**Background**

“*For many workers, these new unemployment benefits will replace more than 100 percent of their pre-crisis wages—some workers could even earn more in four months of unemployment than they earn in an entire year of employment—creating a strong incentive to leave their employers. This incentive directly counteracts the goal of new tax credits and grants designed to keep people attached to their employers through the crisis. Some workers may be reluctant to stay at work or return to work even if the employer is offering work or paid leave. If they do not return within the loan forgiveness eight-week window specified by the Paycheck Protection Program for small-business forgivable loans, the employer will see its loan forgiveness ratio substantially affected. There will also undoubtedly be employers that make paid leave payments after receiving a small-business loan to employees that are also receiving unemployment compensation under the relaxed rules. It is not clear how these double payments will be reconciled or prevented*.”

The validity of above expressed opinion partially hinges on what the effect of an expansionary income shock for private individuals is on their consumption habits in the times of recession. I have written this piece to address this concern.

Between 2010 and 2018, personal savings grew annually, on average, by 6.3 percent, higher than the 4.2 percent rise in disposable personal income during that period. The savings rate has continued to pick up pace, reaching 8.1 percent in June 2019.

There is a wealth of research concerning Consumption multiplier effects of government transfer payments. The bulk of the estimates for multipliers on general government purchases across the leading methods of estimation and samples lie in a surprisingly narrow range of 0.6 to 1.

Many models of consumer behavior predict that permanent and temporary changes in income have very different impacts. This difference is summarized as follows.

*“The most striking result is the large, immediate response of consumption to a permanent increase in benefits. The point estimates suggest that a benefit increase of 1 percent of personal income raises aggregate consumption by 1.2 percent in the month the larger checks arrive, and that the effect persists for the next 5 months.”*

“*The figure shows that the response to a temporary benefit increase of 1 percent of personal income appears considerably weaker. The estimated impact in the month of the increase is only 0.1 percent. The estimates remain small for several months after the temporary payment. Thereafter they rise considerably, but the standard errors are sufficiently large that the possibility that this pattern is just statistical noise cannot be rejected*”

Moreover, these impacts greatly vary based on Income quintiles. The also vary greatly on whether the economy is facing a contractionary shock or expansionary shock.

**The case against fiscal stimulus packages (in aggregate terms.)**

The multiplier for contractionary income shocks is largest in recessions, but the multiplier for expansionary income shocks is always below 1 and not larger in recessions. The result is backed by empirical results showing that consumption is not increasing (possibly even declining) following an expansionary government spending shock (the economy behaving in a neo-classical fashion where the negative wealth multiplier dominates benefits increases multiplier). Moreover, temporary spending increases also tend to shift resources within the subsidized industry rather than resulting in a permanent expansion in the number of firms or jobs. Evidence from the 2008 recovery bills shows that in the best case, federal rescue programs had no effect on—and may actually have crowded out—private activity.

The left graph below depicts changes(as %) in government spending in the sample following a contractionary shock to the economy. The right graph shows corresponding changes in output. The X-axis is in units of “Quarters”. We see that a 1% increase in government spending in Q3 results in a 1% change in consumption spending only in Q6 indicating an impact lag of about 4 Quarters. It is important to note that this is a graphs only of general government spending and is not specific to transfer payments. The following graph provides more insight on transfer payments.

A close up of a map

Description automatically generated\

The graph below depicts the difference in multiplier effects between permanent government benefit increases and temporary government benefit increases. The graph shows the % change in consumption resulting from a 1% change in government transfer benefits. The X-axis is a time series in months. In the case of temporary benefits, as is the case of the CARES act due to COVID-19, the Consumption increases by 1% as a result of 1% change in transfer payments in a time frame of 12 months or 4 Quarters, which is consistent with the previous graph.

A close up of a map

Description automatically generated

**Income effect**

The narrative described above can look very different to people in different income brackets. Deloitte Insights summarizes the difference in saving rate by Income quintiles in the following graph.

A close up of a map

Description automatically generated

The graph essentially conveys that although the aforementioned research reaches statistically significant results in aggregate terms, the results is not necessarily true for people in the lowest income brackets.

This is consolidated by Keynesian Assumptions as follows:

“*the multiplier can be above one provided that three assumptions are satisfied (Gali et al., 2007): (i) prices are sticky, (ii) the central bank response to changes in government spending is not too strong, and (iii) household’s MPC out of transitory income is large enough. With (iii), the increase in disposable income brought about by higher government spending can compensate the negative wealth effect and thus lead to an increase in household consumption and to a multiplier above one. Gali et al. (2007) also allow for a large MPC out of transitory income by assuming the existence of rule-of-thumb consumers (who behave "hand-to-mouth" by consuming all of their disposable income), their assumption is motivated by the existence of financial frictions and by the fact that a sizable fraction of households have close to zero liquid wealth and face high borrowing costs*”

This caveat is also noted in this [paper](https://www.richmondfed.org/-/media/richmondfedorg/publications/research/working_papers/2017/pdf/wp17-15.pdf) where empirical results show that low income consumers have an MPC > 1 for several months as a response to transfer payments in a recessionary situation. The paper also mentions in its findings that “increases in government spending have larger multipliers during a recession. Decreases in government spending during recessions have the largest multiplier, which suggests that austerity measures during recessions can be especially harmful.”

Moreover, this [paper](https://eml.berkeley.edu/~dromer/papers/RomerandRomerTransfers.pdf) also notes that “The multiplier associated with contractionary fiscal shocks depends strongly on the state of the cycle and reaches its highest value in times on high unemployment. Specifically, the contractionary multiplier is about 0.9 around business cycle peaks but gets above to 2 around business cycle troughs.” Which means that as the unemployment rises through this COVID-19 pandemic, the multiplier effect will only grow throughout all income groups on average, providing an automatic correction of the economy of sorts.

**My opinion.**

This only goes to show that while the results in the previous sections may be true, they only identify the time lag required by fiscal intervention to reflect in the GDP and that the results should not be interpreted as a case for dramatically cutting transfer payments. Rather they highlight the need to reduce the time lag by utilizing government funds to target low income groups specifically and with higher accuracy as this can drastically reduce the GDP restoration time lag. This also ties back to my original assertion that population size is a poor metric to distribute Federal funds when compared to per capita personal Income. **Essentially, disregarding Income distribution drastically increases the GDP recovery lag through transfer payments.**