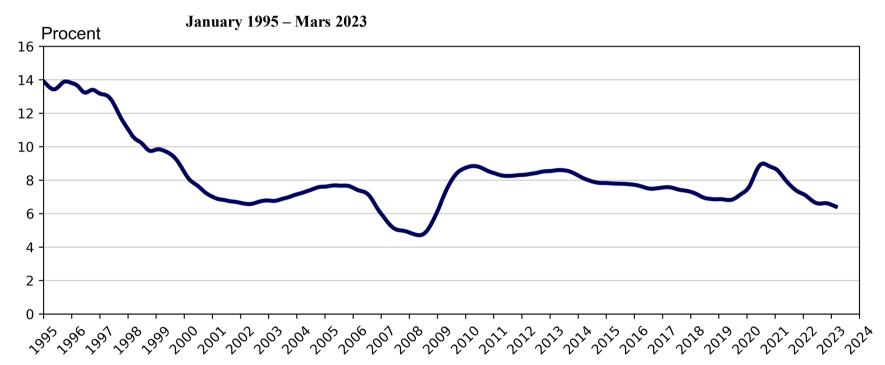


# Consequences of labor shortage

- Existing staff had to work more (64%)
- Declined orders (26%)
- Production/service decreased (23%)
- Used temporary workers (17%)



#### Number of unemployed 16-65 year old as a share of the labor force



Avser 16-65 år från och med januari 2023. Tidigare statistik avser 16-64 år. Säsongrensade data, trendvärden. Källa: Arbetsförmedlingen och SCB

## Labor market challenges

- The economic downturn will have an impact on the labor market going forward
  - Unemployment will increase in 2023 and the beginning of 2024
  - The decreased demand for labor causes long-term unemployment to rise again to high levels
  - Unemployed with weak competitiveness are at risk of having a particularly difficult time
- Clear imbalances in the labor market
  - The lack of skilled workers persists despite a weaker economic situation
  - Education, subsidized employment and a chain of efforts to counter an increase in longterm unemployment
  - A well-functioning collaboration is fundamental to be able to provide support to jobseekers











## **Developing methods for occupational forecasts**

# Previous method

Qualitative::
Based on
employment
officers
assessments



#### **New method**

Largely quantitative:
Based on statistical models.
National and regional perspective.



### And now?

New method under development..



# What is an occupation? And how can it be measured?

- Seemingly easy question. Carpenter is an example of an occupation, but how many carpenters do we have in Sweden?
  - Everyone who is employed as a carpenter?
  - Everyone who is employed or self-employed as a carpenter?
  - Every one with a vocational training or education?
  - Everyone who is employed or unemployed, actively seeking job as a carpenter?



## Short about our model: Supply in an occupation

- Our definition of the supply: Those who work as carpenters and those who should be able to work as carpenters
  - Those who work as carpenters = the number of people with an income from employment as carpenter
  - Those who should be able to work as carpenters = the expected number of people who are not carpenters but at some point in the future are expected to be able to work as carpenters
    - + Takes into account trends in education flows, population forecasting and employer preferences by educational background
    - - Does not take non-formal education or experience into account



## Short about our model: The demand

- Our definition of the demand: Those who work as carpenters and number of job openings
  - Those who work as carpenters= number of people who are employed as carpenters
  - Job openings
    - + Data available
    - - Few job postings within ceratain occupations (carpenters for example!)



## Short about the model

- Based on forecasts of components:
  - Demand (how many carpenters are demanded?)
  - Pensions (how many carpenters will retire?)
  - New supply (how many non-carpenters will be able to work as carpenters?)
- The relationship between forecasts of new supply and demand plus expected retirements.



## Which occupations are included?

- Arbetsförmedlingen makes forecasts for about 175 occupations
- A "forecast-occupation" consists of one or several SSYK4-occupations (similar to ISCO)
  - Homogenous
  - No additional education or training
  - Exclude heterogenous occupations
  - Exclude small occupations
  - Exclude managers





#### Förklaring till prognoser



Mycket stora möjligheter:

Efterfrågan på arbetskraft i yrket är betydligt större än utbudet. Konkurrensen om jobben är mycket liten.



Stora möjligheter:

Efterfrågan på arbetskraft i yrket är större än utbudet. Konkurrensen om jobben är liten.



Små till medelstora möjligheter:

Efterfrågan på arbetskraft i yrket är tillfredsställt, och det förekommer konkurrens om jobben.

#### Ingen prognos:

Bedömning för detta yrke saknas på grund av otillräckligt underlag. Det kan alltså vara både större och mindre möjligheter till arbete även i yrken där prognos saknas.

#### 13 yrkesprognoser inom Försäljning, inköp, marknadsföring

Sortering ~

#### Apotekstekniker

Prognosen är en samlad bedömning av: apotekstekniker



Stora möjligheter till arbete år 2023



Stora möjligheter till arbete år 2026

#### Inköpare och upphandlare

Prognosen är en samlad bedömning av: inköpare och upphandlare



Stora möjligheter



Stora möjligheter till arbete år 2026

Företagssäliare



Små till medelstora



Stora möjligheter

### **Apotekstekniker**

Prognosen är en samlad bedömning av: apotekstekniker

Yrket ingår i yrkesområdet försäljning, inköp, marknadsföring

#### Apotekstekniker sammanfattning

Det finns cirka 4000 yrkesverksamma apotekstekniker i Sverige, varav cirka 83 procent är kvinnor och 17 procent är män. Yrket kräver att du har en specifik utbildning.

Arbetsförmedlingen bedömer att det kommer vara liten konkurrens om jobben för apotekstekniker under det närmaste året. Det innebär att personer som har den utbildning eller erfarenhet som krävs kommer ha stora möjligheter till arbete.

Även på 3 års sikt bedömer Arbetsförmedlingen att möjligheterna till arbete för apotekstekniker kommer vara stora.

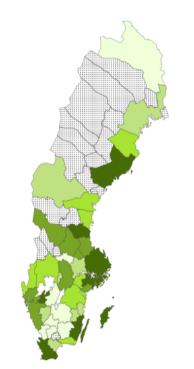


Prognos för apotekstekniker 2023 Stora möjligheter till arbete år 2023.



Prognos för apotekstekniker 2026 Stora möjligheter till arbete år 2026.

Kartan visar spridningen av stora möjligheter över hela landet.





Välj en region för att se en yrkesprognos.

Borås

#### Prognos för Installations- och serviceelektriker i Borås 2023

Möjligheterna till arbete för installations- och serviceelektriker bedöms vara stora på nationell nivå. I Borås bedöms möjligheterna till arbete vara mindre än i de flesta andra regioner.

## **Current developments: Survey on recruitments**

- Digital survey to employers
- Job postings
- Twice a year
- Results:
  - Categories describing current possibilities of finding a job and the recruiting situation within a certain occupation
  - + components describing the future (such as retirement forecasts) to discribe the (short-term) future labor market for the occupation



## **Current developments: Survey on recruitments**

- Combining results from survey with indicators for:
  - Unemployment
  - Leavers
  - Turnover
- Different measures for different users
- Aiming at defining "shortage"

<b>Employment opportunities</b>	Recruiting situation
Very large opportunities	Widespread shortage
	Shortage
	Paradox problems 1,2,3
Large opportunities	Ample supply
Small to medium large opportunities	Surplus



## Links

### Analytical reports

Analyser och prognoser - Arbetsförmedlingen (arbetsformedlingen.se)

#### **Statistics**

Statistik - Arbetsförmedlingen (arbetsformedlingen.se)

### Occupational forecasts

Hitta yrkesprognoser - Yrkesområden (arbetsformedlingen.se)

