FISCAL POLICY AND THE ECONOMY'S GREAT DIVIDE:
Addressing the Income and Jobs Gap in the Traditional Economy

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INTRODUCTION AND OVERVIEW

As Canada recovers in lopsided fashion from its historic economic contraction in the first half of 2020 (1H2020), the economic and social costs of the first-ever services-led recession are striking. The V-shaped recovery of equity and debt markets, and the surge in technology industries contrast starkly with the major income declines and job losses in much of the traditional economy. They make it essential to address the ongoing "Great Divide" among financial markets, technology sectors and most of the traditional economy.

While Canada's fiscal and monetary stimulus prevented far greater declines in employment and incomes during the 1H2020 recession, only 63% of the 3.3 million job losses in the recession have been recovered to date.[1] Even with the Canadian economy's initial rebound through mid 2020, many workers and households continue to struggle. The pandemic-driven recession and "K-shaped" economic recovery have resulted in marked sectoral differences and distributional effects, exacerbating the Great Divide among Canadians.

Looking ahead, the pandemic and economic risks to, and uncertainty about, the shape of the recovery abound, including the potential for renewed outbreaks and a second wave of COVID-19. Even if (i) the optimistic scenario for vaccine development, distribution and widespread vaccination occurs, and (ii) technology, testing and treatment advances bridge effectively to this outcome,[2] the pandemic's stress upon economic and societal fault lines and fissures will last much longer.

Addressing the Great Divide's challenges is thus essential to Canada's transition to a sustainable expansion. The limits to monetary policy in stimulating growth, long-term economic prosperity and addressing sector-specific issues, and the importance of fiscal policy with near zero-interest rates merit emphasis.[3] Prudent rethinking of fiscal policy is timely given Ottawa's new and more activist economic policy direction as set out in the Throne speech.[4] As important, the pandemic has increased the risks of policy errors via new fiscal initiatives driven by popular demands rather than solid analysis and empirical evidence.

Our paper has three overarching themes.

- COVID-19's Accelerator Role in Disruption and Divergence — The pandemic has telescoped years of technology adoption and disruption into months and intensified the economy's fault lines and fissures.

- Fiscal policy needs more balance with a greater focus on investment — Policy must transition to more growth-supportive capital spending from its current focus on helping consumption.

- Economic policy needs to achieve greater resilience in the Traditional Economy — Better policy is vital to helping people in routine jobs transition to sustainable work and incomes.

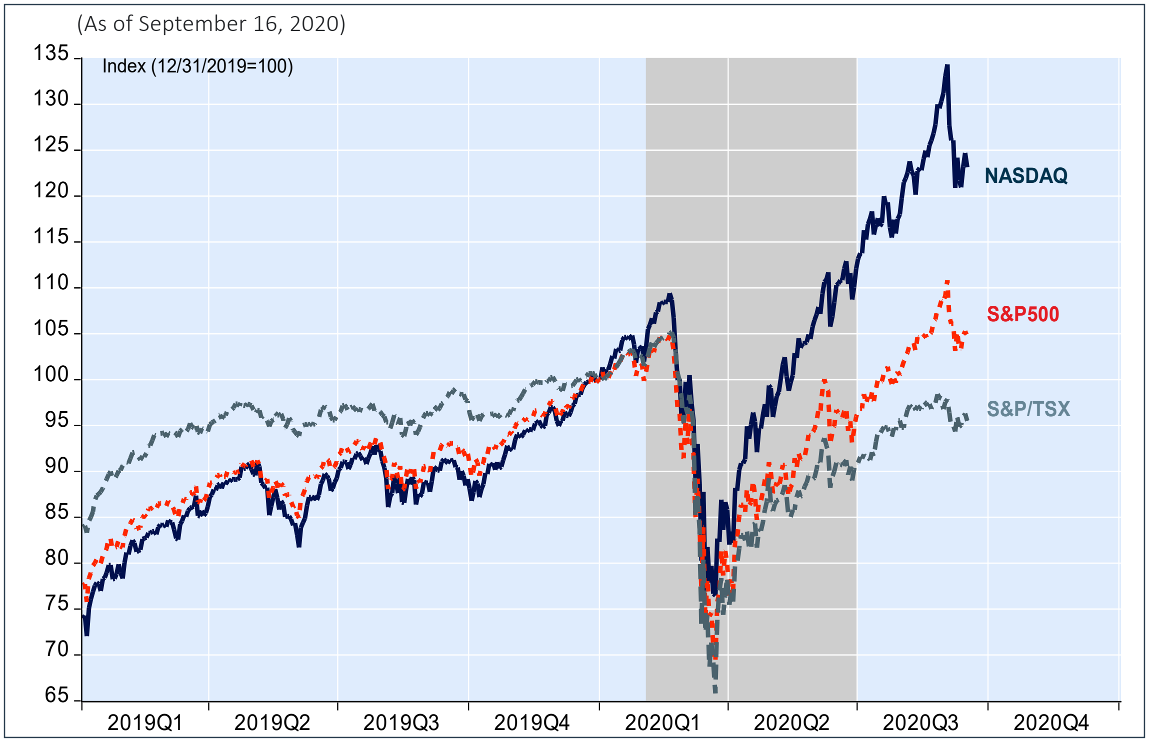
1. THE DIVERGING TRADITIONAL ECONOMY VS. THE FINANCIAL MARKETS AND TECHNOLOGY SECTORS

Global Financial Crisis Redux: Financial Assets and Markets Rebound Sharply with Policy Support

Canadian and global financial markets experienced severe financial market distress in late February-March 2020 as the pandemic and government-imposed lockdowns led to the largest economic contraction in Canada and globally since the Great Depression. The speed of the fall in stock markets was the fastest ever while debt markets experienced major stress from severe illiquidity even in the highest-quality, most stable government bond sectors.

In response, central banks swiftly and aggressively cut interest rates to near or slightly below zero levels coupled with enormous increases in quantitative easing (QE) in Europe, the UK and the US plus the first-ever massive QE by the Bank of Canada. The sheer scale and speed of central bank measures stabilized financial markets by the early spring, and set the stage for the staggering rebound to date. As of mid September, the NASDAQ was up strongly year to date (albeit in volatile fashion), the S&P 500 was modestly higher and Canada's TSX had almost fully recovered (Chart 1). Record annual volumes of corporate and government bond issuance have already occurred in 2020 while the prices of gold and other assets have soared, including house prices which reached new heights in Canada, the US and much of Europe.

Chart 1: V-shaped Recovery — NASDAQ, S&P 500, S&P/TSX Performance



Source: Bloomberg and NBF Economics and Strategy

Great Divide in the Non-Financial Economy — Technology's Growing Impacts

COVID-19's accelerator role has telescoped multi-year technology adoption and disruption into a matter of months in 2020. While increasing digital payments, e-commerce and working from home trends were well underway before the pandemic,[5] COVID-19 put these trends on steroids, transforming their breadth and pace.

E-commerce jumped by 71% in June 2020 vs. June 2019 during a period when overall retail sales rose just 3%.[6] Digital payments leapt with the online shopping surge as well as customers and business' strong preference for non-cash payments given the health advantages in minimizing COVID-19 transmission risks.[7] In labour markets, robust growth in e-commerce and digital usage has further boosted the already strong, ongoing demand for workers with digital skills as well as increasing employment in fulfillment centres and other related logistics tasks.

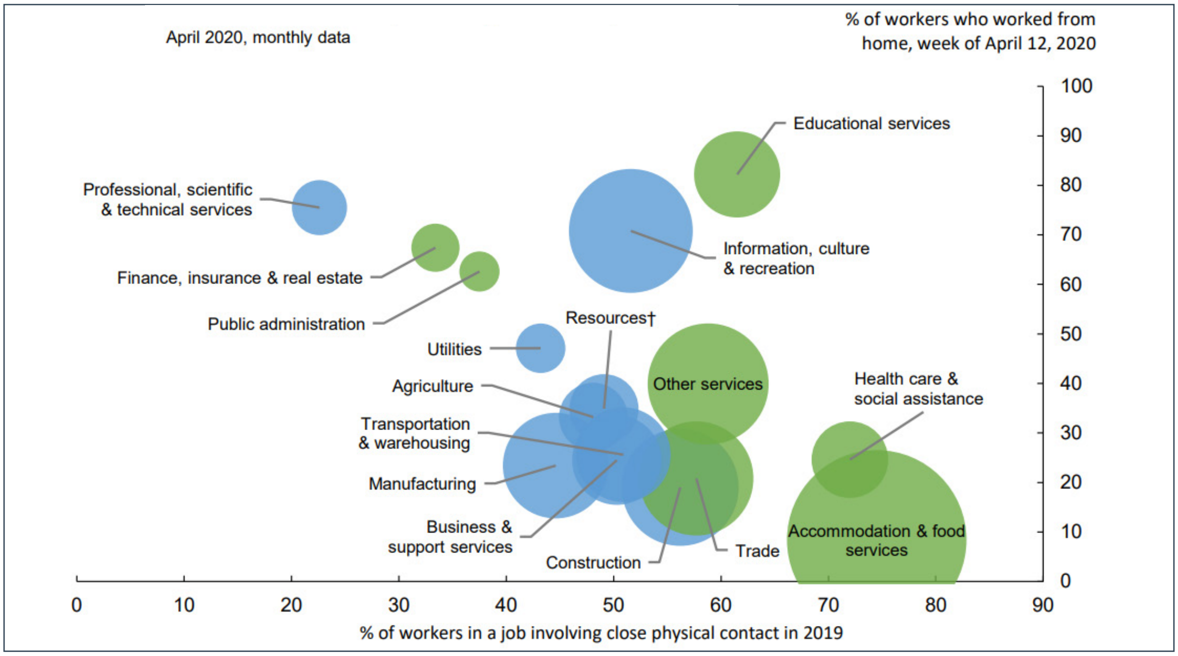
Equally transformational has been the pandemic-driven pivot for employees in many sectors from working in offices to extensively or exclusively doing so from home, at least through the end of 2020.[8] Even after the pandemic is over, the balance between working in offices and at home is expected to be structurally different from pre-COVID-19 times, although it will vary significantly by sector and country.[9] The repercussions for budgets at all three levels of government and the resulting changes needed in economic policy are significant.

Many Traditional Economy Workers Endure Income Declines and Job Losses

The gap between knowledge-intensive worker and less-skilled worker incomes and jobs has been growing for several decades, especially since the Global Financial Crisis (GFC). Median income growth was lacklustre even with government transfers during the decade prior to the pandemic, but was especially weak before these payments.[10] The rise of the gig economy with its precarious employment was significant. For low and medium-income earners, the escalating expense of rental housing, and soaring house prices sharply increased their costs of living, while high and increasing daycare costs outside Québec added more pressure on young adults.

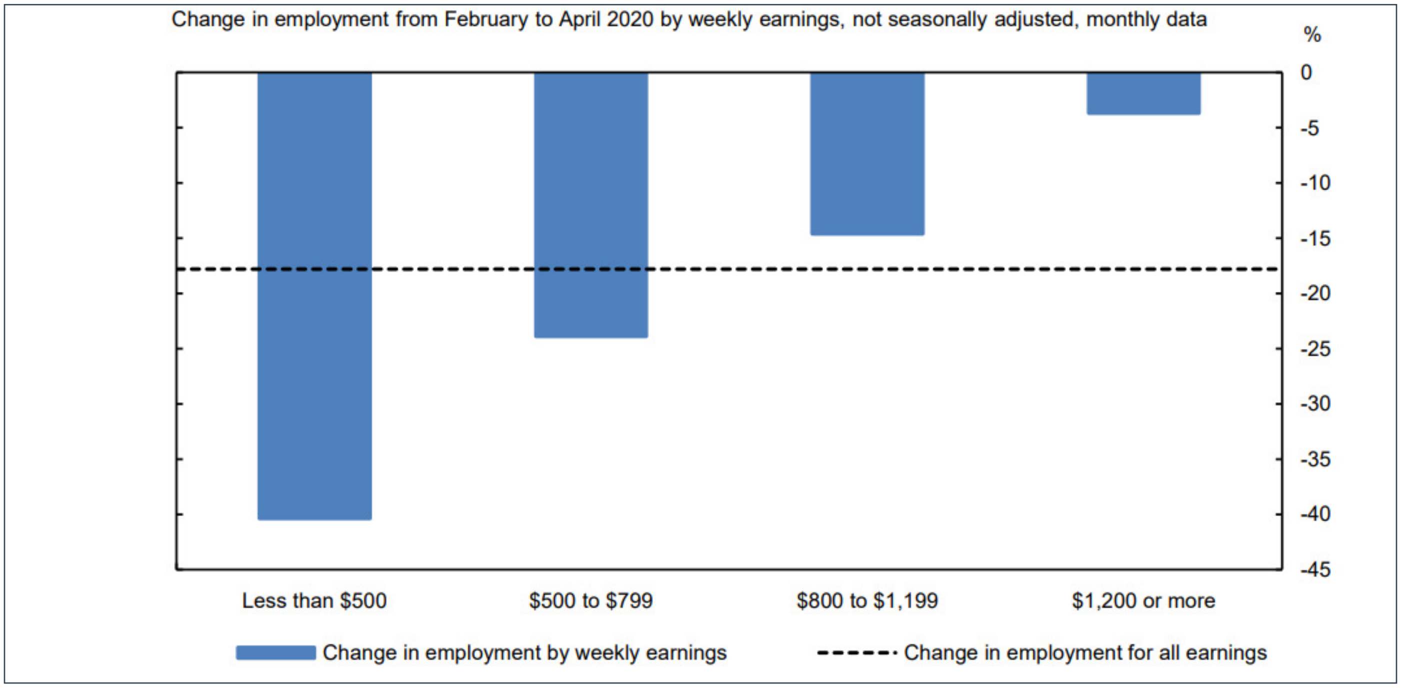
COVID-19 fundamentally worsened the Great Divide with the "K-shaped" economic recovery. In stark contrast to the strength in financial markets, technology sectors and selected essential and home-focused goods and services (e.g., groceries, home renovations and supplies, pharmacies), other industries were slammed in the first ever services-led recession.[11] 38% of workers earning $16 or less per an hour lost their jobs compared to a decline of 13% for all other paid employees. Through the early recovery in mid 2020, the employment of low-wage workers remained much farther below pre-pandemic levels than for all other employees. Women, particularly those working in lower-paid service occupations, suffered disproportionately.[12] Women's labour force participation plunged to three-decade lows during the recession's initial two months as 1.5 million lost their jobs. Women accounted for roughly 45% of the decline in hours worked during the economic contraction, but are projected to benefit by only 35% in the rebound. Young people were also hit hard by employment losses and fewer hours worked. "At one point, more than half of the potential youth labour force was underutilized."[13]

Chart 2: Job Losses Were More Severe in Sectors with Close Contact and Less Remote Work, Affecting Women in Particular



Source: Statistics Canada and Bank of Canada Calculations[14]

Chart 3: The Declines in Employment were Greatest for Low-Wage Workers



Source: Statistics Canada and Bank of Canada Calculations[15]

The pandemic's sharp acceleration of technology disruption in less-skilled/routine work worsened secular pressures on the incomes and jobs of many workers in numerous traditional sectors. Non-routine employment relative to routine jobs had increased substantially over the three decades prior to the pandemic, with virtually the entire total of routine work job losses occurring in bursts during three recessions.[16] These losses in routine work and gains in non-routine work reflect automation within firms and re-allocation of employment across firms.

In 2020, greater demand for e-commerce, with its attendant delivery, digital and logistics employment growth, is occurring at the expense of retail bricks and mortar store closings and job losses. Consumers' safety fears from COVID-19 have created existential crises for many accommodation, in-person entertainment and leisure, travel and related businesses. The pandemic's less skilled/routine work losses are expected to exceed those of earlier recessions given the incentives for technology adoption and labour substitution via automation to address transmission prevention needs[17] to ensure safer workplaces, hospitality spaces, airports *etc*.

In sharp contrast to the GFC, the income losses of many workers in the traditional economy were significantly mitigated by various emergency fiscal measures in 2020.[18] (Indeed, many low-wage earners received more than their previous employment compensation.) Canada's temporary government programs included a range of income supports, wage subsidies, rent and other relief.[19] Their provision of cash flow and income provided vital help to those hardest hit in the traditional economy through the worst of the recession and the initial recovery phase.

However, while these fiscal measures were essential for affected workers and the economy overall, they are inadequate and ill-suited as long-term solutions to the traditional economy's job losses and poor incomes for multiple reasons. Problems arising from the severity of the pandemic and economic contraction coupled with the urgent pressure for reactive policy responses meant that a number of temporary programs had serious design flaws.[20]

Short-term support, while vital as a cash flow bridge from job losses or reduced work hours, is also far from sufficient to transition displaced workers via education and training to non-routine occupations that will be in demand over the medium and long term.[21]

2. RETHINKING FISCAL POLICY IN EXTRAORDINARY TIMES

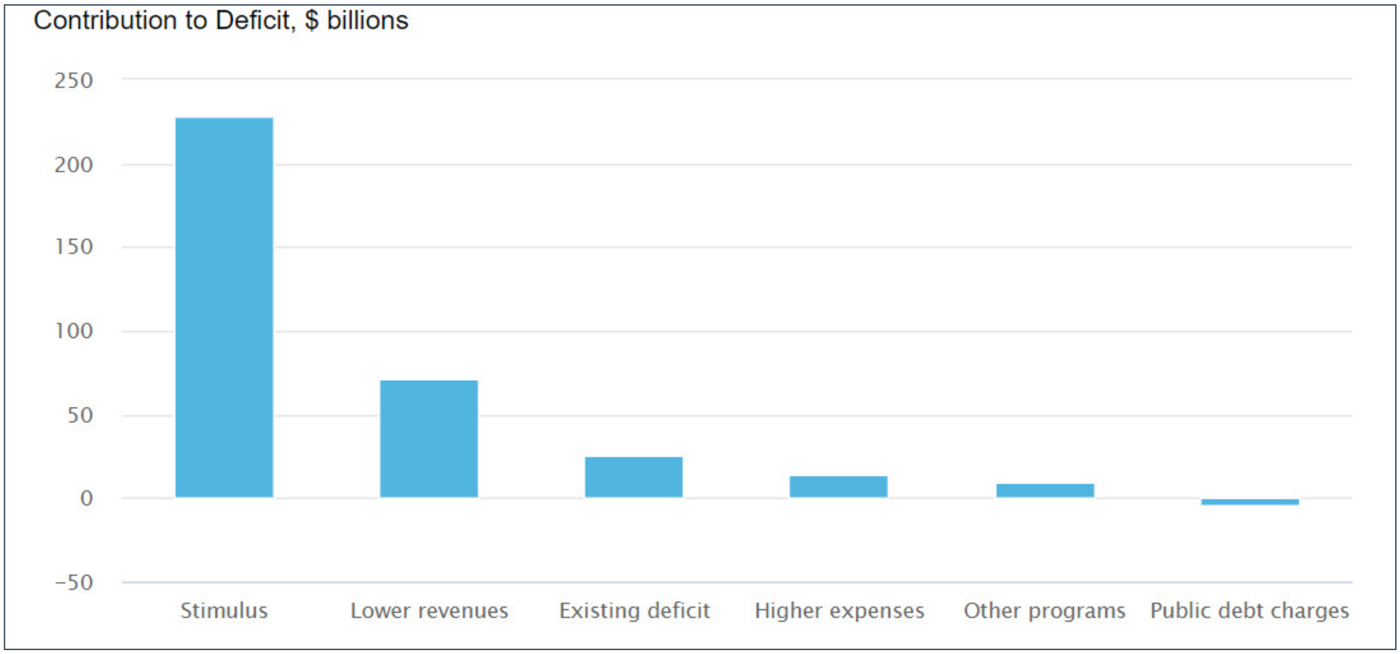
Canada has reached a critical decision stage in its approach to and its model for fiscal policy as part of an overdue rethinking of macroeconomic policy generally.[22]

Enormous and Rapid Stimulus Avoids GFC Mistakes of Many Countries

Canada's massive fiscal support in combination with huge monetary liquidity measures and major regulatory relief was clearly decisive in 1H2020 in avoiding a far more severe contraction with much larger job and income losses for traditional economy workers.[23] Notably, fiscal stimulus has been geometrically larger than during the GFC. This fiscal policy support was essential in preventing the excessive reliance on sustained monetary easing, especially after the GFC when fiscal stimulus in many countries was unwound too early and/or austerity was adopted.[24]

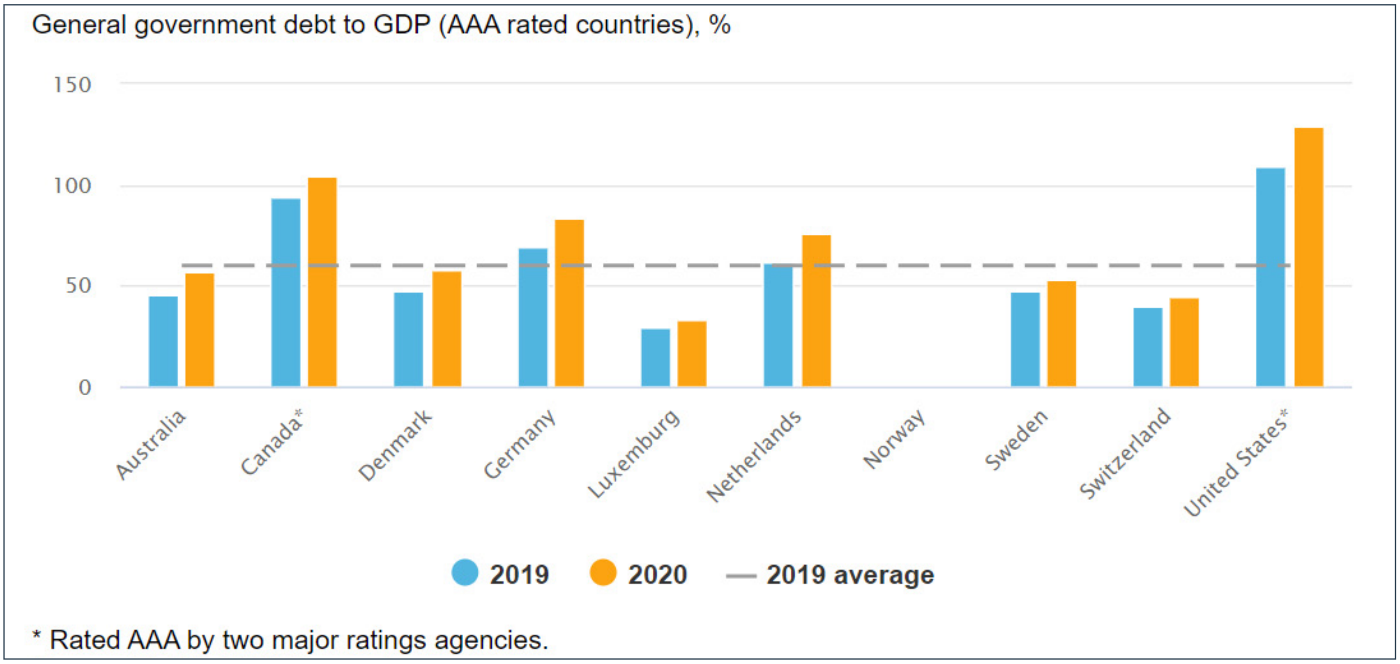
Yet, Canada's numerous and wide-ranging "emergency" fiscal programs have resulted in the largest-ever peacetime deficit of at least 16% of GDP,[25] and a jump in the combined federal-provincial debt ratio to GDP to a minimum of 100% in fiscal 2020-21. Canada is in good company with other AAA-rated governments such as Germany and the US in terms of enormous stimulus, government deficits and debt levels.[26] Yet, the crucial issues of viable fiscal paths beyond 2020-21 and the program design, implementation and selection challenges now loom very large in achieving a much better future approach.

Chart 4: Stimulus and Worse Economic Conditions Drive Record Deficit



Source: Department of Finance, RBC Economics[27]

Chart 5: Debt Picture Deteriorates Across the Globe



Source: OECD, RBC Economics[28]

Advocates of continued huge deficits cite their feasibility, necessity and sustainability.[29] These supporters' rationale begins with Canada's fiscal deficits being similar to the unprecedented approaches in all G-7 countries and most advanced economies globally. They point to the Government of Canada's debt ratio to GDP being among the lowest in the G-7, allowing for a deficit and debt surge this fiscal year and next. Near-zero interest rate levels coupled with the enormous buying programs of the Bank of Canada (similar to other major central banks) make the funding costs and sizes of these deficits manageable.[30] Major slack in many labour and product markets makes the risk of inflation minimal. In addition, ongoing fiscal support is key to avoid the post-GFC fiscal mistakes of unbalanced and excessive reliance on monetary policy.

In contrast, while a number of critics support the use of large-scale government support during the recession and early recovery this fiscal year and next — and thus much-increased deficits — they warn that tightening will be essential in the medium and long term. They point to the combined federal-provincial debt ratio to GDP as the true measure of Canada's deficit and debt capacity. These total government debt ratios show much less room beyond this fiscal year and next. Relying on near-term minimal inflation/potential disinflation ignores future inflation risks from the structural changes underway in global labour markets, supply chains and trade. They stress the need to avoid escalating debt costs if interest rates rise in the medium and long term.

Other critics cite the political economy risks. Ongoing deficits encourage rent-seeking and other behaviour that makes it difficult to achieve sufficient and timely counter-cyclical policy during expansions as Canada's record prior to the GFC shows.[31] This was again evident over the past decade since the GFC. Canada entered 2020 with a deficit position despite the longest post-WWII expansion in history, and with combined federal and provincial debt that increased from $837 billion in 2008 to $1.5 trillion in 2019.[32]

Some argue that the deficit and debt are already far too large in 2020. These critics see declining returns to increasing government debt from already high levels with major costs such as reduced levels of future economic growth and lesser effectiveness of monetary stimulus.[33] Others highlight the need for a fiscal anchor such as a medium and long-term debt-to-GDP target to ensure that fiscal policy is sustainable, to prevent the debt burden from becoming excessive, and to avoid leaving excessive costs to future generations of Canadians.[34]

Calibrating Fiscal Policy: Avoid Excessive and Too Early Fiscal Tightening

Looking ahead, Canada's policy regarding its largest-ever peacetime deficits ultimately will need to be significantly counter-cyclical to avoid large-scale structural deficits and future debt trap risks. A meaningful, viable medium-term fiscal anchor must be part of Canada's fiscal approach.[35]

However, through at least 2020 and 2021, Canada's fiscal stance needs to also reflect several other factors, beginning with avoiding tightening too early and doing so too aggressively. We would underscore Japan's experience as a cautionary tale in this regard. Three times since 1997, it has triggered a downturn from aggressive tax increases to address deficits.[36]

Fiscal stimulus' greatest aggregate demand benefits occur in the recovery phase[37] as well as in supporting consumer segments with the highest propensity to spend (low and middle-income earners). Fiscal measures to help hard-hit individuals with temporary income and job support are also crucial to inclusiveness as they provide the greatest benefits to low and middle-income earners. Sustaining aggregate demand will be crucial to fostering the transition in the recovery from the initial stages in 2020 led by consumption and government to a broader-based, more durable expansion boosted by much-needed increases in private sector investment.

Barring a severe and sustained recurrence of COVID-19 and/or a major recession, ultimately, large budget deficits and debts in advanced economies will need to be resolved by some combination of real GDP growth, inflation and tax increases/spending cuts.

However, it will not be evident until later next year how much growth in real output and increases in prices will contribute to reducing Canada's and provincial deficits. It is also too early to gauge next year's and future deficits given the (i) end to various temporary income support and tax relief programs plus new initiatives in late 2020 and early 2021; and (ii) the rebound in tax revenues as the economy recovers. In sum, policymakers will be in a much better position next year to gauge the extent and appropriate timing of fiscal counter-cyclical tightening required in 2022 and beyond.

3. Provide Greater Structural Support in Fiscal Policy to Assist Traditional Economy Workers

In recommending continued massive fiscal stimulus in the near term, much more focus must be put on transitioning displaced and struggling traditional economy workers to non-routine jobs that offer better incomes and security. Better approaches require effective fiscal investment, not just short-term spending surges to support consumption, to meet these needs of the whole economy.[38] These begin with improved transitional income support and more effective skills training for non-routine work. Better policy also encompasses greater coordination in investing in infrastructure, providing more daycare as well as better education and other labour adjustment support, and addressing other key policy areas.[39]

Greater Fiscal Spending on Capital and Traditional Economy Supportive Programs

Deficit spending can be "capital-augmenting" in support of growth, innovation, investment and the supply of skilled labour or it can be supportive of consumption. Capital-augmenting expenditures on infrastructure (including telecommunications) and people (education and skills training) will be critical to the recovery and expansion, long-term growth, and helping workers in the traditional economy. However, new government capital investment and program support must be well designed, implemented and co-ordinated given the enormous scale of Canada's projected deficits, and the reality that job losses during recessions are followed by increased demand for different jobs in recoveries. As noted above, the changed demand for labour this time will reflect the increased technology disruption and automation incentives of COVID-19.

Increased Investment in Education and Training (Human Capital) and Infrastructure

The importance of education and skills training -- already high -- has soared with COVID-19. The accelerated tech disruption has spurred demand for workers with digital, literacy and/or numeracy skills with notable labour supply shortages ranging from the STEM sector to an array of trades.[40] Even with recent provincial policy changes, the need to upgrade education and training from primary school through college and university continues.[41] As important, increased and more effective infrastructure investment is critical. This capital spending has large-size direct, indirect, induced and systemic benefits for worker productivity,[42] incomes and job opportunities. Despite more provincial infrastructure spending in recent years, greater federal investment, including support for municipal and digital infrastructure, is needed.[43]

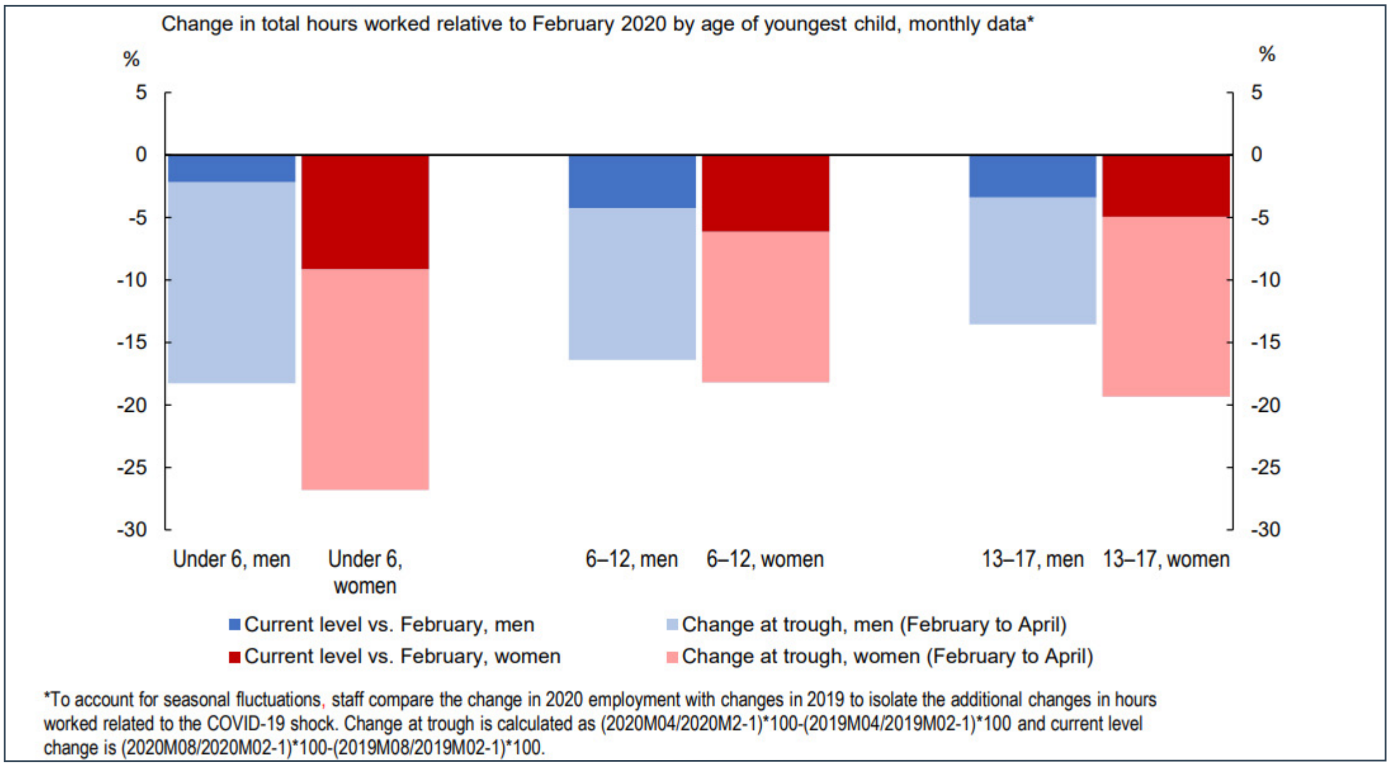
Better Targeted Income Support Beyond the Pandemic and Improved Work Incentives

The pandemic's domestic and global real-life tests of various policies for income and job support in 2020[44] offer an historic opportunity for improvement. Canada's income, wage and other initiatives to assist laid-off workers and insufficient incomes must become more transitional in helping traditional economy workers move from temporary support to being equipped with the education, skills and training for better jobs and incomes.[45] This includes designing and implementing effective measures to provide targeted income support for displaced workers in their transition to new jobs without creating disincentives to find new work. The recent extension of the emergency income benefit and enhanced employment insurance and other supports are major steps in this direction,[46] but it is essential now to have a broad-ranging general income and labour adjustment policy review to develop a more effective and efficient approach to COVID-19,[47] and to the longer-term impacts of tech disruption.

Addressing Daycare Shortages Outside of Québec

Daycare is a foundational investment in the economy as well as in social equity. The challenges of working from home during COVID-19 have highlighted the importance of daycare and the economic penalties for parents of young children, especially mothers, imposed by its inadequate provision outside of Québec (Chart 6). Canada cannot achieve a genuinely inclusive recovery and sustainable expansion nor will it reach its economic potential when at least one parent must stay home given the absence of sufficient quality daycare at reasonable price.

Chart 6: Among Parents, Mothers Have Seen a Greater Decline in Hours Worked and a Slower Recovery than Fathers



Source: Statistics Canada and Bank of Canada Calculations[48]

CONCLUSION

The staggering impact of COVID-19 across so many dimensions of people's lives in 2020 includes its role in accelerating disruption and divergence. The pandemic's strains and stresses, especially the economic and inclusiveness challenges, create potentially grave risks if the Great Divide of COVID-19 is not addressed. Canada needs better fiscal policy approaches that focus on the whole economy and achieve greater resilience for traditional economy workers' incomes and jobs. This includes much-improved program design and implementation that achieves genuine investment in people and infrastructure, not just soaring government spending. How the fiscal money is spent to achieve better longer-term outcomes is as important as how much fiscal support is provided.

In sum, there is a clear and urgent need for fiscal policy leadership that closes the gap between the financial markets and technology industries relative to most of the traditional economy. Fiscal policy can achieve this result by developing an action plan that focuses on investment in crucial areas, such as physical and digital infrastructure, daycare, and improved education and skills training. In doing so, the fiscal plan must also be linked to a fiscal framework with appropriate fiscal anchors in order to be credible and effective.

ENDNOTES

1. Warren Lovely & Taylor Schleich, "Market View – Canada: Extending its lead in job recovery race", National Bank of Canada Financial Markets, September 4, 2020, pp. 1-2.

2. There are significant opportunities for targeted interventions (e.g., making wearing masks mandatory; enhanced testing, tracing and isolation; and temporarily closing close contact locations such as bars and indoor restaurants) to be effective at a fraction of the costs of total lockdowns in response to COVID-19 outbreaks. See for example James H Stock, "Lockdowns are too blunt a weapon against Covid", *Financial Times*, September 4, 2020.

3. Carolyn Wilkins, "Opening remarks", pp. 1-2, and "Closing Remarks", p. 2, Bank of Canada Workshop, *Toward the 2020 Renewal of the Monetary Policy Framework*, August 26, 2020. The limits on monetary policy are also evident in the advocacy of other major central banks for fiscal support. See, for example, European Central Bank President Christine Lagarde's various calls for fiscal stimulus such as her "Statement" at the forty-first meeting of the International Monetary and Financial Committee, April 16, 2020; and Fed Chairman Powell's repeated statements on the importance of fiscal stimulus for the economic recovery from the pandemic such as his speech "Current Economic Issues" to the Peterson Institute for International Economics, May 13, 2020.

4. Canada. Governor General. "A stronger and more resilient Canada: Speech from the Throne to Open the Second Session of the Forty-third Parliament of Canada", September 23, 2020.

5. From 2013 to 2018, electronic payments volume increased in market share by 18 per cent of the total payments market volume led by the increased adoption of emerging payment channels, including contactless, e-commerce and person-to-person payments". See Payments Canada, *Canadian Payment Methods and Trends* 2019, (Ottawa: Payments Canada, 2019), p. 10. The strongly increasing use of e-commerce-- witness Amazon's and Shopify's exceptional growth in Canada — is also evident in e-commerce sales more than doubling during the January 2016 to February 2020 period. See Jason Aston, Owen Vipond, Kyle Virgin & Omar Youssouf, "Retail e-commerce and COVID-19: How online shopping opened doors while many were closing." Statistics Canada, July 24, 2020. On remote working trends, technology enabled numerous firms to adopt or test one day a week work from home options for their employees/consultants prior to the pandemic.

6. Statistics Canada, "Retail Trade, June 2020", *The Daily*, August 21, 2020. While e-commerce sales more than doubled during the four years prior to February 2020 as noted above, they jumped by 99% in just the three months to May 2020. See Aston, Vipond & Youssouf, "Retail e-commerce and COVID-19" cited above.

7. Payments Canada's May 2020 payments study results during COVID-19 included 62% of Canadians reporting using less cash than before the pandemic. Use of Interac, Paypal and credit cards was up notably, including 53% reporting using card or mobile tap payments more for in-store purchases. See https://www.payments.ca/about-us/news/covid-19-pandemic-dramatically-shifts-canadians%E2%80%99-spending-habits

8. As a result of COVID-19 and government lockdowns, 3.4 million people started to work from home by April. Even with the recovery through mid 2020, 2.5 million people who began to work at home with the economic shutdown continued to do so in August. Statistics Canada, "Labour Force Survey, August 2020", *The Daily*, September 4, 2020.

9. Statistics Canada data show that over 80% of jobs in: financial and insurance services; educational services; and professional, scientific and technical services have the potential to be done by teleworking (working from home), and more than half of the jobs in: information and cultural industries; public administration, and wholesale trade could be done from home. See Zechuan Deng, René Morissette & Derek Messacar, "Running the economy remotely: Potential for working from home during and after COVID-19", Statistics Canada, May 28, 2020. For an international perspective, see *Financial Times*, "Why workers in some countries are more comfortable about returning to the office", August 23, 2020; and *The Economist*, "The future of the office: What a way to make a living", September 12, 2020.

10. See data from 1976 to 2018 in Statistics Canada, "Market income, government transfers, total income, income tax and after-tax income by economic family type", https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1110019001

11. See Statistics Canada, "Labour Force Survey, August 2020", *The Daily*, September 4, 2020.

12. RBC Economics, "Pandemic threatens decades of women's labour force gains", July 16, 2020, p. 1.

13. Tiff Macklem, "Economic progress report: a very uneven recovery", Remarks to The Canadian Chamber of Commerce, Bank of Canada, September 10, 2020.

14. *Ibid*, p. 3.

15. *Ibid*.

16. Joel Blit, "COVID-19 Will Transform our Economy if we get our policies right", *Intelligence Memos*, C.D. Howe Institute, July 16, 2020.

17. "Superimposed onto the usual recessionary forces of industrial transformation, are COVID-specific health incentives to automate. By replacing workers with algorithms and robots, firms not only help mitigate the risk of infection, they also reduce risk to their operations. Moreover, firms that are already more highly automated will suffer less significant disruption to operations and therefore increase market share." in *Ibid*.

18. "Compensation of employees fell 8.9%—the steepest drop ever recorded. The majority of industries experienced declines, led by personal and professional services, construction, manufacturing, and wholesale and retail trade. [Yet] Although compensation of employees dropped considerably in the quarter, this was more than offset by a significant increase in government transfers to households, meant to blunt the impact of the COVID-19-related measures; the result was a 10.8% increase in household disposable income." Statistics Canada, "Gross domestic product, income and expenditure, second quarter 2020", *The Daily*, August 28, 2020.

19. The Department of Finance's June 2020 Fiscal Monitor showed that Canada Emergency Relief Benefit (CERB) payments were $43.6 billion during 2Q2020, https://www.canada.ca/en/department-finance/services/publications/fiscal-monitor/2020/06.html. Other examples of fiscal support that significantly mitigated income losses include the Canadian Emergency Wage Subsidy (CEWS) that helped employers continue to pay employees during second quarter 2020. See Statistics Canada, "Gross domestic product, second quarter" cited above.

20. Various much-needed changes to the CERB, CEWS and other emergency programs have been undertaken since their inception. As examples of CERB's problems, see Benjamin Tal, "CERB and the Incentive to Work" in CIBC Economics, *The Week Ahead*, August 10-14, 2020 p. 1; for more general policy-making risks and challenges in the pandemic, see James K. Stewart and Hugh O'Reilly, "Long-Term Thinking in Extraordinary Times: Policy-Making & Regulation during the COVID-19 Crisis", Global Risk Institute in Financial Services (April 2020), pp. 1-2.

21. Improved support must also consider the type of recipient and impacts. For example, unless carefully designed, calibrated and temporary, if the support is provided via the employer, it may actually impede the transition for workers from existing less skilled/routine work to non-routine jobs.

22. On the issues facing current macroeconomic paradigms and mainstream thinking, see *The Economist*, "Starting over again: The covid-19 pandemic is forcing a rethink in macroeconomics", July 25, 2020; and on the challenges of economic approaches adapting to changing environments, *The Economist*, "When the facts change: Economics sometimes changes its mind", August 8, 2020.

23. According to the Bank of Canada's analysis, the negative effects of job and income losses on total employment income "were largely offset by the swift policy actions of the federal government" — see Lawrence Schembri, "Living with limits: household behaviour in Canada in the time of COVID-19", Remarks to the Greater Saskatoon Chamber of Commerce, Bank of Canada, June 18, 2020. Private sector analysts have echoed this assessment. For example, the rapid recovery in retail sales during May through July reflected pent-up demand, improved confidence, and the benefits of government income support. See Kyle Dahms, "Canada: Retail sales soared at the end of a bleak quarter", National Bank of Canada Financial Markets, August 21, 2020.

24. See for example, Mohamed A. El-Erian, **The Only Game in Town: Central Banks, Instability, and Avoiding the Next Collapse**, (New York: Random House, 2016). Inadequate fiscal support was clearly the case with the budget constraints imposed in much of Europe, especially those countries which chose to or had little choice but to impose austerity, but even in the US and Canada, the major limits to monetary policy's lead role in supporting growth have become evident. See the comments by the Bank of Canada and other central banks cited in endnote 4 above, and *The Economist*, "Starting over again: The covid-19 pandemic is forcing a rethink in macroeconomics" cited above.

25. The Department of Finance's July 2020 Fiscal Update projected Canada's FY2020-21 deficit at $343 billion, or 16% of GDP, https://www.canada.ca/en/department-finance/news/2020/07/historic-covid-19-plan-provides-canadians-with-the-support-they-need-to-get-through-the-economic-crisis.html; See also RBC Economics, "Costly Covid Stimulus Loads $343 Billion onto 2020 Deficit", July 8, 2020. Since then, other fiscal measures have been announced increasing the projected deficit. For updated estimates of the FY2020-21 deficit, see Taylor Schleich, Jocelyn Paquet & Alexandra Ducharme, "Tracking the global policy response to COVID-19", National Bank of Canada Financial Markets, August 21, 2020; and RBC Economics, "Ottawa adds $39 billion in EI changes to COVID stimulus plans", August 21, 2020.

26. RBC Economics, "Costly Covid Stimulus Loads $343 Billion onto 2020 Deficit" cited above.

27. *Ibid*.

28. *Ibid*.

29. The strongest advocates of sustained, massive deficits and monetary policy supporting this stimulus are the Modern Monetary Theory proponents. As an example, see Stephanie Kelton, **The Deficit Myth: Modern Monetary Theory and the Birth of the People's Economy** (New York: Public Affairs, 2020), pp. 43, 59-69.

30. Ultra-low debt yields enable governments to fund much higher deficits and pay for much larger debts if these interest rates remain lower than nominal GDP growth. See the work of Olivier Blanchard, "Public Debt and Low Interest Rates", Peterson Institute for International Economics, Working Paper 19-4, February 2019.

31. Thomas Courchene, "Towards a protected society: the politicization of economic life", *The Canadian Journal of Economics*, volume XIII, number 4 (November, 1980), pp. 556-577; and Livio di Matteo, *A Federal Fiscal History: Canada, 1867 to 2017*, (Vancouver: Fraser Institute, 2017).

32. Jake Fuss and Milagros Palacios, "The Growing Debt Burden for Canadians", *Fraser Research Bulletin*, Fraser Institute, January 2020, p. 1.

33. Lesser economic growth could result from (i) the additional government debt not creating an income stream to pay off principal and interest, and (ii) less effective stimulus from near-zero interest rates and QE from the reduced velocity of money as reflected in the evidence from heavily indebted countries. See Van R. Hoisington & Lacy Hunt, "Quarterly Review and Outlook: Second Quarter 2020", Hoisington Investment Management Company, pp. 2-3, 5.

34. Don Drummond, "Don't Forget a Fiscal Anchor For The Speech From The Throne", *Intelligence Memos*, C.D. Howe Institute, August 24, 2020.

35. Market and public confidence in this fiscal anchor would be improved if it included clear indications of which tax and expenditure categories (including tax expenditures) might be relied upon to achieve this objective over time. Lengthening the maturity structure of government debt at the current very low yields reinforces this goal as well as being prudent liability management. Notably, Canada's bond issuance program for 2020-21 "has increased across all terms, and up to an unprecedented combined amount of $106 billion in the 10-year and 30-year sectors alone (i.e. roughly five and seven times more than previous years' issuances, respectively)." Government of Canada, "Debt Management Strategy for 2020-21", July 15, 2020.

36. Robin Harding, "Japan risks repeating some old mistakes", *Financial Times*, November 18, 2018; and *The Economist*, "Japan's GDP shrinks dramatically after a tax rise and a typhoon", February 20, 2020.

37. Benjamin Tal, Presentation to Canadian Business Coalition for Climate Policy, May 1, 2020.

38. Although Canada outperforms many of its peers among advance economies in redistributing income to address inequalities, its record in terms of GDP growth per person, capital investment per worker, and labour productivity growth has been sluggish at best, leading to meager gains in real employee compensation. David Williams and Jock Finlayson, “Canada is good at sharing, but not growing the economic pie”, *The Globe and Mail*, August 4, 2020.

39. These other key areas include much greater investment in (i) climate change mitigation and prevention and (ii) healthcare system resilience. An in-depth examination of each of these vital needs is far beyond this paper’s scope.

40. See Joel Blit, “COVID-19 Will Transform our Economy if we get our policies right” cited above. For earlier analyses of technology disruption’s impact on labour demand and future occupational opportunities, see the Institute for Competitiveness and Prosperity, *Teaching for Tomorrow: Building the necessary skills today*, Working Paper 33 (Toronto: Institute for Competitiveness and Prosperity, 2018), p. 13; *The future is not destiny: CEO perspectives on realizing Ontario’s economic potential*, Working Paper 39 (Toronto: Institute for Competitiveness and Prosperity, 2017) cited in *Teaching for Tomorrow*, p. 13; and BuildForce Canada, “Construction and Maintenance Looking Forward: Ontario 2020-2029 Highlights,” January 2020.

41. Canadian students’ scores in the OECD’s Program for International School Assessment (PISA) have had statistically significant declines in reading, mathematics and science at the upper secondary level. The largest PISA score declines have been in mathematics with the exception of Québec. For these and other education issues, see John Richards & Parisa Mahboudi, “Canada Has Three Other Education Problems In Addition To Teaching During The Pandemic”, *Intelligence Memos*, C.D. Howe Institute, August 10, 2020. See also RBC, *Humans Wanted: How Canadian Youth can Thrive in the Age of Disruption* (Toronto: RBC, 2018), especially pp. 26-27; on communication skills and basic literacy, see Canadian Federation of Independent Business (CFIB), *Hire Education: Connecting Youth and Small Business for the Jobs of Today* (Toronto: CFIB, 2018) p. 8; and the importance of (i) reading, comprehension and writing; and (ii) mathematics in *Teaching for Tomorrow*, pp. 18-19. For the structural challenges and opportunities for universities and colleges with online learning in 2020 and beyond, see Andrew Schrumm, “The Future of Post-Secondary Education: On Campus, Online and On Demand”, *Human Capital*, RBC, June 1, 2020.

42. Canadian Centre for Economic Analysis (CANCEA), *The Economic Impact of Canadian P3 Projects: Why building infrastructure ‘on time’ matters*, (Toronto: CANCEA, November 2016), pp. 37-43.

43. On the absolute and relative benefits to Canada from investment in infrastructure, see CANCEA, “Ontario Infrastructure Investment: Federal and Provincial Risks & Rewards”, 2014, https://www.cancea.ca/sites/economic-analysis.ca/files/reports/RCCAO_Ontario-Infrastructure-Investment_June2014-WEB_0.pdf and CANCEA, “Navigating the COVID-19 Socio-economic Shock: How infrastructure investments will facilitate future growth in Ontario”, June 2020, https://rccao.com/research/files/How-Infrastructure-Investments-Will-Facilitate-Growth-June-2020.pdf.

44. Europe’s and the UK’s approaches of supporting existing jobs with furlough assistance contrasts starkly with the US approach of helping workers who experienced job losses or much reduced hours through direct income assistance. See “Battling Job Losses In Times of COVID”, C.D. Howe Institute, July 30, 2020, https://www.cdhowe.org/graphic-intelligence/battling-job-losses-times-covid; and Chris Giles & Delphine Strauss, “Governments puzzle over how to unwind job protection schemes”, *Financial Times*, August 20, 2020.

45. For example, see Benjamin Tal, “CERB and the Incentive to Work”, p. 1 cited above.

46. RBC Economics, “Ottawa adds $39 billion to EI changes to COVID stimulus plans”, cited above.

47. For an instructive examination of labour policies to deal with novel shocks like COVID-19, see Morley Gunderson, “Playbook for Labour Policies for Novel Shocks Such as COVID-19”, *Canadian Public Policy*, August 2020, volume 46, issue S2, pp. S182-S191.

48. Tiff Macklem, “Economic progress report: a very uneven recovery”, cited above.