Effects of COVID-19 on the Tri-County Economy

Executive Summary

Analysis & Summary Prepared by

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Background

In order to understand the scope of need in the Tri-County area following the SARS-CV2 (COVID-19) pandemic, Trident United Way has conducted an economic assessment of the effect of business closures on Tri-County Gross Regional Product (GRP). Such analysis is explicitly necessary at this time for two reasons: (1) macro-economic indicators provide useful information about the magnitude of the shutdown due to COVID, but necessarily lag the true effect of the slowdown; (2) the mitigation methods imposed on the citizens of the US, South Carolina, and the Tri-County will take a significant toll on the economy of the region which will in turn have tangible human consequences. However, the scale of these effects is not yet known.

To provide estimates of the effects of COVID on the economy of the Tri-County and to provide some indication of the scope of the needs that will come from those effects, we provide rough (back of the envelope) estimates of the effects of COVID. Such estimates are necessarily rough given that the true data necessary to conduct a robust analysis of the effects of COVID suffers from the same lag as the macro-economic indicators of COVID's effect. Therefore, in order to plan for the need that is to come, one cannot rely on data that has not yet been gathered or synthesized, and which is largely unknown.

Estimation Procedures

I base estimates of COVID's effects on GDP on the data from 2001 – 2018 and focus on two separate industries that we know will be affected, e.g. the digital services industry and the tourism industry. Digital services is an industry that is growing in the Tri-County and is commonly used in Labor analysis since most firms today all employ

some form of digital services worker. Tourism is the primary driver of South Carolina's tax base and is a major industry in South Carolina. Data for the Charleston/North Charleston MSA is available at the Bureau of Economic Analysis' CAINC4 database.

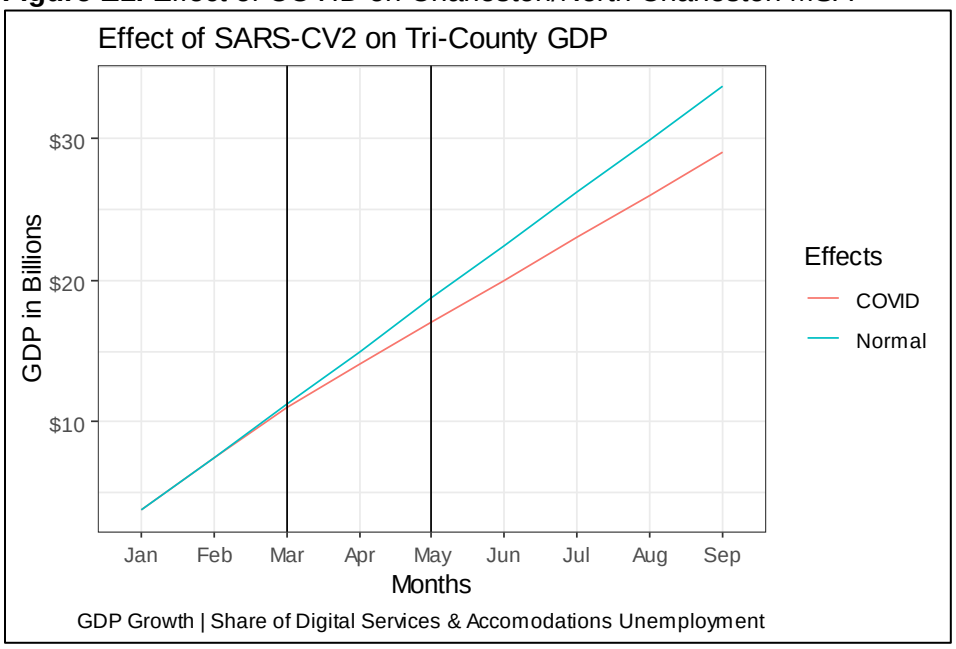
I estimate the "penalty" two specific industry segments will receive based on two assumptions. The first industry segment is digital service workers. I use this segment most firms have at least some portion of their business that is digital and therefore these segments of their firms are the least likely to be affected by a slowdown, i.e. individuals can continue to fully contribute. The penalty for this segment is the share of the economy that is not digitized spread over a 12 month period, e.g. 1/12 multiplied by the penalty. The second segment is the accommodations and tourism segment. Since accommodations cannot function without employees, I estimate the accommodations penalty as the unemployment rate multiplied by the likelihood that an individual works in the accommodations sector, again spread over a 12 month period. In doing this, we have a monthly penalty to GRP that can then simply be multiplied month over month to get the cumulative effects over any given number of months.

This yields a digital penalty of 0.082 per month, e.g. the growth that we would normally see is discounted by 8.2%. This yields a tourism penalty of 0.87% per month, e.g. the growth we would normally see is discounted by 0.87%. In total, the growth we would normally see is discounted by 9.07% per month.

Average growth per month (non-seasonally adjusted) for 2020 under normal conditions would be approximately $3.74 Billion per month. The effects of COVID though would imply growth of $2.98 Billion per month during closures. If we extrapolate this out month over month, then a from March 15 – Memorial Day (2.25 Months) the

loss is 100 - 79.67% = 20.03%, e.g. we only capture 79.67% of the GRP we would under normal circumstances. This is a loss of (1-0.7967)*(46.4 Billion) = $9.43 Billion in GRP (figure 1).

Figure E1. Effect of COVID on Charleston/North Charleston MSA



Effects on Unemployment

The above can give a rough estimate of the effects for two given sectors, but we should also consider the effects of general unemployment. Below I estimate the effects of COVID on unemployment and provide specific recommendations for messaging TUW services to the areas that will be most affected by unemployment increases. Since there is, on average, a 1% decrease in GDP for every 2% increase in unemployment, and we know from the last recession which industries in the Tri-County were hit the hardest, we can estimate a range what unemployment increases will be given the above estimations and what the effects on specific industries will likely be.

The declines seen in the Great Recession were a 5.1% loss to GDP. Current estimates above, if the closures last through may, are approximately 20% over the 2.5-month period between March 15 and the end of May. This would yield a most likely scenario of a 5.41% decline over what would normally be expected for 2020 growth. Using this midpoint as a maximum likelihood estimate, we can estimate the effects to major Tri-County industries using effects of the Great Recession weighted by the 0.40% increase relative to GDP declines seen in 2009. If we consider where these effects will be felt to the heaviest degree, we can examine the industries that felt the greatest impact in 2008, both positively and negatively. Industries that are likely to take the hardest hits include major industries in South Carolina, e.g. accommodations, lumber, development/real estate, and large manufacturing (table 2).

Table E1. Effects of COVID on total wages in major industries (in $100,000)

	Charleston/N. Charleston MSA	Construction	Durable Goods Manuf.	Accommodations	Forestry
Total Wages	$205,860.36	$11,719.38	$18,873.85	$9,759.30	$584.38
% Total Wages	100.00%	5.69%	9.17%	4.74%	0.28%
$ Decline due to COVID	-$5,146.51	-$385.57	-$315.19	-$224.46	-$17.94
Employees	385706	26865	25248	55224	2030
% Employees	1	6.97%	6.55%	14.32%	0.53%
Wages/Employee	$0.53	$0.44	$0.75	$0.18	$0.29
Reduction, Wages/Employee	-$0.0133	-$0.0144	-$0.0125	-$0.0041	-$0.0088
N Jobs los	-40	-30	-60	-43	-33
Likely job losses | No Salary reduction	9643	884	422	1270	62
% Job Decline	2.50%	3.29%	1.67%	2.30%	3.07%
Likely job losses | 5% Salary reduction	9183	842	402	1210	59
% Job Decline	2.38%	3.13%	1.59%	2.19%	2.92%

Job losses estimated as ratio of employees it would take to meet the given salary level reductions.

As seen in table 2, if we consider a slowdown on the order of 5.51% we see an increase in unemployment of 2.38%, e.g. given the current distribution of employees in the Tri-County, we are can expect unemployment on the order of 4.78%. Given that the largest number of declines will come from the accommodations sector, which subsequently has the lowest average employee income, we are likely to see higher need from 211 and Resource Connection Centers coming from this sector of the economy. Note though that the four industries listed below are those that, based on history, are likely to be the most affected. However, they only represent 28.37% of total employment in the Tri-County. Therefore, the bulk of service requirements is likely to come from multiple disparate sectors. It would be advisable to begin to do a general marketing campaign detailing the availability of services, but also provide specific material to accommodations industry groups.

Effects to Financial Stability Partners and Resource Connection Centers

Because TUW's Resource Connection Centers were not in existence during the last recession, we cannot estimate increased demand. However, if we consider that benefits screenings would increase as a result of the recession then we can examine the increases in Medicaid beneficiaries in the last recession to give a rough estimate of increase per percent increase in unemployment. Using 2013 data from the Kaiser Family Foundation's[2] assessment of Medicaid and unemployment in the great recession, we that for every 1% increase in unemployment, there is a corresponding increase in Medicaid beneficiaries of 2.4%. Therefore, we may assume an increase of 5.79% in the number of individuals seeking benefits screenings or basic needs

[2] Available at: https://www.kff.org/wp-content/uploads/2013/03/7850.pdf

assistance at the Resource Connection Centers and Financial Stability grantees. Given that there were 10,398 individuals in 2018-19, we may expect approximately 11,000 clients seeking financial assistance or benefits screenings.