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Tax Weapons in the COVID-19 War: A Preliminary Study of Brazil, Canada, Denmark, UK and US

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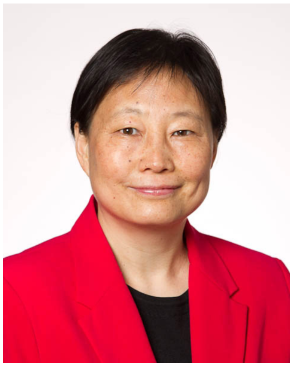

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1. The COVID-19 Pandemic

The COVID-19 pandemic is killing hundreds of thousands of people and crippling businesses worldwide.[2] There is no medical cure or vaccine yet. To prevent COVID-19 from crushing the health care system, non-essential activities have been paused and people are asked to stay home and keep "social distancing" in order to slow down the spread of the virus. Between 37 and 40 percent of jobs in the United States (US), the United Kingdom (UK) and Sweden can plausibly be performed entirely at home, but most workers cannot continue working.[3] Such pause means no income for workers and no revenues for businesses while necessity expenditures continue rising. To fight the COVID-19 "war" through pausing the economy, governments have resorted to tax policy instruments as well as fiscal and monetary instruments to support workers and businesses during the pause period.

In this paper, we canvass the tax policy weaponry in the context of overall COVID-19 relief measures in Brazil, Canada, Denmark, the UK and US. These countries represent different contexts and approaches to fighting against the common invisible "enemy" — COVID-19. Our goal is to see how tax measures are used, whether there is much similarity among the selected countries, and what the likely implications for the long term are. We make some general observations about the possible changes for the post-COVID-19 tax system.

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2 By May 8, 2020, the World Health Organization announced that the coronavirus had infected more than 3.8 million people worldwide and killed at least 269,881, referring to data compiled by Johns Hopkins University. *WHO Briefing on Coronavirus Pandemic*, https://www.youtube.com/watch?v=fb-Wl_eID6iQ (Accessed May 9, 2020).

3 Jonathan Dingel & Brent Netman (2020). *How Many Jobs Can be Done at Home? Becker Friedman Institute for Economics at University of Chicago*, https://bfi.uchicago.edu/wp-content/uploads/BFI_White-Paper_Dingel_Neiman_3.2020.pdf.

2. Tax Weaponry in Selected Countries: At a Glance

2.1 "Rapid" Response

The governments in Brazil, Canada, Denmark, UK and US acted swiftly after the pandemic declaration by the World Health Organization (WHO) on March 11, 2020. Table 1 shows the timing of the government response and pre-COVID-19 state of social safety net, employment and economy.

It is interesting to note that Denmark reacted prior to WHO's pandemic declaration and seemed to be the most prepared. For example, workers were advised before March 11 of the need to self-quarantine should they experience any symptoms of coronavirus, and that they "will of course receive their normal salary during the period."[4]

The pre-COVID-19 state of the economy and social safety net shapes the magnitude and measures of fiscal relief package. Brazil, Canada, Denmark and UK have universal health care system, which presumably reduces the need for emergency health-care support. US does not have universal health care and therefore committed a higher percentage of the GDP to fight the pandemic. Similarly, countries with an employment insurance (EI) system have less need for emergency relief for workers who become unemployed due to COVID-19 and can use the EI system to deliver some emergency relief, such as enhancing the insurance payments. Pre-COVID-19 economic situation, such as unemployment rate and GDP growth rate, suggests pressures on government's action to assist workers as well as on government's fiscal capacity to finance the emergency relief payments.

Table 1: Economic background for the COVID-19 response [5]

Country	Timing			Social Safety Net		Economy	
	First announcement	First Legislation	First direct payment to individuals	Universal healthcare	Employment Insurance (EI)	Unemployment rate	GDP growth rate (2019) [6]
Brazil	March 20 [7]	March 20 [8]	April 7 — application for benefits	Yes	Yes	11%	1.1%[9]
Canada	March 11[10]	March 25 — *An Act respecting certain measures in response to COVID-19*[11]	April 6 — Canada Emergency Response Benefit	Yes	Yes	5.6%[12]	1.6%

4 Rosie Collington (2020). *Denmark is Helping Those Who Can't Work Due to Coronavirus – Why Isn't the UK? https://www.theguardian.com/commentisfree/2020/mar/18/denmark-coronavirus-uk-government-workers-employees.*

5 Main sources: OECD (2020). *Country Policy Tracker*, http://www.oecd.org/coronavirus/en/ (OECD Tracker); IMF (2020). *Policy Responses to COVID-19, Policy Tracker*, https://www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19 (IMF Tracker).

6 For Canada, Denmark, UK and US data, see OECD, https://stats.oecd.org/index.aspx?queryid=60703 (using expenditure approach).

7 On March 20, 2020, Congress declared a state of "public calamity", authorizing the government to introduce COVID-19 response measures. On the same day, measures were introduced. See IMF Tracker.

8 IMF Tracker, supra note 4.

9 Brazil, Ministério da Economia (2020). *Nota Informativa: Medidas de Combate aos Efeitos Econômicos da COVID-19*, https://www.gov.br/economia/pt-br/centrais-de-conteudo/publicacoes/notas-informativas/2020/nota-informativa-medidas-fiscais-coronavirus-final-1704.pdf; Trading Economics (2020). *Brazil Unemployment Rate*, https://tradingeconomics.com/brazil/unemployment-rate.

10 Justin Trudeau, Prime Minister of Canada (2020). *Prime Minister Outlines Canada's COVID-19 Response,* https://pm.gc.ca/en/news/news-releases/2020/03/11/prime-minister-outlines-canadas-covid-19-response; The initial amount of CA$1.1 billion was adjusted later to CA$107 billion, see John Tasker (2020). *Parliament Passes Ottawa's $107 Billion COVID-19 Aid Package*, https://www.cbc.ca/news/politics/covid19-coronavirus-ottawa-hill-economic-legislation-1.5509178.

11 Parliament of Canada, C-13 (2020). *An Act Respecting Certain Measures in Response to COVID-19*, https://www.parl.ca/LegisInfo/BillDetails.aspx?Language=E&billId=10710867.

12 Stats Canada (2020). *Labour Force Survey, February 2020*, https://www150.statcan.gc.ca/n1/daily-quotidien/200306/dq200306a-eng.htm.

Country	Timing			Social Safety Net		Economy	
Denmark	March 10[13]	March 15 — Direct Fiscal Impulse[14]	Unknown	Yes	Yes	3.7%[15]	2.4%
UK	March 11[16]	March 19[17]	April 20 — Portal for Job Retention Scheme opens[18]	Yes	Yes	4%[19]	1.4%
US	March 11[20]	March 18 — Families First Coronavirus Response Act[21]	April 15 — Direct payment of "Recovery Rebate" under the Coronavirus Aid, Relief, and Economic Security (CARES) Act	No	Yes	3.5%[22]	2.3%

2.2 Fiscal Measures

The COVID-19 fiscal response measures in the five countries attempt to provide income support to individuals, liquidity support to businesses and direct funding to assist certain sectors of the economy (such as those whose business model depends on people aggregating or socializing in person) or activities (such as medical research, procurement of medical equipment or caring for homeless people). This paper focuses on the income support and liquidity support programs, which are summarized in Table 2.

The magnitude of the support in terms of the percentage of the national GDP varies among the five countries.

Table 2: Fiscal measures: overview[23]

Country	Income support to individuals			Liquidity support to businesses (except grants)	Magnitude	
	Wage substitute	Top-up E.I.	Top-up social security		% of 2019 GDP[24]	% for business liquidity[25]

13 Brenda Bouw (2020). *How Denmark Got Ahead of the COVID-19 Economic Crisis*, https://www.macleans.ca/economy/economicanalysis/how-denmark-got-ahead-of-the-covid-19-economic-crisis/.

14 Direct fiscal impulse, at https://e-markets.nordea.com/#!/article/56456/denmark-economic-measures-to-tackle-the-corona-crisis and https://www.ft.dk/samling/20191/aktstykke/aktstk.108/index.htm.

15 Trading Economics (2020). *Denmark GDP Annual Growth Rate*, https://tradingeconomics.com/denmark/gdp-growth-annual; Statista (2020). *Denmark: Gross Domestic Product (GDP) Per Capita in Current Prices from 1984 to 2024*, https://www.statista.com/statistics/318343/gross-domestic-product-gdp-per-capita-in-denmark/.

16 BBC News (2020). *Budget 2020: Government Lays out Economic Plan to Combat COVID-19*, https://www.bbc.com/news/av/uk-politics-51845258/budget-2020-government-lays-out-economic-plan-to-combat-covid-19.

17 UK Government (2020). *Finance Bill 2020: Legislation*, https://www.gov.uk/government/collections/finance-bill-2020.

18 UK Government (2020). *Coronavirus Job Retention Scheme up and Running*, https://www.gov.uk/government/news/coronavirus-job-retention-scheme-up-and-running.

19 Office of National Statistics (2020). *Unemployment Rate (2019 Dec - Feb)*, https://www.ons.gov.uk/employmentandlabourmarket/peoplenotinwork/unemployment.

20 *President Donald J. Trump Has Taken Unprecedented Steps to Respond to the Coronavirus and Protect the Health and Safety of Americans*, https://www.whitehouse.gov/briefings-statements/president-donald-j-trump-taken-unprecedented-steps-respond-coronavirus-protect-health-safety-americans/.

21 *Families First Coronavirus Response Act was signed into law on* March 18, 2020 and applies to employers with 500 or fewer employees. *Coronavirus Aid, Relief, and Economic Security (CARES) Act was signed into law by President Trump on* March 27, 2020.

22 Feb 2020, https://data.bls.gov/timeseries/LNS14000000.

23 OECD Tracker.

24 The data in this column is based on IMF Tracker.

25 Our calculation is based on the estimated total value of support to individuals and businesses.

Country	Income support to individuals			Liquidity support to businesses (except grants)	Magnitude	
Brazil	EI payments for employees on reduced hours and furloughed; Unemployed and self-employed receive US$120 (US$240 for single parents)	Employers cannot terminate furloughed employees within a specified period of time after the pandemic is over [26]	US$240	Tax payment deferrals; Tax filing extension; Cuts in payroll taxes; Low-rate loans	8%	35%
Canada	Those stopped working because of COVID-19 (CA$2,000/month); Top-up wages for low-wage essential workers	Enhanced or extended eligibility for unemployment benefit or sick pay	Extra amounts for low-income families and students[27]	Wage subsidy; Tax deferrals; Loan guarantees and forgivable loans; Rent subsidy	8.4%	44%
Denmark	90% of wages of hourly workers; 100% salary of furloughed employees	Enhanced sick and EI benefits	US$4,500.00	Tax deferrals; Reimburse businesses for cost of paying sickness benefits and benefits during the period of leave	2.6%	57%
UK	80% of regular salary[28] or earnings of the self-employed	Enhanced sick pay	Suspension of the floor of Universal Credit (UC)[29]	Tax deferrals; Property tax holidays[30]	3.4%[31]	72%
US	Every resident making up to US$75,000 per year is eligible for US$1,200 per month (CARES Act)	Additional EI benefits; Extending EI to self-employed; Enhanced sick leave and medical leave benefits	Increasing Medicaid and food-security	Tax deferrals; Loss carry-back period; Forgivable small business loans and guarantees	14%	70%

Such variations do not mean that the level of societal support varies that much. This is because countries with an existing high-level social safety net need less emergency support.

2.2.1 Supporting individuals

Individuals receiving income support are generally classified into four groups. Group one includes furloughed employees (employees who work on reduced hours to a significant degree or whose work was suspended while remaining employed). They receive 75% of regular salary in Denmark,[32] 80% of regular salary in the UK,[33] unemployment insurance benefits in Brazil (for low-income workers, the amount is the same as regular salary), and CA$2,000 monthly pay (Canada Emergency Response Benefit or CERB) in Canada.

Group two includes employees

26 The law requires employers to provide stability to their employees on furlough. For example, if an employee stays in furlough for 2 months, he cannot be fired for at least 2 more months after the pandemic is over.

27 The Canada Child Benefit was increased by CA$300 per child and the refundable Goods and Services Tax credit was increased by CA$300 for each adult and CA$150 for each child. The amount for students is CA$250 per month or CA$2,000 per month for students taking care of others.

28 IMF Tracker.

29 The government uses universal credit to test whether it considers an unemployed person is in gainful self-employment. The measure increased the UC allowance by £1,000 for the next twelve months: see OECD (2020). *Country Policy Tracker: UK*, http://www.oecd.org/coronavirus/en/#country-tracker.

30 IMF Tracker.

31 The IMF Tracker does not include this data. 3.4% was derived from reducing the 18.4% of the economic package by 15% attributable to loans and guarantees. Researchers estimate this to be 2.3% if "fiscal package" is used instead of the "economic package". See Carl Emmerson & Isabel Stockton (2020). *The Economic Response to Coronavirus will Substantially Increase Government Borrowing*. Observation, 26 Mar 2020, https://www.ifs.org.uk/publications/14771.

32 The government pays 75% of the salary (up to a maximum of EUR3,100 or about US$4,760 per month of the cost of employees' salaries as long as those companies don't let people go.

33 Under the Job Retention Scheme, the government pays up to 80% of the employee's usual monthly wage costs (up to £2,500 per month to the employer).

who became unemployed during the pandemic. They receive fixed cash payment in Canada (CERB) and the US (Recovery Rebate of US$1,200 per month), standard unemployment insurance benefit in Brazil, and extended unemployment benefits in Denmark[34] and the UK.

Group three includes individuals who are self-employed. They receive: 90% of regular income in Denmark; 80% of regular income in the UK;[35] a monthly US$120 in general or US$240 for single parents in Brazil; a fixed monthly payment of CA$2,000 (CERB) in Canada; and US$1,200 per month Recovery Rebate in the US.

Finally, individuals who do not work or work with low household incomes qualify for additional cash to top up the existing "negative taxation payments" or social income support in Canada and the US. In Canada, these include additional amounts of Canada Child Benefit and refundable Goods and Services Tax credit. In the US, in addition to the general US$1,200 monthly Recovery Rebate, individuals in this group are eligible for an additional US$500 per child under the age of 17 and additional food stamps and medical care assistance.[36]

2.2.2 Supporting businesses

Fiscal support to business takes the form of suspending tax payments (to free up cash flow), extending filing deadlines, wage subsidy, tax subsidy, cuts in social insurance contributions, and interest-free or forgivable loans. Wage subsidies are conditioned upon the employers' undertaking to keep workers on the payroll so that business can resume after the COVID-19 pause and the relationship between employer and employee is preserved, avoiding a massive unemployment outbreak.[37] The percentage of regular salaries covered by the government is 75% in Canada and Denmark, and 80% in the UK. In Brazil, the percentage of regular salaries covered by the government is 70% or 100%, depending on the annual earnings of the company. The percentage is 100% if the company earns less than 4,800,000 BRL (Brazilian real)/year, or 70% if the company earns more than 4,800,000 BRL/year.[38]

In addition, Denmark and Canada cover businesses' fixed costs (rent in Canada[39] and rent and interest in Denmark). In Denmark, sick leave benefits for people with COVID-19 are fully covered by the government. In Canada, the UK and US, banks and financial institutions provide support to businesses and home-owners by relaxing mortgage payments deadlines and line of credit and the government provides lenders with a partial guarantee on loans extended to small and medium-sized enterprises (SMEs). The US provides small businesses with forgivable loans.[40]

2.3 Tax Measures

Tax measures introduced as part of the COVID-19 emergency response are summarized in Table 3 below. They fall into administrative measures and substantive measures regarding personal income taxes (PIT), corporate income taxes (CIT), valued-added taxes (VAT) and payroll taxes (including contributions to social insurance programs, such as EI, and pensions).

2.3.1 Deferring tax filing and tax payment

Extending deadlines for tax filing, tax payments and information reporting is among the first announced by governments to provide relief to taxpayers. Deferred tax payments mean that taxpayers can use the money earmarked for tax payment during the

34 See Jan Størup Nielsen & Helge J. Pedersen (2020). *Denmark: Economic Measures to Tackle the Corona Crisis*, https://e-markets.nordea.com/#!/article/56456/denmark-economic-measures-to-tackle-the-corona-crisis.

35 UK, Self-Employed Income Support Scheme (SEISS).

36 This credit phases out at 5% of adjusted gross income in excess of US$75,000 per year.

37 For example, in Canada, under a Canada Emergency Wage Subsidy (CEWS) program, employers (individuals, taxable corporations, certain non-profit organizations, registered charities, and partnerships) experiencing at least 15% of revenue drop in March 2020 and 30% of the qualifying revenue in April 2020 and May 2020 receive a subsidy equal to 75% of wages paid to employees, up to a maximum of CA$847 per employee per week. Parliament of Canada (2020). *A Second Act Respecting Certain Measures in Response to COVID-19*, https://www.parl.ca/DocumentViewer/en/43-1/bill/C-14/royal-assent.

38 See Articles 6, I and II, a) and b), and Article 8, s. 5 of Medida Provisoria no. 936/2020, http://www.planalto.gov.br/ccivil_03/_ato2019-2022/2020/ (in Portuguese).

39 Canada Revenue Agency (2020). *Canada's COVID-19 Economic Response Plan*, https://www.canada.ca/en/department-finance/economic-response-plan.html#businesses.

40 Under the CARES Act, the government provides recipients of loans to be eligible for loan forgiveness on covered loans in an amount equal to the sum of the costs incurred on or after February 15, 2020, and on or before June 30, 2020, due to payroll cost, mortgage interest payments, rent or utility payments. These benefits are available to employers with no more than 500 employees, including nonprofit organizations.

Table 3: Tax measures[41]

	PIT	CIT	VAT	Payroll taxes	Extension of deadlines
Brazil	Income support payments are tax-free	Subsidy to 75% of salary of furloughed employee	No import VAT on medical equipment	Reductions	Tax payments; Tax filing
Canada	Cash transfer through the PIT; Relaxation of withdrawals from retirement funds	Wage subsidy to employers; Rent subsidy	No import VAT on medical equipment	[CEWS to cover the contributions from employer]	Tax payments; Tax filing; Refrain from initiating new tax audits; Refrain from taking collection actions
Denmark		Wage subsidy up to 75% of salary of furloughed employees; Subsidy towards fixed expenses[42]	Reimbursing employers for the cost of sick pay and leave of absence pay		Tax payment; Tax filing; More flexible tax debt repayments
UK		Wage subsidy up to 80% of wage costs of furloughed employees[43]	No import VAT on medical equipment	Refund the cost of Statutory Sick Pay for up to two weeks for SMEs	Tax payment; Tax filing; Flexible tax debt repayments
US	Cash transfers delivered through the tax system; Special rules for using retirement funds; Relaxation of limitations on charitable donations	Extending net operating losses carry back to five years; Relaxing limitation on interest deductibility[44]; Employee retention credit Pass-through of losses to individuals[45]		A refundable tax credit to employers to offset the cost of providing workers with sick and family leave	Tax payment; Tax filing

extended period. Other extensions reduce pressure for compliance and concerns for penalties.

Some tax administrations, such as Canada Revenue Agency, the Brazilian Federal Revenue Service and Her Majesty's Revenue & Customs (HMRC) also suspended audit interactions with taxpayers and their representatives and refrained from initiating any post-assessment audits with SMEs or taking collection actions.[46]

2.3.2 Delivery through the tax system

While in many countries the tax administration is tasked to administer the implementation of support programs, in Canada and the US the support payments are delivered through the tax system. Major relief payments to individuals and businesses are legislated as tax expenditure provisions of the income tax statute. For example, section 125.7 was added to the Income Tax Act in Canada to facilitate the wage subsidy to businesses. Similarly, the Internal Revenue Code was added with new provisions to facilitate payments under the CARES Act. For example, employee retention tax credit provided to employers under CARES Act section 2301, which is equal to 50% of the qualified wages paid by a

41 The main source for the data is OECD Policy. OECD (2020). *Country Policy Tracker*, http://www.oecd.org/coronavirus/en/.

42 This is based on the decline in turnover (from 80% of fixed expense to 25%).

43 This is limited to £2,500 per employee per month.

44 The Tax Cuts and Jobs Act (TCJA) limited interest deductions to 30 percent of earnings before interest, taxes, depreciation, depletion, and amortization (EBITDA). The CARES Act raises this limit to 50 percent for 2019-2020 and calculates both years' allowance on the basis of 2019 EBITDA.

45 This measure allows owners of pass-through entities to offset business losses against other forms of income, such as wages and investment, without limit.

46 See Canada Revenue Agency (2020). *Changes to Taxes and Benefits: CRA and COVID-19*, https://www.canada.ca/en/revenue-agency/campaigns/covid-19-update.html.

qualified employer to an employee is allowable against the tax imposed on an employer under section 3111(a) –i.e., the Old-Age, Survivors, and Disability Insurance Social Security tax. The Recovery Rebates for individuals under the CARES Act section 2201 is a refundable tax credit.

The main reason for using the tax system to deliver COVID-19 support payments is that the tax administration has (1) the information about the vast majority of businesses and individuals and (2) an efficient system to transfer funds to taxpayers. This is particularly important when eligibility for COVID-19 supports is tied to gross income, revenue or expenditures of a business, such as wage subsidies.

2.3.3 Substantive tax measures

Among the five countries, the US introduced changes to substantive tax rule to offer financial relief to businesses. These changes include: eliminating the taxable income limit for certain net operating losses (NOLs) and allow businesses and individuals to carry back NOLs arising in 2018, 2019 and 2020 to the five prior tax years;[47] suspending the excess business loss rules under section 461 of the Internal Revenue Code; and generally loosening the business interest limitation under section 163(j) from 30% to 50% of EBITA. These tax expenditure provisions were estimated to reduce federal tax revenue by over US$591 billion between 2020 and 2030.[48]

2.3.4 Examples of convergence and divergence

All countries reacted rapidly to use tax measures as major weapons to fight against COVID-19. They have all granted immediate relief through extending deadlines for tax payment and filing returns or providing information. SMEs are typical recipients of wage subsidies.

As to divergence, Canada and the US rely more on the tax system to deliver cash payments under the COVID-19 relief programs. The US uses substantive tax rule changes as part of the relief measures. There is also divergence in policy priority in terms of the proportion of money spent on assisting individuals or businesses. As shown in Table 2, while Brazil and Canada spend less than half of the total fiscal package on assisting businesses liquidity, UK, US and Denmark spent more.

3. Some General Observations

Given the rapid and unprecedent developments since March 11, 2020, it is difficult to offer any definitive assessment of the fiscal and tax measures. On the basis of our research, we make some preliminary observations below.

3.1 Different Emphasis

The governments of the five countries appear to identify the COVID-19 response package differently. Denmark and UK seem to treat it as a "bridge" in the sense of paying workers and businesses during the COVID-19 pause; Canada emphasizes the national emergency relief nature in a way similar to a social insurance; the US and Brazil tend to present it as an economic stimulus to facilitate a faster recovery.

The "bridge" perspective has shown to be the most straightforward — a percentage of workers' salaries and businesses' fixed expenses is covered by the government. Socializing the COVID-19 risk in Canada seems to have made the emergency response package more reactive to on-going assessment of the damages caused by the pandemic and more "demand" for government assistance. For example, the response package has been growing in Canada since March 25, 2020. The "stimulus" message seems to have been lost as millions of people became unemployed during the pandemic and reopening the economy seems very challenging.

3.2 Long-term Implications

Tax measures appear to be effective in providing immediate relief to taxpayers. COVID-19 hit right before the deadline for filing annual tax returns (typically in April). Extending the deadlines was well received by taxpayers. Delaying the payment of taxes means more money can be used by taxpayers in the crisis. In Canada, for example, the value of income tax and sales tax remittance and customs duty payments deferrals was estimated to be CA$85 billion (while the total value of direct cash payments to individuals was CA$105 billion).[49]

The COVID-19 measures are meant to be temporary. Temporary measures can have long-term implications. One major implication is the potential damage to the fiscal health of the country as the cost of these measures will be paid through increasing public debt or higher taxes. It is hoped

47 This is necessary because the 2017 Tax Cut and Jobs Act repeals the carryback of most net operating loss of corporations. See IRS, https://www.irs.gov/publications/p542#en_US_201809_publink1000257872. Corporations must carry forward the NOL with certain conditions.

48 The Joint Committee on Taxation (2020). *Description of the Tax Provisions of Public Law 116-136, the Coronavirus Aid, Relief, and Economic Security ("CARES") Act*, https://www.jct.gov/publications.html?func=startdown&id=5256.

49 *Canada's COVID-19 Economic Response Plan– Cost and Implementation*, https://www.canada.ca/en/department-finance/news/2020/04/the-canada-emergency-wage-subsidy.html.

that the economy could resume after the COVID-19 pause and generate sufficient tax revenues. Another long-term implication is perhaps the efficiency gains derived from using technologies in the tax administration.

As to policy implications, one is the consideration of reviving previous "wartime" excessive profits tax on taxpayers whose businesses profited from the opportunities presented by COVID-19 (e.g. digital businesses and medical equipment and supplies).[50] Another policy implication is to reimagine the social safety net based on lessons learned from the experience, such as installing universal basic income (UBI; that is, turning the emergency minimal income support into a permanent system). Or, just like Marshall Plan devised following World War II, or President Franklin D. Roosevelt's New Deal of 1933 followed the 1929 economic depression, it is possible that a better social insurance system would evolve after COVID-19 pandemic. In Canada, for example, previous major crisis has led to the creation of long-lasting institutions: income taxation was introduced in 1917 during the World War I, and the national unemployment insurance system was introduced in 1940 after the Great Depression.

More fundamentally, the future of the state in post-COVID-19 world is likely different. Having stepped forward to deliver so much in the crisis, the state seems unlikely to simply retreat to its former shape and size once the pandemic is over. Citizens will likely continue to expect the state to address other systematic risks or crises, such as inequality, poverty and environment. The use of fiscal and tax policies in the post-COVID-19 world will thus be different and likely be reimagined.

4. Tax Weaponry for a Post-COVID-19 World

4.1 A "Dangerous Opportunity"

There are some features of the COVID-19 pandemic and fiscal responses by governments that suggest opportunities for a "great reset" of tax policies for the post-COVID-19 world. During the pandemic, governments acted fast and such speedy action was well received by the public. Such "crisis effectiveness" may be continued into the post-crisis mode.

While many people must "pause" their income-earning activities, many others continue their activities online (such as teaching and government services). The fact that COVID-19 fiscal and tax response measures were designed, legislated into law and implemented during "social distancing" is an amazing testament to the potential of working online. Online shopping for goods and services increased exponentially. This presents challenges and opportunities for reimaging the taxes that were designed for the physical world.

The global pandemic calls for a global response. Even though each government acted separately, the response measures across the five countries are similar in nature. This may bode well for future global-based tax reforms. The 2008 Global Finance Crisis led to the G20/OECD Base Erosion and Profit Shifting (BEPS) project — the first major "renovation" of the international tax system that was created after the WWI. The COVID-19 pandemic is likely to inspire some meaningful rethinking about taxation at a global level, such as taxing global digital businesses that profited tremendously from the opportunities presented by COVID-19.

Due to the length constraint of this paper, we briefly canvass below some possible tax changes in the post-COVID-19 world. These changes include the revenue side of the budget as well as the expenditure side through tax incentives.

4.2 Tax System Restructuring

To raise sufficient tax revenues in the post-COVID-19 economy to pay for the cost of the COVID-19 response measures may involve restructuring the tax system, reforming some specific taxes, and introducing new taxes.

One restructuring idea is to increase taxes on capital. In Canada, Denmark, the UK and US, income tax is the most important source of tax revenue, accounting for about 35% in the UK and over 40% in Canada, Denmark and the US.[51] Adding the burden of contributing to social insurance programs, workers or labor bears the brunt of the fiscal burden. Meanwhile, the burden of tax on capital has been on decline. As a result, the income tax is largely a tax on labor.[52] There had been calls for more taxation of capital to reduce income inequality and to make the

50 Reuven S. Avi-Yonah (2020). *COVID-19 and US Tax Policy: What Needs to Change?* https://ssrn.com/abstract=3584330.

51 OECD. *Revenue Statistics – Tax Structures*, https://www.oecd.org/tax/tax-policy/revenue-statistics-tax-structures.htm.

52 See Edward McCaffery (2019). The Death of the Income Tax (or, The Rise of America's Universal Wage Tax), 95 *Indiana L.J.*; also https://ssrn.com/abstract=3242314.

tax system fairer, as well as for more equal taxation of employees and the self-employed or gig workers.[53] Such calls are likely to receive more support after the COVID-19 crisis is over. During the crisis, all workers are treated the same, regardless of the status of the worker as an employee or self-employed.

Lowering taxes on labor may also be a way to help get people back to work. It may also act as a stimulus to small businesses as the cost of labor will be lower, which may help these businesses to survive and thrive in a more pandemic-resilient economy. Not all the jobs saved by the government during the crisis will remain viable. Such stimulus would be important for the economy.

Consumption tax may also become more important. During the COVID-19 pandemic, consumption was not paused, and may in fact increase. Online sales replaced in-person sales. It is unclear whether such change adversely impacted the sales tax revenues owing to the difficulty of collecting sales taxes on remote (especially cross-border) transactions.

The taxation of multinational enterprises (MNEs) had been changed through the BEPS project. Fixing the deficiencies in the corporate tax system, especially the problem of tax avoidance, is likely to continue. MNEs based in tax havens are excluded from receiving COVID-19-related aid in Denmark, France and Germany (to some extent Canada which requires an economic footprint in the country).

A new system of taxing digital businesses[54] may become more plausible. These businesses are positioned to make excessive profits during the pandemic and the business models will likely continue in the future. It has been challenging to collect income taxes or sales taxes on digital businesses.

4.3 Tax Expenditures as Stimulus Tools

While direct spending is expected to help restart the economy, indirect spending through tax subsidies is expected to be used as stimulus tools. It is possible that some of the COVID-19 emergency measures be extended. More generous loss carryover rules, such as those introduced by the US, may be introduced in other countries. More tax incentives may be warranted to support start-up companies in "essential" sectors or medical research to develop vaccines or treatments for novel diseases.

The rapid and massive fiscal response to COVID-19 suggests that governments can take action to address large and systematic risks. Encouraged by the public support of such actions during the COVID-19 crisis may encourage some governments to use tax measures to stimulate investment in clean energy and preventing environmental risks.

4.4 Universal Basic Income

The COVID-19 income support to individuals in Canada, Denmark, UK and US, and to a lesser extent Brazil, is in the nature of a universal basic income to working-age individuals. This experiment may pave the way for a more permanent UBI to build up resilience for combating future systematic risks. The COVID-19 pandemic clearly indicates the connection between public health and minimal income to sustain people's basic need and dignity during the crisis.

4.5 Taxpayer Interface and Services

Experience gained from providing services to taxpayers and implementing COVID-19-related programs is expected to help create a "new normal" for taxpayer interface and services. The tax administration is likely to become more efficient in delivering transfers and subsidies to taxpayers as well as collecting taxes, using enhanced digital platforms and technologies.

5. Conclusions

Our preliminary study of the COVID-19-response measures allows us to make several conclusions. First, these measures are largely similar in nature and design across the selected countries, although the magnitude varies, ranging from 2.6% in Denmark to 14% of GDP in the US. Second, they all have been introduced in haste, suspending the application of normal fiscal disciplines in such abnormal time. The impact of such action is too early to tell. Third, some long-term implications for the tax system, both on the revenue-raising side and tax-expenditure side, are likely to be significant. If "no crisis should go to waste", this COVID-19 crisis may prove to be an opportunity for some fundamental rethinking about the tax system.

53 Jinyan Li, Arjin Choi & Cameron Smith (2020). Automation and Workers: Re-imagining the Income Tax for the Digital Age, 68 *Canadian Tax J.* 1, pp. 99-124.

54 See OECD (2020). *Statement by the OECD/G20 Inclusive Framework on BEPS on the Two-Pillar Approach to Address the Tax Challenges Arising from the Digitalisation of the Economy*, https://www.oecd.org/tax/beps/statement-by-the-oecd-g20-inclusive-framework-on-beps-january-2020.pdf.