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Labor Market and Fiscal Policy During and After the Coronavirus

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> **What are the likely effects of coronavirus-related restrictions on the labor market and the macroeconomy? What are the likely effects of government policies on the unemployment rate and output?**

What are the likely effects of coronavirus-related restrictions on the labor market and the macroeconomy? What are the likely effects of government policies on the unemployment rate and output? In a complete working paper[i] published at CIRANO, I develop a model to answer these questions. Labor markets search frictions are captured as follows: Unemployed workers searching for a job, and firm vacancies come together in a matching function that determines the number of new firm-worker pairing. The remainder of the macroeconomy in the model is based on neoclassical foundations.

I feed into this model 'educated guesses' for the impact effects of four exogenous shocks; the shocks then dissipate over the 18 months that the coronavirus is likely to directly affect the economy. First, relative to the pre-coronavirus U.S. economy, the job separation probability initially quadrupled. While this is a rather large increase, on impact the job separation probability is not much higher than it was during the Great Recession. These separations are intended to reflect the outcome of lost revenues and the inability of workers to get to work in light of widespread lockdowns. To match the U.S. experience – a immediate and large increase in unemployment – the model simply needs such a large increase in separations. Second, match efficiency falls by 40%, capturing the difficulties workers and firms have in meeting when many firms are closed, and workers are restricted to their homes. Third, vacancy posting costs double. These costs capture a combination of the aforementioned difficulties firms have in recruiting when they are closed, and the inability of firms to obtain financing, some of which is used to pay for the up-front costs of recruiting. Finally, total factor productivity falls by 10%, capturing the loss in productivity of working from home, as well as disruptions to supply chains. By way of comparison, over the Great Recession, total factor productivity fell by 6.5%. When all four shocks are in play, absent a policy response, the outlook is dire: The model predicts that unemployment will peak at over 22.5% and output will fall by over 20%.
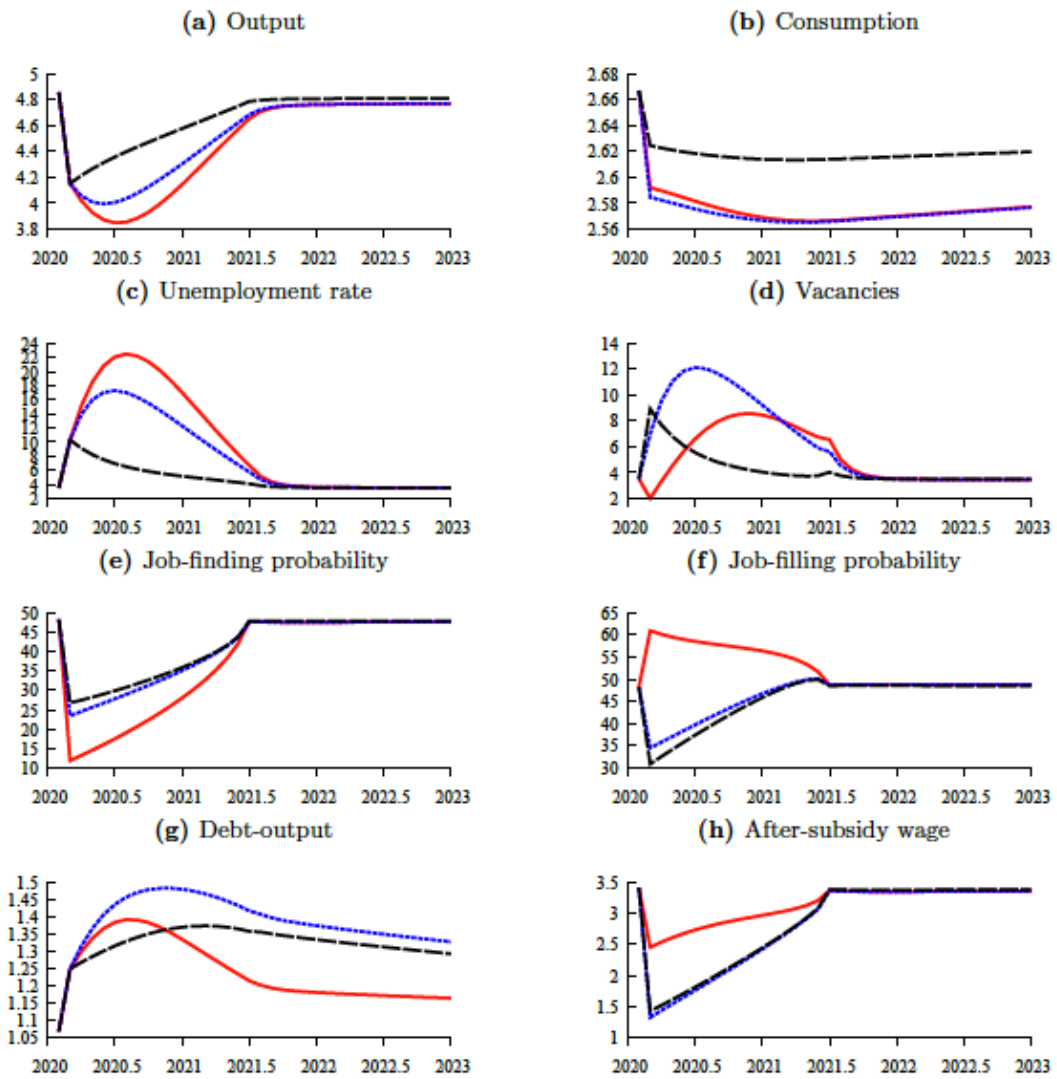
Policy Interventions

I consider four labor market policies. As with the shocks, these policies fade out over the 18 months of the coronavirus, reflecting the likelihood that these programs will be wound down, and that over time fewer firms and workers will quality for these programs.

1) Wage Subsidy: The first policy is a straight wage subsidy of 50%. While this policy reduces unemployment (by less than two percent) and cushions the fall in output (by 1.3 percentage points), it is not nearly as good as the second policy: a wage subsidy along with an employment guarantee (modeled as a return of the job separation probability to its pre-coronavirus value).

2) A wage subsidy along with an employment guarantee: This second policy is designed to get at policies in several countries, including Denmark and Canada, that tie the receipt of government help with firms' wage bills to those firms limiting job losses. Under this second policy, the unemployment rate initially rises to just over 10%, before falling gradually to its original value of 3.5%. Despite the improved unemployment performance, the model predicts a 14% decline in output.

3) More Generous Unemployment Insurance: The third policy is more generous unemployment insurance. This policy is not particularly efficacious in terms of labor market outcomes: the model predicts a small increase in unemployment, and a slightly larger dip in output. To be sure, there are other reasons to increase the generosity of transfer programs like unemployment insurance; lowering the unemployment rate is simply not one of them.

4) Subsidizing Vacancies: The final policy is a 50% subsidy to vacancy posting costs. This is a reduced-form way of incorporating a variety of programs aimed directly at firms, including various loan programs. Such a reduction in the cost of a vacancy lowers the peak unemployment rate by as much as six percentage points.

(a) Output

(b) Consumption

(c) Unemployment rate

(d) Vacancies

(e) Job-finding probability

(f) Job-filling probability

(g) Debt-output

(h) After-subsidy wage

Key: Red solid line: baseline with all shocks, no policy intervention. Blue dotted line: wage subsidy, increased unemployment insurance, subsidized vacancies. Black dahsed line: in addition, employment guarantees.

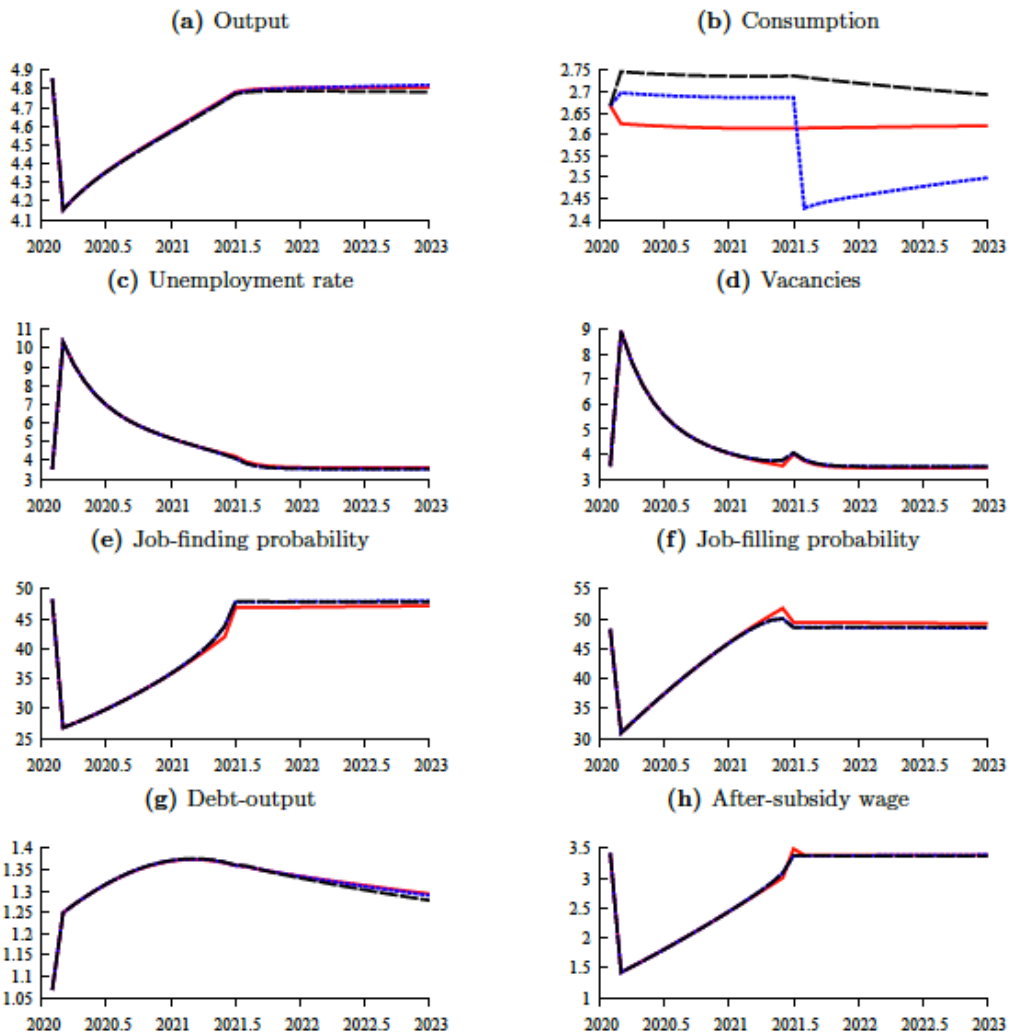*Figure 1: Implications of All Policies*

What if it takes a few months to actually implement these labor market policies? The model predicts that unemployment will be higher, and output lower, and for longer. A delay of one month implies a peak to the unemployment rate of 15.1% compared to just over 10.3% if there is no delay.

After the coronavirus period

What happens when the coronavirus is no longer a pressing problem? According to the model, the government debt-output ratio will rise by around 30 percentage points. This is likely a conservative estimate of the rise in government debt since only labor market policy responses are considered. I evaluate the implications of restoring the debt-output ratio to its pre-coronavirus value through one of: the labor income tax, the capital income tax, or the sales tax (in Europe, the VAT). Since these taxes distort the economy in different ways, in principle the tax used to restore government debt levels should matter both during and after the coronavirus. Yet, visually, there is little difference in the model's predictions for most labor market and macroeconomic variables. The model indicates that substantial tax increases will be necessary. It may be tempting to simply leave the level of government debt permanently higher, but doing so will necessitate some sort of tax response – particularly if the economy exits this period of extraordinarily low real returns on government debt.

> **To help labor markets return to some semblance of normal, it is of utmost importance that job separations be reduced. Wage subsidies substantial enough to induce firms to agree to employment guarantees are a promising avenue.**

While the model is fit to the U.S., the lessons apply equally well to Québec. To help labor markets return to some semblance of normal, it is of utmost importance that job separations be reduced. Wage subsidies substantial enough to induce firms to agree to employment guarantees are a promising avenue. While improving match efficiency (the ease by which firms and the unemployed meet) and reduced vacancy (recruiting) costs help, they are of secondary importance. Finally, it would be best that Québec quickly put these labor market policies into practice – delay keeps unemployment needlessly high.

(a) Output

(b) Consumption

(c) Unemployment rate

(d) Vacancies

(e) Job-finding probability

(f) Job-filling probability

(g) Debt-output

(h) After-subsidy wage

Key: Red line: Labor income tax. Blue line: consumption tax. Black line: Capital income tax.

Figure 2: Implications of Alternative Fiscal Policies After the Coronavirus

NOTE

[i] Gomme Paul, 2020, "Labor Market and Fiscal Policy During and After the Coronavirus", CIRANO Working Paper, 2020s-27.