Marriage Equality and the Transnational Flow of Skilled Labor: The Impact of Same-Sex Marriage Legalization on the US Inflow of Skilled Labor

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In 2001, the Netherlands became the first country to legalize same-sex marriage.
Introduction

- In 2001, the Netherlands became the first country to legalize same-sex marriage.
- 35 countries have marriage equality.
- Most countries with marriage equality are in North America, South America, and Europe.
- The composition of a family and family ties influence skilled labor migration decisions (Borjas & Bronars, 1991; Bushin, 2009).
- Foreign skilled labor contributes to the US comparative advantageous sectors, (Gunadi, 2019).
Related Literature

In opposite-sex couples:

- Migration and the family (Borjas & Bronars, 1991).
- Marriage as a migration tool (Charsley et al., 2012; Fan & Li, 2002).

In same-sex couples:

- Marriage equality and household’s interstate migration (Beaudin, 2017).
- Marriage equality and individual’s interstate migration (Marcén & Morales, 2022).
Research Question

How does access to legal same-sex marriage affect the international skilled labor movement?
The effect of marriage equality policies in Europe on the inflow of European Skilled labor to the US.
EU countries

- Europe is the geographical location with the highest density of countries with marriage equality.
- The implementation of marriage equality varied over time.
- Limiting our analysis to EU member countries lowers unobservable variations.
- 27 member countries in the EU.
- 13 have enacted marriage equality.
Skilled Labor Inflow

H1B visa admissions

- Requires a bachelor’s degree and highly specialized knowledge.
- The number of visas issued is limited.
- Holders of masters degrees and higher have higher odds.
Why European Skilled Labor?

- In the US same-sex couples are more likely to have a masters degree or higher.
- Male same-sex couples are more likely to live in a state different from their birthplace (Badgett et al., 2021)

H1B visa holders:

- 73.7% are male.
- 54.2% are masters degree holders or higher.
Using the difference-in-differences approach developed by Callaway and Sant’Anna (2021) where the outcomes are defined as:

\[ Y_{i,t} = Y_{i,t}(0) + \sum_{g=2}^{T}(Y_{i,t}(g) - Y_{i,t}(0)) \times G_{i,g} \]

Group treatment effect parameter:

\[ ATT_t = [Y_t - Y_{g-1} \mid G_g = 1] - [Y_t - Y_{g-1} \mid C = 1] \]

where \( Y \) is H1B visa admission per 1000 of the labor force.

\( ATT_t \) is the average treatment effect at year \( t \), which starting treatment at time \( g \).

\( G \) is the time period when a unit first becomes treated.

\( G_g \) is a binary variable that is equal to 1 if a unit is first treated in period \( g \).

\( C \) is a binary variable that is equal to 1 for units that are never treated.
Identification

- Limited treatment anticipation.
- Pre-treatment parallel trends based on the never-treated group.
- Pre-treatment parallel trends based on the not-yet-treated groups.
An average decrease of $0.155^{***}$ admissions per 1000 of the labor force. A 41% decrease from the average.
Group Treatment Effect

![Graph showing the treatment effect over years (2001 to 2017)]
Group Treatment Effect
Extensions and Robustness

Robustness checks.

- Placebo tests using visitor visa admissions.
- Using not yet treated as the control group.
- Using the total number of admissions and controlling of population.
- Using a two-way fixed effects model, based on Wolfers’ (2006).

\[
\text{US Admission}_{c,t} = \\
\beta_0 + \sum_j \beta_{j1} \text{Legalization}_{c,t,j} + \sum_j \beta_{j2} \text{Legalization2013}_{c,t,j} + \sum_t \text{Time FE}_{s_t} + \\
\sum_c \text{Country FE}_{s_c} + \sum_c \text{Country}_c \times \text{Time} + [\sum_c \text{Country}_c \times \text{Time}^2 + \text{Controls}_{s_c,t}] + \epsilon_{it}
\]
### US Policies

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
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<tbody>
<tr>
<td>Year 1-2</td>
<td>-197.622*</td>
<td>-209.632</td>
</tr>
<tr>
<td></td>
<td>(119.113)</td>
<td>(134.432)</td>
</tr>
<tr>
<td>Year 3-4</td>
<td>-300.829**</td>
<td>-304.172*</td>
</tr>
<tr>
<td></td>
<td>(143.288)</td>
<td>(179.349)</td>
</tr>
<tr>
<td>Year 5-6</td>
<td>-591.303***</td>
<td>-627.729***</td>
</tr>
<tr>
<td></td>
<td>(172.096)</td>
<td>(241.145)</td>
</tr>
<tr>
<td>Year 7+</td>
<td>-475.981***</td>
<td>-511.127*</td>
</tr>
<tr>
<td></td>
<td>(170.595)</td>
<td>(290.613)</td>
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<tr>
<td>Year 1-2 after 2013</td>
<td>597.400***</td>
<td>585.315***</td>
</tr>
<tr>
<td></td>
<td>(155.047)</td>
<td>(162.321)</td>
</tr>
<tr>
<td>Year 3-4 after 2013</td>
<td>655.180***</td>
<td>634.352***</td>
</tr>
<tr>
<td></td>
<td>(176.197)</td>
<td>(188.065)</td>
</tr>
<tr>
<td>Year 5-6 after 2013</td>
<td>549.443***</td>
<td>558.873**</td>
</tr>
<tr>
<td></td>
<td>(205.200)</td>
<td>(222.416)</td>
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<tr>
<td>Year 7+ after 2013</td>
<td>321.617**</td>
<td>222.328</td>
</tr>
<tr>
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<td>(148.667)</td>
<td>(182.965)</td>
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| Observations year² | 540 | 540 | ✓  |

Koroles Awad (Washington State U)
Marriage equality lead to a decrease in the number of admissions before 2013.
After 2013 there was a positive effect on the number of admissions.
Conclusions

- The results show an average decrease of -0.155 in admission per 1000 of the home country’s labor force. An average of 1459 admissions.
- Access to same-sex marriage influences not only on prospective new skilled labor but also extends to the existing H1B holders.
- Based on H1B holders’ average spending, the decline equates to a $27 million spent in the US economy, and $41 million in taxes each year (Gogol, 2023).
- The U.S. federal recognition of same-sex marriages helped lower the decline in admission.
- Marriage equality can help attract and retain skilled labor.
Thank you!


