

Wage Disparities and Career Trajectories of Transgender Individuals in Spain

This paper presents the first large-scale longitudinal analysis of wage dynamics and occupational trajectories among transgender individuals in Spain. Despite growing visibility of gender-diverse populations, empirical evidence on their economic outcomes remains scarce, largely due to data limitations. Understanding the economic implications of gender transition is not only crucial for assessing equality and inclusion, but also for expanding gender and labour economics beyond the binary framework that dominates existing research. Spain provides a particularly relevant case: it ranks among the most LGBTIQ+-tolerant societies in Europe and has implemented progressive legislation, culminating in the 2023 Trans Law (Law 4/2023), which introduced gender self-determination and new equality obligations for employers. Yet, legal protections may not fully translate into economic equality.

This study uses a panel event study methodology — a robust quasi-experimental approach — to examine the wage impact of gender transition among transgender individuals in Spain. This research incorporates dynamic, longitudinal data drawn from eighteen waves of the Continuous Sample of Working Lives (MCVL). We investigate two crucial yet underexplored dimensions: (1) the influence of the timing of transition on subsequent earnings, and (2) how economic trajectories differ between trans men and trans women. By providing a comprehensive comparison with cisgender control groups, our findings offer unparalleled insight into the circumstances in which gender transition influences labour market outcomes. Moving beyond descriptive analysis, this research reveals the nuanced and persistent ways in which gender and identity interact with economic inequality, challenging outdated understandings and opening vital new avenues for research into work, wages and social stratification.

Literature and Theoretical Framework

The study builds on literature examining gender gaps in earnings, occupational segregation, and identity-based discrimination, extending it to transgender populations. Previous research—mostly descriptive and cross-sectional—has revealed wage penalties and employment barriers for trans individuals, but limited longitudinal evidence exists to capture how these evolve over time. The analysis is informed by Minority Stress Theory, which posits that members of stigmatized groups experience chronic social stress due to prejudice and discrimination. In the labour market, this manifests as barriers to hiring, promotion, and equal pay. Transgender individuals may thus face both direct discrimination and indirect penalties from disrupted career paths or reduced access to social networks. At the same time, transitions can also alter social perceptions of gender and occupational fit, potentially producing asymmetric effects for trans men and trans women.

We explore three central hypotheses

1. Age at Transition – Earlier transitions are associated with more favourable long-term labour market outcomes, as they minimize career interruptions and facilitate earlier social integration.

2. Consequences of Transition – Gender transition entails short-term wage penalties due to labour market adjustment costs and potential discrimination.
3. Direction of Transition – Trans women are expected to experience larger post-transition wage losses than trans men, reflecting persistent gender-based wage hierarchies and biases in the Spanish labour market.

Data

The empirical analysis relies on eighteen waves of the Continuous Sample of Working Lives (MCVL), a 4% random sample of all individuals registered in the Spanish Social Security system between 2005 and 2023. The dataset links administrative records from Social Security, the Municipal Register, and the Income Tax Register, enabling precise measurement of employment, earnings, and demographic characteristics. Gender transitions are identified through changes in registered gender markers observed at least twice over the observation period. This allows the construction of a balanced panel following individuals before and after transition, alongside matched cisgender comparison groups (see Table 1 and 2).

Table 1. Descriptive statistics: A random sample of cisgender individuals and transgender individuals identified in the sample between 2005 and 2022 (cases that make the transition during the observation window)

	Cisman	Ciswoman	Transwoman	Transman
Age	44.1	44.0	46.7	49.5
Monthly wages (p50)	1,654 €	1,299 €	1,287 €	1,571 €
Work hours coeff	96.2	90.1	88.3	95.7
Labour tenure	206.9	157.6	187.4	239.1
Part time parental leave	0.0	1.1	1.0	0.0
Child leave months accum	0.0	0.1	0.2	0.0
Self emp months accum	16.4	9.4	12.7	19.2
Unemployed months accum	4.4	4.1	5.6	6.7
Inactivity months accum	6,808	10,172	3,738	1,112
(%)				
Educational attainment				
Low	0.28	0.24	0.28	0.32
Medium	0.53	0.47	0.50	0.52
High	0.19	0.29	0.22	0.16
Monthly obs.	735,000	700,152	183,579	221,565

Source: MCVL.

Table 1. Sample for inferential statistics: cisgender individuals and transgender individuals identified in the sample between 2005 and 2023 (cases that make the transition during the observation window)

	n	%	Monthly obs.
Cisgender men	4,936	37.73	788,799
Cisgender women	4,933	37.71	748,830
Transmen	1,906	14.57	337,593
Transwomen	1,306	9.98	245,290
Total	13,081	100.00	2,120,512

Source: MCVL.

Methodology

We apply a panel event study design, a robust quasi-experimental framework that models the dynamic effects of an event—in this case, gender transition—on outcomes over time. Individual fixed effects control for unobserved heterogeneity, and the design captures both short- and long-term changes in log income and occupational status relative to the transition date. The specification follows standard event-study estimation with leads and lags, allowing for pre-trend tests and heterogeneous effects by transition direction and age at transition.

To analyse how individual earnings evolve around the time of gender transition, we estimate a fixed effects event study model using the *eventdd* command in Stata. The model takes the following general form:

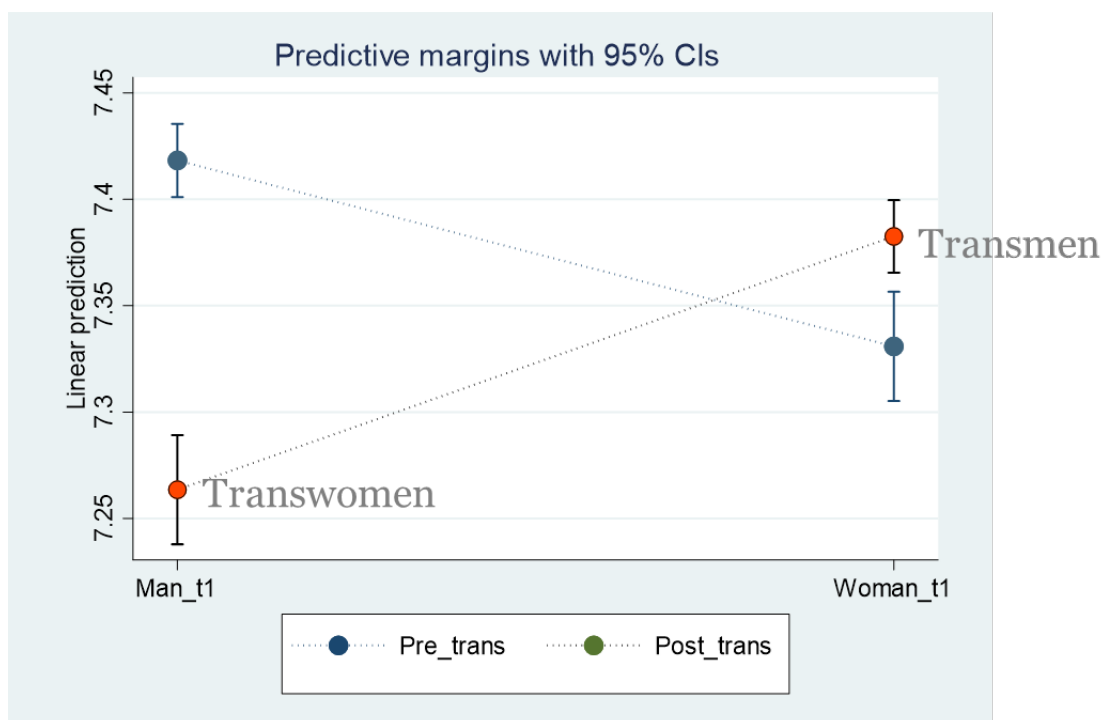
$$\text{incomeLn2}_{it} = \sum_{k=-60}^{60} \beta_k D_{i,t+k} + \alpha_i + \gamma_t + \delta X_{it} + \varepsilon_{it}$$

where incomeLn2 is the natural logarithm of monthly income for individual i at time t ; $D_{i,t+k}$ are event-time indicators for months relative to the gender transition (with the month immediately preceding transition as the reference); α_i and γ_t denote individual and year fixed effects; and X_{it} is a vector of time-varying covariates. The controls in X_{it} include working hours, job tenure, household composition, company size, public-sector employment, rural residence, contract type, and accumulated months of self-employment, unemployment, and inactivity. We estimate separate models for male-to-female and female-to-male transitions, restricting the sample to paid employees. Leads and lags are defined over ± 60 months to capture pre- and post-transition dynamics, with estimation by within-individual (fixed effects) regression and robust standard errors clustered at the individual level.

Preliminary Results

(1) Traditional Fixed-effect Approach:

Figure 1. Predicted Wage Before and After the Gender Transition for Transgender Population in Paid Work: Results from Fixed Effects Model



Note: controls include parental status (children), time since transition, co-residence with grandparents, work hours, labour tenure, company size, civil servant status, rural/urban residence, contract type, self-employment, unemployment, inactivity, and time period fixed effects.

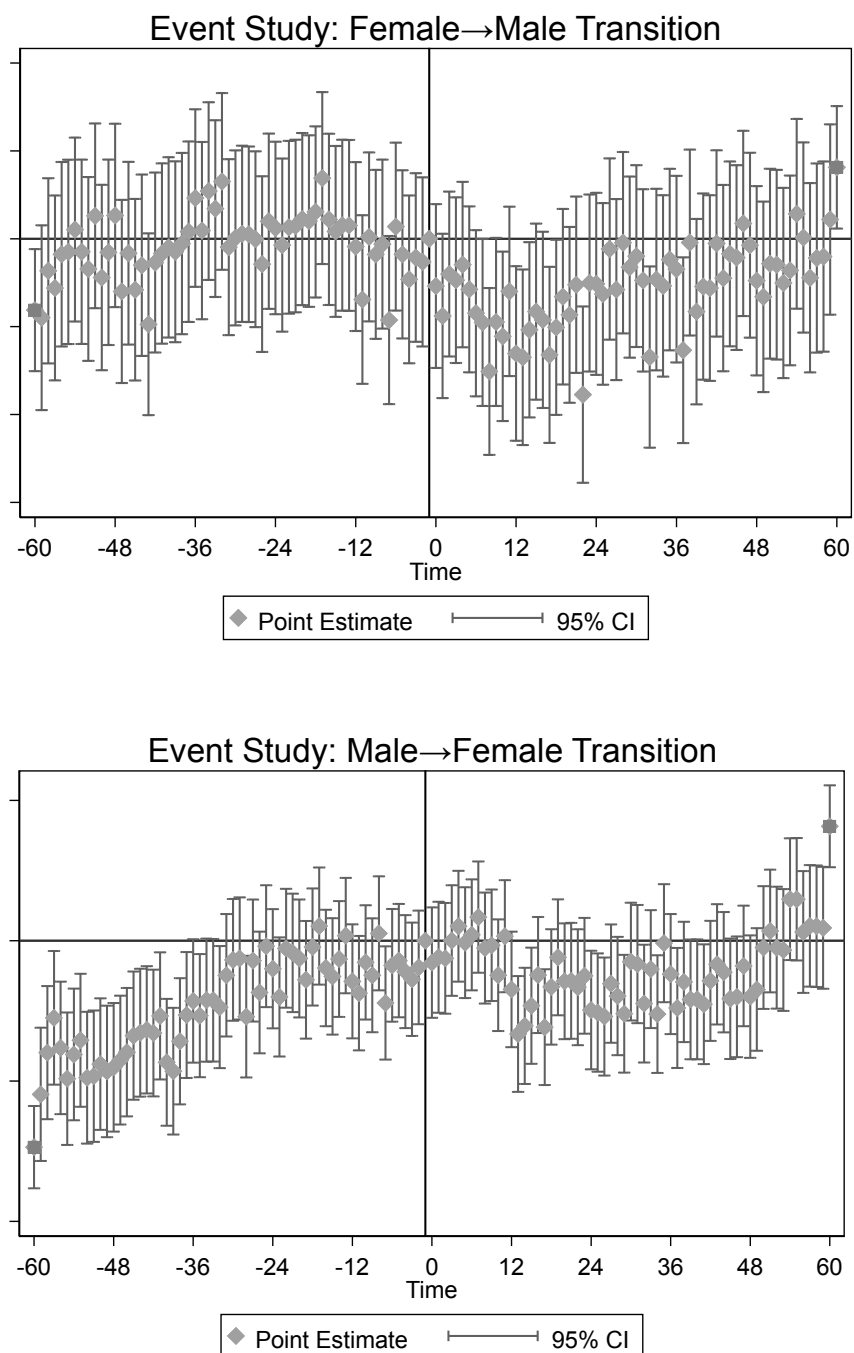
Data: MCVL, 2005-2023.

Figure 1 presents the predicted wage before and after the gender transition for the transgender population in paid work, estimated using a fixed effects model. The results indicate a clear asymmetry in post-transition wage outcomes by transition direction. The overall negative effect observed following gender transition is largely driven by trans women (individuals transitioning from male to female), who experience an average wage reduction of approximately 14.3% after transition. In contrast, trans men (those transitioning from female to male) exhibit a modest post-transition wage gain of around 5.3%. These findings highlight the persistence of gendered wage hierarchies in the Spanish labour market, where transitions towards femininity are economically penalised, while transitions towards masculinity are associated with comparatively small earnings advantages.

Transgender individuals are less likely to be employed than their cisgender counterparts, but such differences may reflect selection rather than the causal effects of transitioning. To address this, next we use a panel event study comparing transgender individuals to cisgender controls who never transition, allowing us to isolate the impact of gender transition on labour market outcomes.

(2) Panel Event Study Approach

Figure 2. Estimated Wage Trajectories Before and After Gender Transition: Results from the Fixed Effects Event Study Model



Note: controls include parental status (children), time since transition, co-residence with grandparents, work hours, labour tenure, company size, civil servant status, rural/urban residence, contract type, self-employment, unemployment, inactivity, and time period fixed effects.

Data: MCVL, 2005-2023.

Using a panel event study design (Figure 2) with individual and year fixed effects, we estimate the dynamic wage effects of gender transition on the transgender population in paid work. The event-time coefficients trace earnings trajectories from five years before to five years after the transition, controlling for work hours, tenure, and other employment characteristics. For individuals transitioning from male to female (trans women), the model reveals a significant and persistent wage penalty following transition. The estimated coefficients indicate a decline in log income beginning shortly after the transition year, reaching its lowest point between two and four years post-transition. On average, trans women earn approximately 6–7% less in the long term relative to their pre-transition baseline, confirming a sustained post-transition disadvantage consistent with gendered labour market inequalities.

In contrast, for female-to-male transitions (trans men), the event study indicates a modest but positive wage trajectory following transition. Although not all post-transition coefficients reach conventional significance thresholds, the general pattern suggests earnings gains of around 4–5% after several years, with no evidence of pre-transition divergence, supporting the validity of the identifying assumption. Overall, the panel event study confirms that gender transition has asymmetric economic consequences: transitions towards femininity are associated with wage losses, whereas transitions towards masculinity produce small but measurable wage gains.

Finally, factors beyond the scope of this analysis, such as the degree of “passing” (the extent to which transgender individuals are perceived by others as the gender with which they identify), may substantially influence economic trajectories. Trans men may, on average, find it easier to pass than trans women, yet administrative data provide no means of assessing this phenomenon or its labour market implications. Taken together, these results underscore the enduring influence of gendered norms and discrimination in shaping labour market inequalities, even within a legal context that promotes inclusion. They highlight the need for policies that move beyond formal equality to address the structural and cultural barriers that continue to marginalise transgender workers.

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