

# PRELIMINARY ESTIMATE OF THE ECONOMIC IMPACT OF THE COVID-19 VIRUS IN PUERTO RICO

## UPDATE

May 18, 2020



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### Modification of Existing Impacts

- The parameters associated with the lockdown period and the month-equivalent magnitude of the initial impacts were updated in response to the extensions and flexibilizations of the Executive Order. This update represents a 40.5% increase in direct impacts with respect to the previous update.
- The new measures outlined in the economic stimulus package were included as part of the influx of funds. This represented a 50.3% increase with respect to the last update of a month ago.
- The impact estimates are for the year 2020 as of May.

### Discussion of Results

As can be seen, the direct impact increased by 40.5% with respect to the previous version (\$9.7 billion vs \$6.9 billion). However, the large increase in estimated funding (50.3%) dampened the impact significantly. Hence, the net direct impact seen in tables 1 and 2 below is lower than in the previous version. The purpose of this exercise is not to estimate an impact on an indicator such as GDP that would require netting. It is also true that federal funds do not necessarily impact the same individuals and firms that have suffered a negative impact. Thus, the gross impact and its distribution provides a better measure of impact as opposed to the net impact.

The total impact is 43.2% higher, on account of the extended lockdown and additional stimulus measures. Due to a significant portion of the new increases in funding being transfers to agencies rather than directly impacting demand, the total increase in funding impact is much lower, 29.6%. This is representative of the deadweight loss due to agency redistribution and administrative inefficiencies compared to direct transfers (which were by far the majority of funding in the previous update). Hence, even though the funding increased by more than 50%, the total economic impact of the additional lockdown periods is greater than the expected benefits from additional funding.

There are, of course, other impacts that are not included in the two tables below. One such is the loss of employment that, as of the date of this report is close to 300,000. The new unemployment claims since mid-March total some 272,000 and this provides an indication of job losses. How many will be recovered once the economy is completely open remains to be seen. Our estimate is that some 100,000 jobs are lost permanently due to a number of factors, including the use of technology. The jobs that have the highest risk of being lost are precisely those that are more susceptible of being substituted by technology. Tables 3 and 4 and Graph 1 below illustrate the above.

Another impact difficult to gauge at this moment is that on the structure of specific markets. It is clear that many small and medium size businesses will be lost permanently and that the retail market will have a very different and more concentrated structure than before. Although the trend in that direction was already well established, COVID will almost certainly accelerate it. This is not unique to Puerto Rico.

As ETI has made clear since the initial report, estimating impacts for COVID is a very different process than doing so for a hurricane, since the virus can have extended impacts while a hurricane is a one day event and is localized. COVID is a global phenomenon that is now entering its sixth month. What this means is that impact estimates will change over time, while in the hurricane one had a fairly clear idea of impacts a few days after the event. This is why periodic updates are necessary to gauge the impacts of COVID-19.

A detailed description of methodology is included in the initial report of March 26, 2020, found in [www.estudiotecnicos.com](http://www.estudiotecnicos.com). More details on this update are available in a dashboard accessible at <https://www.estudiotecnicos.com/es/covid-19>.

**TABLE 1: DIRECT IMPACTS (\$ MILLIONS)**

<b>NAICS Sector</b>	<b>Impact on Economic Output</b>
NAICS 11: Agriculture, Forestry, Fishing and Hunting	\$56.2
NAICS 21: Mining, Quarrying, and Oil and Gas Extraction	\$67.5
NAICS 22: Utilities	\$19.9
NAICS 23: Construction	\$113.4
NAICS 31-33: Manufacturing	\$4,849.8
NAICS 42-45: Wholesale and Retail	\$67.6
NAICS 48-49: Transportation and Warehousing	\$703.4
NAICS 51: Information	\$438.6
NAICS 52: Finance and Insurance	\$352.6
NAICS 53: Real Estate and Rental and Leasing	\$432.6
NAICS 54: Professional, Scientific, and Technical Services	\$54.4
NAICS 55: Management of Companies and Enterprises	\$0.0
NAICS 56: Administrative and Support and Waste Management and Remediation Services	\$28.6
NAICS 61: Educational Services	\$149.0
NAICS 62: Health Care and Social Assistance	\$880.3
NAICS 71: Arts, Entertainment, and Recreation	\$191.4
NAICS 72: Accommodation and Food Services	\$1,075.2
NAICS 81: Other Services (except Public Administration)	\$109.3
NAICS 92: Public Administration	\$111.2
<b>Direct Impact on the Local Economy</b>	<b>\$9,700.9</b>
Minus: Direct Influx of Federal Funding	\$5,826.9
<b>Equals: Net Direct Impact</b>	<b>\$3,874.0</b>

**TABLE 2: TOTAL IMPACTS (\$ MILLIONS)**

NAICS Sector	Impact on Economic Output
NAICS 11: Agriculture, Forestry, Fishing and Hunting	\$207.2
NAICS 21: Mining, Quarrying, and Oil and Gas Extraction	\$83.3
NAICS 22: Utilities	\$378.2
NAICS 23: Construction	\$255.9
NAICS 31-33: Manufacturing	\$9,171.3
NAICS 42-45: Wholesale and Retail	\$1,930.9
NAICS 48-49: Transportation and Warehousing	\$1,021.9
NAICS 51: Information	\$786.8
NAICS 52: Finance and Insurance	\$1,165.7
NAICS 53: Real Estate and Rental and Leasing	\$490.4
NAICS 54: Professional, Scientific, and Technical Services	\$474.7
NAICS 55: Management of Companies and Enterprises	\$53.3
NAICS 56: Administrative and Support and Waste Management and Remediation Services	\$316.2
NAICS 61: Educational Services	\$183.4
NAICS 62: Health Care and Social Assistance	\$1,637.7
NAICS 71: Arts, Entertainment, and Recreation	\$217.9
NAICS 72: Accommodation and Food Services	\$2,094.8
NAICS 81: Other Services (except Public Administration)	\$227.3
NAICS 92: Public Administration	\$239.8
<b>Total Impact on the Local Economy</b>	<b>\$20,936.7</b>
Minus: Total Impact of Influx of Federal Funding	\$10,123.6
<b>Equals: Net Impact on the Economy</b>	<b>\$10,813.1</b>

**TABLE 3: UNEMPLOYMENT RISK BY INDUSTRY**

NAICS CODE	Industry	Employment Mar-2020 (000s)	% Employment at high risk of unemployment	High-risk employment (000s)
22,42-48	Trade, Transportation and Utilities	174.1	60%	104.5
71-72	Recreation and Accommodation	81.8	81%	66.3
61-62	Educational and Health Care Services	120.7	48%	57.9
54-56	Professional and Management Services	121.4	25%	30.4
21,23	Mining and Construction	25.8	95%	24.5
52-53	Finance, Insurance and Real Estate	44.9	30%	13.5
81	Other Services	18	74%	13.3
92	Public Administration	208.1	5%	10.4
51	Information	16.3	25%	4.1
31-33	Manufacturing	75	1.0%	0.8
<b>Total Non-Agricultural Salaried Employment</b>		<b>886.1</b>	<b>36.7%</b>	<b>325.5</b>
Agricultural employment		37.0	25%	9.25
Self-employed, Non-incorporated employees and family without pay.		34.9		34.9
<b>Total:</b>		<b>958.0</b>	<b>38.6%</b>	<b>369.7</b>

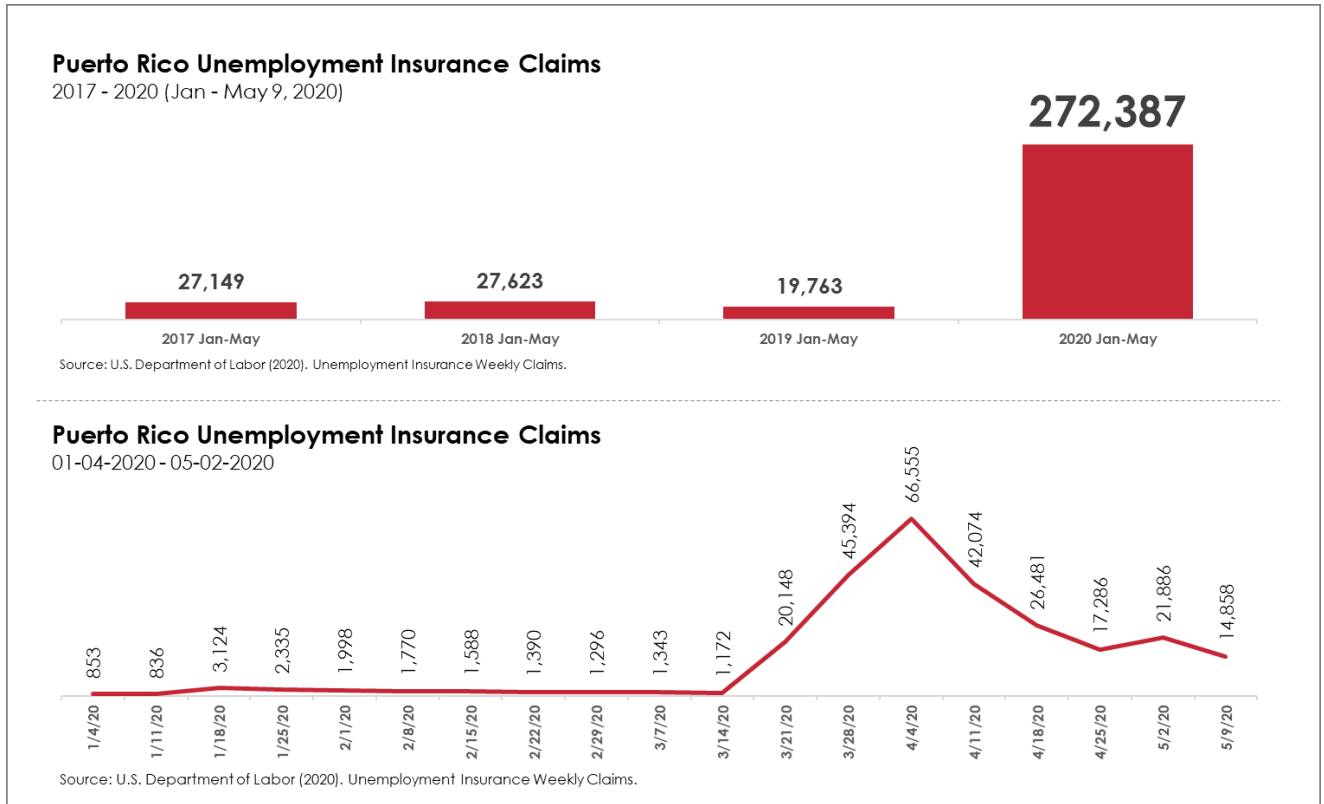
Source: Negociado Federal de Estadísticas del Trabajo, Current Employment Survey. Makridis C. & Hartley J. (Apr 6, 2020) The Cost of COVID-19: A Rough Estimate of the 2020 US GDP Impact. Mercatus Center, George Mason University. Estimados de Estudios Técnicos, Inc.

**TABLE 4: DISTRIBUTION OF EMPLOYMENT AT RISK BY OCCUPATION**

Occupation Code SOC	Occupation	High-risk employment (000s)
41	Sales and Related Occupations	94.0
35	Food Preparation and Serving Related Occupations	75.7
53	Transportation and Material Moving Occupations	48.6
37	Building and Grounds Cleaning and Maintenance Occupations	46.0
49	Installation, Maintenance, and Repair Occupations	31.7
47	Construction and Extraction Occupations	27.6
39	Personal Care and Service Occupations	14.9
Other Occupations		31.1
<b>Total High-risk employment</b>		<b>369.684</b>

Source: Negociado Federal de Estadísticas del Trabajo, Occupational Employment Statistics. Gascon C. (Apr 3, 2020) COVID-19 and Unemployment Risk: State and MSA Differences. Federal Reserve Bank of St. Louis.

**FIGURE 1: PUERTO RICO UNEMPLOYMENT INSURANCE CLAIMS**



Prepared by:

