Proposal - Changes in Women's Unemployment Rate

Group L
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Github Repo

I. Introduction:

We are interested in finding out how paid parental leave affects women's unemployment rate. For this project, we plan to focus on OECD countries and compare their unemployment rate before and after enacting certain parental policies.

II. Policies enacted for reducing gender gaps in labor force:

By 2013, except for the United States, all Organization for Economic Co-operation and Development (OECD) countries provided certain levels of national paid parental policies. Although both the United States and Sweden are considered as economically robust developed countries in terms of the GDP, parental leave policy in the US lags far behind than in Sweden.

OECD Countries
- Sweden:
    Swedish parental leave major reforms
    - 1974: Introduction of parental leave with 180 days paid leave and 90% replacement rate
    - 1995: Introduction of one-month non-transferable month to each parent
    - 2002: Increased to 480 days of paid leave; added to two months of non-transferable months for each parent
    - 2007: changed ceiling to 80 percent of earned income
    - 2008: Adopted equality bonus: a tax deduction for families to share the leave more equally
    - 2012: Increased ceiling to $68,508 to encourage higher earners take the leave
- German:
    - All new mothers, whether they are employed or not, receive a flat payment of €13 (US$17) per day during this eight-week period. German parents receive three years of job-protected parental leave after the birth of a child. This was part of an effort to make leave more attractive to higher-qualified (and higher-paid) workers.

This provides an incentive for women to postpone childbirth until they are established in the labor market.
- ○ 2007 family policy reform: the compensation attached to this leave was increased from a flat-rate payment to a percentage of earned income.
- US:
- The Family and Medical Leave Act (FMLA)
  - ○ The only existing universal or nationally federal parental leave policy passed in 1993.
  - ○ FMLA allows employees to take twelve workweeks of unpaid, job protected leave in a 12 months period for family and medical reasons. The eligible reasons of FMLA are 1) The birth of child to care within one year of the birth or the placement of the adopted child with employees 2) To care family members who have severe health issues 3) A serious health issue that prevent the employee perform his or her job 4) For any qualifying exigency that one of the family members are related with covered active duty within the military.
  - ○ FMLA applies to eligible employees who work for eligible covered employers
    - ■ The covered employer needs to 1) be a private-sector employer that contains more than fifty employees in more than twenty workweeks in the calendar year 2) public-sector employer regardless of the number of employees or 3) private or public elementary or secondary schools regardless of the number of employees.
    - ■ To be an eligible employee for FMLA, one need to 1) work for an eligible covered employer 2) have worked for at least twelve months 3) have worked for 1250 hours in twelve months before using the leave 4) work for an employer with more than fifty employees within seventy five miles (U.S. Department of Labor Fact Sheet #28, 2012).

	Germany	Sweden	United States
Paid parental leave	14 months at 67% of pay	13 months at 80% of pay, plus 3 months at $9 per day	None
Leave reserved for second parent	2 months at 67% of pay	2 months at 80% of pay	None
Paid leave to care for sick child	10–25 days	120 days	None
Paid leave to attend to children's personal needs	None	5 days	None
Public preschool child care	From age 1; mostly half day, coverage better for ages 3–5 than for ages 1–3	From age 1½	None; nonrefundable child care tax credit of $1,050 per child
Cash allowance	Refundable tax credit of $2,530 per child plus $2,300 per child for low-income families	$155 per month per child	None; tax deduction for dependents ($3,650 each); nonrefundable tax credit for children ($1,000 each); refundable tax credit for low-income families (EITC)

(Table 1) Family Policies Compared

III. Dataset: (OECD Labor Force Statistics & U.S. BUREAU OF LABOR STATISTICS)

OECD Datasets:

Dataset 1:
<Female Labor Force>: includes international comparisons for female labor force from 2011 to 2020
https://www-oecd-ilibrary-org.ezproxy.cul.columbia.edu/employment/female-labour-force-thousands_25c577c3-en

Dataset 2:
<Female employment dataset>: includes international comparisons for female employment from 2011 to 2020
https://www-oecd-ilibrary-org.ezproxy.cul.columbia.edu/employment/female-employment-thousands_52035dea-en

Dataset 3:
<Female employment as a percentage of employment>:
https://www-oecd-ilibrary-org.ezproxy.cul.columbia.edu/employment/female-employment-as-a-percentage-of-employment_009dae67-en

US BUREAU OF LABOR STATISTICS Datasets (Optional supplementary datasets to specifically see the data of US if needed)

Dataset 4:

The Current Population Survey (CPS) is a monthly survey of households conducted by the Bureau of Census for the Bureau of Labor Statistics. It provides a comprehensive body of data on the labor force, employment, unemployment, persons not in the labor force, hours of work, earnings, and other demographic and labor force characteristics.

https://www.bls.gov/cps/tables.htm

IV. Visualization:

We will make use of ggplot2, geospatial data techniques and interaction in our visualization project.

- Line chart: We would use line charts to illustrate changes in women's unemployment rate over time.
- Bar chart: For different parental policies, we would use bar charts to display any numerical difference or gender gap.
- Map: We would use ggmap or other geospatial data techniques to show the difference in unemployment rate across the world.
- Interaction: Interactions will be added to charts to increase functionality.