

THE SCHOOL OF PUBLIC POLICY PUBLICATIONS

SPP Pre-Publication Series

September 2021

GENDER DISPARITIES IN THE LABOUR MARKET? EXAMINING THE COVID-19 PANDEMIC IN ALBERTA^{*}

John Baker, Kourtney Koebel and Lindsay M. Tedds

^{*} This work was supported by a generous contribution by the John Dobson Foundation (Project 10011864) which had no role in the conceptualization, data collection, analysis, decision to publish, or preparation of the manuscript. The authors declare they have no competing interests, either financial or community in nature.

This chapter is a summary of the work that first appeared as Baker, John, Kourtney Koebel, and Lindsay M. Tedds. 2021. "Gender Disparities in the Labour Market? Examining the COVID-19 Pandemic in Alberta." The School of Public Policy Publications, vol. 14 (18): 1-36. June. https://www.policyschool.ca/wp-content/uploads/2021/06/TEG88_Gender-Disparities-Labour-Market_Baker-et-al.pdf

ALBERTA FUTURES PROJECT PRE-PUBLICATION SERIES

Alberta has a long history of facing serious challenges to its economy, including shocks in the form of resource price instability, market access constraints, and federal energy policies. However, the recent and current challenges seem more threatening. It seems that this time is truly different.

The collapse of oil and gas prices in 2014 combined with the rapid growth of U.S. oil production, difficulties in obtaining approval for infrastructure to reach new markets and uncertainty regarding the impacts of climate change policies world-wide have proven to be strong headwinds for the province's key energy sector. Together, the negative effects on employment, incomes and provincial government revenues have been substantial. To make matters worse, in early 2020 the COVID-19 pandemic struck a major blow to the lives and health of segments of the population and to livelihoods in many sectors. The result has been further employment and income losses, more reductions in government revenues and huge increases in government expenditures and debt. These events, combined with lagging productivity, rapid technological shifts, significant climate policy impacts and demographic trends, call for great wisdom, innovation, collective action and leadership to put the province on the path of sustainable prosperity.

It is in this context that we commissioned a series of papers from a wide range of authors to discuss Alberta's economic future, its fiscal future and the future of health care. The plan is that these papers will ultimately be chapters in three e-books published by the School of Public Policy. However, in the interest of timeliness and encouraging discussion, we are releasing selected chapters as pre-publications.

INTRODUCTION

On March 5, 2020, Alberta reported its first case of the novel coronavirus disease (COVID-19). Shortly after, extensive measures were taken to "flatten the epidemic curve" and contain the spread of the virus: schools and daycares closed on March 15, a state of public health emergency was declared on March 17, and the closure of non-essential businesses and services was mandated on March 27. The impacts of these social distancing efforts on Alberta's labour market were large and immediate. In a year-over-year comparison, data from April 2020 shows that employment in Alberta declined by 15.5 per cent, while the unemployment rate increased to 13.4 per cent (Alberta Treasury Board and Finance 2020).

As the government started to relax public health restrictions over the summer months, Alberta's labour market showed promising signs of recovery (Business Council of Alberta 2020). However, by mid-September 2020, COVID-19 cases began to rise again, with Alberta's COVID-19 cases reaching new daily record highs throughout fall 2020 (see Figure 1). A second state of public health emergency was declared on November 24,¹ which was followed by further social and economic restrictions on December 8.² Similar to the first round of social distancing measures, these restrictions brought further turmoil to Alberta's labour market, including reduced working hours, increased unemployment, or complete non-participation in the labour force all together.

In this chapter, we use data from Statistics Canada's Labour Force Survey (LFS) to explore the health of Alberta's labour market amid the twin-crises of low energy prices and the crippling COVID-19 pandemic. To get a sense of the differential impacts of these crises across socioeconomic groups, we examine their impact on employment, hours worked, part-time employment and labour force participation across gender, parental status, and age. Because researchers and policymakers in Canada have been particularly concerned about the potential gendered effects of the COVID-19 crisis (Alon et al. 2020; Montenovo et al. 2020; Stevenson 2020; Qian and Fuller 2020)³, in our main analysis, we focus on whether and to what extent the pandemic produced differential labour market effects for women versus men (with and without children).

For additional details on the restrictions imposed by Alberta's government in November see Cameron-Blake (2021) and Pearson (2020).

This included: i) prohibition of all indoor and outdoor social gatherings, including limiting in-home contact to household members only; ii) mandatory working from home when physical presence was not required; iii) mandatory closure of restaurants/bars/cafes, entertainment businesses, and personal and wellness services; and iv) all K-12 students returning to online learning for the first week of school in January. See CBC News (2020) for further details.

For example, in a February 2021 press release for the Feminist Response and Recovery Fund, the Government of Canada emphasized that "the COVID-19 pandemic has magnified systemic and longstanding inequalities, with women and girls disproportionately affected by the crisis" (Women and Gender Equality Canada, 2021). Similar concerns about an asymmetric economic recovery for women have been expressed by the federal government in the 2020 Fall Economic Update (Department of Finance, 2020).

Figure 1: Number of Active COVID-19 Cases in Alberta, March 12, 2020-February 15, 2021



Source: Government of Canada Public Health Infobase, 2020-2021. Tabulations by authors.

We first present a descriptive analysis of labour market outcomes before and during the COVID-19 pandemic by age, gender, education, parental status, and geography. While labour market losses are widespread, our analysis shows that women, individuals aged between 15 and 29, individuals with lower educational achievement, and residents of the tourism and hospitality-heavy regions in the Rockies were disproportionately impacted by the COVID-19 economic shutdowns. Second, we perform a regression analysis showing that: i) women were more adversely impacted than men at the onset of the pandemic; ii) differences between men and women stabilized in the summer months; and iii) the stabilization of gender differentials persisted into December 2020. Crucially, for policymakers, we also find that parents with young children in Alberta experienced a large deterioration in employment during both the first and second waves of the COVID-19 pandemic. Finally, we provide evidence of a staggering decline in cumulative formal, paid hours worked for parents, irrespective of gender.

ALBERTA'S COVID-19 PANDEMIC AND THE LABOUR MARKET

Table 1 displays descriptive statistics for our sample of LFS respondents from Alberta in 2019 and 2020.⁴ Panel A contains summary statistics for employed respondents (either absent from or at work) only, while panel B contains summary statistics for all LFS respondents (i.e., employed, unemployed, and not in the labour force). Examining panel B, there is a clear reduction in both employment (at work) and average total actual hours worked (all jobs) between the two years. Overall, labour force participation declined by 2 percentage points, while part-time employment remained the same at 18 per cent. Average wages increased slightly between the two years; this is likely because job losses have been heavily concentrated in low-wage jobs so that the wages among individuals who remained employed throughout the pandemic are, on average, higher.

Note that the employment rate and labour force participation rate are higher than the real employment and labour force participation rate in Alberta because of sample selection.

In terms of the composition of our sample, there are no remarkable differences between the pre- and post-pandemic years. In both years, almost half of the sample is comprised of women. About 19 per cent of respondents work in the public sector, and roughly 25 per cent are covered by a collective agreement. The majority of LFS respondents: i) are married; ii) are non-students; and iii) do not have any children residing in the household. Of those with children, the presence of a child under the age of 6 is the most common, followed by children aged 6-12. Finally, there is a relatively even distribution of ages in our sample, though there are very few respondents who are older than 65.

	2019	2020
Panel A: Employed respondents (absent or at work)		
Average total actual hours worked (all jobs)	33.90 (17.44)	32.29 (18.16)
Part-time employment (%)	18 (.38)	18 (.39)
Average hourly wage (\$)	31.39 (15.66)	32.89 (16.10)
Average job tenure (months)	82.21 (78.03)	86.80 (77.75)
Public (%)	19 (.39)	20 (.40)
Union (%)	25 (.43)	26 (.44)
Ν	80,308	64,772
Panel B: All respondents		
Average total actual hours worked (all jobs)	30.42 (19.46)	27.15 (20.42)
Employed, at work (%)	82 (.38)	75 (.44)
Employed, absent from work (%)	7 (.26)	9 (.29)
Labour force participation (%)	94 (.24)	92 (.28)
Female (%)	46 (.50)	46 (.50)
Married* (ref: single) (%)	63 (.48)	64 (.48)
Children		
None (%)	63 (.48)	61 (.49)
Youngest child < 6 (%)	14 (.35)	15 (.36)
Youngest child 6-12 (%)	11 (.32)	11 (.32)
Youngest child 13-17 (%)	6 (.24)	6 (.25)
Youngest child 18-24 (%)	5 (.23)	6 (.24)

Table 1: Descriptive statistics, 2019 and 2020

Low education** (%)	30 (.46)	29 (.45)
Student		
Non-student (%)	92 (.27)	92 (.28)
Full-time (%)	6 (.24)	6 (.24)
Part-time (%)	2 (.14)	2 (.14)
Immigrant	24 (.43)	23 (.42)
Age Group		
Age 15-24 (%)	14 (.35)	14 (.34)
Age 25-34 (%)	23 (.42)	23 (.42)
Age 35-44 (%)	23 (.42)	24 (.43)
Age 45-54 (%)	19 (.39)	19 (.39)
Age 55-64 (%)	15 (.36)	16 (.36)
Age 65+ (%)	5 (.22)	5 (.21)
Ν	89,644	76,697

Notes: Summary statistics are computed with LFS survey weights. Unweighted sample sizes reported. Figures in brackets show the standard deviation. * Married includes common-law relationships. ** Low education includes individuals who have secondary education or less. Proportions may not sum to 1 due to rounding. Sample excludes: i) unpaid family workers; ii) respondents who have never worked; and iii) respondents who are not employed and who last worked more than a year ago.

Source: Canadian Labour Force Survey, public-use microdata files, 2019-2020. Tabulations by authors.

It is clear in Table 1 that survey response declined substantially over the course of the pandemic. Overall, between 2019 and 2020 there is a reduction of 12,947 respondents. While this may be potentially problematic if those still responding to the LFS are more (or less) likely to be employed during the pandemic than those who are not responding, Table 1 suggests that the use of survey weights adequately corrects for the possibility of a non-representative sample due to non-random attrition.

In Table 2, we present data on changes in employment rates, labour force participation rates, average weekly hours worked, and the share of employment in part-time occupations across several different demographics of interest.⁵ Note that, in order to reflect pre- and post-COVID-19 samples over the same seasonal period, these statistics include all data between March and December in 2019 and 2020.

Note that the employment rate is the percent of the total surveyed population that is employed. Labour force participation rates include both employed and unemployed individuals (i.e. those who are not working, are actively searching for work, and are able to do so) as a percent of the surveyed population. Finally, the share of employment in part-time occupations is the percent of total employed persons working in a part-time occupation (less than 30 hours per week).

Across gender, age, parental status, education, and geography, declines in the Alberta labour market due to the COVID-19 economic crisis have been wide-ranging. The raw differentials we present in Table 2 suggest that, overall, the following groups have experienced especially large labour market consequences during the pandemic: i) women; ii) individuals under the age of 30; iii) individuals with less than a bachelor's degree; iv) and residents of Edmonton.⁶ Across the four labour market statistics presented, the largest reductions are seen in employment rates. We do not observe movements of a similar magnitude for labour force participation. This suggests that many individuals shifted into unemployment rather than complete non-participation—i.e., many respondents may have been temporarily laid off or were still searching for work despite heavy losses in employment. Furthermore, the reduction in labour market hours worked is shown to be uniform across all demographics. Table 2 also indicates that the 15-29-year-old cohort experienced a slight increase in part-time employment during the pandemic.

	Employment Rate			Labour Force Participation Rate			Average Weekly Hours Worked			Part-Time Employment (% of Employed Persons)		
	2019	2020	Diff.	2019	2020	Diff.	2019	2020	Diff.	2019	2020	Diff.
Men (15-29)	83.3	74.0	-9.3	89.2	86.7	-2.5	29.0	23.5	-5.5	21.0	23.9	+2.9
	(37.3)	(43.9)	(0.8)	(31.0)	(34.0)	(0.6)	(20.4)	(20.7)	(0.4)	(40.7)	(42.6)	(0.9)
Men (30-54)	94.2	89.9	-4.3	98.2	97.2	-1.0	37.3	33.8	-3.5	4.9	5.5	+0.6
	(23.4)	(30.2)	(0.3)	(13.1)	(16.4)	(0.1)	(18.9)	(20.7)	(0.3)	(21.5)	(22.8)	(0.3)
Women (15-29)	84.9	72.5	-12.4	89.6	84.4	-5.2	23.7	18.4	-5.3	34.8	37.0	+2.2
	(35.8)	(44.7)	(0.8)	(30.5)	(36.3)	(0.7)	(17.4)	(17.8)	(0.4)	(47.6)	(48.2)	(1.1)
Women (30-54)	93.6	87.5	-6.1	96.3	93.9	-2.4	28.6	25.4	-3.2	21.0	21.1	+0.1
	(23.9)	(33.0)	(0.3)	(18.9)	(24.0)	(0.3)	(17.3)	(18.7)	(0.2)	(40.7)	(40.8)	(0.5)
Parents (Child <13, Men)	95.4	91.4	-4.0	98.7	97.6	-1.1	38.0	34.2	-3.8	3.9	5.1	+1.2
	(20.9)	(28.1)	(0.5)	(11.2)	(15.4)	(0.2)	(18.6)	(20.3)	(0.4)	(19.2)	(22.0)	(0.4)
Parents (Child <13, Women)	92.2	86.7	-5.5	94.7	92.7	-2.0	24.8	21.9	-2.9	27.8	26.6	-1.2
	(26.8)	(34.0)	(0.6)	(22.5)	(26.0)	(0.5)	(17.8)	(18.8)	(0.4)	(44.8)	(44.2)	(0.9)
Parents (Child >=13, Men)	95.2	90.6	-4.6	98.1	96.4	-1.7	37.7	33.5	-4.2	4.0	5.8	+1.8
	(21.4)	(29.2)	(0.7)	(13.5)	(18.5)	(0.4)	(18.8)	(20.9)	(0.6)	(19.7)	(23.3)	(0.7)
Parents (Child >=13, Women)	95.3	89.1	-6.2	97.1	94.3	-2.8	30.1	26.6	-3.5	22.6	22.0	-0.6
	(21.1)	(31.1)	(0.7)	(16.8)	(23.1)	(0.6)	(16.6)	(18.0)	(0.5)	(41.9)	(41.4)	(1.2)
Bachelor's Degree	92.8	88.5	-4.3	95.4	94.3	-1.1	31.1	29.1	-2.0	15.7	15.1	-0.6
	(26.0)	(31.9)	(0.4)	(20.9)	(22.8)	(0.3)	(18.4)	(19.1)	(0.2)	(36.4)	(35.8)	(0.5)

Table 2: Changes in labour market statistics between 2019 and 2020, March – December

⁶ In fact, deteriorating economic conditions in Edmonton led the city to the highest unemployment rate in the nation (Johnson, 2020).

No Bachelor's	89.0	81.0	-8.0	93.5	90.3	-3.2	30.2	25.8	-4.4	19.0	19.6	+0.6
	(31.9)	(38.6)	(0.3)	(25.0)	(29.3)	(0.2)	(19.9)	(20.9)	(0.2)	(39.2)	(39.7)	(0.3)
Calgary	90.2	83.9	-6.3	94.2	92.4	-1.8	30.1	26.7	-3.4	17.8	16.8	-1.0
	(29.6)	(36.8)	(0.4)	(23.3)	(26.4)	(0.3)	(18.6)	(19.6)	(0.2)	(38.2)	(37.4)	(0.5)
Edmonton	90.2	82.8	-7.4	94.6	91.3	-3.3	30.2	26.2	-4.0	17.2	18.3	+1.1
	(29.7)	(37.7)	(0.4)	(22.7)	(28.1)	(0.3)	(18.6)	(20.2)	(0.2)	(37.7)	(38.6)	(0.5)
Other Alberta	89.3	82.9	-6.4	93.2	90.6	-2.6	31.1	26.9	-4.2	18.7	18.9	+0.2
	(30.9)	(37.7)	(0.4)	(25.1)	(29.2)	(0.3)	(21.4)	(20.5)	(0.2)	(38.0)	(39.1)	(0.4)

Notes: Labour market statistics are computed with LFS survey weights. Sample excludes: i) unpaid family workers; ii) respondents who have never worked; and iii) respondents who are not employed and who last worked more than a year ago. For the "2019" and "2020" columns, the parentheses denote the standard deviation, while the difference column reports the robust standard error. All estimates are rounded to one decimal place. From March 2019 to December 2019, we draw from a total sample of 73,941 unweighted survey respondents. Over the same period in 2020, our sample size is reduced to 62,615 individuals.

Source: Canadian Labour Force Survey, public-use microdata files, 2019-2020. Tabulations by authors.

Figure 2: Percent Change in El Usage by Census Division, January 2021-January 2020



Source: Statistics Canada Table 14-10-0323-01. Tabulations by authors.

To gain a better understanding of the possible urban/rural or regional differences in labour market outcomes in the latter half of the pandemic, we use Employment Insurance (EI) data for census divisions in Alberta and take the year-over-year percentage change in the number of EI recipients between January 2021 and January 2020. These data are presented in Figure 2. We find that EI usage increased over 300 percent in the census division including Banff, Canmore and Jasper. With a heavy reliance on the tourism and hospitality industries, this region stands out sharply compared to the rest of the province. Indeed, the hospitality-heavy regions appear to be more impacted than the energy-intensive regions, which were also recovering from a subsequent decline in the price of oil. Comparatively, the least afflicted region is the rural and sparsely populated census division in the central-east part of the province. Notably, all regions were at least 60 percent above their pre-COVID-19 levels in January 2021.

While these descriptive statistics give some insight into the labour market impacts of the COVID-19 pandemic in Alberta, they are far from conclusive. To conduct a statistically rigorous analysis of the crisis, in the next section, we present the regression framework that we use to measure whether the impact of the pandemic has trended differently across time and sociodemographic groups and whether those differences exhibit statistical significance.

REGRESSION ANALYSIS

Based on the overwhelming policy interest in the impact of the COVID-19 pandemic on women and parents, in this section we perform a regression analysis to determine whether Alberta's economic shutdowns generated significant labour market differences between men and women and individuals with and without children. We use a difference-in-difference approach to investigate the impact of the COVID-19 pandemic on labour supply in Alberta. More specifically, for each group of interest, we compare labour force statistics from February 2020 to each of the post-COVID-19 months in 2020. We use February as our comparison month since it captures the most recent state of Canada's labour market before the onset of the crisis. To account for normal seasonal fluctuations in the labour market, we also use data from 2019.

Using weekly hours worked for men and women in March as an example, intuitively, this approach involves computing average hours worked separately for men and women in February 2020 and March 2020. We then take the difference between average hours worked in February 2020 and March 2020 for men and women. We do the same computation using data from 2019. Taking a second difference between average hours worked in 2020 and 2019 thus provides our double-difference estimate of the impact of COVID-19 on the labour market. To examine whether the pandemic produced differential effects across gender, we also take the difference in average hours worked between men and women, which provides our third difference.⁷

EMPIRICAL RESULTS

GENDER-BASED DIFFERENTIALS: HAS COVID-19 GENERATED A 'SHE-CESSION?'

Figure 3 plots the results of the employment regressions estimated using equation (1) and equation (2) for men and women. To be clear, the black squares represent the difference in employment between men and women, while the light grey diamonds/circles indicate the group-specific estimate. The vertical bars denote the 95 percent confidence intervals computed using robust standard errors. When the black vertical bars cross the zero line, there is no statistically significant difference between the groups; for example in the right-hand side of Figure 3, the black bars cross the line in every month, suggesting that there was no difference in the likelihood of being employed and absent from work between men and women.

⁷ The regression equation for the double difference takes the form $Y_{imt} = \alpha + \sum_{m=1}^{11} \delta_m COVIDMonth_m * COVIDYear_t + \sum_{m=1}^{11} \beta_m COVIDMonth_m + \theta COVIDYear_t + \gamma X_{imt} + \varepsilon_{imt}$. The regression equation for the triple difference takes the form $Y_{imt} = \alpha + \sum_{m=1}^{11} \delta_m Female_i * COVIDMonth_m * COVIDYear_t + \sum_{m=1}^{11} \gamma_m Female_i * COVIDMonth_m * COVIDYear_t + \sum_{m=1}^{11} \gamma_m Female_i * COVIDMonth_m * COVIDYear_t + \mu Female_i + \sum_{m=1}^{11} \beta_m COVIDMonth_m + \theta COVIDYear_t + \gamma X_{imt} + \varepsilon_{imt}$.

The panel on the left-hand size of Figure 3 presents estimates for the likelihood of being employed and at work while the panel on the right-hand side of Figure 3 presents estimates for the likelihood of being employed and absent from work. The left panel of Figure 3 confirms that women in Alberta experienced a disproportionate decline in employment relative to men in the first four months of the pandemic. The difference in the likelihood of employment (at work) between men and women is around five percentage points between March and June. These differences are significant at the 5 per cent level. However, the estimated gender differential converges to zero during the summer months and remains at a similar level through the fall and into December. Apart from December 2020, there are no statistically or economically significant differences between men and women in terms of the likelihood of being employed but absent from work during any month of the pandemic. Interestingly, our results suggest that Alberta's second wave did not reproduce the large gender differentials that were observed in the beginning of the crisis. Instead, Figure 3 indicates that between July and December 2020, men and women have faced an almost identical decline (or gain) in employment—around six percentage points below pre-crisis levels.





Notes: Figure 3 displays the regression results for each month of the pandemic estimated using equations 1 and 2. The dependent variable in the left panel is an indicator for employed and at work, while the dependent variable in the right panel is an indicator for employed and absent from work. The vertical bars denote the 95 percent confidence intervals computed using robust standard errors. The black squares represent the difference in employment between men and women (equation 2), while the light grey diamonds/circles indicate the group-specific estimate (equation 1 estimated separately for women and men). Controls include: a dichotomous variable equal to 1 if the respondent is married or in a common-law relationship, the age of the respondent (in 5-year age groups), the respondent's highest level of educational attainment, and a dichotomous variable equal to 1 if the respondent's youngest child is under the age of 13. Sample excludes: i) unpaid family workers; ii) respondents who have never worked; and iii) respondents who are not employed and who last worked more than a year ago.

Source: Canadian Labour Force Survey, public-use microdata files, 2019-2020. Tabulations by authors.

Although we observe a convergence in employment levels in the second half of 2020, labour market disparities between men and women may still exist if their actual hours worked are differentially reduced relative to pre-crisis levels. To investigate this, we plot the estimates for hours worked in Figure 4 for all LFS respondents (left panel) and only those who remained employed (right panel). Our results suggest that, early in the pandemic, both men and women experienced profound declines in weekly actual hours worked at all jobs. For example, in May, actual hours worked declined by seven to eight hours on average for the entire sample of LFS respondents. Among those who were employed, the pandemic generated a significant reduction in hours worked of about four hours per week, on average. However, like the employment estimates, there is some gradual recovery over the course of the summer and fall months. We do not find any compelling evidence that there are statistically different reductions in hours worked between men and women in either group of respondents.



Figure 4: Double- and triple-difference estimates of the effect of the COVID-19 pandemic on actual hours worked by gender, 2019-2020

Notes: Figure 4 displays the regression results for each month of the pandemic estimated using equations 1 and 2. The dependent variable is a continuous measure of hours worked. The left panel contains estimates for the entire sample of LFS respondents (i.e., employed at work, employed absent from work, unemployed and not in the labour force), while the right panel contains estimates for employed respondents (at or absent from work). The vertical bars denote the 95 percent confidence intervals computed using robust standard errors. The black squares represent the difference in hours worked between men and women (equation 2). The light grey diamonds/circles indicate the group-specific estimate (equation 1 estimated separately for women and men). Controls include: a dichotomous variable equal to 1 if the respondent is married or in a common-law, the age of the respondent (in 5-year age groups), the respondent's highest level of educational attainment, and a dichotomous variable equal to 1 if the respondent's highest level of educational attainment, and a dichotomous variable equal to 1 if the respondent's highest level of educational attainment, and a dichotomous variable equal to 1 if the respondent's highest level of educational attainment, and a dichotomous variable equal to 1 if the respondent's highest level of educational attainment, and a dichotomous variable equal to 1 if the respondent's highest explore the age of 13. Sample excludes: i) unpaid family workers; ii) respondents who have never worked; and iii) respondents who are not employed and who last worked more than a year ago.

Source: Canadian Labour Force Survey, public-use microdata files, 2019-2020. Tabulations by authors.

In summary, while we document clear evidence of a 'she-cession' in the first round of economic shutdowns from the COVID-19 pandemic, we do not find evidence of a she-cession in Alberta's second round of economic shutdowns. While this suggests that the province may not need a gender-based recovery plan,⁸ it does not rule out the possibility that policy intervention is warranted among other groups. Indeed, because school and daycare closures have had profound effects on workers with young children, we investigate this group next.

Note that there are important gendered differences in labour market outcomes that existed prior to the pandemic which may require policy attention. These pre-crisis differences are distinct from the disparities that we are investigating in this paper (i.e., those generated by the pandemic).

PARENT STATUS DIFFERENTIALS: DO YOUNG CHILDREN POSE UNIQUE LABOUR MARKET CHALLENGES?

The pandemic has presented a unique set of challenges to parents in Alberta, many of whom have had to balance their time between childcare and formal and informal work activities amid two province-wide states of emergency. School and daycare closures, inhome online learning, and isolation requirements resulting from exposure ultimately result in trade-offs between caregiving, parental supervision of learning activities, and paid employment. In turn, these trade-offs may generate adverse employment consequences for parents simply because a child is present in the household. This trade-off is likely to be especially large among people with younger children who require more attention and supervision (Montenovo et al., 2020).

In Figure 5, we compare the employment status of respondents whose youngest child is under the age of 13 to those whose youngest child is 13 years of age or older and those who have no child in the household at all. We focus on parents with children under the age of 13 as we believe that this age captures the point at which the trade-off between working in the labour market and providing childcare and parental supervision are likely the strongest.

Figure 5 shows that—except for May—between March and August, there are similar declines in the likelihood of being employed and at work among individuals with young children and individuals with older or no children. During the fall months, these gaps widen—particularly in November and December—suggesting that the school closures and the move to online learning associated with Alberta's second round of social distancing measures were likely more detrimental to employment than the shutdown of non-essential businesses. The right-side panel of Figure 5 reveals futher evidence that parents with young children have been especially impacted by the government's social distancing measures: there are large, substantial differences between parents and non-parents in terms of absences from work among those who remained employed. In March, May, June and July, individuals with children under 13 years old were significantly more likely to be absent from work than those with older or no children in the household. During the fall months, these gaps are no longer statistically significant, but individuals with young children remain somewhat more likely to be absent from work than non-parents.

Figure 5: Double- and triple-difference estimates of the effect of the COVID-19 pandemic on employment by presence/age of youngest child, 2019-2020



Notes: Figure 5 displays the regression results for each month of the pandemic estimated using equations 1 and 2. The dependent variable in the left panel is an indicator for employed and at work, while the dependent variable in the right panel is an indicator for employed and absent from work. The vertical bars denote the 95 percent confidence intervals computed using robust standard errors. The black squares represent the difference in employment between respondents whose youngest child is under the age of 13 and respondents: i) whose youngest child is 13 years of age or older; or ii) who have no children at all (equation 2). The light grey diamonds/circles indicate the group-specific estimate (equation 1 estimated separately for these groups). Controls include: a dichotomous variable equal to 1 if the respondent is married or in a common-law relationship, the age of the respondent (in 5-year age groups), the respondent is female. Sample excludes: i) unpaid family workers; ii) respondents who have never worked; and iii) respondents who are not employed and who last worked more than a year ago.

Source: Canadian Labour Force Survey, public-use microdata files, 2019-2020. Tabulations by authors.

There are two main reasons why the employment of parents may have continued to trend downward during the second wave of Alberta's pandemic. First, between September and December 2020, many parents may have elected to use online learning or to provide home schooling for their children rather than risk the uncertainties associated with a return to the classroom.⁹ Second, in October 2020, the federal government introduced the Canada Recovery Caregiving Benefit (CRCB). The CRCB provided \$500 weekly payments to households that had to reduce formal paid employment hours to provide child care.¹⁰ The availability of this income support coincides with the downward trends observed in Figure 5, suggesting that the CRCB may have also incentivized more parents to stay home with their children.

The findings presented in Figure 5 suggest that, even among parents who have maintained employment, there may be a substantial re-allocation of hours away from the labour market towards home production. We investigate this in Figure 6, which shows that the stable

9

Indeed, relative to 2019, the coronavirus has led to a near doubling of enrollment in provincial home-based schooling (Edwardson, 2020) – an option which is eligible for funding from the Alberta government. The ability to receive such funding may impact the labour market decisions of parents differently than non-parents (or parents with older children).

To be eligible for the CRCB, parents must have experienced a 50 percent reduction in weekly working hours because of a need to care for a child under 12. The CRCB is also available to individuals who have reduced their hours worked due to care for another family member that may have been affected by school, daycare or other care facilities. Eligibility also extends to individuals providing care for a child who is at a high-risk of contracting the COVID-19 virus.

differentials in employment observed early in the pandemic mask relatively large declines in hours worked among parents with young children. Subjugated to closures of childcare centres and schools to face-to-face learning, the challenges experienced by this group of workers are considerably different from the rest of the population as parental activities effectively reduce the amount of time available to do other things like formal, paid work in the labour market (i.e., constrained optimization). In most of the months in Figure 6, many of the differentials exhibit statistical significance and are typically in the range of two to four fewer hours worked per week for parents relative to non-parents. Specific to parents of young children, the change in hours worked relative to pre-COVID-19 levels was nearly ten hours less per week on average in May at the extensive margin (left panel). During the summer and fall months, this number reduced slightly to about six hours less on average in December.

Figure 6: Double- and triple-difference estimates of the effect of the COVID-19 pandemic on actual hours worked by presence/age of youngest child, 2019-2020



Notes: Figure 6 displays the regression results for each month of the pandemic estimated using equations 1 and 2. The dependent variable is a continuous measure of hours worked. The left panel contains estimates for the entire sample of LFS respondents (i.e., employed at work, employed absent from work, unemployed and not in the labour force), while the right panel contains estimates for employed respondents (at or absent from work). The vertical bars denote the 95 percent confidence intervals computed using robust standard errors. The black squares represent the difference in employment between respondents whose youngest child is under the age of 13 and respondents: i) whose youngest child is 13 years of age or older; or ii) who have no children at all (equation 2). The light grey diamonds/ circles indicate the group-specific estimate (equation 1 estimated separately for these groups). Controls include: a dichotomous variable equal to 1 if the respondent is married or in a common-law relationship, the age of the respondent (in 5-year age groups), the respondent's highest level of educational attainment, and a dichotomous variable equal to 1 if the respondent is female. Sample excludes: i) unpaid family workers; ii) respondents who have never worked; and iii) respondents who are not employed and who last worked more than a year ago.

Source: Canadian Labour Force Survey, public-use microdata files, 2019-2020. Tabulations by authors.

The relatively greater loss in hours worked for parents with young children still leaves room for a potential gendered effect of the pandemic given that women tend to spend relatively more time on home production and childcare than men (Moyser and Burlock 2018). Are mothers bearing the brunt of increased home production duties? We turn to this question next.

EXAMINING DIFFERENTIALS BETWEEN MOTHERS AND FATHERS: WHO IS MAKING A BIGGER TRADE-OFF?

We start this section by noting that any documented differences in hours worked between men and women should be interpreted with the following caveat: if women with children worked fewer hours relative to men before the pandemic, then they ultimately had fewer hours to give up during the pandemic. In other words, if the pandemic generates a larger negative effect for fathers at the intensive margin, this may simply be because men with children had more hours available to lose given the pre-pandemic status quo in Alberta. We explore whether and how differences in pre-pandemic labour market participation impact the interpretation of our results at the end of this section.

Figure 7 shows the change in hours worked between 2019 and 2020 for respondents with young and older/no children, separately for men and women. During the second wave, there is an evident downward trend in working hours for both men and women with young children. While these trends are similar for both genders, there is a much greater decline in hours worked for men, particularly in November and December when the Alberta government introduced the second round of school closures. This is suggestive of more equitable sharing of parental duties and perhaps provides evidence that the pandemic may be shifting attitudes about the role of men in household work. This is consistent with other research in the UK showing that the pandemic has produced a substantial increase in the share of home responsibilities held by men (Alon et al. 2020; Chung et al. 2020; Shafer et al. 2020). Finally, all the point estimates are consistently below zero for both women and men with young children.¹¹ However, the difference in the reduction of working hours between these two groups is only statistically significant for men in May and the last two months of 2020.

Note that conditioning the data in this way leads to smaller sample sizes and therefore a reduction in the precision of our estimates. While this is potentially concerning, there is little variability across the (separately) estimated months, which should provide readers with additional reassurance in our results.

Figure 7: Double- and triple-difference estimates of the effect of the COVID-19 pandemic on actual hours worked by gender and presence/age of youngest child, 2019-2020



Notes: Figure 7 displays the regression results for each month of the pandemic estimated using equations 1 and 2. The sample includes all LFS respondents (i.e., employed at work, employed absent from work, unemployed and not in the labour force). The dependent variable is a continuous measure of hours worked. The left panel contains estimates for women, while the right panel contains estimates for men. The vertical bars denote the 95 percent confidence intervals computed using robust standard errors. The black squares represent the difference in employment between respondents whose youngest child is under the age of 13 and respondents: i) whose youngest child is 13 years of age or older; or ii) who have no children at all (equation 2). The light grey diamonds/circles indicate the group-specific estimate (equation 1 estimated separately for these groups). Controls include: a dichotomous variable equal to 1 if the respondent is married or in a common-law relationship, the age of the respondent (in 5-year age groups), and the respondent's highest level of educational attainment. Sample excludes: i) unpaid family workers; ii) respondents who are not employed and who last worked more than a year ago.

Source: Canadian Labour Force Survey, public-use microdata files, 2019-2020. Tabulations by authors.

A reoccurring theme in the data on labour market hours is the concept of *persistence* or the tendency for shocks, such as the COVID-19 pandemic, to have long-run effects that dissipate slowly. Because we observe steady reductions in working hours for parents of young children throughout the pandemic, persistence may be particularly concerning for this group. Cumulatively, this means that lower working hours will build up over time, leading to the potential for even greater differences between parents with young children and individuals with older or no children in the medium run. For example, a full-time parent working three hours less per week (relative to an individual without a child under the age of 13) would accumulate an excess loss of 120 hours between March and December—the equivalent of three full-time weeks—attributed to the pandemic effect alone. We examine this empirically in Figure 8, where we illustrate the loss of aggregate cumulative hours relative to 2019, noting that the difference in February is normalized to zero.¹²

Across all groups, the cumulative effect of the pandemic was most severe in the summer months, after which, some momentum in the labour market levelled out the differences relative to 2019. Nonetheless, by December, all gender-parent pairings saw large reductions in total hours worked. Figure 8 suggests that parents of young children (as highlighted by

¹² More specifically, we gather the cumulative sum of total hours worked by parental status and gender from February to December in 2019 and 2020. Then, we normalize these values such that the February amount is set to be 100 in both years. Finally, we take the log difference between 2020 and 2019.

the grey lines) experienced the most profound reductions in hours worked, and that men and women experienced nearly the same cumulative losses by the end of 2020. At 14 per cent, men without young children lost the smallest per cent of hours relative to 2019, while women with young children saw the largest declines by the end of 2020—26 per cent below their 2019 level. However, also note that by December 2020, the cumulative losses among men and women with young children were roughly at the same level. Given the large gaps between these two groups through the spring and summer months, this suggests that changes in hours worked among men in the second wave were substantial enough that they resulted in roughly the same cumulative losses by the end of December 2020.

Given our finding that the hours worked of men with young children have been particularly impacted in the second half of the COVID-19 crisis in Alberta, it is important to distinguish between what can be classified as a 'pandemic effect' and any normal economic disparities that existed before the COVID-19 crisis. For example, Alberta has the highest proportion of stay-at- me home parents across Canada (Statistics Canada, 2018). Although Statistics Canada (2018) does not disaggregate this statistic by gender, this likely also means that Alberta has the highest proportion of stay-at-home mothers. Relative to men, this suggests that women with children likely had less hours to lose when businesses and schools/ daycares started to close throughout the province in March 2020. This, in turn, may explain the smaller reductions in hours worked among women with children in the second wave of Alberta's pandemic compared to their male counterparts (i.e., they may have maxed out reductions in working hours). In other words, these results may simply reflect pre-pandemic gender inequality in Alberta's labour market.



Figure 8: Percent change in cumulative labour market hours lost compared to 2019 by gender and presence/age of youngest child

Notes: Figure 8 displays the per cent change in cumulative labour market hours lost over the course of the pandemic relative to 2019 by gender and presence/age of youngest child. We separately examine the following four sub-samples: i) women whose youngest child is under the age of 13; ii) women whose youngest child is 13 years of age or older or who have no child at all; iii) men whose youngest child is under the age of 13; and iv) men whose youngest child is 13 years of age or older or who have no child at all. Sample excludes: i) unpaid family workers; ii) respondents who have never worked; and iii) respondents who are not employed and who last worked more than a year ago.

Source: Canadian Labour Force Survey, public-use microdata files, 2019-2020. Tabulations by authors.

In Figure 9, we display the monthly historical trends in average hours worked between 2015 and 2020 by gender and parent status. It is clear that, before the pandemic, men with young children consistently worked the highest average weekly hours. In contrast, women with young children tended to work about 10-15 hours less than men with young children. The large gap between these two groups suggests that the division of household labour is still heavily placed on women. Importantly, Figure 9 further confirms that part of the reason we are observing large negative impacts on the hours worked of men with young children may be because they had more to lose in the first place. This general pattern is robust to a related analysis by the age of the youngest child (i.e., youngest child aged 0-5 and youngest child aged 6-12). However, we find the effect of the pandemic has been more severe for those with very young children.





Notes: Figure 9 displays the trends in average hours worked by gender and presence/age of youngest child. The sample includes all LFS respondents (i.e., employed at work, employed absent from work, unemployed and not in the labour force). We separately examine the following four sub-samples: i) women whose youngest child is under the age of 13; ii) women whose youngest child is 13 years of age or older or who have no child at all; iii) men whose youngest child is under the age of 13; and iv) men whose youngest child is 13 years of age or older or who have no child at all; iii) men whose no child at all. Sample excludes: i) unpaid family workers; ii) respondents who have never worked; and iii) respondents who are not employed and who last worked more than a year ago.

Source: Canadian Labour Force Survey, public-use microdata files, 2015-2020. Tabulations by authors.

CONCLUDING REMARKS

In this paper, we examined various labour force statistics to understand the impact of the COVID-19 pandemic across different sociodemographic groups in Alberta. We show that initial large differences in labour market outcomes between men and women dissipated over the summer and fall months and that there is no evidence of an ongoing 'she-cession' in Alberta's second wave. Our most striking result is significantly large differences in employment and actual hours worked between parents and non-parents—*irrespective of*

gender. These findings suggest that pandemic recovery plans which disproportionately focus on gender may be insufficient for addressing the complex labour market dynamics experienced by different groups throughout the pandemic. Rather than focus exclusively on gender, we propose that policymakers target policies towards both mothers *and* fathers with young children.

We must emphasize that the analysis conducted in this study describes the *short-run* effect of the COVID-19 pandemic on Alberta's labour market. For example, we are unable to determine the extent to which the large cumulative reductions in hours worked that we document in Figure 7 will impact long-run outcomes for parents—and mothers especially. When the province is eventually able to return to normalcy, there will likely still be lingering effects from the pandemic on the labour market outcomes of the various sociodemographic groups examined in this article. Moreover, it is important to note that, even though we show that employment has converged between men and women, because the latter group faced a larger decline in employment early on in the pandemic, in the longer run, women may experience more labour market frictions due to missed on-the-job training and other work experience opportunities—a concept known as scarring.¹³ As such, future research must examine whether the pandemic produced differential long-run effects on labour market outcomes for the groups studied in this paper. Such research will also better serve a discussion of long-run policy implications that are beyond the scope of our study and likely help to address labour market differences that existed between men and women before the COVID-19 pandemic.

Further, we also note that, in this chapter, we present estimates of the impact of the COVID-19 pandemic on the Alberta labour market, and we are not analyzing or commenting on the pre-pandemic status quo. Given substantial pre-pandemic labour market differences between men and women with and without children (see Figure 9), it is worth considering whether the status quo is acceptable and what policy options may help facilitate greater female labour force participation. This is not within the scope of our paper, but we raise it as an important consideration for future research.

We end on a hopeful note. Our paper provides preliminary evidence that Alberta fathers may have taken on a greater share of childcare and other household responsibilities during the pandemic. This is consistent with a report from the UK, which provides descriptive evidence that fathers spent more time providing childcare and performing other unpaid household work than they did before the pandemic (Chung et al. 2020). Using a sample of Canadian parents, Shafer et al. (2020) similarly find that fathers increased their participation in housework and childcare during the COVID-19 shutdowns. Finally, in the U.S., Alon et al. (2020) have also documented this change, and further note that, in effect, the pandemic may erode traditional social norms that propagate the uneven distribution of labour in the household.

Together, these studies suggest that the pandemic may generate long-run benefits for both women and men. Women may see reduced household responsibilities if men continue to take on a greater share of parenting duties. In contrast, many men are now recognizing the benefits of spending more time with their children (Lamont 2021). These changes may be everlasting if the pandemic has made firms more willing to provide flexible work

These long-run benefits and costs are further described in Stevenson (2020) and Alon et al. (2020).

arrangements in terms of both when and where work is completed. Indeed, if these trends continue, there may be greater improvements in the future labour market participation of women with young children who disproportionately shouldered the burden of home production well before the COVID-19 era.

REFERENCES

- Alberta Treasury Board and Finance. 2020. *Labour Market Notes, May 2020*. Available from https://open.alberta.ca/dataset/02edb3a8-8a3b-4162-a74c-eaa6de1b7320/ resource/9c3c2962-2a39-4d31-ada3-fe22f1d4e998/download/2020-05-labour-market-notes.pdf.
- Alon, Titan M., M. Doepke, J. Oimstead-Rumsey, and M. Tertilt. 2020. "The Impact of COVID-19 on Gender Equality." National Bureau of Economic Research Working Paper No. w26947.
- Bench, A. 2021. "Nearly 30% of Students Have Opted for Online Learning: Edmonton Public Schools." August 25, 2020. Accessed March 1, 2021. https://globalnews.ca/ news/7298294/edmonton-public-schools-online-learning-september-2020/.Business Council of Alberta. 2020. "The surprising picture of women's economic recovery—it's not what you think." August 14, 2020. Accessed November 10, 2020. https://www. businesscouncilab.com/work/how-are-women-recovering-from-covid-19-economicshutdown/.
- Cameron-Blake, E., Breton, C., Sim, P., Tatlow, H., Hale, T., Wood, A., Smith, J., Sawatsky, J., Parsons, Z., Tyson, K. 2021. "Variation in the Canadian Provincial and Territorial Responses to COVID-19." Blavatnik School of Government Working Paper Series No. 039. https://centre.irpp.org/wp-content/uploads/sites/3/2021/03/Variation-inthe-Canadian-provincial-and-territorial-responses-to-COVID-19.pdf.
- Canada Revenue Agency. 2021. "Detailed data about CRCB applications." January 10, 2021. Accessed February 16, 2021. https://www.canada.ca/en/revenue-agency/services/ benefits/recovery-caregiving-benefit/crcb-statistics/crcb-data.html
- CBC News. 2020. "Alberta Imposes Tough New Restrictions in Bid to Curb Soaring COVID-19 Infections." December 8, 2020. Accessed December 8, 2020. https://www.cbc.ca/news/canada/edmonton/covid-alberta-reatrictions-1.5832682
- Chung, H., Seo, H., Forbes, S., and H. Birkett. 2020. "Working from Home During the COVID-19 Lockdown: Changing Preferences and the Future of Work." Accessed February 23, 2020. https://www.birmingham.ac.uk/Documents/college-socialsciences/business/research/wirc/epp-working-from-home-COVID-19-lockdown.pdf
- Department of Finance. 2020. "Supporting Canadians and Fighting COVID: Fall Economic Statement 2020". Accessed December 3, 2020. https://www.budget.gc.ca/feseea/2020/report-rapport/toc-tdm-en.html.
- Edwardson, L. 2021. "Home School Enrolment Nearly Doubles in Alberta". *CBC News*. January 26, 2021. Accessed February 3, 2021. https://www.cbc.ca/news/ canada/calgary/home-schooling-enrolment-alberta-education-covid-childrenstudents-1.5887496.
- Government of Alberta. 2020. "K-12 Learning During COVID-19." Accessed February 15, 2021. https://www.alberta.ca/k-12-learning-during-covid-19.aspx.

- Hudes, S. 2020. "Alberta to Receive \$45 Million from Ottawa for Child Care Funding". *Calgary Herald*. July 23, 2020. Accessed February 19, 2021. https://calgaryherald.com/news/ politics/alberta-to-receive-45-million-from-ottawa-for-child-care-funding
- Johnson, L. 2020. "Alberta Lost 11,000 Jobs in November, but Unemployment Rate Relatively Unchanged". *Edmonton Journal*. December 4, 2020. Accessed February 1, 2021. https://edmontonjournal.com/news/local-news/alberta-lost-11000-jobs-innovember-but-unemployment-rate-relatively-unchanged.
- Koebel, K. and D. Pohler. 2020. "The Double Lability of Low-Wage Work During the COVID-19 Pandemic." *Industrial Relations: A Journal of Economy and Society.* 59(4): 503-531.
- Lamont, T. 2021. " 'I Had No Idea About the Hidden Labour': Has the Pandemic Changed Fatherhood for Ever?" February 20, 2021. Accessed February 21, 2021. https://www. theguardian.com/lifeandstyle/2021/feb/20/i-had-no-idea-about-the-hidden-labour-hasthe-pandemic-changed-fatherhood-for-ever?CMP=fb_gu&utm_medium=Social &utm_source=Facebook&fbclid=IwAR02oscHR1sduYJr2MgxQhVBhapUnMKc4QkItcsI O3BDGABkAGNasphNA9Q#Echobox=1613816416.
- Lemieux, T., K. Milligan, T. Schirle, and M. Skuterud. 2020. "Initial impacts of the COVID-19 pandemic on the Canadian labour market." *Canadian Public Policy.* 46(1): S55-S65.
- Mertz, E. 2020. "Alberta Offers Grants to Child Care Centres, Day Homes to Prepare for Relaunch." May 6, 2020. Accessed February 16, 2021. https://globalnews.ca/ news/6914051/alberta-grants-child-care-centres-day-homes-covid/
- Montenovo, L., X. Jiang, F.L. Rojas, I.M. Schmutte, K.I. Simon, B.A. Weinberg and C. Wing. 2020. "Determinants of Disparities in COVID-19 Job Losses". National Bureau of Economic Research Working Paper No. w27132.
- Moyser, M., and A. Burlock. 2018. "Time Use: Total Work Burden, Unpaid Work and Leisure." Cat. No. 89-503-X. Ottawa: Statistics Canada.
- Pearson, H. 2020. "Alberta Enacts Second COVID-19 State of Public Health Emergency. Here's What it Means". *Global News*. November 24, 2020. Accessed December 1, 2020. https://globalnews.ca/news/7481178/alberta-covid-19-new-restrictions/.
- Qian, Y. and S. Fuller. 2020. "COVID-19 and the Gender Employment Gap Among Parents of Young Children." *Canadian Public Policy*. *46*(2): S89-S101.
- Ramsay, C. 2020. "Alberta Child Care Programs to Receive Funding Boost as Part of Federal Government's Safe Restart Agreement." September 22, 2020. Accessed February 15, 2021. https://globalnews.ca/news/7350800/alberta-child-care-programsfunding-boost/
- Shafer, K., Scheibling, C., Milkie, M. (2020) "The Division of Domestic Labor Before and During the COVID-19 Pandemic in Canada: Stagnation Versus Shifts in Fathers' Contributions." *Canadian Review of Sociology*. 57(4): 523-549.
- Statistics Canada. 2020a. "Labour Force Survey, April 2020." Statistics Canada Catalogue No. 11-001-X. Ottawa. Accessed February 15, 2021. https://www150.statcan.gc.ca/n1/ daily-quotidien/200508/dq200508a-eng.htm.

- Statistics Canada. 2020b. "Impacts on Immigrants and People Designated as Visible Minorities." Statistics Canada Catalogue No. 11-631-X. Ottawa. Accessed February 15, 2021. https://www150-statcan-gc-ca.myaccess.library.utoronto.ca/n1/pub/11-631-x/2020004/s6-eng.htm.
- Statistics Canada. 2018. "Changing Profile of Stay-At-Home Parents." Canadian Megatrends. Ottawa: Statistics Canada. Accessed February 15, 2021. https://www150-statcan-gc-ca. myaccess.library.utoronto.ca/n1/pub/11-630-x/11-630-x2016007-eng.htm.
- Stevenson, B. 2020. "The Initial Impact of COVID-19 on Labor Market Outcomes Across Groups and the Potential for Permanent Scarring." *The Hamilton Project, Brookings Institution, Washington, DC*.
- Women and Gender Equality Canada. 2021. "Government of Canada to Invest \$100 Million to Support Women Impacted by the Pandemic". Accessed February 15, 2021. https:// www.canada.ca/en/women-gender-equality/news/2021/02/government-of-canada-toinvest-100-million-to-support-women-impacted-by-the-pandemic.html.

About the Authors

John Baker is a Senior PhD candidate in the University of Waterloo's Department of Economics. His main research interests involve the intersection of labour economics and the macroeconomy, and he is currently writing his dissertation on the influences of macroeconomic policy on labour market outcomes in Canada. In addition to his current studies, John holds an MA and BA in Economics from Wilfrid Laurier University.

Kourtney Koebel is a PhD candidate at the Centre for Industrial Relations and Human Resources at the University of Toronto. She is interested in the interaction between the labour market and social policy, as well as poverty alleviation strategies. Her work involves using applied econometrics to evaluate public policy. Kourtney has published several peer-reviewed papers on designing and financing a basic income guarantee in Canada and has contributed to the growing literature on the labour market impacts of the COVID-19 pandemic and the design of policy in a pandemic. She has a BA in economics and political science from Wilfrid Laurier University, a MA in economics from Queen's University and a MA in political science from the University of Toronto.

Lindsay M. Tedds is currently an Associate Professor in the Department of Economics and Scientific Director, Fiscal and Economic Policy, School of Public Policy at the University of Calgary. Her primary research fields are in tax policy, public economics, and Canadian public policy and her approach to research is multidisciplinary. Her approach harnesses the strengths of economics, law, and public administration in the study of public policy problems. Her objective is to make both an academic contribution and to have an impact on Canadian policy-making and policy-implementation. She does this by publishing in a wide range of outlets, including academic peer-reviewed journals across a several disciplines, through a variety of knowledge-mobilization efforts, and by forming strategic partnerships that lead to technical reports for decision makers and the general public.

ABOUT THE SCHOOL OF PUBLIC POLICY

The School of Public Policy has become the flagship school of its kind in Canada by providing a practical, global and focused perspective on public policy analysis and practice in areas of energy and environmental policy, international policy and economic and social policy that is unique in Canada.

The mission of The School of Public Policy is to strengthen Canada's public service, institutions and economic performance for the betterment of our families, communities and country. We do this by:

- Building capacity in Government through the formal training of public servants in degree and non-degree programs, giving the people charged with making public policy work for Canada the hands-on expertise to represent our vital interests both here and abroad;
- Improving Public Policy Discourse outside Government through executive and strategic assessment programs, building a stronger understanding of what makes public policy work for those outside of the public sector and helps everyday Canadians make informed decisions on the politics that will shape their futures;
- Providing a Global Perspective on Public Policy Research through international collaborations, education, and community outreach programs, bringing global best practices to bear on Canadian public policy, resulting in decisions that benefit all people for the long term, not a few people for the short term.

The School of Public Policy relies on industry experts and practitioners, as well as academics, to conduct research in their areas of expertise. Using experts and practitioners is what makes our research especially relevant and applicable. Authors may produce research in an area which they have a personal or professional stake. That is why The School subjects all Research Papers to a double anonymous peer review. Then, once reviewers comments have been reflected, the work is reviewed again by one of our Scientific Directors to ensure the accuracy and validity of analysis and data.

The School of Public Policy

University of Calgary, Downtown Campus 906 8th Avenue S.W., 5th Floor Calgary, Alberta T2P 1H9 Phone: 403 210 3802

DISTRIBUTION

Our publications are available online at www.policyschool.ca.

DISCLAIMER

The opinions expressed in these publications are the authors' alone and therefore do not necessarily reflect the opinions of the supporters, staff, or boards of The School of Public Policy.

COPYRIGHT

Copyright © Baker, Koebel and Tedds 2021. This is an open-access paper distributed under the terms of the Creative Commons license <u>CC BY-NC 4.0</u>, which allows non-commercial sharing and redistribution so long as the original author and publisher are credited.

ISSN

ISSN 2560-8312 The School of Public Policy Publications (Print) ISSN 2560-8320 The School of Public Policy Publications (Online) DATE OF ISSUE September 2021

MEDIA INQUIRIES AND INFORMATION

For media inquiries, please contact Morten Paulsen at 403-220-2540. Our web site, www.policyschool.ca, contains more information about The School's events, publications, and staff.

DEVELOPMENT

For information about contributing to The School of Public Policy, please contact Catherine Scheers by telephone at 403-210-6213 or by e-mail at catherine.scheers@ucalgary.ca.

RECENT PUBLICATIONS BY THE SCHOOL OF PUBLIC POLICY

AN EXAMINATION OF THE CONSERVATIVE PARTY OF CANADA'S PROPOSED CHILDCARE REFUNDABLE TAX CREDIT https://www.policyschool.ca/wp-content/uploads/2021/09/TEG66_Childcare_Tax_Credit.pdf Gillian Petit, Lindsay Tedds and Tammy Schirle | September 2021

NORTHERN AND ARCTIC SECURITY AND SOVEREIGNTY: CHALLENGES AND OPPORTUNITIES FOR A NORTHERN CORRIDOR https://www.policyschool.ca/wp-content/uploads/2021/08/EN_FR_NC25_Arctic-Security_Lackenbauer-Koch.pdf P. Whitney Lackenbauer and Katharina Koch | August 2021

SOCIAL POLICY TRENDS: OVERCROWDING AS A RESPONSE TO HIGH RENT https://www.policyschool.ca/wp-content/uploads/2021/08/SPT-Aug.pdf Ron Kneebone | August 2021

ENERGY AND ENVIRONMENTAL POLICY TRENDS: CANADA'S GHG EMISSIONS FROM TRANSPORTATION AND ELECTRICITY SECTORS https://www.policyschool.ca/wp-content/uploads/2021/08/EEPT-August-2021-FINAL.pdf Alaz Munzur | August 2021

VALUE-BASED MENTAL HEALTH SERVICES FOR YOUTH AND FAMILIES: THE ROLE OF PATIENT-REPORTED OUTCOME MEASURES IN YOUTH MENTAL HEALTH SERVICES

https://www.policyschool.ca/wp-content/uploads/2021/07/HSP-87_Value-Based-Mental-Health.pdf Megan Mungunzul Amarbayan, Travis Carpenter, Michèle L. Hébert, Maria Santana and Jennifer D. Zwicker | July 2021

SOCIAL POLICY TRENDS: THE GAP IN PURCHASING POWER BETWEEN HIGH-AND LOW-INCOME HOUSEHOLDS IN CANADA https://www.policyschool.ca/wp-content/uploads/2021/07/Social-Policy-Trends-Inequalty.pdf Ron Kneebone and Margarita Wilkins | July 2021

DIVERSIFICATION OF THE ALBERTA ECONOMY: IN SEARCH OF STABILITY https://www.policyschool.ca/wp-content/uploads/2021/07/AF11_Diversification_Mansell.pdf Robert Mansell | July 2021

ALBERTA'S PUBLIC DEBT: ENTERING THE THIRD CRISIS https://www.policyschool.ca/wp-content/uploads/2021/07/AF22_AB-Public-Debt_Ascah.pdf Robert Ascah | July 2021

ALBERTA AGRI-FOOD FUTURES https://www.policyschool.ca/wp-content/uploads/2021/07/AF8_AB-Agri-Food_Spencer-McConnell.pdf Karen Spencer and Kim McConnell, CM | July 2021

REVENUE OPTIONS TO CLOSE THE FISCAL GAP IN ALBERTA: PICK YOUR POISON https://www.policyschool.ca/wp-content/uploads/2021/06/AF23_Fiscal-Gap_Crisan-McKenzie.pdf Daria Crisan and Kenneth McKenzie | June 2021

THE FISCAL CHALLENGES FACING ALBERTA'S MUNICIPALITIES https://www.policyschool.ca/wp-content/uploads/2021/06/AF25_AB-Municipalities_Dahlby-McMillan.pdf Bev Dahlby and Melville McMillan | June 2021

WHAT IS THE FUTURE OF CANADA'S ENERGY SECTOR? EMERGING THEMES OF AN OPTIMAL PATHWAY https://www.policyschool.ca/wp-content/uploads/2021/06/AF6_Canadas-Energy-Sector_Van-Wielingen.pdf Mac Van Wielingen | June 2021

ALBERTA IN CANADA'S NET ZERO FUTURE: SEIZING OPPORTUNITIES WHILE ADAPTING TO CHANGE https://www.policyschool.ca/wp-content/uploads/2021/06/AF5_Net-Zero-Future_Bataille-et-al.pdf Chris Bataille, Sarah Dobson, Anna Kanduth and Jennifer Winter | June 2021