Economics of the Minimum Wage

Is Ontario making the right move?

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Agenda
What we will be discussing today

1. Introduction
2. Impact on Inflation and Unemployment
3. Positive Implications of Increasing the Minimum Wage
4. Alternatives to the Minimum Wage
5. Understanding Ontario’s Demographics
Introduction
The Plan
What we know about the planned Ontario minimum wage increase

The Timeline

- May 30, 2017 – Ontario government announces minimum wage increase from $11.40/hour
- October 1, 2017 – Minimum wage rises to $11.60/hour
- January 1, 2018 – Minimum wage rises to $14.00/hour
- January 1, 2019 – Minimum wage rises to $15.00/hour

Political and Economic Landscape

- Kathleen Wynne of the Ontario Liberal Party is seeking re-election in June 2018 provincial election
- Ontario minimum wage rose to $11.60/hour from $11.40/hour in October
- Ontario inflation rate at 1.7% (Canada – 1.6%)
- Ontario unemployment rate at 5.9% (Canada – 6.3%)

Demographic % of Minimum Wage Workers

<table>
<thead>
<tr>
<th>Demographic</th>
<th>% of Minimum Wage Workers</th>
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<tbody>
<tr>
<td>Male</td>
<td>5.5%</td>
</tr>
<tr>
<td>Female</td>
<td>8.0%</td>
</tr>
<tr>
<td>Youths Age 15-19</td>
<td>50.2%</td>
</tr>
<tr>
<td>HS Diploma or Less</td>
<td>20.4%</td>
</tr>
<tr>
<td>Retail Sector</td>
<td>17.4%</td>
</tr>
<tr>
<td>Food and Accommodation</td>
<td>26.9%</td>
</tr>
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Source: Maclean’s
# Overview of Traditional Arguments

The pros and cons of a minimum wage increase

<table>
<thead>
<tr>
<th>Arguments For</th>
<th>Arguments Against</th>
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<tbody>
<tr>
<td>• Wage gap will shrink</td>
<td>• Negative impact on inflation and unemployment</td>
</tr>
<tr>
<td>• Everyone is provided with the baseline necessary income to live</td>
<td>• Incentive for employers to replace human labor with automation</td>
</tr>
<tr>
<td>• Could lead to more overall spending in the economy</td>
<td>• Prices will increase and quality will decrease to offset higher labor costs</td>
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<td>• Social programs would become less necessary and taxes could go down</td>
<td>• Higher earners will ask for higher wages and lead to price inflation up the earning ladder</td>
</tr>
<tr>
<td>• Potential health, productivity, and education gains</td>
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Sources: University of Wisconsin Press, University of Washington, Bloomberg, Upjohn Institute
Examining Existing Studies and Literature

Flaws in Methodology?

Aaronson, French, and McDonald Study 2008

- Sample is based on 7,500 food items at 1,000 different establishments from 1995 to 1997
- Flaws
  - **Micro-industry approach leads to conclusions that cannot be generalized**
  - Lack of a specific control group
  - Omitted multiple state metropolitan areas
- 10% increase in minimum wage increases overall restaurant prices by 0.7%
  - 1.5% increase in fast food restaurants
  - 1.8% increase for fast food in low wage regions
- Conclude that restaurants pass full cost of minimum-wage increases to consumers, but results were too imprecise to be certain

Seattle Minimum Wage Study (UW) 2016

- Collected price data through a combination of online "web scraping" and in-person visits to area grocery stores, restaurants, and other retail locations
- Flaws
  - **Excludes businesses with more than one location (48% of Seattle’s low-paid workforce)**
  - Not yet peer reviewed
  - Lead researcher Jacob Vigdor likely biased as an opponent of minimum wage
- Restaurant prices increased by around 4%
- Unable to measure prices increases for groceries, gas, and rent but assume modest increases of 1% and 2%
Impact on Inflation and Unemployment
Expected Inflation

Inflation is a common argument against minimum wage increases, but there may be little truth to it.

**Economic Theory**

- Many argue that minimum wage increases will inflate consumer prices.
- Employment elasticity is close to 0, so employment changes will likely be minor.
- Low-income spending is better for local economies than high-income spending.
- If minimum wage is increased in pace with inflation, it should have a minimal effect.

**Phillips Curve**

- Inflation and unemployment have a stable and inverse relationship.
- Under this logic, economic growth causes inflation, which increases employment:
  - This has been disproven (1970s).
- More likely: a wage increase would hold employment constant to the long run trend.
- The natural rate of employment is determined by real macro factors.

*Source: Federal Reserve*
Expected Inflation

Inflation is a common argument against minimum wage increases, but there may be little truth to it.

**Seattle Case Study**

- Since the rise in 2015, unemployment has fallen and prices haven’t increased.
- Each 10% increase in minimum wage raised pay in low-wage industries by 1-2.3%.
- Some studies have shown a decrease in low-wage employment but an increase in high-wage.
  - May harm low-wage workers and increase income inequality.
- Ontario’s wage increase is more aggressive.

**Change in Prices**

- Elasticity of prices to minimum wage changes: 0.036.
- Small wage changes have a much smaller impact than more significant increases.
- Shows that the market is monopolistically competitive.

**Projected Increase in Canada’s Inflation**

- TD: 0.3%
- CIBC: 0.9%
- CIBC (US): 0.4%
- FAO: 0.5%
- CCEA: 0.7%

**Notable Side Effects**

- No evidence to show that the exit of businesses to regions with lower minimum wages is significant enough to affect output prices.
- Lower income households are more likely to spend their increased earnings.
- Price increases generally occur in the same month as the minimum wage increase.
Relationship between Nominal Wage and Inflation

Regressing 30 countries’ data from 1960 - 2016

$y = 0.0079x + 0.0769$

datasets collected from OECD
Relationship between Real Wage and Inflation

Regressing 30 countries’ data from 1960 - 2016

\[ y = -0.2133x + 0.0825 \]

Datasets collected from OECD

- **Sources:** BBC, The Economist, United Nations
Nominal Minimum Wage against Inflation

No Correlation between Inflation and Nominal Wage Increases in Canada

Datasets collected from OECD
Theoretical Impact on Unemployment

Economic theory dictates that minimum wage raises will increase unemployment.

Increase in Unemployment

- Unemployment
- Employment

Deadweight Loss

- Buyer Surplus
- Seller Surplus
- Deadweight Loss

Graph:
- Real hourly wage ($)
- Unskilled labor (hours)
- Labor Demand
- Labor Supply
- New Minimum Wage

Sources:
- BBC
- The Economist
- United Nations
Youth Unemployment against Nominal Wage

Comparing log differences of US youth unemployment against log differences US nominal wages

Datasets collected from OECD
Minimum Wage against Unemployment in Canada

Regressing Canada’s provincial data on log differences of unemployment against minimum wage

Datasets collected from OECD
Québec Case Study

Background

The Quiet Revolution

- 1960 – Jean Lesage of the Québec Liberal Party won the Provincial election and aimed on setting various social reforms
- Public sector saw growth throughout 1960s through initiatives such as the SGF (1962) and the nationalization of Hydro Québec (1963)
- Provincial budget rose from $745 million to $2.1 billion
- Share of Québec public spending went from 4 percentage points below Canadian average in 1961 to 4 percentage points above by 1978
- Socialist policies continued under Robert Bourassa of the Québec Liberal Party in the 1970s


Source: Statistics Canada
Québec Case Study
The Wage Increase

The Québec Wage Increase

- Minimum wage rose from $2.10 to $2.80 from the end of 1974 to the end of 1975
- 33% increase in the one year span
- Largest increase in the province’s history to date

Relative to Ontario

- Narrowing its wage gap with Ontario was a reason behind Québec’s minimum wage hike
- Minimum wage went from 8% below Ontario’s to 23% above it
- 1975-1985 was the only period that Québec has ever had a higher minimum wage than Ontario

Québec Minimum Wage (1965-1985)

Québec and Ontario Minimum Wages (1965-1985)
Québec Case Study

The significance of minimum-wage-to-AHE

Minimum Wage – Average Hourly Earnings Ratio

- Quebec’s minimum-wage-to-AHE ratio increased to 54.2% in 1975
- Only province with a minimum-wage-to-AHE ratio greater than 50% (Ontario had 40.9% ratio)
- Only Canadian precedent of a minimum-wage-to-AHE ratio above 50%

Youth Unemployment

- By 1977, unemployment for people aged 15-24 rose 6 percentage points to 19.5%
- Québec was the only province where youth employment declined between January 1976 and December 1977
- Employment for all other age groups in Québec grew by 2.2% in this period

Provincial Government Response

- 1978 Pierre Fortin report issued by Québec found the minimum wage was detrimental to youth employment
- Determined that optimal method of maintaining high employment and improving wealth redistribution includes:
  - a minimum wage to AHE ratio below 50%, and
  - government transfers
Québec Case Study

Ontario unemployment predictions based on previous cases

Elasticity Extrapolation – Fortin (2010)

- 10% rise in minimum-wage-to-AHE ratio reduced employment of those aged:
  - 15-19 by 5.3%
  - 20-24 by 2.2%
  - 25-54 by 0.6%
- This would translate to a loss of 124 000 jobs from Ontario’s proposed legislation

Ontario Unemployment and Min. Wage

Québec and National Unemployment Levels (1976-2016)

Unemployment Rate Changes
Nominal Minimal Wage Changes
Positive Implications of Increasing the Minimum Wage
Impact on Poverty
A minimum wage increase is necessary to combat inflation and reduce poverty

Poverty’s Rising Influence

- Inflation has been increasing over time
- Last minimum wage hike was in 2014
- $1 in 2014 is worth $0.96 now, giving the $11.40 that was minimum wage in 2014 less than $11 of purchasing power today
- More people living in relative poverty
- Ontario relative poverty is highest among single parents, for which the gap has skyrocketed 200%

Effect of a Minimum Wage Hike

- Those at the poverty threshold are helped most from minimum wage increases
- Arin Dube, an economist from UMass Amherst, believes a 10% increase reduces poverty by 2.4%
- An increase to $15 would lift 100,000 Ontarians above the poverty line

Δ Family Income Percentile from 10% Minimum Wage Increase

- Change in income, in 2016 dollars
- Family income percentile, adjusted for family size

Cash income
Cash income + tax credits + non-cash transfers
Higher Education

Improvements in education make the economy more efficient

San Francisco Case Study

- When parents received wage increases, their children:
- Completed 0.25 more years of formal education, on average
- Were 34% more likely to complete high school
- Were 22% less likely to have an early or unexpected childbirth

Increased Income for Students

- 15-24 year olds, mostly students, are 58% of minimum wage earners
- Generally from low-income families to start with
- More able to save money for higher education

Educational Improvements

- Currently, 54% of minimum wage earners have earned a high school diploma or less
- 3% of minimum wage earners have a university degree
- Education and training makes the workforce and economy more productive

Tertiary Education Enrollment % Increase

\[ y = 0.0494x + 0.036 \]
Healthier Lower-Income Families

Improvements in health lead to lower social services costs

California Wage Increase Analysis

• The minimum wage rise increased household income, even after job loss was considered
• Effect on health was severe reductions of chronic disease, mental and physical disability, alcohol and drug addictions, and obesity
• Reduced risk of premature death by 4-5%

Applicability to Ontario

• Reduces strain on social services and healthcare
• In most recent budget, Ontario healthcare costs were $58 billion
  • 42% of all public services costs
• 43% of healthcare costs go to hospitals
• The top 1% of users account for 33% of spending

Health Care Indicators by Family Income

% of Individuals Reporting Health by Family Income

- No usual place to go when sick
- ER visit in the past year
- Had a flu vaccine

0-99% FPL  100-199% FPL  200-299% FPL  300%+ FPL
Alternatives to the Minimum Wage
Ethical Concerns and Alternatives
Addressing the Living Wage

Ethical Concerns

• The minimum wage concept is designed to allow one parent working full-time to support his or herself, his or her children, and a stay-at-home spouse
• Easy to replace low-income families with numbers and statistics

Earned Income Tax Credit

• The EITC provides a tax credit for every dollar earned by a worker in a low-income household, and it is refundable—so workers with no tax liability get a check from the government
• Increases employment because subsidized wages increase incentive to work
• Taxpayers must foot the bill

Universal Basic Income Examples

• Alaska’s Permanent Fund Dividend (PFD) derived earnings from Alaska Permanent Fund (APD)
  • Spending and saving increased
  • Increase in purchasing power created 10,000 jobs
  • Native American Poverty rate fell from 25% to 19%
• Namibia has set up Basic Income Grant Coalition
  • Malnourished children fell from 42% to 10%
  • Poverty rate has dropped from 86% to 68%
  • Average earned income beyond UBI has increased 29%
  • Crime has dropped 36.5%

Sources: Time, Futurism, Classroom
Unconditional Basic Income (Switzerland)

Understanding UBI

**Overview of UBI**

- Two financing structures
  - Market socialism
  - Capitalist system

- Purpose of UBI
  - Reduce poverty
  - Increase transparency
  - Promote economic growth

**Overview of Switzerland**

- Switzerland is located at the heart of Europe, but not member of the EU
- Political system is called “democratic federal republic”
- Currently no minimum wage in Switzerland
- Great importance of collective labor agreements

**Cost Estimation**

- **Overall Cost**: 270 billion CAD
- **Uncovered Costs**: 36 billion CAD
- **Welfare Institutions**: 70 billion CAD
- **Higher Taxes**: 164 billion CAD

*Costs are quoted in CAD (billions)*
Unconditional Basic Income (Switzerland)

Arguments for and against UBI

Would UBI work?

- Supporting UBI
  - Social, liberal benefits
  - Democratic and emancipatory
  - Easy to implement

- Problems with UBI
  - Misaligned incentives
  - Expensive and uncertain
  - Welfare institutions can not be removed
  - Leads to higher immigration

Referendum Results

- Yes: 77%
- No: 23%

Switzerland does not want any experiments concerning the welfare institutions
Understanding Ontario Demographics
“We don’t believe that anyone in Ontario who works full time should be struggling to pay their rent, put food on their tables or care for their families — especially when the provincial economy is doing so well.”

— Labor Minister Kevin Flynn
Potential Effect of Minimum Wage

How the minimum wage hike will affect different earners in the province

Effects on Lowest Earners

• Only 1/7 minimum wage workers in Ontario live in low-income households
• 60% are aged 15-24 and live with parents
• 19% of minimum wage earners are married with employed spouses (90% of spouses earn more than minimum wage)
• Only 2% of minimum wage workers are single parents with young children

Kaitz Index

• Scored between 0 and 1, where 0.5 is median wage
• As the index exceeds 0.5, unemployment increases
• Ontario is currently at 0.51 but is projected to be at 0.64 by 2019
• No other provinces are projected to be over 0.6

Application to Different Economic Regions

• Jurisdictions with relatively lower median wages will experience higher unemployment than those with higher median wages
• Ontario is a large economy with various regional labor markets that vary in performance
• An increased minimum wage will affect lower earning industries, such as food and accommodation, far more than other industries
• Cities with lower median earnings will also be more effected than those with higher median earnings
• Toronto ($30.40/hour) will be less effected than areas such as London or Kingston-Pembroke ($25.40/hour)


0.59  0.49
We believe increasing the minimum wage does not achieve the intended outcome of benefitting low-income families. It will potentially increase youth unemployment rates, and modestly increase inflation levels.
Thank you!