

# Legal gender recognition with or without mandated sterilization: Impacts on transgender health and earnings

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## Some key concepts for the presentation

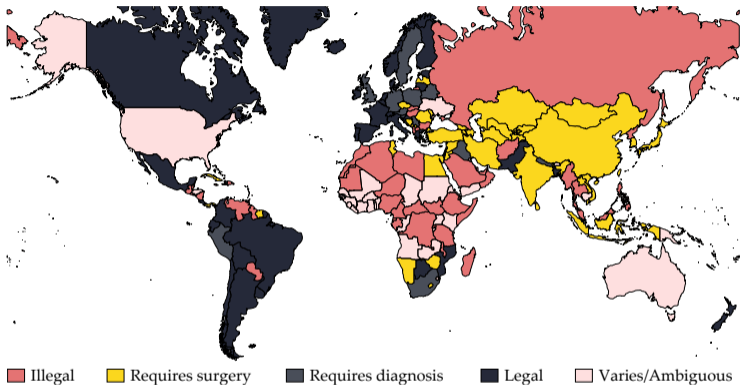
**Transgender (trans):** Gender identity  $\neq$  registered sex at birth  $\rightarrow$  may undergo medical and legal gender transition

**Legal gender marker:** The gender registered on official identity documents such as a passport or driver's license — in Sweden, either *male* (M) or *female* (F)

- Trans women: registered male at birth, legal change to female (MtF)
- Trans men: registered female at birth, legal change to male (FtM)

**Cisgender (cis):** Someone whose gender identity aligns with their registered birth sex

## Gender marker changes are strictly regulated



Source: Equaldex 2023

In Sweden: diagnosis (until July 2025), surgical sterilization, and destruction of reproductive cells from 1972–2012. Latter two requirements abolished in 2013. \*

## Possible effects of mandated sterilization

Mandated sterilization violates the human rights of the transgender population and such requirements may lead to:

- Less autonomy and flexibility in the transition process
- Social stigma and negative perceptions of trans people
- Distrust of or negative interactions with healthcare providers
- Psychological distress (e.g. anxiety and depression)
- Economic consequences due to increased sick leave or discrimination (if trans identity is less/more salient)

# Overview of our research

We leverage detailed Swedish administrative data from 2006–20 to **study the repeal of Sweden's sterilization requirement** in two parts:

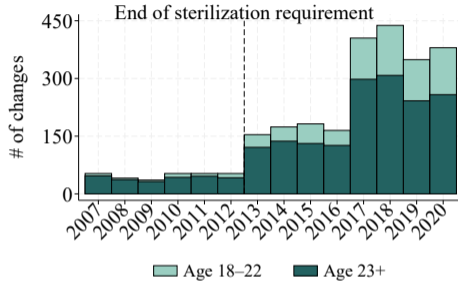
- ① Impact on the number of legal gender changes and the background characteristics of those who change their marker pre- versus post-2013
- ② Differences in health and labor market trajectories when changing legal gender with versus without mandated sterilization
  - Follow trans people from four years pre- to four years post-legal gender change
  - Compare trajectories for those who changed legal gender before and after 2013
  - Benchmark observed outcomes with those of similarly aged cis people

## Previous findings and our contributions

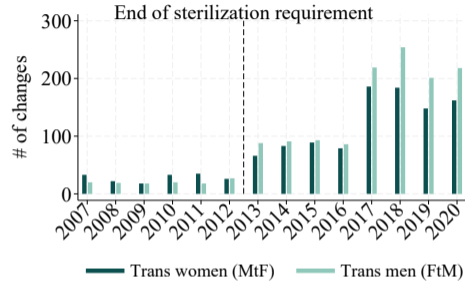
- Fairly well established that **trans people face disparities relative to cis people**, e.g., in terms of mental health, welfare reliance, economic circumstances (Carpenter et al. 2022, 2024; Dujeancourt 2024; Kolk et al. 2023; Bränström & Pachankis 2020)
- We know less about how policy and legal regulations affect trans people's life trajectories, despite increased policy debates in recent years
  - **de Weerd et al. (2024)**: More young people, especially trans men, change legal gender marker when facing fewer medical requirements
  - **Mann (2021)**: Trans men but not trans women have higher employment rates after repeal of surgical requirements for legal change; no effects on self-reported health
- We are the first to document different dynamics in outcomes when obtaining legal gender recognition with versus without mandated sterilization

**The reform's impact on selection into legal gender marker changes and sterilizing surgery**

# Large increases in number of gender marker changes after 2013



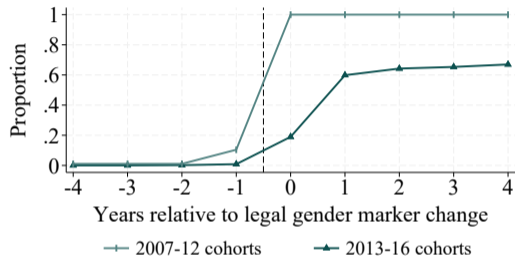
(a) Changes by age group, 2007–2020



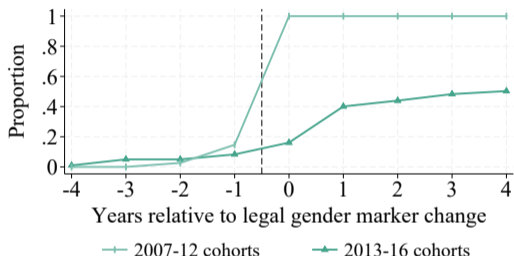
(b) Changes by gender, 2007–2020

Amounts to a **three-fold increase** immediately around the policy change (ca. **215%**). Especially large increases among **18–22 year olds** and **trans men**.

# Many trans people opt out of sterilizing surgery after 2013



**Trans women:** around 33% opt out



**Trans men:** around 55% opt out

Similar picture if we include/exclude 23+ year olds (Moberg et al. 2025, AEA P&P)

**Health and labor market trajectories when obtaining legal recognition with or without mandated sterilization**

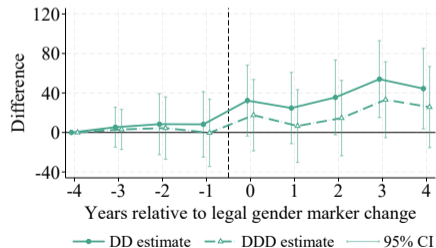
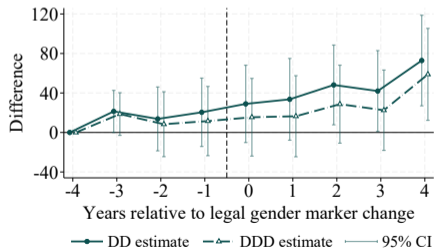
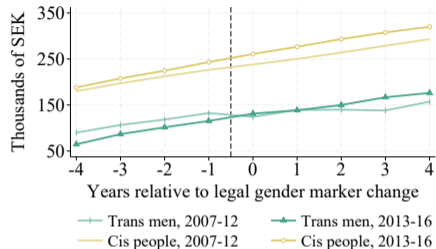
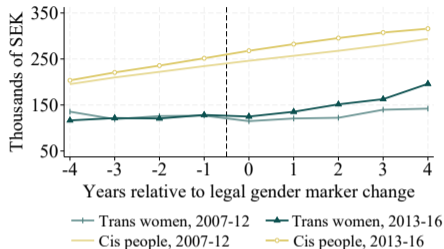
## Sample construction (separately for trans men and trans women)

- Focus on trans people who changed legal gender from 2007–16 at age 23–64
- Randomly assign a **pseudo year of legal change for cis people**, then match 100 cis women and 100 cis men to each trans person on age and transition year
- Divide the sample into two groups by year of actual/pseudo legal change: **2007–12 (mandated sterilization)** and **2013–16 (no mandate)**
- **Calculate weights** so 2013–16 cohorts are age-matched to the 2007–12 cohorts
- Estimate a **dynamic DD** and **DDD** comparing each group's trajectory of outcomes before and after their actual/pseudo legal change (base year:  $t = -4$ )

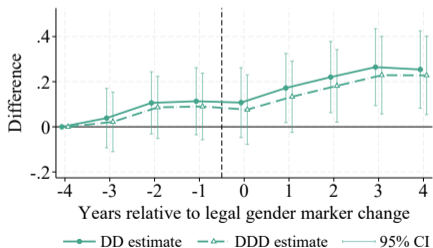
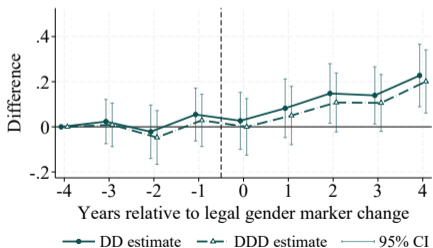
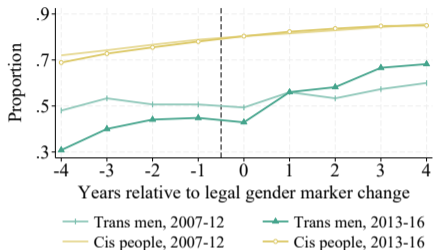
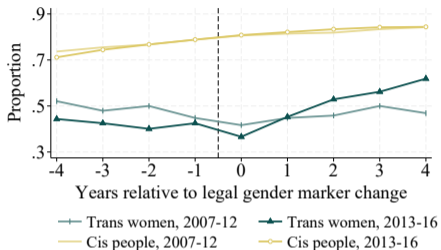
Baseline diffs: trans women

Baseline diffs: trans men

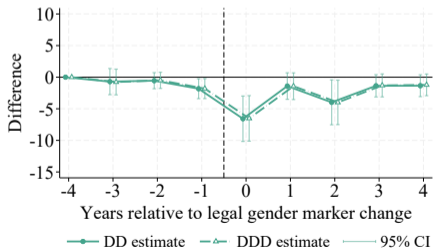
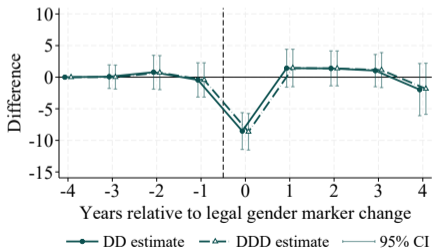
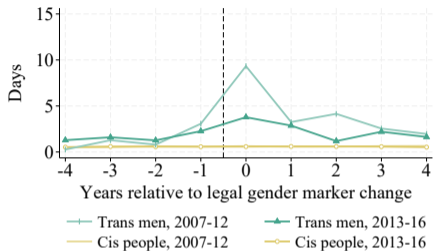
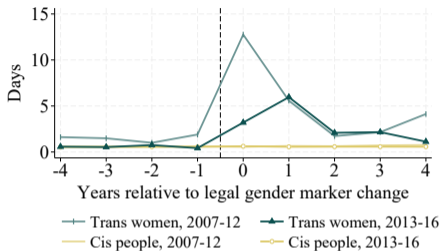
# Improved earnings trajectories without mandated sterilization



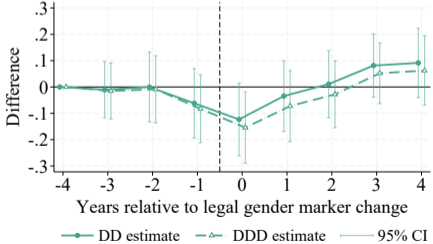
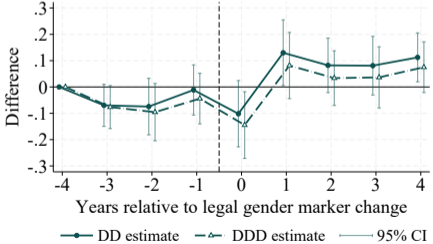
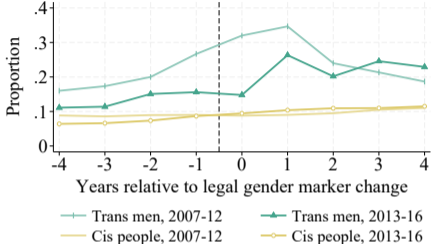
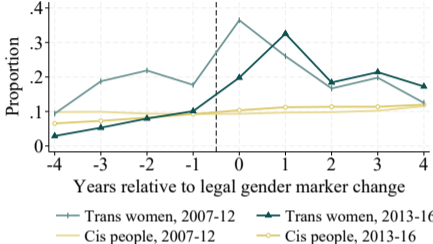
# Improved employment trajectories without mandated sterilization



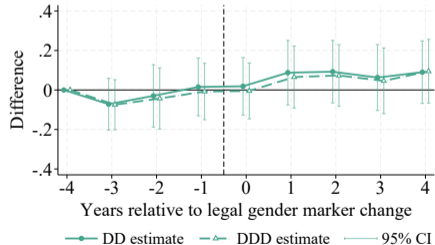
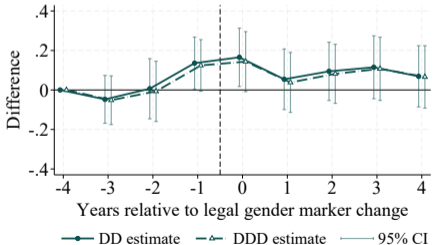
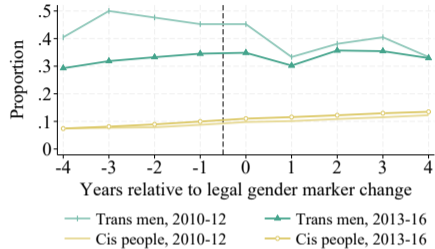
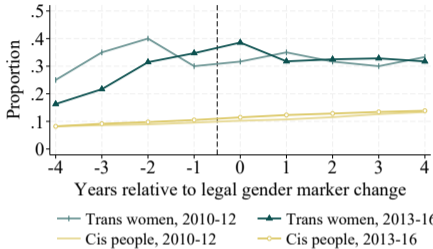
# Fewer days hospitalized without mandated sterilization



# Delayed sick leave uptake without mandated sterilization



# No improvements in mental health without mandated sterilization



## Concluding remarks

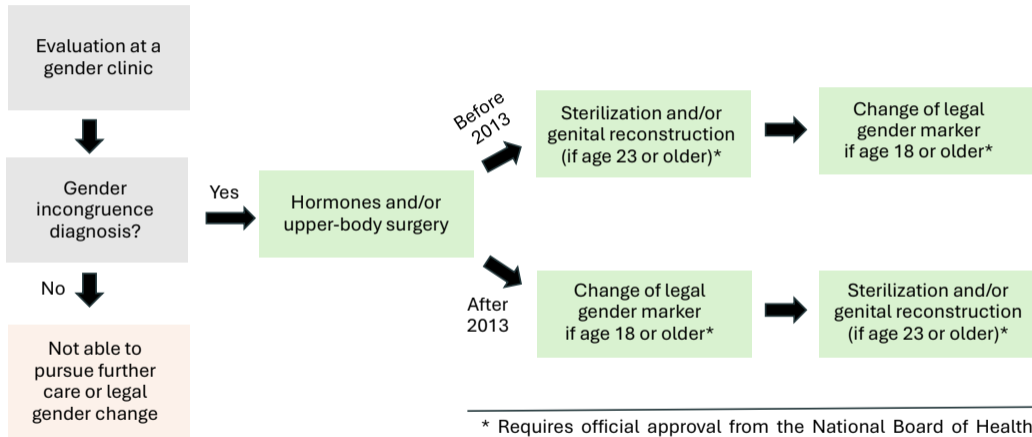
- **Regulations** around legal gender change **shape trans people's life trajectories**
  - Significantly more trans people opted into legal gender change when sterilization was not mandated — particularly young adults
  - Many opt out of sterilization when given the chance, leading to a reduction in hospitalization days during transition
  - Transitioning without mandated sterilization is associated with shifts in sick leave dynamics and faster earnings and employment growth
- While labor market trajectories have improved for recent transition cohorts, there remain **profound socio-economic disparities with cis people**

## Next steps

- Implement a more complex matching algorithm to more convincingly rule out selection (on observables)
- Explore variation relative to other events in the medical transition (e.g. hormone initiation or bottom surgery) to see if “timeline shifts” fully explain the effects
- Exploit variation stemming from age cutoffs for sterilizing surgery

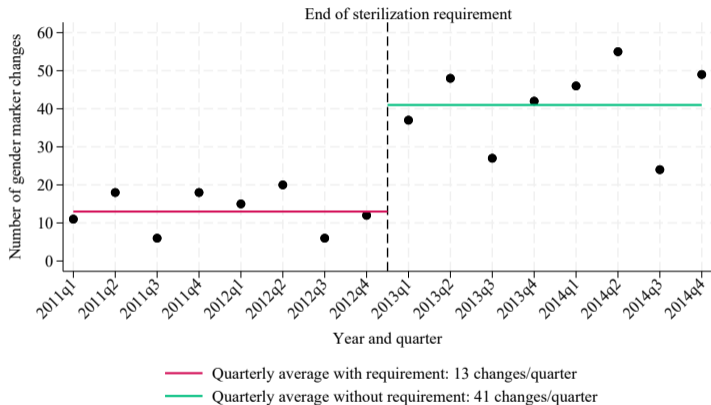
# Appendix

# Illustration of transition pathways in Sweden \*



\* Requires official approval from the National Board of Health and Welfare. Sterilizing surgery can only be performed on people under age 23 in special circumstances.

# Quarterly number of legal gender marker changes, 2011–14



## Baseline differences for trans women

	Trans women			Cis people		
	2007–12	2013–16	Diff.	2007–12	2013–16	Diff-in-Diff
Age at legal change	35.62	35.62	-0.00 (1.42)	35.62	35.62	-0.00 (1.42)
Born in Sweden (%)	85.42	79.87	-5.55 (4.86)	84.77	80.10	-0.89 (4.85)
Lives in metro area (%)	48.96	47.25	-1.70 (6.60)	36.53	38.24	-3.42 (6.59)
Parents' years of schooling	12.48 (2.92)	13.00 (2.73)	0.52 (0.38)	12.04 (2.70)	12.28 (2.65)	0.27 (0.38)
Years of schooling	11.89 (2.36)	12.10 (2.37)	0.21 (0.31)	12.17 (2.09)	12.35 (2.15)	0.03 (0.31)
In a legal union (%)	5.21	11.16	5.96 (3.52)	26.11	27.13	4.93 (3.53)
Lives with young children (%)	0.00	4.65	4.65 (1.82)	19.59	20.88	3.36* (1.85)
Observations	96	218		19,200	43,600	

## Baseline differences for trans men

	Trans men			Cis people		
	2007–12	2013–16	Diff.	2007–12	2013–16	Diff-in-Diff
Age at legal change	32.65	32.65	-0.00 (1.30)	32.65	32.65	0.00 (1.30)
Born in Sweden (%)	81.33	82.73	1.39 (5.96)	85.41	80.15	6.64 (5.95)
Lives in metro area (%)	52.00	52.15	0.15 (7.56)	36.61	38.62	-1.86 (7.56)
Parents' years of schooling	12.91 (2.98)	13.27 (2.71)	0.35 (0.44)	12.24 (2.63)	12.53 (2.56)	0.07 (0.44)
Years of schooling	11.59 (1.97)	12.01 (2.31)	0.42 (0.35)	12.22 (2.00)	12.36 (2.12)	0.28 (0.35)
In a legal union (%)	12.00	5.25	-6.75 (4.31)	22.11	23.18	-7.82* (4.30)
Lives with young children (%)	2.67	8.78	6.11 (4.53)	22.83	24.06	4.87 (4.54)
Observations	75	212		15,000	42,400	