

Examiner's Commentary

One reason why this essay is commendable is that the topic, youth unemployment following increases in minimum wage levels, is well suited to the use of primary data and the candidate goes to great lengths to provide such information. The survey of youths in Ontario is well carried out, with clear questions that are all directly relevant to the research question. The candidate has managed to avoid speculative "what if...?" questions. The limitations of such analysis are also clearly recognized. The use of secondary data is also commendable. Although not always completely accurate, the efforts to calculate economic variables (eg PED), from published secondary data, are to be applauded, as is the awareness demonstrated of possible limitations. The process undertaken is impressive in its thoroughness and lucidity. Throughout the essay, the writing is clearly focused on the research question and so the conclusions, while a little vague in places, are reflective of the evidence presented.

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Youth in Ontario Will Benefit from the Province's New Minimum Wage

To what extent has the January 2018 minimum wage increases in Ontario affect the employment of youth in Ontario?

Economics

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Introduction

In January 2018, the legislation of Ontario passed Bill 148, a plan that will work on making the workforces in the province “more fair and better than before”¹. One of the main criteria in this bill that engaged the public was raising the minimum wage rate by more than 20% since 2017² and has been the largest wage increase seen in Canada for the past two decades. This is important for the citizens of Ontario to discuss because there are two perspectives with arguable facts that can be concluded from the passing of this bill. On one side of the argument, many people can support the passing of this bill, where raising the minimum wage can help improve the living standard of lower-income families and improve the quality of life for workers in Ontario. On the other hand, increasing the minimum wage can perhaps create more unemployment in the future. To further analyze, although 60% of minimum wage workers are youth aged 16-24-years-old as of June 2017³, assumptions of price controls say businesses would be less willing to hire young workers, as the former will now need to pay for higher training costs and argue that it would be inefficient to hire a student working part-time rather than hire someone already trained and able to work full time without study obligations. Therefore the research question that this extended essay will discuss is **to what extent has the January 2018 minimum wage increases in Ontario affect the employment of youth in Ontario?** This is worthy of study because it is important as it affects youth and the investigation

¹ Ontario's Ministry of Labour. “A plan for fair workplaces and better jobs (Bill 148).” <https://www.ontario.ca/page/plan-fair-workplaces-and-better-jobs-bill-148>

² Ibid

³ Charles Lammam & Hugh MacIntyre. “Ontario’s planned \$15 minimum wage will likely hurt young and low-skilled workers,” Fraser Institute. June 12, 2017. <https://www.fraserinstitute.org/blogs/three-reasons-why-albertas-minimum-wage-hike-is-misguided>

may challenge existing economic theories about minimum wage. Research in this investigation will explore how provincial government intervention and monetary policies affects youth in or looking for minimum wage placements, the market failure and externalities against youth in Ontario, and the evaluation of the overall imposition of the minimum wage from an economist's point of view considering youth as the primary stakeholder. To clarify, youth will be considered as people between 15-25 years of age and the terms youth and students are interchangeable, even though it is taken into consideration that not all youth are a full-time or part-time student.. The conclusion of this investigation will hopefully allow one to wholeheartedly support or oppose the passing of this bill with substantial analysis and evidence.

Methodology

For this investigation, primary research was conducted through several interviews with a range of small to large firms that can be found in Ontario and a survey where a total of 50 youth living in Ontario from the ages of 15-24 years old had responded. Interviews were conducted with small business owners and large firms with franchising programs located around the Shoppers World Danforth to analyze how they are currently coping approximately nine months after the passing of Bill 148. Specifically, one small business had sent some data of their expenses and revenues from 2018, including labour costs which will be useful in considering whether the minimum wage increase has restricted them from hiring potential youth workers. On the other hand, the survey was conducted near the end of September 2018, to find out the experiences of youth workers before and after the minimum wage increase and the effects it had on the age demographic. Through this small representation, we can see how some youth in Ontario

handled the minimum wage increase, and whether they were able to keep their jobs or were let go as a result of it.

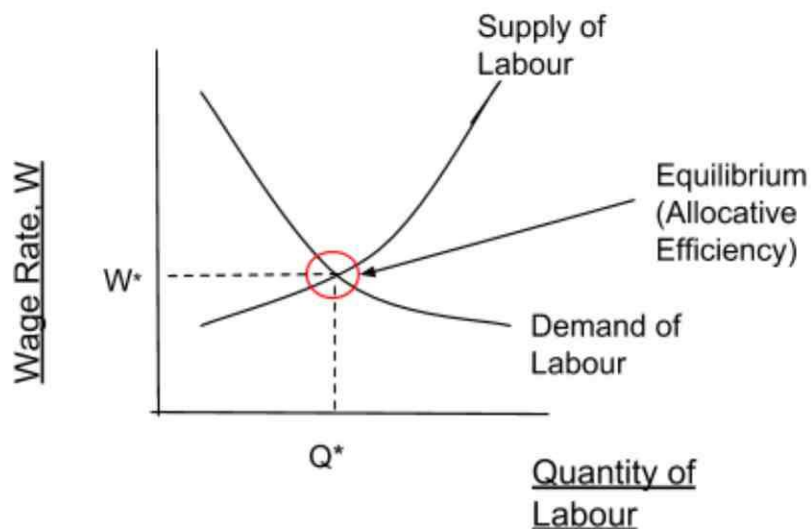
Secondary research was conducted through news articles to aid the progressions and explanations behind Bill 148, Statistics Canada and the Bank of Canada to find out detailed rates of the labour force, consumer price indexes and inflation rates from 2013-2018 in Ontario, economic reports about how minimum wage affects teen unemployment, research from OECD and the New Economics Foundation to provide additional material to use when analyzing data, and economics textbooks to help verify economic theories.

Investigation

Background Information

In an unregulated and unskilled labour market, the demand for labour comes from employers seeking employees to train and the supply of labour comes from individual workers who don't have any specific training or experience for a given job. The employers are seeking low total costs in their factors of production systems, (FOPS) in order to achieve high profits, whereas workers are looking for work placements with relatively good pay that outweigh their opportunity costs, which is cost of all that is lost from choosing one course of action over another, (such as choosing a job that pays \$10/hour with benefits over a job that pays just \$11/hour).

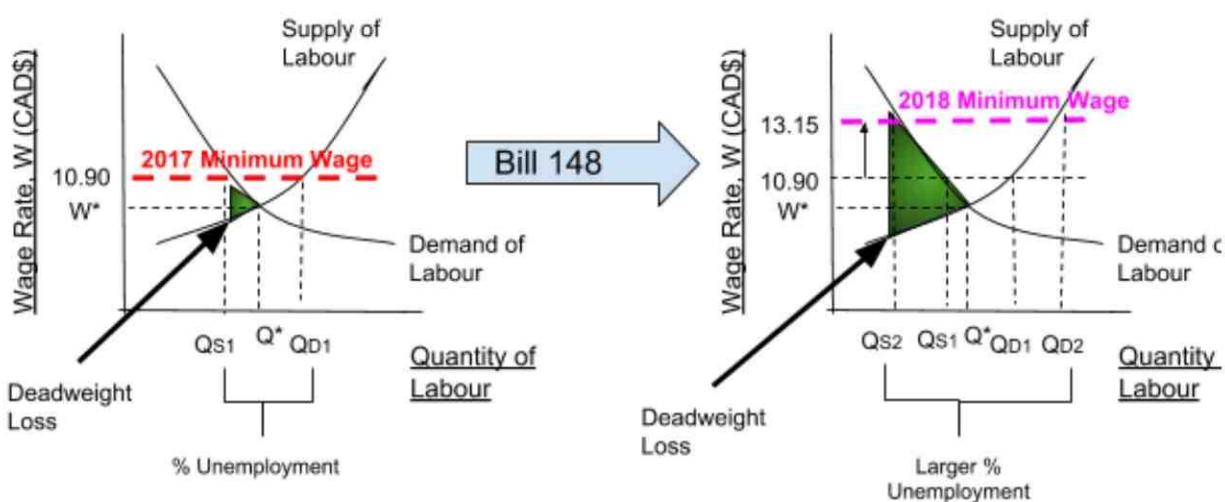
Figure 1.1: The quantity of labour at the average wage rate in an unskilled labour market



In figure 1.1, the point at which the demand and supply of labour meet is the equilibrium, which is the allocatively efficient level where the quantity of labour that employees give, (Q^*) is equal to the wage that employers are willing to pay, (W^*). With allocative efficiency, total economic welfare is maximized and equalized between the employer and the employee.

A minimum wage is a type of price control that governments use to achieve the best outcomes for its citizens in the economy. More specifically, it is a mandatory price floor, where the government establishes the certain level that wages can not fall below in order to increase living standards and quality of life for workers. As the minimum wage rate will increase from \$10.90/hour to \$13.15/hour⁴ for students in 2018, those with minimum-wage paying jobs can now have more access to buying goods and services and can work on financial issues with more ease such as paying for post-secondary tuition.

Figure 1.2: The quantity supplied and demanded of labour at the old and new minimum wage



⁴ Ontario's Ministry of Labour. "Minimum Wage," <https://www.ontario.ca/document/your-guide-employment-standards-act-0/minimum-wage>

In figure 1.2, one can notice that the minimum wages are set above the equilibrium point. After increasing from \$10.90 to \$13.15, the quantity supplied of labour would severely increase, (Qs_1-Qs_2) , whereas the quantity demanded of labour would severely decrease, (Qd_1-Qd_2) . As the minimum wage rises, so would production costs for companies which would create a lower demand for labour. Meanwhile, one can safely assume that more students would be willing to work at a higher wage rate which creates a higher supply of labour. This in turn creates a surplus of labour or more commonly known as youth unemployment, which is the number of youth unemployed and actively seeking work. The green triangles represents the absence of allocative efficiency, known as deadweight loss, and thus, as you increase the minimum wage, there is more loss of the total economic welfare felt by employers and employees. Unlike tangible commodities such as wheat or milk, the government cannot buy the surplus of workers and thus the employers get to choose the amount of employees required and may even lay off workers who are currently in the labour force. The following conclusion arises: although the high minimum wage entices them to join the workforce to make money, youth that are in the labour force may be rejected or even fired due to employers having to take on additional costs such as providing training for the required skill sets for a given job. Having little to no prior experience can in turn hurt young adults' chances of applying for future careers. Thus from background information and assumptions of price floors, theories clearly shows that the minimum wage increase in Ontario will severely affect the youth employment in Ontario, by raising the youth unemployment rate to a larger percentage than before.

Using labour force characteristics from Statistics Canada such as the amount of youth in the labour force in Ontario⁵ and minimum wage information from the minimum wage database of the government of Canada⁶, (adjusting for inflation in 2018 dollars⁷), the following graph was created.

Figure 1.3: This chart shows the correlation between the minimum wage increases and the youth employment rate in Ontario from 2004-2017.



Assuming that all external factors are constant, as the minimum wage rate steadily rises, the youth employment rate steadily falls, showing a moderate negative correlation between the two statistics. This further proves how the minimum wage increase affects the youth employment rate, as at a lower minimum wage rate, there is high youth employment and vice-versa. However, this correlation could potentially not be relevant, as there are always other factors in an economy that can cause the youth employment rate to decrease such as higher

⁵ Appendix 5

⁶ "Customized Search for General Minimum Wage Rates in CANADA," Government of Canada. Date modified: 2017-06-19 <http://srv116.services.gc.ca/dimt-wid/sm-mw/rpt4.aspx?GoCTemplateCulture=en-CA>

⁷ "Inflation Calculator," Bank of Canada. <https://www.bankofcanada.ca/rates/related/inflation-calculator/>

inflation rates in the area or the change in demand of goods and services, like the bankruptcy and layoff of workers of Sears⁸.

Secondary research has led to many academic reports that were available on sites that were free of advertising and therefore perhaps less likely to be biased. The data accumulated to either being for or being against minimum wage laws with evidence to support both arguments.

A report done in 1998 analyzed “the effect of minimum wages on youth employment in Canada”⁹, where it suggests that the minimum wage is “very unlikely to lead to a reduction in the overall youth employment level”¹⁰, yet points out how the theory of increasing minimum wage can still cause a decrease in employment in other age groups. Another report has argued that “minimum-wage laws hurt small businesses that are unable to absorb the costs of higher payrolls, increase unemployment by forcing employers to cut back on hiring, and result in inflation as businesses are forced to compensate for rising costs.”¹¹ This can be supported by the fact that the percentage composition of students (15-24) who work at minimum wage jobs severely dropped from the first quarter of 2017, (41.1%)-to the first quarter of 2018, (31.6%), creating a 9.5% drop¹². Yet, what is surprising that contrary to the supposed argument is the number of youth who have minimum wage jobs increased from 402,900 in 2017 to 520,200 in 2018¹³. Thus, although some youth workers may face trouble of being fired for working in a small business, the amount of jobs that is accessible to youth would perhaps increase.

⁸ Hayley Peterson. “Sears is closing more stores, with some layoffs starting 2 days before Christmas,” Business Insider. October 3, 2018.

⁹ Terence Yuan. “The Effect of Minimum Wages on Youth Employment in Canada: A Panel Study.” The Journal of Human Resources 38, no. 3 (2003): 647-72. doi:10.2307/1558771.

¹⁰ Ibid

¹¹ Britannica School, s.v. “Minimum wage,” accessed September 16, 2018, <https://school.eb.com/levels/high/article/minimum-wage/52853>.

¹² Dominique Dionne-Simard & René Morissette. “Recent changes in the composition of minimum wage workers.” Statistics Canada. June 13, 2018. <https://www150.statcan.gc.ca/n1/pub/75-006-x/2018001/article/54974-eng.htm>

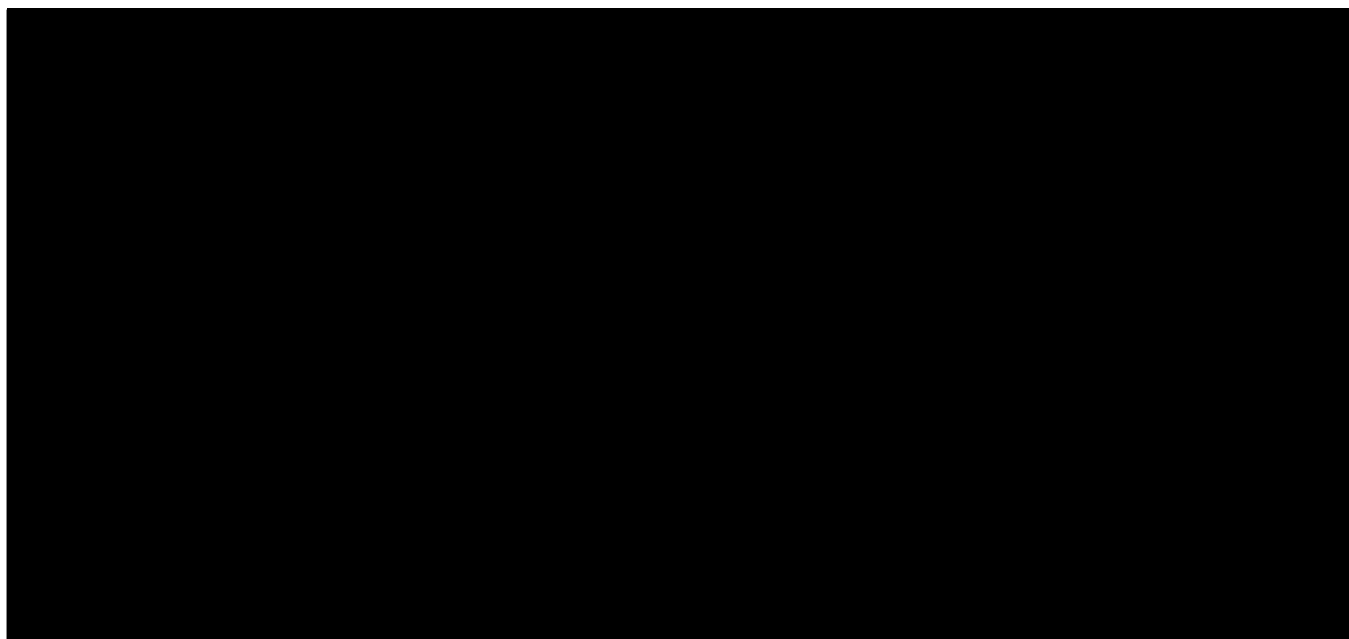
¹³ Ibid

Analysis of Primary Data: Companies

In the business world, companies strive to seek profit¹⁴, which is where the total costs of their FOPS is less than the total revenue of their sales. Companies usually have two types of costs: fixed costs that stay the same at all levels of production, (ex. rent) and variable costs that rise or fall when their production respectively rises or falls. Companies are always trying to maximize their profit levels¹⁵, and one way they can do this is through reducing labour costs. They are an example of variable costs, as employees earn salaries by the hours they work for a firm.

Through conducted interviews with companies in the Shoppers World Danforth, a *small* company, (Mizan Furniture Complex & Auditorium (MF)), had mentioned¹⁶ that they struggled with the minimum wage increase, as labour costs were a large percentage of their overall costs.

Figure 2.1: MF's short run cost curves before and after the minimum wage increase¹⁷



¹⁴ Andrew Mell & Oliver Walker, "Profit & the Profit Motive" in *The Rough Guide to Economics: From First Principles to the Financial Crisis*. (London: Rough Guides Ltd, 2014), 63-71.

¹⁵ Ibid

¹⁶ Appendix 1

¹⁷ Appendix 3

In figure 2.1, total fixed cost, (TFC), is horizontal as it is fixed in the short run. Costs in TFC included the rent of the space, insurance, property taxes and the costs of the amount of equipment they have for making and transporting their goods, which altogether gave a total of around \$15000. Total variable costs, (TVC), steadily increases from the origin point and at higher levels of output, start to go vertical. This is because of the law of diminishing returns, as a company can pay for more labour and train more people but not get the corresponding increase in outputs. Costs in TVC included labour, transportation costs and the utilities of the company, which were around \$5000-\$10000 depending on the level of output. With the minimum wage increase, their TVC were around \$7000-\$12000 in January 2018. Finally, total costs, (TC) is equal to $TVC + TFC$ and it is above TVC by the amount of TFC. As shown in the graph, TFC is greater after the minimum wage increase as TVC also increased due to larger labour costs. In order to reduce their TFC since the minimum wage increase, MF has spoken about letting go of one of their youth workers as it was time-consuming and expensive to train someone who needed to learn the basics of their company. This proves how the minimum wage increase can be detrimental towards both small businesses and youth workers that work for them. However, this is only one small firm out of many firms in Ontario and thus it may not accurately represent how a minimum wage increase affects this type of business. There are other ways to reduce costs that managers can go through with such as selling off equipment or reducing the amount of utilities used.

Analysis of Primary Data: Survey

A survey was sent online to around 50 youth in Ontario, both in and out of high school, to get a representation of the qualitative and quantitative data of youth's conditions before the minimum wage increase and potential repercussions they had faced after the minimum wage increase. Shown below are the 7 survey questions and responses can be found in Appendix 5.¹⁸

Q1	Did you have a minimum-wage job before January 2018?
Q2	Do you currently have a minimum-wage job or previously had a minimum-wage job since January 2018?
Q3	In which industry do/did you work in? (If more than one apply to you, please choose the most relevant one.)
Q4	If you currently have a job, have you seen a cutback in your hours?
Q5	If you currently have a job, have you seen a cutback in your benefits?
Q6	If you had a job, has your boss/manager reported a need to cut back employee hours?

To summarize, most of the respondents were in high school, (around 78%), which proves how some minimum-wage paid workers must work part-time due to study obligations. The most common minimum-wage positions that youth had were in the retail, food/barista and education & health services industries. This suggests that jobs in these industries can offer valuable experience for youth yet require extensive training from employers. Out of the respondents who have a minimum wage job or previously had a minimum wage job since January 2018, only

¹⁸ Appendix 4

38.6% have seen a cutback in their hours and only 14.6% have seen a cutback in their benefits. This suggests that although they may have a minimum-wage job, they are at low risk of losing the amount of hours worked and the benefits they receive when working with their employer, even though employers must face higher labour costs. Thus, from a qualitative perspective with anecdotal data to back it up, the minimum wage increase has not severely affected the youth employment rate and youth workers were let go from external factors as mentioned before. There are in fact benefits that arise from the minimum wage increase, as more youth can have access to buying more goods and services with bigger pay cheques.

One limitation of this analysis is the amount of data recorded, or lack of data recorded.

Although it was thought that 50 questionnaires with this set of questions was a suitable sample space to collect data from, it was realized further on that a larger sample space with a larger variety of quantitative-related questions, (such as whether youth workers worked part-time or full time), can better reflect a more in-depth consideration of the research question. What also needs to be acknowledged is that these 50 questionnaires are not truly representative of how the entire youth population is coping with the minimum wage increase and limit the validity of the conclusion drawn. In future research purposes, questionnaires of the people must accurately reflect the population of the location they are in and thus having a larger sample space can lead to higher validity.

Analysis of Secondary Data: Labour Elasticities

In economics, the labour elasticity of demand is a measure of how much labour demand changes when there is a change in the wage of an area. This measure will help determine whether the demand for youth workers in Ontario are wage elastic, where the demand of youth workers by employers is very responsive to wage changes, or wage inelastic, where the demand of youth workers by employers is very unresponsive to wage changes. There are three factors that affect the elasticity of labour demand which are:

- 1) the percentage of labour costs in the total amount of FOPS costs, where if labour costs are a high percentage of FOPS costs, then the labour demand would be more elastic,
- 2) the ease and cost of factor substitution, where if it is easier to implement technology and automated machines that can replace a worker, then the labour demand would be more elastic, and
- 3) the price elasticity of demand for the final output, which is a measure of responsiveness of the quantity demanded of a good or service, where if the actual goods and services produced by workers are more inelastic, then the labour demand would be more inelastic, as producers can pass on labour costs to consumers who would still be willing to spend on goods and services.

In order to calculate the elasticity of labour demand for a given year using data from Statistics Canada, you take the percent change of the labour force of youth workers from the previous year divided by the percent change in wage rate from the previous year.

$$\text{Elasticity of labour demand} = \frac{\% \Delta \text{labour demand of youth workers}}{\% \Delta \text{wage rate}} \times 100\%$$

Below is the calculation of the elasticity of labour supply from 2015 to 2016.

$$= \frac{\frac{\text{job vacancies (2016)} - \text{job vacancies (2015)}}{\text{job vacancies (2015)}}}{\frac{\text{Student minimum wage rate (2016)} - \text{Student minimum wage rate (2015)}}{\text{Student minimum wage rate (2015)}}} \times 100\%$$

$$= -0.53$$

Therefore, the elasticity of labour demand between those years is relatively inelastic. The next time frames are shown in the table below.

2016-2017 Elasticity of Labour Demand	-0.56
2017-2018 Elasticity of Labour Demand	-0.57

As shown in the table, the elasticities of labour demand is relatively inelastic as the minimum wage increases.

The labour elasticity of supply is a measure of how much labour supply changes when there is a change in the wage of an area. This measure will help determine whether the supply for youth workers in Ontario are wage elastic, where the supply of workers is very responsive to wage changes, or wage inelastic, where the supply of workers is very unresponsive to wage changes.

In order to calculate the elasticity of labour supply for a given year using data from Statistics Canada¹⁹, you take the percent change of the labour force of youth workers from the previous year divided by the percent change in wage rate from the previous year. In theory, minimum-wage paying jobs are considered lower-skilled and therefore have an elastic supply as the barriers of entry are low and a lot of people can be potential workers.

¹⁹ Appendix 5

$$\text{Elasticity of labour supply} = \frac{\% \Delta \text{ labour supply of youth workers}}{\% \Delta \text{ wage rate}} \times 100\%$$

Below is the calculation of the elasticity of labour supply from 2015-2016.

$$\begin{aligned} & \frac{\text{Labour force of youth workers (2016)} - \text{Labour force of youth workers (2015)}}{\text{Labour force of youth workers (2015)}} \times \frac{\text{Student minimum wage rate (2016)} - \text{Student minimum wage rate (2015)}}{\text{Student minimum wage rate (2015)}} \times 100\% \\ &= \frac{1,077.1 \times 10^3 - 1,097.6 \times 10^3}{1,097.6 \times 10^3} \times \frac{11.25 - 11.0}{11.0} \times 100\% \\ &= \frac{-0.01965}{0.02273} \\ &= -0.86. \end{aligned}$$

Therefore, the elasticity of labour supply between those years is inelastic. The next time frames are shown in the table below.

2016-2017 Elasticity of Labour Supply	-0.89
2017-2018 Elasticity of Labour Supply	-0.84

As you can see from the table, the elasticities of labour supply are relatively inelastic, showing how youth workers are unresponsive to wage changes. This is contradictory to the theory that minimum wage is elastic.

Thus, from looking at the elasticities of labour demand and labour supply, one can notice that they are relatively inelastic and thus the demand and supply of youth workers are unresponsive

to wage changes. This is surprising as it contradicts the theory that minimum wage increases would result in high amounts of labour quantity supplied and low amounts of labour quantity demanded.

For calculating both the labour demand and labour supply of youth workers, data from Statistics Canada was commonly used as it is the most accessible database of labour force characteristics in Ontario for those given years. However, it needs to be said that data from Statistics Canada is not always reliable as the number of people in the labour force may not be adequate. For example the data would disregard people who work for the black market and thus understating the true extent of unemployment in Canada. Another example is that youth workers who work part-time are counted as working full-time, however part time work is not using the full potential of the youth worker.

Analysis of Secondary Data: Inflation Rate vs Unemployment Rate

Not only does the minimum wage laws directly affect the wage that youth receive and the possibility of being let go, the minimum wage increase also can affect the consumer spending of youth. Minimum wages also allow wages to be indexed to inflation, which is the persistent rise in the general level of prices. This brings the theory of cost pull inflation which states that prices increase because the costs of producing goods and services increase, including increased minimum wage rate. Due to a low valued Canadian dollar, the increase in minimum wage increases the cost of imported FOPS. This is considered bad inflation because the increase in price level results in a decrease of the gross domestic product, (GDP), which is the total market value of all goods and services produced in a given time period, within a country's borders. Thus

although youth workers can experience the benefit of having more access to goods and services, their purchasing power, the value of the sum of their money, decreases.

Another point to mention is that unemployment and inflation are inversely related, which illustrates a possible trade-off between the two important macroeconomic objectives of keeping inflation low yet allowing it steadily rise and of keeping unemployment low but not zero.

Statistics Canada creates consumer price indexes, which measures the change in the prices of usually 600 goods and services that are put into 8 different categories. This is used to define purchasing power, which is the ability to buy these goods and services. As prices rise, wages need to be indexed to inflation so that the % increase in wages matches the % increase in prices. The inflation rate is equal to the following:

$$= \frac{CPI\ year\ 2 - CPI\ year\ 1}{CPI\ year\ 1} \times 100\%$$

Below is the inflation rate from 2015-2016.

$$= \frac{CPI\ year\ 2016 - CPI\ year\ 2015}{CPI\ year\ 2015} \times 100\%$$

$$= \frac{129.7 - 127.4}{127.4} \times 100\%$$

= 1.8% inflation

The next time frames are shown in the table below.

2016-2017 Inflation Rate	= 1.9% inflation
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As you can see from the table, the inflation rate increases which proves that the general unemployment rate decreases. The consumer price index of 2018 could not be calculated at the time this report was written thus this is a limitation as we do not know whether inflation increased or decreased after the minimum wage increase. Thus, the minimum wage increase affects the youth employment rate to a slight positive degree. As mentioned before, data from Statistics Canada can be unreliable.

Conclusion

In responding to the question, **to what extent has the January 2018 minimum wage increases in Ontario affect the unemployment of youth in Ontario**, this analysis suggests that a slight degree of the minimum wage increase affects the youth unemployment rate in Ontario. This essay was first heading towards the answer of the minimum wage increases severely and negatively affects the youth employment rate. However, through further analysis, it can be examined and concluded that the contrary is true. The minimum wage rate increase will cause a increase in inflation and thus a decrease in unemployment. Also, the survey conducted showed how not that many youth workers had lost their jobs, the amount of hours they worked and their benefits. Although it is hard to truly quantify its impact on youth employment rate, as there are many studies that support and oppose the positive effects of minimum wage, what we can conclude is that there will be more jobs accessible to youth workers. It's surprising that theory would not accurately apply to a real life situation like the minimum wage increase in Ontario as there are many different assumptions and ideas we must be aware of, such as the

elasticities of labour demand and supply. Indeed, based on this investigation, it can be concluded that the minimum wage increase has and will greatly help increase the youth employment rate in the long run.

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Images

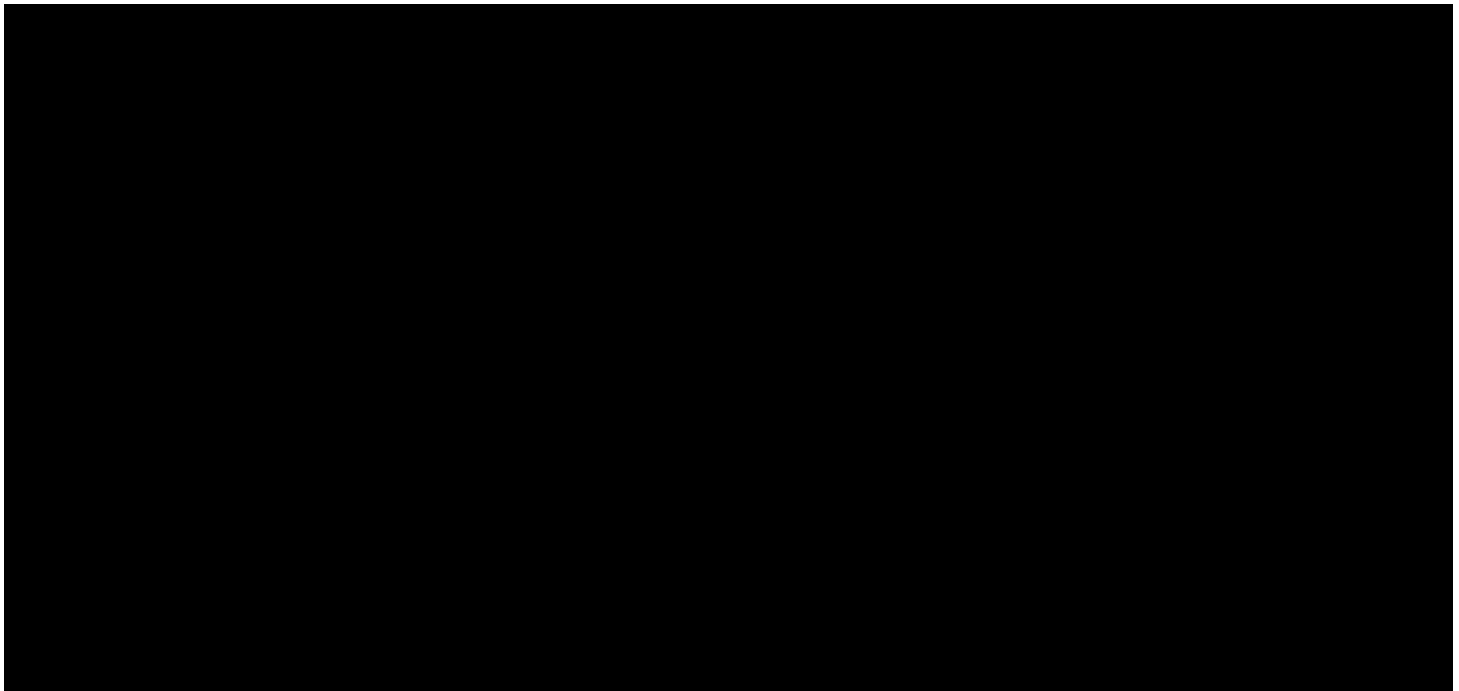
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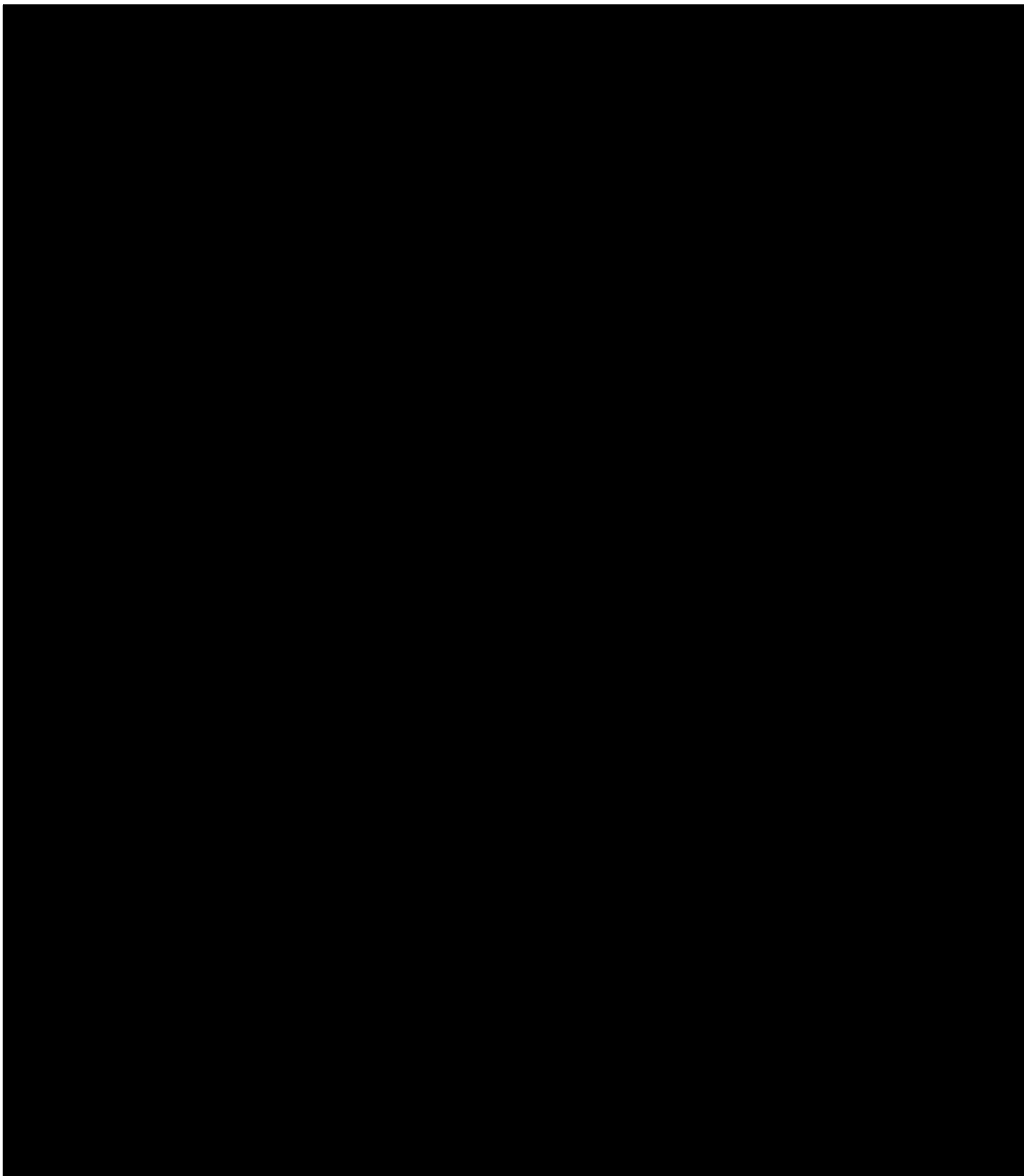
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Appendix

Appendix 1: Interviews with Small Local Business Owners; Mizan Furniture Complex & Auditorium (C) & Marhaba Supermarket (S)





Appendix 2: Interviews with Large Firms; Dollarama (D) & Tim Hortons (T)

1) Describe your company and classify the sector your business would be classified in.

D: "Dollarama, classified in the retail industry, now operates in more than 1,000 stores across Canada. All stores are corporately owned and operated, providing a consistent shopping experience. We provide different types of everyday consumer products, general merchandise and seasonal items with low value in convenient locations, including metropolitan areas, such as Shoppers World Danforth. Our quality merchandise is sold at fixed price points up to \$4.00.

T: "Tim Hortons is the leading food business in selling your everyday breakfast and lunch meals and your favourite beverages and baked goods."

2) Has the recent minimum wage increases in Ontario positively or negatively affected your corporation?

D: "Although the minimum wage increase may have given us a few obstacles, we firmly believe that the minimum wage increase positively affected us as it provides our workers more stability."

T: "As a franchisee, the minimum wage increase negatively affected my restaurant, because there are higher labour costs that I now have to pay."

3) How many people do you pay minimum wage at this location, and of which how many are youth aged 15-24? What percentage of your costs are labour costs? By what % have your wage costs increased?

D: "At this specific location, roughly twenty people are paid at minimum wage, where seven of our employees are youth [aged 15-24-years-old.]. We have stayed consistent with the province's minimum wage rates. [Over 18-years-old: \$11.40 in 2017, \$14.00 in 2018, 23% increase; student minimum wage: \$10.90 in 2017, \$13.15 in 2018, 20% increase]. I believe labour costs are around ¼ of our costs here at this location.

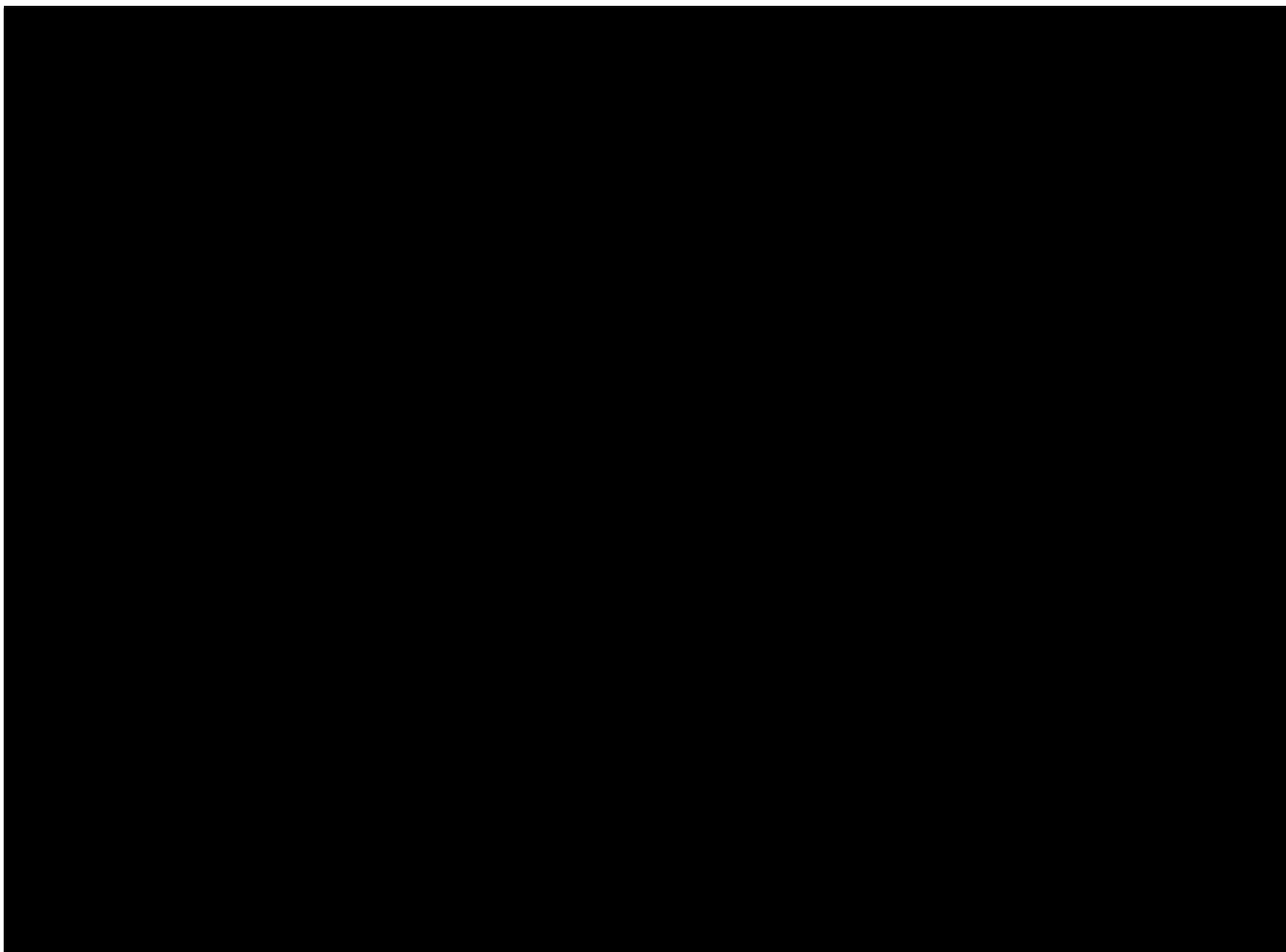
T: " In our restaurant we have around ten chefs and baristas who are paid at the minimum wage level. We brought in two youth workers but recently one had left. [23% increase.] Labour costs are a huge percentage of my costs here. [Could not clarify exact percentage]."

4) How have you managed the minimum wage increase? As the boss or manager, did you cutback hours and benefits of your workers? Did you specifically let go of youth workers or are hesitant to hire youth workers?

D: "We did not cutback hours and benefits of our workers and we did not let go of any youth workers as a result of the minimum wage increase."

T: "At this particular location we have had to implement a cutback in benefits for our workers in order to accommodate for the minimum wage increase. [From further research, cutback in benefits include "paid breaks, fully-covered health and dental plans, and other perks for their workers."²⁰]

Appendix 3: Revenues and Expenses of Mizan Furniture Complex & Auditorium in February



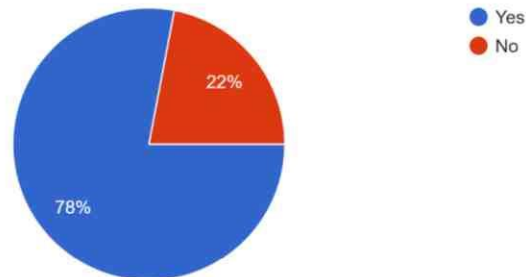
²⁰

Aleksandra Sagan. *Tim Hortons Franchisees Want More Price Hikes: Source*. Published on 01/13/2018. https://www.huffingtonpost.ca/2018/01/13/tim-hortons-franchisees-price-hikes_a_23332615/?utm_hp_ref=ca-ontario-minimum-wage, The Canadian Press

Appendix 4: Survey of youth workers about their experiences with the minimum wage increase

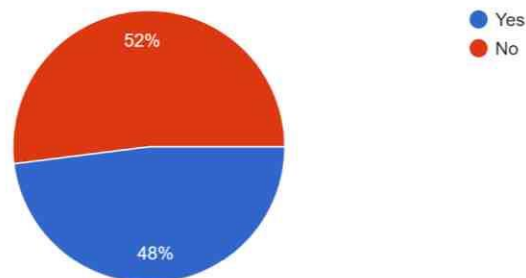
Are you a high school student as of 2018?

50 responses



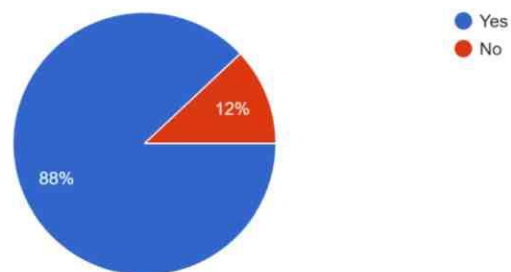
Did you have a minimum-wage job before January 2018?

50 responses



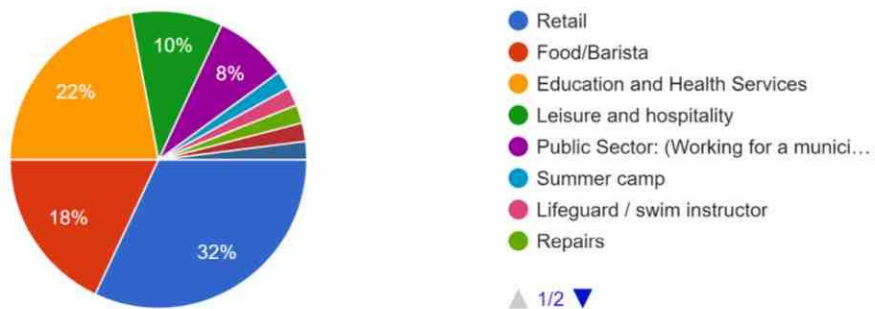
Do you currently have a minimum-wage job or previously had a minimum-wage job since January 2018?

50 responses



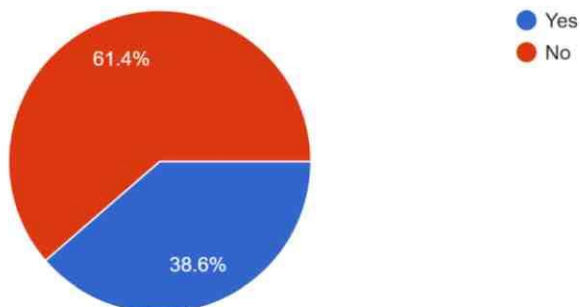
In which industry do/did you work in? (If more than one apply to you, please choose the most relevant one.)

50 responses



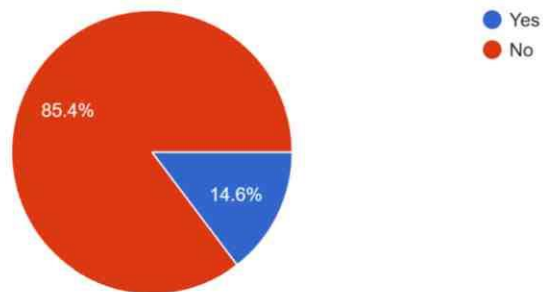
If you currently have a job, have you seen a cutback in your hours?

44 responses



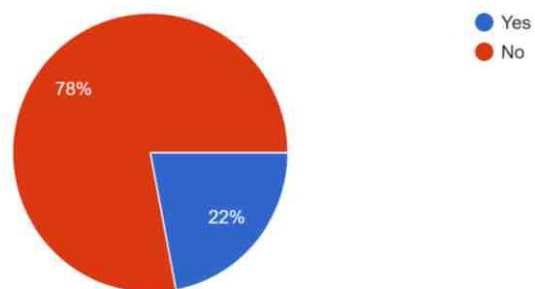
If you currently have a job, have you seen a cutback in your benefits?

41 responses



If you had a job, has your boss/manager reported a need to cut back employee hours?

50 responses



Appendix 5: Labour force characteristics of Ontario from 2004-2017

		Ontario (map)													
Labour force characteristics	Sex	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
		15 to 24 years	15 to 24 years	15 to 24 years	15 to 24 years	15 to 24 years	15 to 24 years	15 to 24 years	15 to 24 years	15 to 24 years	15 to 24 years	15 to 24 years	15 to 24 years	15 to 24 years	15 to 24 years
		Persons													
Population ^{3,4}	Both sexes (x 1,000)	1,664.2	1,698.1	1,723.9	1,736.9	1,746.1	1,755.3	1,771.6	1,789.8	1,806.3	1,814.7	1,809.2	1,797.0	1,785.6	1,784.4
Labour force ⁵	Both sexes (x 1,000)	1,106.1	1,097.7	1,109.2	1,131.3	1,128.9	1,097.6	1,084.2	1,105.1	1,084.9	1,110.0	1,119.6	1,097.6	1,077.1	1,083.2
Employment ⁶	Both sexes (x 1,000)	949.7	944.6	962.7	985.0	973.3	904.3	895.5	929.3	900.6	930.3	944.3	936.2	925.9	950.0
Full-time employment ⁷	Both sexes (x 1,000)	497.3	486.6	499.6	500.0	493.9	439.0	423.0	452.6	432.7	443.1	451.9	464.3	466.8	478.2
Part-time employment ⁸	Both sexes (x 1,000)	452.4	458.1	463.2	485.0	479.4	465.4	472.4	476.7	467.8	487.2	492.3	471.9	459.1	471.7
Unemployment ⁹	Both sexes (x 1,000)	156.4	153.0	146.5	146.3	155.6	193.2	188.8	175.8	184.3	179.7	175.3	161.4	151.2	133.2
Not in labour force ¹⁰	Both sexes (x 1,000)	558.1	600.5	614.7	605.5	617.2	657.8	687.4	684.8	721.4	704.7	689.6	699.5	708.4	701.2
		Percentage													
Unemployment rate ¹¹	Both sexes	14.1	13.9	13.2	12.9	13.8	17.6	17.4	15.9	17.0	16.2	15.7	14.7	14.0	12.3
Participation rate ¹²	Both sexes	66.5	64.6	64.3	65.1	64.7	62.5	61.2	61.7	60.1	61.2	61.9	61.1	60.3	60.7
Employment rate ¹³	Both sexes	57.1	55.6	55.8	56.7	55.7	51.5	50.5	51.9	49.9	51.3	52.2	52.1	51.9	53.2

Appendix 6: Average Consumer Price Indexes from 2013-2017

		Ontario (map)				
Products and product groups ³		2013	2014	2015	2016	2017
		2002=100				
All-items		123.0	125.9	127.4	129.7	131.9

EE/RPPF

For use from May/November 2018

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International Baccalaureate®
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Bachillerato Internacional

Candidate personal code _____

Extended essay - Reflections on planning and progress form

Candidate: This form is to be completed by the candidate during the course and completion of their EE. This document records reflections on your planning and progress, and the nature of your discussions with your supervisor. You must undertake three formal reflection sessions with your supervisor: The first formal reflection session should focus on your initial ideas and how you plan to undertake your research; the interim reflection session is once a significant amount of your research has been completed, and the final session will be in the form of a viva voce once you have completed and handed in your EE. This document acts as a record in supporting the authenticity of your work. The three reflections combined must amount to no more than 500 words.

The completion of this form is a mandatory requirement of the EE for first assessment May 2018. It must be submitted together with the completed EE for assessment under Criterion E.

Supervisor: You must have three reflection sessions with each candidate, one early on in the process, an interim meeting and then the final viva voce. Other check-in sessions are permitted but do not need to be recorded on this sheet. After each reflection session candidates must record their reflections and as the supervisor you must sign and date this form.

First reflection session

Candidate comments:

I knew when I first received Economics as my extended essay topic that I wanted to talk about the recent minimum wage increases in Ontario, because it played a huge part in my life with my ability receive \$15/an hour but on the other hand, it affected my dad as an entrepreneur who had to lay off workers and endure more costs to his business. I will begin my research process by first looking at economics papers and current news articles about how the minimum wages increases in Ontario affects the steadily rising youth unemployment rate and poverty rate. I feel as though one of these two topics is appropriate for the microeconomics topic that I want to pursue. Overall, I found it pretty hard to make these research decisions, as this is the biggest and longest research/writing process that I must do in order to receive my IB diploma. When talking with my mentor, he had reminded to stay focus and not procrastinate as this is a very big deal of me. I must take this into consideration about how this will greatly impact my education as a researcher, writer and economist. As my mentor said, you need to be ready "to flip the leaf over."

Date:

Supervisor initials

Interim reflection

Candidate comments:

This process of writing the extended essay has been quite difficult for me. Throughout the summer, I've been trying to conduct interviews with a variety of stores around my community and collect surveys from teenagers of how the minimum wage increase has affected them. Yet, many of the stores are reluctant to provide sufficient data such as whether the managers needed to cut back shifts or benefits for their employees and the sample size of my survey is too small. I will go about resolving this by collecting more secondary data from large news outlets and journals that have created reliable interviews with large firms and ask my peers to send out the survey to others. I think that the data I've collected is starting to head into the direction that I've previously thought of, which is that the minimum wage increase negatively affects youth in Ontario. My mentor has suggested that I keep an outline and schedule to stay focused, but lately that hasn't been working with me. I know I should start focusing more on writing, but it's difficult to do with little motivation.

Date:

Supervisor initials:

Final reflection - Viva voce

Candidate comments:

I made a reasonable attempt to answer my RQ, which is that minimum wage increases are good for youth. I learned how it's important to have an outline before writing as it will allow you to find any information you're missing. Recency of the topic made it difficult to see the effects of the increases. I received a lack of primary data and the owners that I spoke with are not reflective of the province. I managed this through using secondary data sources from other parts of the world and speculated the positive outcomes in Ontario. I believe this process will definitely help me with future endeavours.

Date:

Supervisor initials: