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**René Morissette**

**Statistics Canada**

**August**

# Past Shocks

Several changes in the socio economic environment since the early 1970s

massive entry of women in the labour force

falling fertility rates

substantial increases in the educational attainment of the workforce

the manufacturing decline

huge labour saving technological changes e.g. from ICT

changes in international trade patterns

declines in unionization rates

movements in real minimum wages

Oil booms and busts



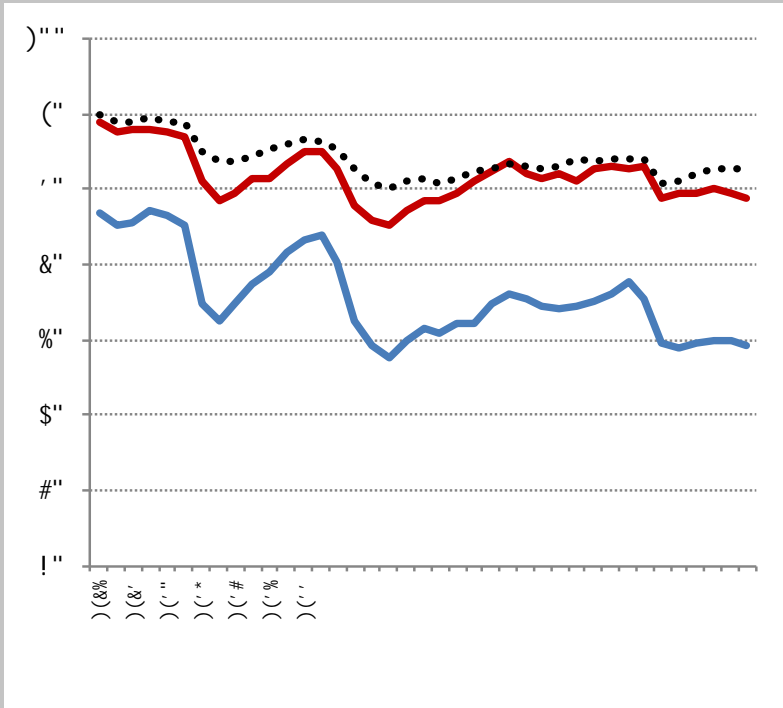
# The relative stability of the rates for men and rising rates for women

# full time employment rate masks falling

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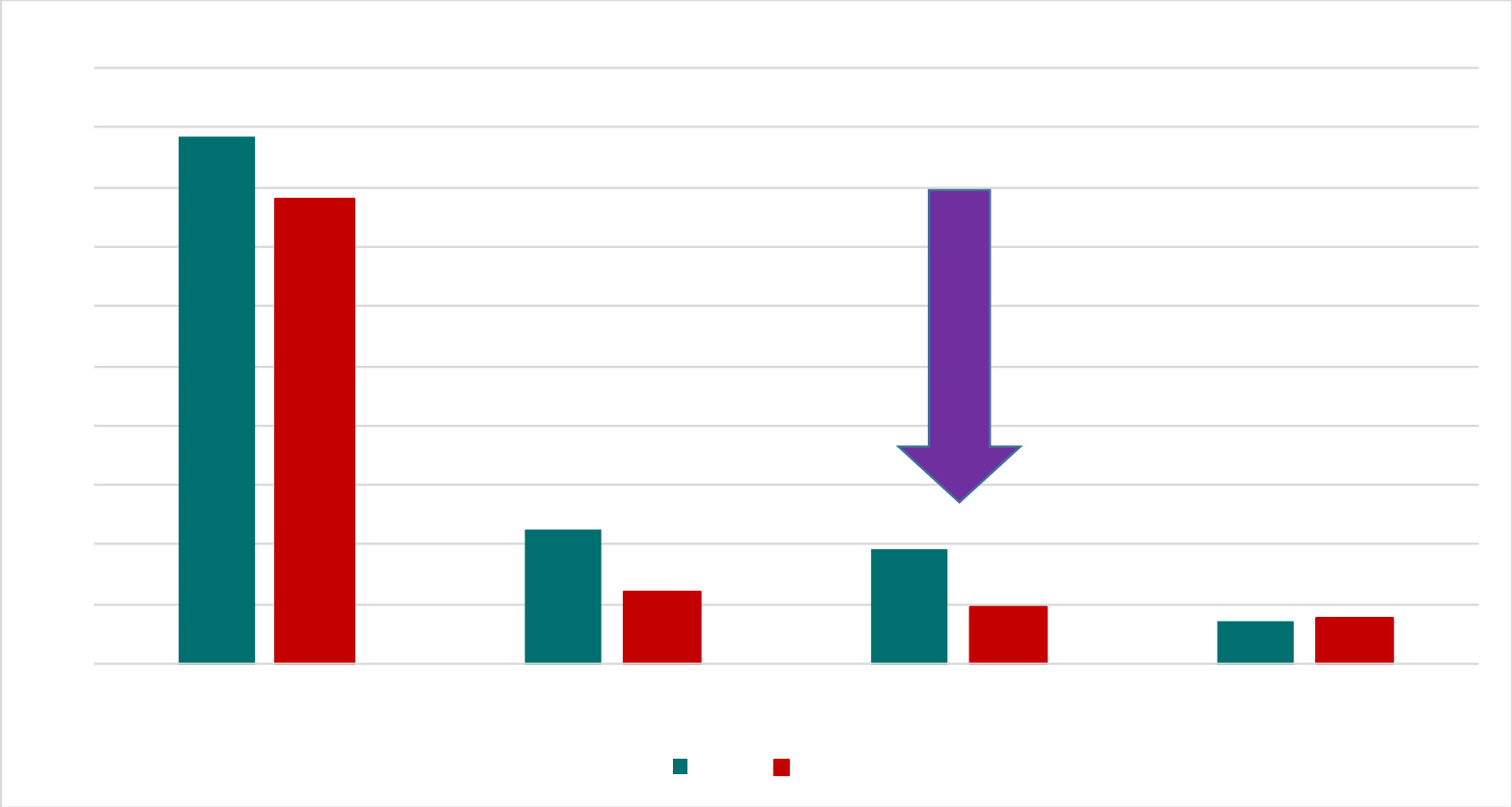
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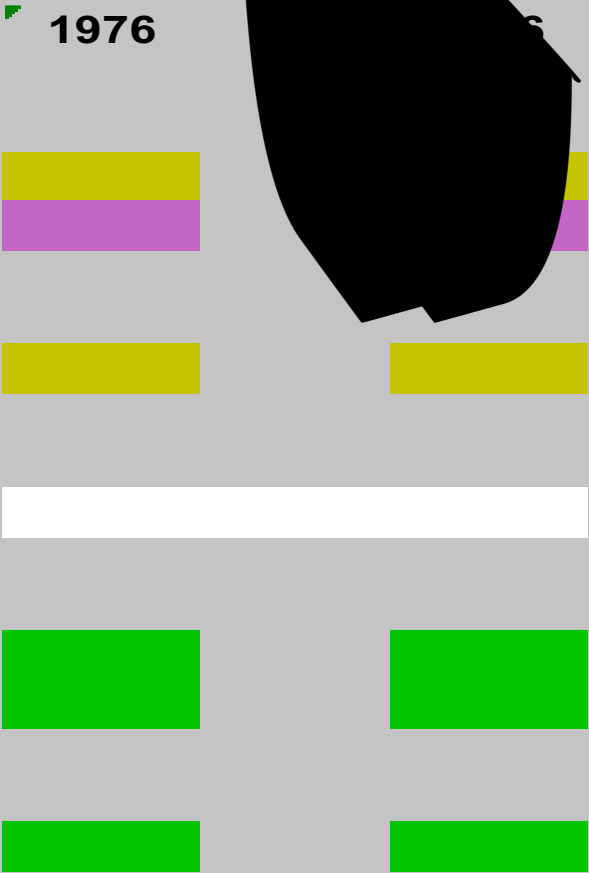
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**As manufacturing employment became less prevalent the full time employment rate of less educated men fell**

**Selected statistics, men aged 25 to 54 with no university degree, 1976 and 2016**



But as manufacturing employment became less prevalent other confounding trends emerged



**Even after controlling for these confounders the manufacturing decline remains associated with a decline in the full time employment rate of less educated men and women**

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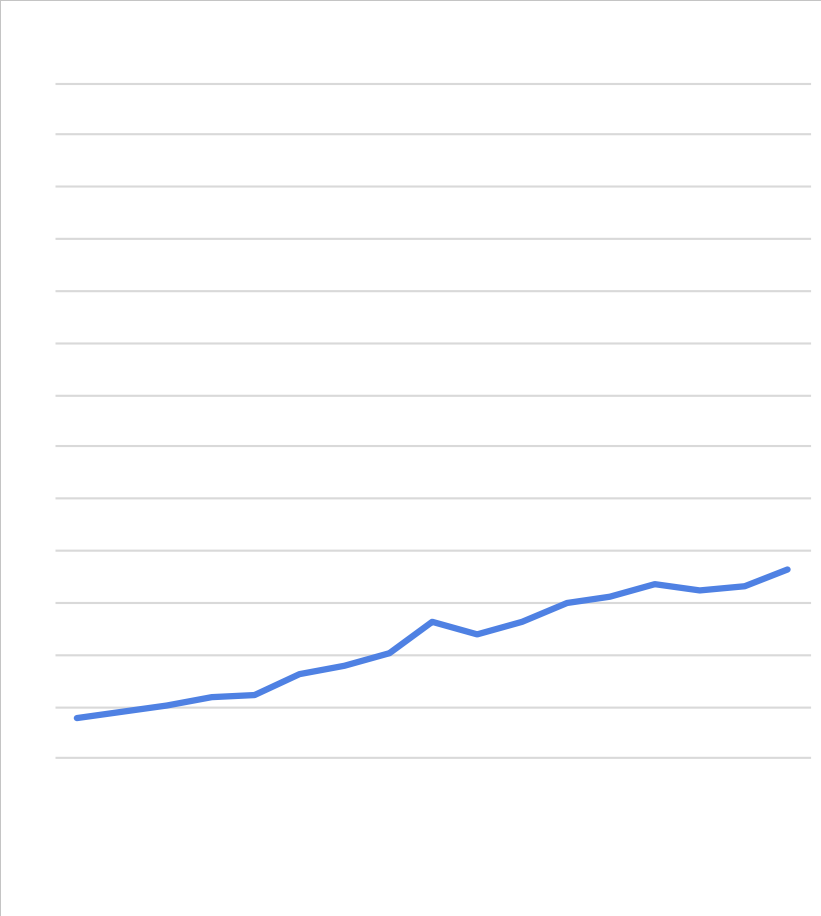
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# The impact of the manufacturing decline among less educated Canadian men has been partly masked by the growing importance of construction for this group

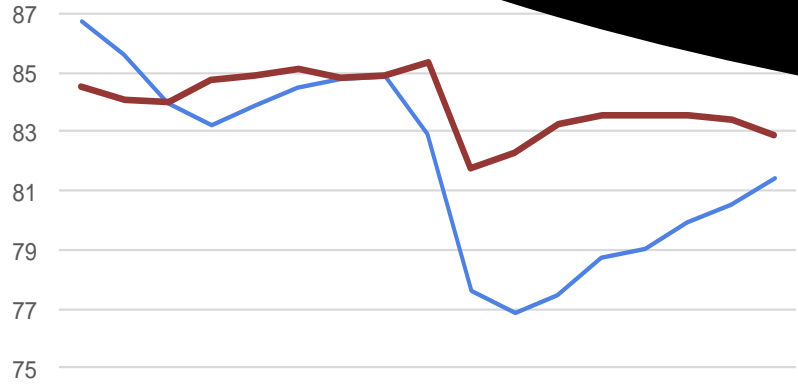
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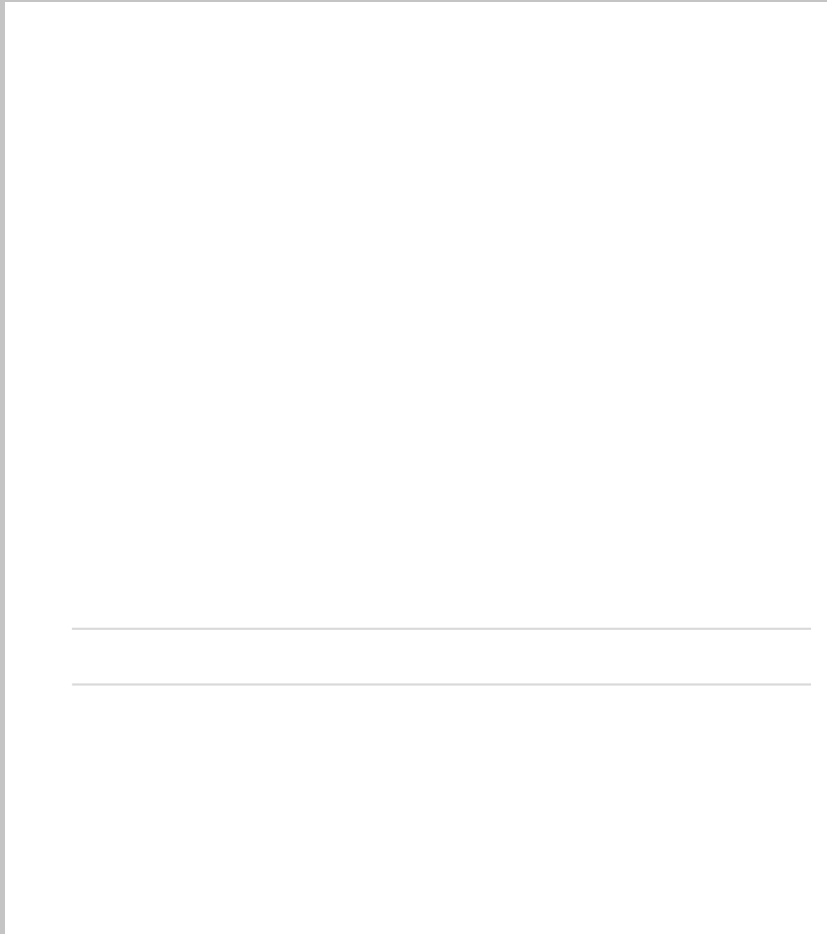


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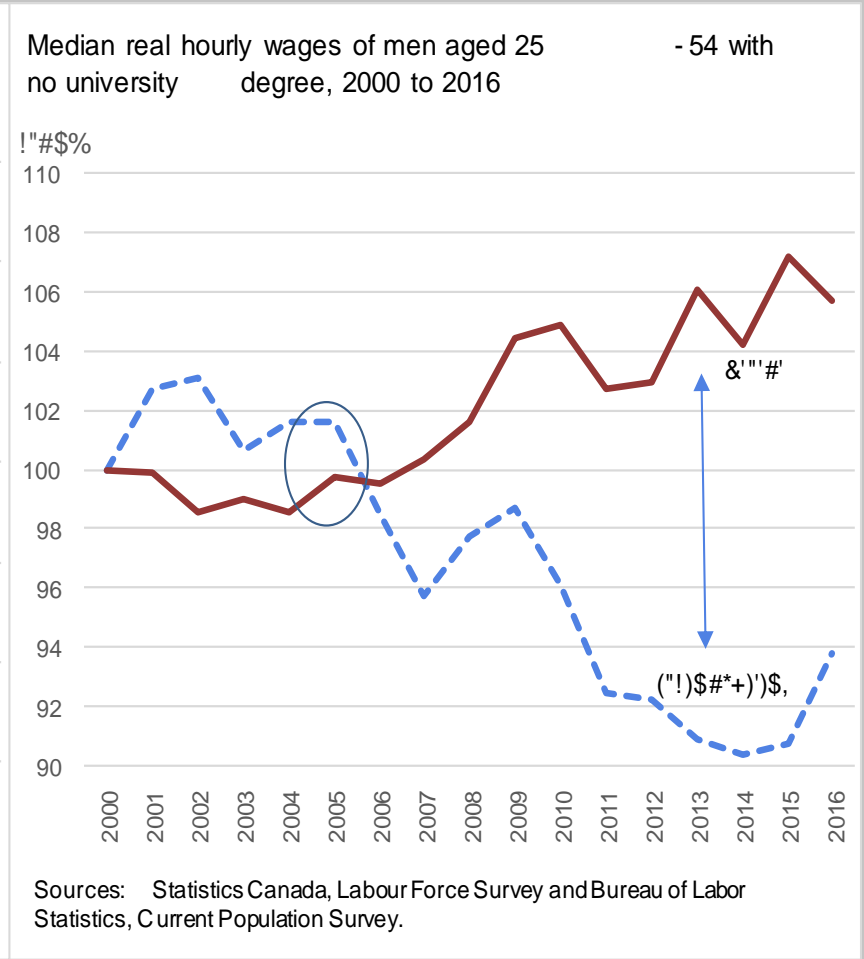
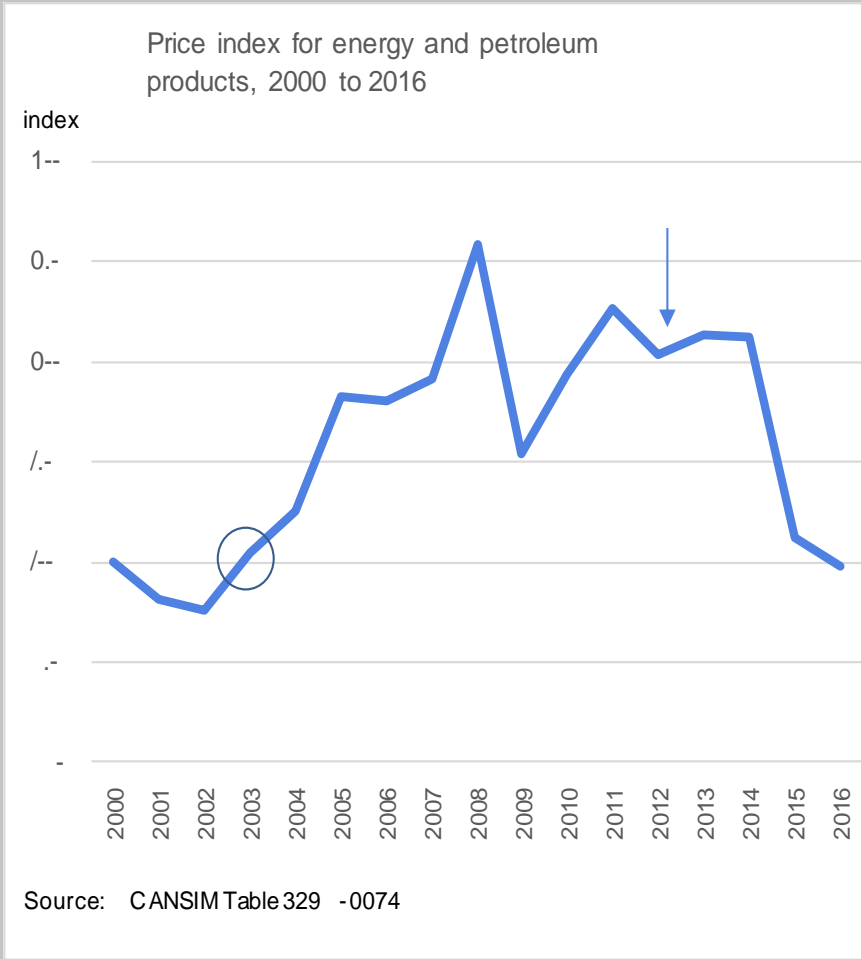
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**The same pattern was observed among less educated women**



# Canadian and US wages started to diverge after world oil prices increased





# Summary

**Aggregate employment rates fairly stable over last 10 years**

**Full time employment rates fell for men and increased for women**

**The manufacturing decline among other factors reduced the full time employment rate of less educated men and women**

**Less educated Canadian men and women fared better than their US counterparts since the early 1980s**

**The oil boom and the better performance of construction in Canada played an important role**

# Future Shocks

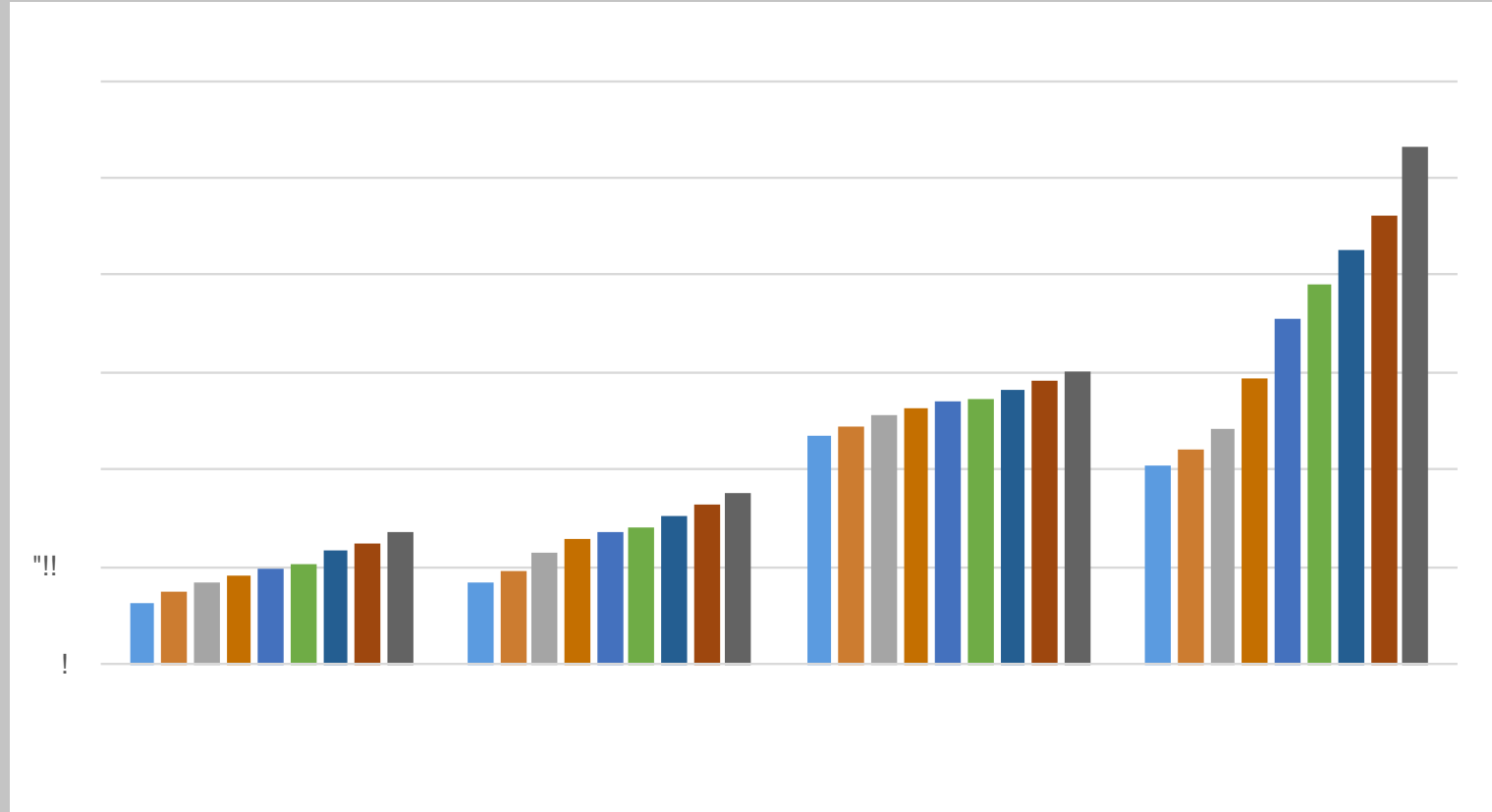
Automation robots ! Job losses

Slowdown reversal of globalization

Climate change Food prices !

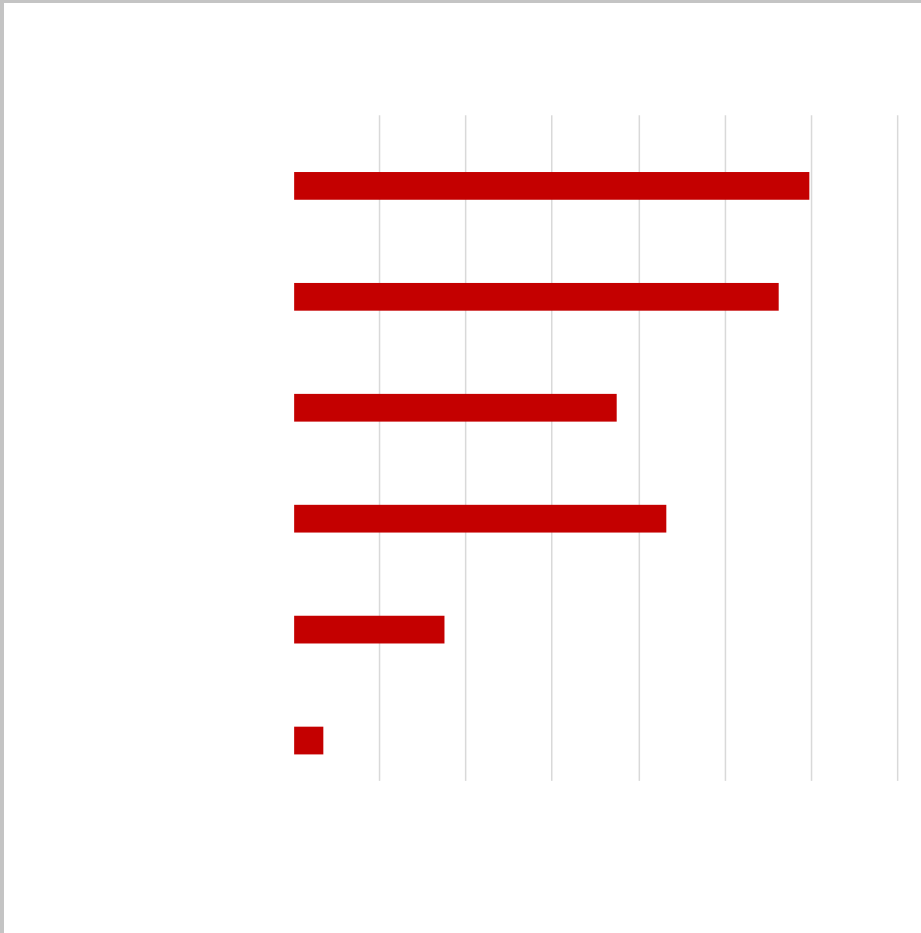
# Meanwhile robot density has increased in many countries

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This raises concerns about job prospects overall as well as for less educated workers given their deteriorating employment rates



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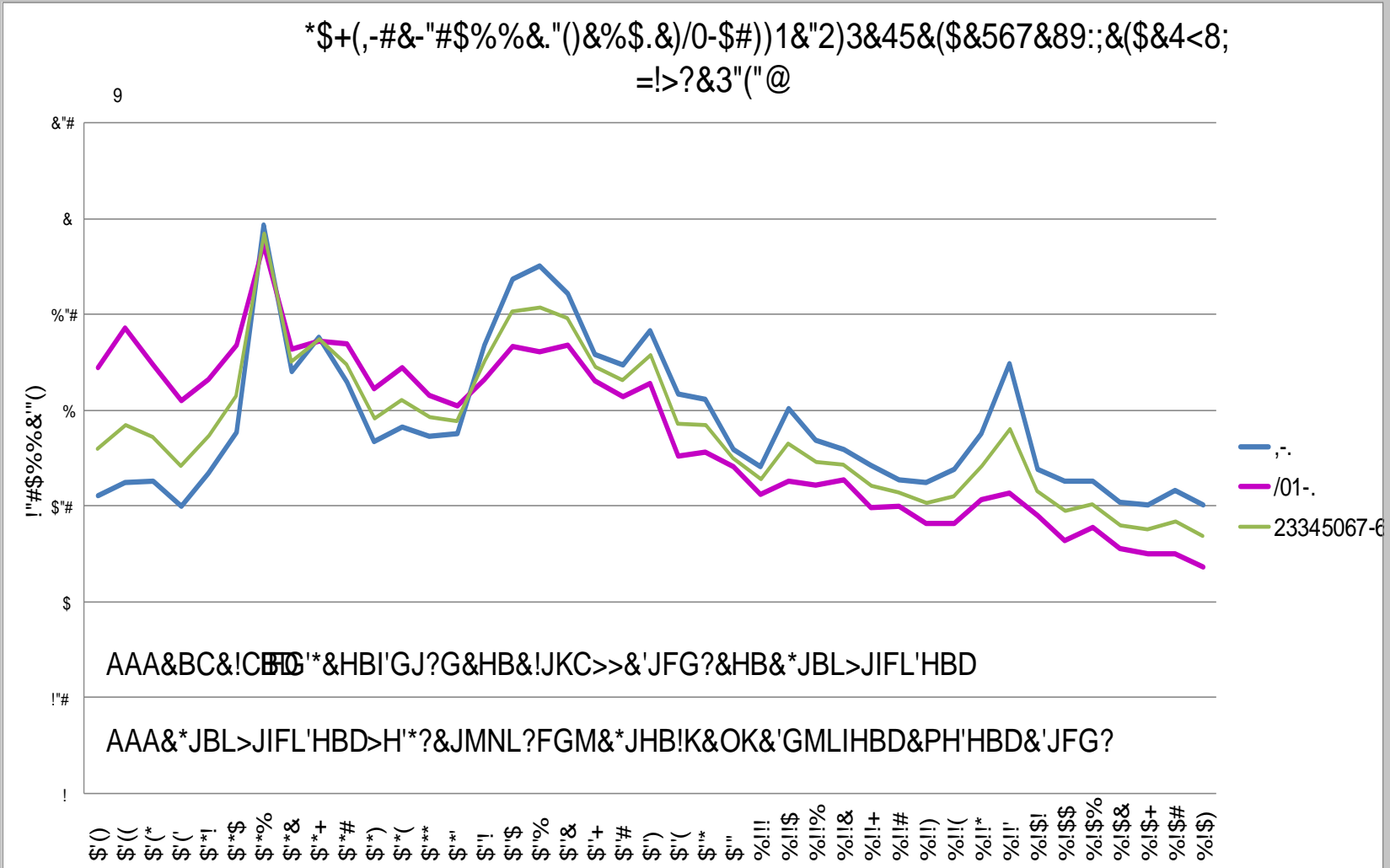
Increased robot use raised productivity but had no effect on aggregate hours worked Graetz and Michaels cross country data

One more robot per thousand workers reduced the employment rate by percentage point and wages by percent Acemoglu and Restrepo US data

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# Layoff rates have not trended upwards in Canada





# But displaced workers with high tenure or a strong attachment to the labour market experienced persistent earnings losses

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# Few displaced workers become self employed or move to other regions following job loss

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# Summary

**Layoff rates did not trend upwards but**

**a small group of high tenure workers has consistently experienced substantial long term earnings losses**

**Formal self financed lifelong learning PSE not very frequent for displaced workers**

**Displaced workers are not that malleable transition rates to self employment are low**

**Displaced workers move slightly more than non displaced workers**

# Future Shocks Policy Related Questions

Q Is it the End of Work Once Again

, CD Howe No

, Brynjolffson and MacFee Maybe

Humility required given the difficulty to predict the future

Given a the uncertainty about future technological unemployment

b what we currently know about worker displacement in Canada

Q to what extent if any and if so how should Canada s be modified enhanced  
to assist future displaced workers

, Enhanced EI benefits

, Wage Insurance for high tenure displaced workers Lalonde Riddell

Q to what extent if any should the be  
-modified to increase individuals adaptability to shocks

, Teaching general skills learning how to learn

Q Will more broad based measures be needed

Universal basic income

**THANK YOU !**