

MARCH 27, 2020

PRELIMINARY ESTIMATES OF THE IMPACT OF COVID-19 AND RELATED CONTAINMENT MEASURES ON THE B.C. ECONOMY IN 2020

CONTEXT AND OVERALL GROWTH PROJECTIONS

The economic impact of the COVID-19 virus is difficult to estimate. The situation is dynamic, as cases soar and government policy responses are updated. Deliberately shuttering large segments of the provincial economy is unprecedented. The halting of international air travel has profound implications for tourism, business travel and family visits; there may also be more permanent implications if international air travel becomes less popular when the crisis has passed. The rapid spread of the virus in Europe and now the U.S., and the shutting down of large parts of the consumer-facing economy in these jurisdictions, means a global recession is inevitable. Not knowing the extent or detail of government measures to contain the pandemic, nor how long "social distancing" and widespread business closures will continue make it impossible to provide anything more than educated guesses about the ultimate impact of COVID-19 on economic activity.

In this short piece, we provide some order of magnitude estimates of how big a hit the B.C. economy is about to suffer. Our projections point to a larger decline in economic activity in 2020 than other forecasters seem to be anticipating. In part, this reflects our judgement that the pandemic and the measures being taken to contain it will affect many industry sectors, not just those that are "consumer-facing." We also believe the effects of the crisis will be felt beyond the second quarter of 2020.

To help quantify the potential economic impact of COVID-19, two scenarios are considered. Both recognize that prior to the onset of the pandemic, growth in the provincial economy was already ebbing. That means B.C. confronts this extraordinary challenge from a weaker starting point than would have been the case two years earlier. Both of the scenarios described below assume a global recession is imminent or already underway. The global economic context is important, because B.C. is a small open economy that is strongly influenced by developments in outside markets. The province's goods-producing

industrial base and export sector – large parts of which could continue to operate even as many consumerfacing businesses shutter – will be hurt by the looming global (and U.S.) downturn.

With respect to the domestic setting, the first scenario assumes that the widespread lockdown and closing of "non-essential" B.C. businesses is maintained for at least eight weeks. Here, it is instructive to note that in China, it took at least 35 days (five weeks) of truly draconian lockdown measures before the number of new cases began to level off. Italy, Spain and now the U.S. are today on worse trajectories. In truth. meaningful containment of the virus will likely take more than eight weeks. Some business closures will probably continue into the summer months. Under this scenario, bars and restaurants are permitted to open in the second half of 2020, with new social-distancing and cleaning guidelines in place. This scenario also assumes that international travel will remain heavily restrained for five or six months, and that the Canadian government will put tighter limits on such travel due to fears that

the virus could be re-introduced to the domestic population by people arriving from outside of North America. We also assume that leisure, entertainment and conventions/meetings businesses will be slow to get back to anything like normal operations.

The second scenario outlined below is similar to the first but foresees a more muted rebound in output in the third quarter. It has the closure of bars, restaurants and many other consumer-interacting service businesses <u>lasting somewhat longer</u> than in the first scenario. Stringent restrictions on international travel remain in place throughout most of 2020, before being gingerly relaxed; this has a significant albeit hard-to-quantify negative impact on B.C.'s tourism, hospitality and air transportation sectors. The longer closure of major slices of B.C.'s service economy means more job losses, more businesses going under, and a greater economic malaise. The second scenario also assumes the North American and global recessions are deeper.

The bullets below summarize the expected impacts on the provincial economy under the two different scenarios. Projections are done for each industry. Then, the output (real GDP) for each industry is aggregated to determine the effect on total economic growth. At this stage, we are not making projections for 2021. When the virus is mostly or entirely contained, and the economy starts up again, we would expect a sizable rebound in growth. But we don't believe this will occur until late 2020 or early 2021. A significant economic recovery, when it comes, will in part reflect the fact that output falls so steeply in 2020.

HIGHLIGHTS OF THE TWO SCENARIOS

The key results of our two economic scenarios are as follows:

Scenario 1

- •Under the first scenario, the provincial economy (real GDP) contracts by 7.3% in 2020. Although the analysis and modelling produce this figure, given the high degree of uncertainty it is preferable to think of the economy contracting in the 6% to 8% range.
- •The above projection is striking. It represents a dramatic drop in economic activity by historical standards. For context, the B.C. economy contracted by 2.6% in 2009, during the Great Recession. In our view, the impact from the COVID-19 pandemic, which includes large parts of the service sector being shut down, supply chain interruptions, mass layoffs and job losses, and very possibly tens of thousands of businesses going bust, will dwarf what happened during the 2008-09 financial crisis. Also, for those old enough to remember, the brutal 1981-82 recession saw the B.C. economy shrink by 6.5%. This time the decline in both GDP and — even more so - employment is expected to be greater.
- •A 7.3% decline in real GDP represents an \$18.3 billion reduction in the total value of economic output. The measures announced by the federal and B.C. governments so far, while helpful, will fall short of filling this deep economic hole.
- •Measured output in the B.C. public sector (pubic administration, healthcare and education) is equal to roughly \$43 billion. Fully offsetting the coming decline in total GDP would require expanding the

- public sector by half again. That is impossible to engineer, and even if it could be engineered, it would not be sustainable for long given collapsed tax revenues. But more importantly, most of the government funding announced to date by Ottawa and B.C. is going to support household incomes and in this sense will not generate a lot of incremental economic activity. For each employed person and household, the extra government funding represents a fraction of pre-crisis employment earnings. This suggests that B.C. households will use the money provided by governments just to pay rent/mortgages, buy food and cover utility costs. In this world, aggregate consumer spending is destined to fall, perhaps steeply, as non-essential purchases are deferred or shelved by a majority of households.
- •Under our first scenario, the largest negative GDP impacts are in the air transportation, tourism and hospitality sectors. With some variation, output in these sector falls by around 40%. (Details of projected declines in each industry are provided in the table on pages 5-7.)

Prior to the onset of the pandemic, growth in the provincial economy was already ebbing. That means B.C. confronts this extraordinary challenge from a weaker starting point than would have been the case two years earlier.

- •Many other B.C. economic engines will also be hard hit. The once high-flying film and television industry could shrink by one-third in 2020, in GDP terms. Activity in this industry fell sharply when the virus first emerged in B.C. - even before the Canada-US border was closed. Professional services will also contract substantially in 2020, due to social distancing and the closing of many businesses as well as a general slump in demand stemming from the onset of recession. Manufacturing output drops by 16% for similar reasons (for context, manufacturing GDP in B.C. fell nearly 14% in 2009).
- •We believe the economic slowdown and heighted uncertainty will weigh on the construction sector, as companies postpone investment plans and new home building declines. Construction sector output is projected to drop by more than 11% in 2020 in our first scenario. It should be noted that spending on some large high profile current projects, such as LNG Canada's Kitimat facility and B.C. Hydro's Site C dam and reservoir, has already been reduced. We are also hearing of other large businesses that are not going ahead with planned investments.
- •A few industries grow under the first scenario, the most obvious one being health care. We have assumed that health care services GDP increases by 10% in 2020, reflecting ramped up government spending, increased hiring, and more work hours by health care staff. An increase of this magnitude may be too large considering that, simultaneously, some parts of health care are being scaled back (elective surgeries postponed, dentist offices closed, etc.). In other words, from a short-

We believe shell-shocked B.C. consumers will have less capacity and less inclination to spend after the crisis has passed, in part because most households will have seen their incomes drop and many will have experienced sizable declines in financial wealth as well.

term perspective, an expanding health sector may offset less of the decline in economic activity in other sectors. Of course, looking beyond 2020 it is not possible to have a continuously growing — and mainly government-financed — health care sector if the private sector economy that ultimately pays the bills lies in ruins.

Scenario 2

- •Under our second COVID-19 scenario, the provincial economy shrinks by more than 11% in 2020. This is beyond anything B.C. has experienced in the last 70 years.
- •The larger contraction represents a \$45 billion reduction in real GDP. Under this more pessimistic scenario, the drop in aggregate real output is larger than the entire broad public sector in GDP terms.
- •The air transportation, accommodation, food services, retail and entertainment sectors are assumed to experience even larger contractions in output in scenario two than in the first scenario. That is mainly because business shut downs last longer.

ADDITIONAL CONTEXT REGARDING THE MAGNITUDE OF THE ANTICIPATED CONTRACTION

Going through the exercise of estimating the potential impact on an industry-by-industry basis is helpful. It clarifies thinking about the potential impact of the crisis and the related policy responses in each sector, and allows the scenarios we develop to reflect the fact that impacts will be divergent across industries. While it may be hard to see given the rather dire projections, the bottom-up, industryby-industry analysis also reveals a certain amount of resilience in the economy. Some sectors will not see big contractions in GDP (for example, crop and animal production, utilities, parts of construction). A few will see increases (such as telecommunications, data processing). The broad public sector, representing a bit less than one-fifth of GDP, is poised to expand significantly over the next year.

The projections presented, while rough and preliminary, represent our best estimates given currently available information. In our more "optimistic" scenario, we assume significant portions of the service economy will remain locked down in B.C. for at least eight weeks. Many other economists and forecasters, mainly looking at Canada rather than at individual provinces, expect a smaller impact on annual growth in 2020. For example, the research teams at CIBC and RBC see the Canadian economy shrinking by roughly 2.5% in 2020.1 The Conference Board is not even certain Canada will suffer a recession. At the heart of these projections is

an assumption that almost all of the "negative growth" that Canada will experience is concentrated in the second quarter of this year, with a big rebound over the rest of 2020. Our assessment of the likely economic outlook differs from these other forecasters, for a few reasons.

First, we believe a very weak global backdrop and low world-wide commodity prices will continue to weigh on the B.C. economy (and Canada's) well beyond the next 2-3 months, particularly as the virus still seems to be spreading to more countries (e.g., India) even as it deepens its hold on others (e.g., the UK. US. Canada). Global trade is certain to take a major hit in 2020, and many international supply chains are unlikely to soon return to full functionality. Of interest, a prominent German economic think tank has speculated about a potential 20% fall in Germany's real GDP this year — a stunning prospect.² In short, our judgement is that global economic conditions are likely to be less positive from a B.C. perspective than some leading Canadian forecasters appear to expect.

Second, we believe shell-shocked B.C. consumers will have less capacity and less inclination to spend after the crisis has passed, in part because most households will have seen their incomes drop and many will have experienced sizable declines in financial wealth as well. With perhaps 500,000 B.C. jobs set to be lost before the end of the second quarter, it is not hard to imagine that consumer confidence and spending will be profoundly affected. The need to manage record levels of

household debt will act as another brake on consumer spending.

Third, in the B.C. context we expect the economic toll of the pandemic will include the insolvency or permanent closure of multiple tens of thousands of businesses. This means many firms will not exist when the time comes to "hire back" workers laid off or furloughed in March, April and May. The disappearance of significant numbers of small and mid-sized companies translates into a weaker rebound in employment, at least for the first 6-12 months following the crisis. The only way to avoid this scenario is for governments to do more to financially backstop businesses that were viable before the crisis hit but cannot survive 3-4 months of chaos.

Finally, we fear that some industries that have an important place in B.C. will suffer lasting damage as a result of the global pandemic — including travel, aviation, the cruise ship industry, the meeting and convention business, and some other parts of the broad tourism sector. It is also possible that international education — foreign students attending schools in B.C. — will be scaled back in a world where travel is more restricted, borders thicken, and the desire to host huge numbers of foreigners on study and work visas may diminish.

It is possible we are too pessimistic. Some or even most business activity may resume sooner than we believe. And perhaps governments will do more to prevent otherwise viable businesses from going under during the crisis. But so far we see little reason to incorporate these more favourable outcomes into our projections.

DETAILS OF THE PROJECTIONS

On the next few pages is a table summarizing our industry growth assumptions. The second column shows the estimated output (real GDP) for each industry in 2019. The third and fourth columns show the 2020 growth rates for each industry in our two scenarios. Growth rates for some of the 20 sectors (bolded) are determined by output in the respective subindustries that comprise the larger sectors.

The final column contains comments and thoughts that shaped our thinking about estimating industry growth rates. Because we are truly in uncharted territory, in many cases the growth estimates (guesses) are informed by looking at the magnitude of the contraction B.C. industries experienced in the 2008-09 Great Recession. In cases where there is little basis for estimating industry growth rates, impacts from the virus in the second scenario are often assumed to be roughly twice as large as in the first scenario.

CO-AUTHORED BY

Jock Finlayson Executive Vice President

Executive Vice President and Chief Policy Officer

Ken Peacock Chief Economist and Vice President

¹RBC Economics, "COVID-19 recession to hit every province," March 2020; CIBC Economics, "Thinking Through an Unthinkable Shock: How Deep and How Long?", March 23, 2020.

² "German economy could shrink by as much as 20% due to coronavirus," Reuters, March 25, 2020.

| Industry (NAICS) | B.C. 2019 GDP, 000s (2012 chained \$) | Projected 2020 Growth Under Scenario 1 | Projected 2020 Growth Under Scenario 2 | Comments and Thoughts |
|---|---|---|---|---|
| All industries | 250,757.91 | -7.3 | -11.4 | Total output determined by industry growth rates listed below |
| Agriculture, forestry, fishing and hunting | 5,722.73 | -5.3 | -8.7 | Sector growth determined by sub-sector projections below |
| Crop and animal production | 3,124.25 | -1.0 | -3.0 | Food production should continue, but parts of sector are affected |
| Forestry and logging | 1,696.20 | -10.0 | -25.0 | Sector challenges persist amid a weaker global backdrop |
| Fishing, hunting and trapping | 156.62 | -20.0 | -50.0 | |
| Support activities for agriculture/forestry | 732.35 | -10.0 | -25.0 | Contracts in line with forestry sector |
| Mining, quarrying, and oil and gas extraction | 11,074.20 | -5.85 | -15.9 | Sector growth determined by sub-sector projections below |
| Oil and gas extraction | 5,376.36 | 0.0 | -15.0 | Downward pressure on prices and output assumed from broad economic slowdown |
| Mining and quarrying (except oil and gas) | 5,038.96 | -10.0 | -25.0 | Downward pressure on prices and output assumed from broad economic slowdown |
| Support activities for mining, and oil and gas extraction | 955.98 | -15.0 | -25.0 | Downward pressure on prices and output assumed from broad economic slowdown |
| Utilities | 4,857.57 | -1.0 | -10.0 | Household demand higher, but industrial and business demand down sharply |
| Construction | 21,718.10 | -11.91 | -12.8 | Sector growth determined by sub-sector estimates below |
| Residential building construction | 10,144.37 | -20.0 | -33.0 | Assume developers scale back building activity due to uncertaint. Note that output in this sub-sector fell 12% during the Great Recession |
| Non-residential building construction | 2,979.79 | -5.0 | -15.0 | This sector will likely be interrupted, and investment plans scaled back, but can continue to operate |
| Engineering and other construction actitivies | 5,495.36 | 1.0 | -4.0 | This sector will likely be interrupted but is an area that can continue to operate |
| Repair construction | 3,098.58 | -15.0 | -33.0 | Significant impact assumed, due to reduction in home renovation spending. This sub-sector contracted by 5% during the Great Recession |
| Manufacturing | 16,405.52 | -16.0 | -35.0 | During the Great Recession Manufacturing output tumbled 8% in 2008 and 14% in 2009 |
| Wholesale trade | 9,265.41 | -10.0 | -33.0 | Wholesale trade fell by more than 8% during the Great Recession |
| Retail trade | 14,742.85 | -11.0 | -33.0 | The impact on retail will be very significant due to mobility restrictions and negative income and employment impacts. Output in this sector fell by over 2% during the Great Recession. We assume a significantly larger impact because of the closing of non-essential businesses (most of retail apart from food, pharmacies and a few others) |
| Transporation and warehousing | 14,964.82 | -13.49 | -15.76 | Sector growth determined by sub-sector growth estimates |
| Air transportation | 2,347.37 | -45.0 | -75.0 | Major restrictions assumed for at least 3 months. Under the second scenario restrictions remain in place throughout most of 2020 |
| Rail transportation | 1,564.30 | -10.0 | -25.0 | General economic slowdown (industry shrunk 8% during the GR) |
| Water transportation | 833.65 | -18.0 | -30.0 | Industry contracted by 16% in 2009 |
| Truck transportation | 2,508.03 | -10.0 | -22.0 | General slowdown will affect trucking. (contracted by 4% in 2008 |
| Transit, ground passenger and scenic and sightseeing | 1,616.14 | -20.0 | -40.0 | Drop in tourism has a major impact in this sector. Work from hom and social distancing orders reduce transit ridership |
| Support activities for transportation | 3,406.71 | 1.0 | -7.0 | This sector is relatively resilient. It includes Port services and airport services. It grew moderately during the Great Recession |
| Pipeline transportation | 1,273.88 | -11.0 | -22.0 | |
| Postal service, couriers and | 774.55 | 10.0 | 25.0 | Assumed to expand due to increase in home deliveries |
| messengers | 774.55 | 10.0 | 25.0 | Assumed to expand due to increase in nome deliveries |

| Industry | B.C. 2019 GDP, 000s | Projected 2020 Growth Under | Projected 2020 Growth Under | Comments |
|---|------------------------|-----------------------------------|-----------------------------------|--|
| (NAICS) | (2012 chained \$) | Scenario 1 | Scenario 2 | and Thoughts |
| Information and cultural industries | 8,990.88 | -6.5 | -8.0 | Sector growth determined by sub-sector growth estimates |
| Publishing industries | 1,183.43 | -12.0 | -18.0 | Newspaper decline accelerates, software output decline also accelerates |
| Motion picture and sound recording industries | 1,564.89 | -33.0 | -75.0 | Big decline in activity assumed. Production had already dropped sharply Output could fall even further if border is closed through to the end of 2020 |
| Broadcasting (except Internet) | 287.99 | 1.0 | 1.0 | Assumed to expand slightly |
| Telecommunications | 5,248.78 | 1.0 | 2.0 | Assumed to expand slightly due to virtual communications |
| Data processing, hosting, and related services | 357.71 | 2.0 | 3.0 | Assumed to expand slightly |
| Other information services | 468.79 | 2.0 | 2.0 | |
| Pay and speciality television, telecommunications and other information services | 5,645.43 | 0.0 | -5.0 | The sector could expand but is assumed to shrink due to job losses and the decline in household income |
| Finance and insurance | 14,304.29 | -5.0 | -15.0 | Fell 2.2% during the Great Recession |
| Real estate and rental and leasing | 45,886.60 | 0.72 | -3.99 | Sector growth determined by sub-sector growth estimates |
| Real estate | 44,373.72 | 1.05 | -3.74 | Sector growth determined by sub-industry growth estimates below |
| Lessors of real estate | 11,972.40 | -1.0 | -8.0 | Fell just slightly during the Great Recession |
| Owner-occupied dwellings | 30,259.58 | 3.0 | 1.5 | This is owner imputed rent. It grew steadily (by around 5%) consistently through the Great Recession. Owner imputed rent alone accounts for 12% of provincial GDP and does provide some resiliency to overall growth |
| Offices of real estate agents and brokers and activities related to real estate | 2,141.74 | -15.0 | -33.0 | Fell by 30% during the Great Recession. The fallout from COVID-19 will probably be larger than what is shown |
| Rental and leasing services | 1,523.18 | -9.0 | -20.0 | Fell 5% during the Great Recession |
| Lessors of non-financial intangible assets (except copyrighted works) | 116.42 | -9.0 | -15.0 | Fell more than 10% during the Great Recession |
| Rental and leasing services (except automotive equipment) and lessors of non-financial intangible assets (except copyrighted works) | 1,073.05 | -7.0 | -20.0 | Fell 5% in 2009 |
| Professional, scientific and technical services | 15,688.44 | -12.66 | -10.90 | Sector growth determind by sub-sector assumptions |
| Legal, accounting and related services | 3,675.08 | -15.0 | -33.0 | Fell 7.7% during the Great Recession — we assume a steeper decline this time |
| Architectural, engineering and related services | 3,655.18 | -14.0 | -30.0 | Fell by 6% during the Great Recession |
| Other professional, scientific and technical services including scientific research and development | 4,104.00 | -16.0 | -25.0 | Fell 8% in 2009 |
| Computer systems design and related services | 3,654.59 | 0.0 | 1.0 | |
| Advertising, public relations, and related services | 548.29 | -18.0 | -33.0 | Fell 15% in 2009 |

| E | B.C. REAL GDP (| TWO SCENARIOS (cont'd) | | |
|---|---|---|---|--|
| Industry (NAICS) | B.C. 2019 GDP, 000s (2012 chained \$) | Projected 2020 Growth Under Scenario 1 | Projected 2020 Growth Under Scenario 2 | Comments and Thoughts |
| Management of companies and enterprises | 1,175.64 | -6.0 | -12.0 | Fell 4% in 2009 |
| Administrative and support, waste management and remediation services | 6,057.17 | -17.96 | -20.17 | Sector growth determined by sub-sector growth projections detailed below |
| Administrative support services | 5,414.19 | -19.14 | -22.04 | Sector growth determined by sub-industry assumptions |
| Other administrative and support services | 2,671.60 | -20.0 | -40.0 | Fell 11% in 2009 and another 5% in 2010 |
| Travel arrangement and reservation services | 568.15 | -40.0 | -75.0 | Massive decline assumed due to travel restrictions |
| Investigation and security services | 740.15 | -10.0 | -20.0 | Fell 3% during the Great Recession |
| Services to buildings and dwellings | 1,434.29 | -14.0 | -25.0 | Fell 19% during the Great Recession |
| Waste management and remediation services | 642.98 | -8.0 | -18.0 | Industry has been shrinking in recent years |
| Educational services | 12,705.40 | -6.0 | -12.0 | Contraction assumed due to closures of schools — overall impact difficult to gauge. K-12 remains largely intact, but colleges and universities see a downturn in foreign student enrollment and private education institutions see a large drop in enrollments |
| Health care and social assistance | 17,418.74 | 10.0 | 13.0 | Sector grows in response to fighting COVID-19 (not sure if there is capacity to expand output by 20%, but 10-12% is probably achievable) |
| Arts, entertainment and recreation | 2,373.64 | -60.0 | -85.0 | Massive declines — professional sports leagues suspended; events postponed |
| Accommodation and food services | 7,911.28 | -37.52 | -54.05 | Sector growth determined by sub-industry projections below |
| Accommodation services | 2,964.65 | -45.0 | -80.0 | Sector hit hard |
| Food services and drinking places | 4,952.03 | -33.0 | -66.0 | Sector hit hard |
| Other services (except public administration) | 5,422.09 | -15.0 | -40.0 | Household services decline – employment and income effects as well as social distancing |
| Public administration | 14,010.25 | 6.0 | 9.0 | Spending expands |