STOCKTON UNIVERSITY | WILLIAM J. HUGHES CENTER FOR PUBLIC POLICY

THE SOUTH JERSEY ECONOMIC REVIEW

About the SJER

Since 2006, the South Jersey Economic Review has provided the region's stakeholders and policymakers timely, high-quality research that focuses on the regional economy. The Review analyzes the region's key industries and tracks its most important labor force, wage, and demographic trends. The Review is published bi-annually under the aegis of Stockton University's William J. Hughes Center for Public Policy.

IN THIS ISSUE

EDITORIAL NOTE

The 2020 COVID-19 pandemic will be a defining historical moment. Like other such moments (be they wars, natural disasters, or prior pandemics) this year's novel coronavirus has already produced indelible images, stories, and unimaginable human suffering. And, though its public health dimensions are not unprecedented the continued daily rise in the number of deaths due to COVID-19, more than 140,000 globally (as of April 17), remains sobering. The University of Washington's Institute for Health Metrics and Evaluation estimates that the American death toll (nearly 31,000) may still surpass 60,000 by early August.

The pandemic will also produce significant social, political, and economic change. Indeed, the current wave of national economic lockdowns enacted in response to the pandemic has upended the lives of millions across the world while sending their governments into unchartered policy territory and their economies plummeting to depths rarely, if ever, experienced.

It is against this somber backdrop that the current edition of *The South Jersey Economic Review* is published. The pandemic resulted in a significant publishing delay as we grappled with whether and how to estimate the regional impact of the pandemic. We ultimately decided to delay publication and produce a set of estimates. These estimates, and our discussion of them, are set out in Section 1. All material that follows Section 1 was completed in late February. Much of this analysis and discussion highlights the regional economy's solid economic performance last year. Needless to say, the pandemic provides a significantly altered lens through which last year's performance will be assessed. The decision to include our 2019 analysis was driven by a belief that the region's stakeholders would still benefit from having a comprehensive sense of where the regional economy stood prior to the onset of the COVID-19 crisis.

In addition to a broad overview of the regional economy's performance last year, the effects of last year's minimum wage legislation are assessed, and the gaming industry's performance is reviewed.

I. Estimating the Economic Impact of the COVID-19 Pandemic on the Southern New Jersey Regional Economy

The economic dimensions of today's COVID-19 pandemic are unprecedented. Today's economy boasts linkages far wider and deeper than those that existed a century ago when the Spanish flu of 1918-19 took the lives of 675,000 Americans and millions more across the globe. While today's globalized economy enables the rapid transmission of localized economic events from one country to another, depth-oriented industry and sectoral linkages quickly magnify such events through local and regional populations and their economies. The complexity of these horizontal and vertical linkages significantly increases the difficulty of predicting the economic consequences of the present world-wide wave of pandemic-induced national lockdowns. Reflecting this, private-sector estimates of the COVID-19 pandemic's effect on the U.S. economy in 2020 vary widely—though virtually all now suggest that 2020 will be dreadful in GDP terms. A late-March survey by *The Economist* of eighteen investment banks and consultancies turned up a median estimate of -3 percent for U.S. GDP in 2020, with a range of -7.5 to -0.3 percent.[1] The IMF estimates it will contract 5.9 percent. The national economy contracted 2.5 percent in 2009 amid the Great Recession.

Estimating the impact of the lockdown on local economies is especially difficult. While local inputs are obviously smaller than those used in a national modeling

continued on page 2

continued from page 1

context, they are often characterized by greater volatility, which reduces estimation precision. This is especially true for regional economies like southern New Jersey's with high concentrations of industries disproportionately affected by the lockdown. Ongoing fiscal and monetary policy responses to the pandemic fallout further complicate efforts to estimate the pandemic's economic impact. Finally, the nation has only recently begun to think through the myriad technical complexities and significant ethical and political questions that will be involved with restarting the economy. Given these caveats, the estimates presented below—which aim to provide the region's stakeholders a very broad sense of the possible trajectories of the regional economy over the remainder of 2020—are best conceived as educated guesses.

One final remark should be underscored. These types of economic impact exercises—which ultimately reduce myriad assumptions, significant political and moral questions, and unimaginable socio-economic complexity and human suffering to a single number—often, and understandably, invite charges of crassness. But, it is important to keep in mind that however imperfect the metrics these exercises produce are, they nevertheless represent attempts to capture something meaningful about *human welfare:* whether the regional economy contracts 5, 10, or 25 percent over the coming year *will* translate into starkly different welfare outcomes for its population.

Reflecting time constraints, the fluidity of the moment, and the lack of precedents, the model used to derive the estimates presented here is austere.[2] Its only input is industry-based gross output (GDP) data for metropolitan areas produced by the U.S. Bureau of Economic Analysis. The model aggregates these data over the Atlantic City-Hammonton and Ocean City metropolitan areas to create a Southern New Jersey regional economy. The use of industry-based output data is especially important owing to the structural makeup of the regional economy and its heavy reliance upon hospitality and tourism and the summer shore season.

Three key assumptions drive the model:

- **The percentage of economic output lost in the regional economy between mid-March and the end of May**—the ten-week period that roughly coincides with the start of the lockdown and the commencement of the summer shore season.
- **The speed at which the economy returns to some semblance of "normalcy"**—which dictates the number of summer shore season weeks that will be adversely affected by the lockdown.[3]
- **The percentage of economic output lost *post* a return to normalcy**—referred to as the "COVID-19 drag." This drag captures the longer-term adverse economic effects likely to be left in the pandemic's wake, e.g., enhanced fear of public spaces like restaurants, casinos, convention halls, entertainment venues, beaches, shopping districts, classrooms and commercial aircraft cabins, etc.

Table 1 shows the model's estimates for the decline in real gross domestic product (GDP) for the regional economy in 2020. Table 1 assumes that the percentage of economic output lost in the regional economy for the ten-week period between mid-March and the end of May equals 40 percent.[4]

As shown, estimates for the decline in real GDP range from a low of $2.1 billion (equal to a 11.9 percent decline in real GDP relative to 2019) to a high of $5.1 billion (-28.3 percent). The median estimate is -$3.9 billion (-21.4 percent). Unsurprisingly, there is a trade-off between the model's "speed" and "drag" dimensions, i.e., how many weeks it takes for the economy to return to some semblance of normalcy and COVID-19's more lasting impact on the overall level of economic activity. For example, a fast return to normalcy (mid-June) coupled with a moderate COVID-19 drag (-15 percent) would yield a loss of -$3.3 billion in regional economic output—a 18.1 percent decline in real GDP. Alternatively, a more moderately-paced return to normalcy (mid-July) coupled with a relatively small drag (-5 percent) would result in $2.9 billion of lost output—an 16.4 percent decline in real GDP. To take another example, a speedy return to normalcy with a significant drag results in $4.4 billion of lost output (a 24.4 percent decline in real GDP), which is roughly on par with what a slow recovery and moderate drag would yield.

One way to gauge these estimates is to consider them in light of the overall economy. Southern New Jersey's $18.2 billion economy generates a straight-line average of $49.7 million of output daily. Multiplying that figure by 84 days (12 weeks or, say, the period between mid-March and mid-June) equals $4.2 billion. This is the approximate value of output that would

Table 1: Estimating the Economic Fallout of the COVID-19 Pandemic on the Southern New Jersey Regional Economy*

Real GDP Decline in 2020			
Speed of Return to "Normalcy"	"COVID-19 Drag" Following Return to Normalcy		
	Small (5% decline)	Moderate (15% decline)	Significant (25% decline)
Fast: mid-June (2 summer weeks lost)			
$ Decline	-$2.1	-$3.3	-$4.4
% Decline	-11.9%	-18.1%	-24.4%
Moderate: mid-July (6 summer weeks lost)			
$ Decline	-$2.9	-$3.9	-$4.8
% Decline	-16.4%	-21.4%	-26.4%
Slow: mid-August (10 summer weeks lost)			
$ Decline	-$3.8	-$4.5	-$5.1
% Decline	-20.9%	-24.6%	-28.3%

Model assumes 40% decline in output for 10 week period between mid-March and end of May.
See appendix for additional model details.
* Atlantic City-Hammonton and Ocean City Metropolitan Areas.
Source: Author calculations using U.S. Bureau of Economic Analysis GDP data for metropolitan areas.

continued on page 3

continued from page 2

be lost were the regional economy to stop *completely* for nearly one-quarter of a year which it has not (despite understandable widespread sentiment that it effectively has).[5] This is marginally larger than the median estimate in Table 1 (-$3.9 billion or -21.4 percent) that involves a mid-July return to "normalcy" and a moderate COVID-19 drag.

Table 2 provides several additional benchmarks against which the estimates can be assessed. The Great Recession and related financial crisis provide another useful benchmark. The regional economy contracted 9.6 percent in 2009, whereas the smallest contraction estimated in Table 1 equals -11.9 percent. It is also noteworthy that the regional economy's decline in 2009 was significantly larger than the state's and the nation's (-4.1 and -2.5 percent respectively).

Three additional benchmarks are provided in Table 2. Two are especially relevant to the regional economy. Namely, the wave of casino closures that occurred in the fall of 2014 and Hurricane Sandy which swept across the region in the fall of 2012. While the late-year timing of these events complicates assessments of their economic impacts (both generated adverse effects that cascaded across two years), both were significant enough to yield declines in regional real GDP in the subsequent year. While the regional economy contracted 0.9 percent in 2013 (a figure reflecting the economic "boost" post-Sandy recovery and rebuilding generated), it contracted 2.7 percent in 2015. The last benchmark shown in Table 2 reflects the economic consequences of Hurricane Katrina on New Orleans's economy. Real GDP in New Orleans contracted 5.7 percent in 2006. As with Sandy and the New Jersey shore in 2013, 2006 saw significant rebuilding activity in New Orleans which (in GDP-terms) helped offset sizable declines in economic spending tied to the hurricane's destruction of large swaths of the city's basic infrastructure.

While the state of the pandemic lockdown remains fluid, it is clear it will generate a 2020 regional recession larger than the Great Recession's -9.6. In fact, the COVID-19 2020 contraction may well be much larger owing to the outsized role that tourism and hospitality play in the regional economy and the public health challenges the pandemic seems likely to present going forward. The leisure and hospitality sector—which includes gaming, accommodations, restaurants and bars, and other recreational activities—accounts for 15 percent ($2.8 billion) of the regional economy. The retail trade sector accounts for an additional 8 percent ($1.4 billion). Perhaps most significantly, the real estate, rental and leasing industry accounts for 22 percent ($4 billion) of total regional economic output (35 percent in Ocean City). Importantly, a significant portion of the region's real estate-related output reflects summer condo and home rental activity.[6]

Table 2: Benchmarking the Economic Impact of COVID-19 on the Southern New Jersey Regional Economy
Selected Historically Significant Declines in Regional/Metro Area Real GDP

Event	Real GDP Decline — Billion $2012	%	Period
Great Recession & Financial Crisis	-$2.0	-9.6%	2009
Hurricane Katrina (August 2005)	-$4.7	-5.7%	2006
Casino closures (Fall 2014)	-$0.5	-2.7%	2015
Hurricane Sandy (August 2012)	-$0.2	-0.9%	2013

Source: U.S. Bureau of Economic Analysis.

The longer it takes for the economy to reestablish some semblance of normalcy, the shorter the 2020 summer shore season will be and thus the greater the impact on the regional economy's real estate industry. The pace of the return to normalcy in the eastern part of the country will also be a key factor influencing the size of this local real estate impact. If the pace of rehiring over the coming 4-8 weeks is relatively slow (which seems possible in light of the heightened level of business uncertainty that will surely linger once the immediate lockdown begins to ease), many individuals could remain dependent on the enhanced and extended unemployment lifeline Congress's recently-passed *CARES Act* provides. Such a scenario would ostensibly reduce vacation spending by many regional families and have significant adverse implications for the regional economy. In this regard, it is noteworthy that in the context of the unprecedented increases in initial unemployment claims filed over the past few weeks, New Jersey and Pennsylvania have seen some of the largest.

While the speed of the return to normalcy will dictate the number of lost summer 2020 shore weeks, my own sense is that the COVID-drag will eventually play the more important role in determining the trajectory of the regional economy over the remainder of 2020 (and beyond). The regional economy's reliance upon the leisure and hospitality sector again looms large. We play and vacation *together.* And, *personal, intimate,* high-quality service (whether provided at a poker or restaurant table) arguably lies at the heart of the hospitality business. The pandemic has dramatically upended and altered our daily economic lives in unimaginable ways. While we will eventually begin to work and play again, it strains credulity to believe that we will *all* do so at the *same levels* we previously did—at least for the better part of what remains of 2020. To take but one example, it may, understandably, take many of us considerable time (perhaps until a vaccine is developed) before we feel comfortable enough to sit side-by-side in a live-performance venue with thousands of other spectators.

Thus, it seems entirely possible that a 25 percent COVID-drag (see the right-most column in Table 1) may prove an *underestimate* of the adverse lingering effects the pandemic will have on the regional economy over the remainder of 2020. Were the COVID-drag to be as high as 33 percent, the estimates in Table 1 increase to -$5.4 billion (-29.7 percent), -$5.6 billion (-30.6 percent), and -$5.7 billion (-31.4 percent). Indeed, the competing "reopening" plans that have been floated and discussed over the past week provide a stark sense of what the new "normal" may look like. This new reality seems destined

continued on page 4

continued from page 3

to involve a host of remarkable changes in millions of Americans' daily lives. And, those changes will produce a post-pandemic economy very unlike the economy we all knew in February 2020.

While there are reasons to believe that the official unemployment rate may *not* be a particularly good barometer of the pandemic's economic impact over the next several months, it may nevertheless prove useful to place the regional economy's 2009 Great Recession contraction (which, again, equaled -9.6 percent) in unemployment terms.[7] The regional unemployment rate climbed to 11.9 percent in 2009 from 7.4 percent the prior year as the number of unemployed individuals increased by 64 percent to 31,500. The implication is that a 2020 recession in the range of 15-20 percent of real GDP would almost assuredly push the regional unemployment rate above 20 percent.

Concluding Thoughts on the COVID-19 Pandemic

It is important to note that the estimates presented in Table 1 do not take into account recent fiscal and monetary policy measures that have been enacted to counter the economic fallout of the coronavirus pandemic. These unprecedented policy responses will undoubtedly help offset some (though clearly not all) of the economic losses associated with the pandemic lockdown. In addition to the aforementioned enhanced and extended unemployment benefits included in the $2 trillion *CARES Act,* the *Act's* so-called *Paycheck Protections Program*—designed to help small businesses retain/rehire and employees—will prove especially important to smaller local and regional economies like southern New Jersey's. County Business Patterns data from the U.S. Census Bureau indicate that 88 percent of all business establishments in the regional economy have fewer than 20 employees. Should small businesses comply with the program's payroll retention and other requirements, these loans will eventually be forgiven.[8] While recent news suggests the program got off to a rocky start, it is clear its take-up rate has been sky-high. Indeed, as of April 16, The Small Business Administration indicated that the $350 billion originally allocated to the program had already been exhausted via its approval of 1.6 million loans. Thus, the SBA won't be accepting new aid applications or enrolling new lenders until Congress agrees on additional funding. Ensuring these federal monies continue to flow into the nation's small business communities is vitally important to the stabilization of their local economies.

In addition to its programs targeting small businesses, the *CARES Act* created a $500 billion Treasury-administered program designed to aid a range of industries disproportionately impacted by the pandemic. While $46 billion of this was reserved for passenger air carriers, cargo air carriers, and other industries critical to U.S. security, the remaining $454 billion is intended for other sectors hard hit by the pandemic—including the hospitality industry. Again, given the Treasury's apparent wide latitude in administering these monies, it will be incumbent upon regional politicians, stakeholders, and watchdog groups to ensure that these funds make their way into the regional hospitality industry. While much has been made of the apparent fact that the *Act* provided local governments little aid, it appears their needs will be addressed in the next stimulus package already in the works. Worries emanating from some political quarters over the longer-term budget implications of yet more fiscal stimulus should be summarily dismissed given the enormous short-term costs and pain associated with the myriad forms of economic crises and dislocation currently cascading across the U.S. economy—evidenced by the 20-plus million American workers who have filed for unemployment benefits in just the past several weeks. During the depths of the Great Recession, the high mark for the number of unemployed Americans, reached in October of 2009, was 15.3 million.

While this tidal wave of fiscal stimulus will help soften the myriad economic blows emanating from the COVID-19 lockdown, at the end of the day it can't accomplish what a fully rebooted economy ultimately requires: "Open for Business" signs in every window.[9] While the future days on which such signs begin to reappear *en masse* will be cause for celebration, the most visible sign of all healthy economies—streams of consumers walking through front doors—will remain a wild card. Their return seems likely to hinge upon some combination of public health-oriented conditions, medical advances, and individual assessments of the tradeoff between economic necessity and personal safety.

II. Regional Economy in 2019

Based on current U.S. Bureau of Labor Statistics (BLS) data, last year marked the southern New Jersey regional economy's best performance since 1984, the year Trump Plaza opened in Atlantic City. Total employment in the three metropolitan areas that comprise the broad regional economy—Atlantic City-Hammonton, Ocean City, and Vineland-Bridgeton—increased by 7,300 last year. (Figure 1) This 3.1 percent increase in regional employment was significantly greater than a statewide employment gain of 1.1 percent. While it seems likely that the BLS' annual benchmarking process will result in some *downward* revision to last year's preliminary estimate of job growth, it also seems likely that last year will continue to remain the second consecutive year of job growth for the regional economy—a feat it has not managed since 2005-2006.[10]

Reflecting last year's strong job growth, the regional economy's unemployment rate averaged a seasonally adjusted 5.6 percent, down a full percentage point from 2018. (Figure 2) Moreover, last year's decline in unemployment came despite a sizable increase in the regional labor force, which expanded by a noteworthy 2.3 percent. (Last year's labor force expansion is discussed in more detail below. See discussion on minimum wage.)

All three metropolitan areas contributed to last year's job growth. While the pace of job growth slowed in Atlantic City last year to 2.5 percent from 3.1 percent in 2018 (a fact reflecting the strong gains in mid-2018 that were tied to the opening of the Ocean Resort and Hard Rock casinos), the metropolitan area added 3,300 jobs in 2019. The Ocean City metropolitan area (which comprises Cape May County) added 2,900 jobs last year (+6.7 percent). If the benchmarking process leaves Cape May's initially reported employment estimate unchanged, last year's increase would constitute the largest annual

continued on page 5

continued from page 4

job gain ever recorded by the metropolitan area. Meanwhile, the Vineland-Bridgeton metropolitan area saw employment increase by 1,100 (+1.9 percent).

All three metropolitan areas experienced declines in their unemployment rates last year despite solid labor force growth. Atlantic City's unemployment rate fell to a seasonally adjusted 5 percent from 5.9 in 2018, while its labor force expanded by 2.4 percent. (Figure 3) The comparable figures for Cape May County were 7 percent (vs. 8.5 percent in 2018) and 3.3 percent; and in Cumberland County, 5.5 percent (vs. 6.5 percent in 2018) and 1.4 percent.

Atlantic City Industry Employment

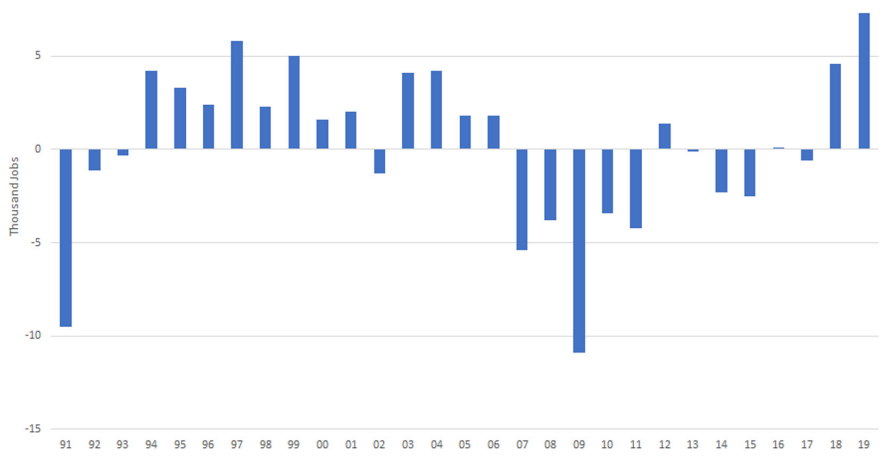
Establishment employment climbed by 3,300 jobs last year which marked the first time since 2006 that the Atlantic City metropolitan area recorded job growth in two consecutive years. (Table 3) The leisure and hospitality sector added 3,200 jobs (+8 percent) accounting for virtually all of last year's job growth. The accommodations sector (which includes both the casino hotels as well as non-gaming accommodation establishments) saw employment increase by 2,100, while restaurants and bars added 600 employees.

Outside the leisure and hospitality sector, job gains were also recorded in transportation and warehousing (+200); professional and business services (+300); education and health services (+300); and, other services (+200). Those gains were largely offset, however, by losses in construction (-300); retail and wholesale trade (-500); and, government (-100).

While the past two years' worth of job gains in Atlantic City have been critically important as they have stabilized the local economy, total employment remains 10 percent below (-15,000) its 2007 level, the year prior to the onset of the Great Recession. Since 2007, net job declines have been recorded in several industries, including: -12,200 (leisure and hospitality); -1,800 (retail and wholesale trade); -1,700 (construction); -1,600 (manufacturing); and, -1,500 (government).

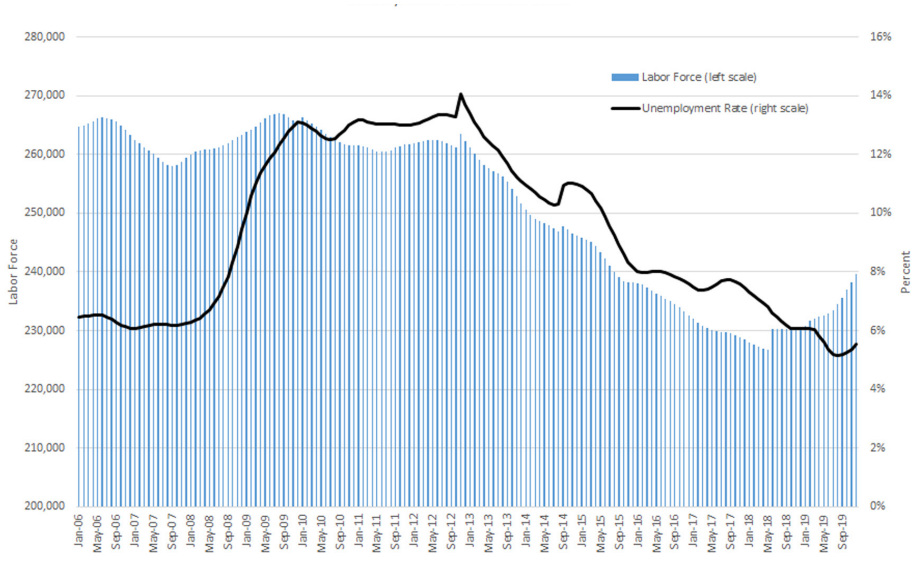
For reasons explained more fully in Section 3, it seems unlikely that casino hotel

Figure 1: Change in Total Employment in the Southern New Jersey Regional Economy*
1991 to 2019



* Atlantic City-Hammonton, Ocean City, and Vineland-Bridgeton metropolitan areas.
Source: U.S. Bureau of Labor Statistics.

Figure 2: Labor Force and Unemployment in the Southern New Jersey Regional Economy*
January 2006 to December 2019



Atlantic City-Hammonton, Ocean City, and Vineland-Bridgeton metropolitan areas.
Source: U.S. Bureau of Labor Statistics.

employment will continue to expand at the rapid clip it has during the past two years. (Last year's pace of job growth in the industry slowed to 5 percent from 17 percent in 2018). Given this, the metropolitan area's job growth prospects over the near-term horizon will hinge on the pace of job creation outside the leisure and hospitality sector. Job growth in the broad services sector will prove especially important. Excluding the past two years' worth of job gains in leisure and hospitality, the bulk of job gains the metropolitan area has recorded since 2007 have occurred in services: education and health care services (+3,400); other services (+1,200); and professional and business services (+200).

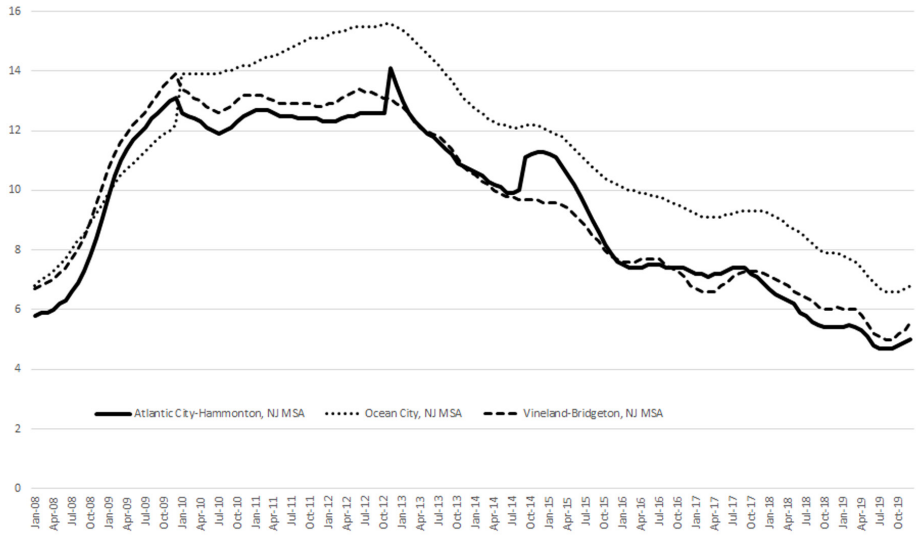
As total employment in the service-providing industries has climbed, their

continued on page 6

continued from page 5

share of total employment has increased to 31 percent from 26 percent. (Figure 4) This 5-percentage-point increase in service's share of total employment was mirrored by a 5-percentage-point decline in leisure and hospitality's share. The Great Recession and its aftermath buffeted the local gaming industry for several years and drove this share down to 28 percent in 2017 (from nearly 37 percent in 2007), as casino hotel employment plummeted by nearly 19,000 (-49 percent) between 2007 and 2017. The last two years' worth of job gains in leisure and hospitality have increased the sector's share of total employment back above 30 percent. While the recent job gains in leisure and hospitality have rightfully been cause for celebration (as they have signaled a healthier local gaming industry), a longer-term continuation of a rise in the sector's share of

Figure 3: Metropolitan Area Unemployment Rates in the Sourthern New Jersey Regional Economy: Atlantic City-Hammonton, Ocean City, and Vineland-Bridgeton
January 2008 to December 2019



Source: U.S. Bureau of Labor Statistics.

Table 3: Industry Employment in Atlantic City, Selected Years

Industry	Employment in thousands 2007	2017*	2018	2019	2018-2019 Change	% Change	2017-2019 Change	% Change	2007-2019 Change	% Change
Total	149.5	127.3	131.2	134.5	3.3	2.5%	7.2	5.7%	-15.0	-10.0%
Private	127.1	106.1	110.3	113.7	3.4	3.0%	7.6	7.2%	-13.4	-10.6%
Construction	7.2	5.4	5.8	5.4	-0.3	-5.6%	0.0	0.8%	-1.7	-23.9%
Manufacturing	3.8	2.2	2.3	2.3	0.0	0.0%	0.1	3.0%	-1.6	-41.1%
Wholesale Trade	3.1	2.8	2.5	2.5	-0.1	-2.3%	-0.3	-11.7%	-0.7	-21.6%
Retail Trade	16.5	16.0	15.7	15.4	-0.4	-2.2%	-0.6	-4.0%	-1.1	-6.6%
Transportation, Warehousing, and Utilities	3.0	3.0	3.2	3.3	0.2	5.8%	0.3	10.8%	0.4	12.4%
Information	1.1	0.8	0.7	0.7	0.0	-1.2%	-0.1	-7.8%	-0.4	-37.6%
Financial Activities	4.6	3.8	3.7	3.7	0.0	-0.2%	-0.1	-3.5%	-0.9	-19.7%
Professional and Business Services	10.7	10.3	10.6	10.9	0.3	2.8%	0.5	5.3%	0.2	1.5%
Education and Health Services	18.1	20.8	21.2	21.4	0.3	1.3%	0.6	2.9%	3.4	18.7%
Hospitals	6.2	5.9	5.8	5.8	0.0	0.1%	-0.1	-1.4%	-0.4	-6.2%
Leisure and Hospitality	54.8	35.7	39.4	42.6	3.2	8.0%	6.9	19.4%	-12.2	-22.2%
Accommodation and Food Services	52.8	33.9	37.6	40.3	2.7	7.1%	6.4	19.0%	-12.5	-23.6%
Accommodation	41.0	22.2	25.5	27.6	2.1	8.2%	5.5	24.6%	-13.4	-32.6%
Casino Hotels	38.6	19.7	23.1	24.3	1.2	5.0%	4.6	23.1%	-14.3	-37.1%
Food Services and Drinking Places	11.8	11.7	12.1	12.7	0.6	4.8%	1.0	8.3%	0.9	7.8%
Other Services	4.4	5.3	5.4	5.6	0.2	3.7%	0.3	5.0%	1.2	26.8%
Government	22.3	21.2	20.9	20.8	-0.1	-0.4%	-0.4	-1.8%	-1.5	-6.9%
Federal Government	2.7	2.6	2.6	2.5	-0.1	-3.6%	-0.1	-5.4%	-0.2	-6.9%
State Government	3.6	3.6	3.6	3.8	0.2	5.3%	0.2	5.1%	0.2	6.8%
Local Government	16.1	15.0	14.7	14.5	-0.2	-1.3%	-0.4	-2.9%	-1.6	-9.9%

* 2017 represented the employment trough for the metropolitan area.
Source: U.S. Bureau of Labor Statistics.

continued on page 7

continued from page 6

total employment would arguably not be, as it would represent a return to an economy whose relative lack of diversification would make it very susceptible to industry-specific shocks as seen in 2014.

Assessing the Effects of Last Year's Minimum Wage Legislation on the Regional Economy

Last year saw the passage of significant minimum wage legislation in New Jersey as the state became the fourth to set its minimum wage on a glide path toward $15 per hour. The legislation will ratchet the state's minimum wage up in $1 increments each January 1, so that it eventually reaches $15 per hour by January 2024. Thereafter, the minimum wage will be annually indexed to the national consumer price index which will ensure the maintenance of its real value over time.

Last year's legislation also included a one-time increase that hiked the minimum wage for most workers from $8.85 to $10 per hour on July 1. The minimum wage was increased again to $11 per hour on January 1 of this year. With this past January's increase, New Jersey joined 11 other states (along with the District of Columbia) that have minimum wages of at least $11 per hour.

Importantly, the legislation included several carve-out provisions that put seasonal workers (May-September employment) and employees of small businesses (five or fewer workers) on a longer glide path toward $15 per hour. The minimum wage for these workers did *not* increase last July. These workers' minimum wage was pushed up to $10.30 per hour on January 1 of this year. It will continue to be ratcheted up in annual increments of $0.80 until a final $0.70 bump pushes it to $15 per hour on January 1, 2026. These workers' minimum wage will eventually reach parity with other workers in January 2029. The legislation also established different increases in minimum wages for farm labor and tipped workers and included a training wage that went into effect this January.[11]

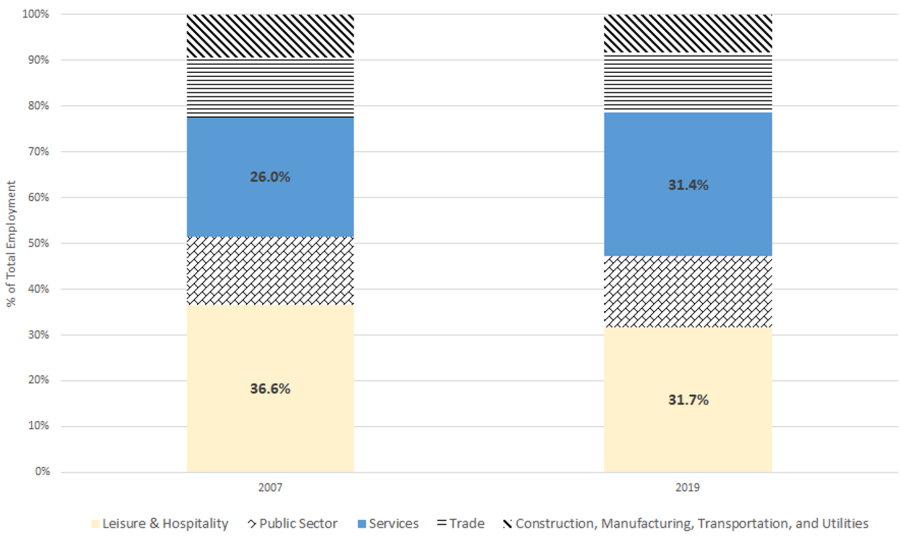
Analysis by The Economic Policy Institute (EPI) estimates that last year's legislation will eventually affect 1.1 million New Jersey workers, approximately 25 percent of the state's 2019 workforce.[12] Fifty-eight percent of beneficiaries will be women. Ninety percent will be twenty years or older. Fifty-five percent work full-time. Fifty-nine percent have high school degrees or less. Forty-nine percent of affected workers will be members of families with incomes of $50,000 or less.

The debate in the run-up to last year's minimum wage legislation was intense. It was also of special importance to the regional economy. A handful of industries that tend to employ a disproportionate number of minimum wage workers—in particular, retail trade and the leisure and hospitality sector, which includes accommodations and restaurants and bars—are of central importance to the regional economy and especially its summer shore season. EPI's analysis indicates that workers in New Jersey's retail trade and restaurants and bars will be major beneficiaries of the minimum wage increases that will occur over the coming years. Retail trade workers will account for 20 percent of all beneficiaries, while restaurant and bar workers will account for 17 percent of all beneficiaries. (Health care workers will account for an additional 14 percent of all beneficiaries.) The carve-out provisions for seasonal workers and small business employees included in last year's legislation were in part crafted out of concern about its impact on small businesses and shore communities.

Mainstream economic theory conceives minimum wages as price floors as they disallow employers from paying workers below a certain amount. This theory suggests that minimum wage increases reduce the demand for low-wage workers and result in fewer hours and/or jobs for such workers. Economists, however, have engaged in raucous theoretical and empirical debates over this basic prediction for the last three decades. The debate remains far from settled as the veritable tidal wave of minimum wage legislation battles that have swept across state houses throughout the country over the past five years—which regularly feature economists on different sides of the issue dueling it out before state legislatures—duly attest.

The one-time increase in New Jersey's minimum wage that occurred last July (that, again, took the minimum wage for most workers to $10 per hour from $8.85) affords an interesting natural experiment of sorts that appears capable of shedding additional light on the long-running debate over the effects of minimum wage increases. As noted, owing to the special carve-outs for small and seasonal businesses, workers in these types of establishments did *not* receive last July's minimum wage increase. Thus, small and seasonal business owners' hourly labor costs were unaffected by the July 1 hike in the minimum wage. Given this, these owners' summer hiring decisions last year (typically made in April and May, ahead of the annual Memorial Day summer kickoff weekend)

Figure 4: Structure of Atlantic City Economy by Broad Sector
Sector Shares of Total Employment* 2007vs 2019



* Services include: education and health care; financial; information, professional and business, and other.
Source: U.S. Bureau of Labor Statistics.

continued on page 8

continued from page 7

were ostensibly driven by a standard set of considerations—most importantly their expectations regarding the strength of the 2019 summer shore season. (Last year's minimum wage legislation was signed into law by the governor in early February.)

Column A in Tables 4 and 5 shows the average increase in employment that occurred between the January-April and May-August periods for industries in the Atlantic City and Ocean City metropolitan areas between 2007 and 2018. Total employment typically increases by 5 percent (+6,500) during the summer shore season in Atlantic City, while it increases by 52.3 percent in Ocean City (+17,800). Last year, total employment increased by 5.1 percent in Atlantic City, and 52.6 percent in Ocean City. In other words, last July's increase in the minimum wage for most workers did not materially alter the *overall* summer hiring pattern of either metropolitan area. In fact, last summer's job gains were marginally higher (proportionally) than their historic averages.

At the same time, the underlying industry detail presented in the tables makes clear that last summer's minimum wage increase did alter the industry *distribution* of summer job gains. Among the most interesting findings concerns what occurred in retail trade. As shown, retail trade employment in Atlantic City typically increases by 5.8 percent (+900 jobs) in the summer, while it expands 50 percent (+2,700 jobs) in Ocean City. Last year, however, retail trade employment increased by only 2.5 percent in Atlantic City (+400 jobs), and 37.5 percent (+2,300 jobs) in Ocean City. Reflecting these smaller-than-usual summer job gains, retail trade's share of the total summer job gain recorded by each metropolitan area last year was smaller than it typically is. In Atlantic City, this share declined to 5.6 percent from a historic benchmark of 13.5 percent. In Ocean City, it declined to 11.8 percent from 15.5 percent.

The vast majority of jobs gains that occur in retail trade in both metropolitan areas every summer are of course seasonal in nature. Moreover, a significant proportion of retail trade establishments are small businesses.[13] The upshot is that a significant proportion of all retail trade establishment owners in the two metropolitan areas were protected from last July's increase in the minimum wage, i.e., their hourly labor costs were unaffected by the legislation. Thus, there is little reason to believe that the smaller-than-usual increases in retail trade employment that occurred last summer reflect changes in the *demand* for retail trade labor. And, as noted, last summer's overall job gains in the two metropolitan

Table 4: Average Summer Employment Increases by Industry in Atlantic City, NJ

Column ID	*A*	*B*	*C*	*D*	*E*	*F*
	Average Change in Employment January-April vs. May-August 2007-2018*			**Change in Employment January-April vs. May-August 2019**		
Industry	**Level Change (thousands)**	**% Change**	**Share of Summer Job Gain**	**Level Change (thousands)**	**% Change**	**Share of Summer Job Gain**
Total	6.5	5.0%	100%	6.7	5.1%	100%
Construction	0.6	11.9%	8.7%	0.6	11.4%	8.6%
Manufacturing	0.1	4.9%	1.6%	0.2	8.3%	2.6%
Wholesale Trade	0.1	5.5%	2.3%	0.0	2.1%	0.7%
Retail Trade	0.9	5.8%	13.5%	0.4	2.5%	5.6%
Transportation, Warehousing, and Utilities	0.0	0.1%	0.0%	0.0	-1.5%	-0.7%
Information	0.0	-1.0%	-0.1%	0.0	0.0%	0.0%
Financial Activities	0.1	3.2%	1.9%	0.1	2.8%	1.5%
Professional and Business Services	0.5	4.8%	7.1%	0.5	5.0%	7.8%
Education and Health Services	0.2	1.0%	3.0%	0.1	0.4%	1.1%
Hospitals	0.0	0.3%	0.3%	0.0	0.0%	0.0%
Leisure and Hospitality	4.8	11.7%	74.5%	5.4	13.3%	80.6%
Accommodation and Food Services	4.1	10.3%	63.4%	4.5	11.8%	67.5%
Accommodation	1.8	6.3%	28.0%	2.8	10.7%	42.2%
Casino Hotels	1.4	5.2%	21.9%	1.7	7.2%	25.4%
Non-Casino Hotel Accommodations	0.4	21.9%	6.1%	1.1	39.1%	16.8%
Food Services and Drinking Places	2.3	20.9%	35.3%	1.7	14.1%	25.4%
Arts, Entertainment, and Recreation	0.7	49.8%	11.1%	0.9	38.9%	13.1%
Other Services	0.3	6.4%	5.0%	0.3	5.5%	4.5%
Government	-1.1	-4.9%	-17.3%	-0.8	-3.9%	-12.3%

2008 and 2009 were adversely affected by the Great Recession, while summer 2018 saw the opening of two new casinos in Atlantic City. These three years are thus excluded from the averages shown.

Source: U.S. Bureau of Labor Statistics. Author calculations.

continued from page 7

Table 5: Average Summer Employment Increases by Industry in Ocean City, NJ

Column ID	*A*	*B*	*C*	*D*	*E*	*F*
	Average Change in Employment January-April vs. May-August 2007-2018*			Change in Employment January-April vs. May-August 2019		
Industry	**Level Change (thousands)**	**% Change**	**Share of Summer Job Gain**	**Level Change (thousands)**	**% Change**	**Share of Summer Job Gain**
Total	17.8	52.3%	100.0%	19.7	52.6%	100.0%
Retail Trade	2.7	50.4%	15.5%	2.3	37.5%	11.8%
Wholesale Trade, Transportation, and Utilities	0.3	30.9%	1.4%	0.8	77.3%	4.3%
Education and Health Services	0.1	2.0%	0.5%	0.2	4.4%	1.0%
Leisure and Hospitality	11.7	204.4%	66.1%	12.0	195.9%	60.7%
Accommodation and Food Services	9.7	199.8%	54.6%	9.7	169.0%	49.2%
Arts, Entertainment, Recreation	2.0	229.4%	11.5%	2.3	606.7%	11.6%
Government	0.9	10.9%	5.1%	1.0	12.7%	5.1%

2008 and 2009 were adversely affected by the Great Recession. These two years are thus excluded from the averages shown.
Source: U.S. Bureau of Labor Statistics. Author calculations.

areas were in line with their historic averages suggesting that the overall increase in the demand for labor last summer was typical.

This same pattern held in restaurants and bars in Atlantic City.[14] Whereas employment in restaurants and bars usually expands 21 percent (+2,300) in the summer in Atlantic City (the absolute largest job increase across all industries), last year it rose just 14 percent (+1,700). At the same time, accommodations employment in Atlantic City increased 10.7 percent (+2,800) compared to a historic average of just 6.3 percent (+1,800). And, interestingly, much of last summer's above-average increase in accommodations employment occurred in non-casino hotels.[15]

As Figure 5 makes clear, last year's minimum wage also enticed many individuals to enter and/or rejoin the regional labor force. The regional economy's labor force, which had been declining for many years, began to stabilize during the summer of 2018 in tandem with the opening of two new casinos in Atlantic City. The pace of labor force growth continued to increase slowly over the remainder of that year. Following passage of the state's new minimum wage legislation in February 2019, however, the pace of growth in the region's labor force accelerated dramatically from 0.8 percent in December 2018 to an eye-popping 2.6 percent in May 2019. Remarkably, while the pace of growth slowed during the summer months (as might be expected), it accelerated again last fall eventually reaching 4 percent in December 2019. (It should be noted that these rates do not simply reflect seasonal patterns as the underlying data were already adjusted for seasonality.) At the same time that the labor force was growing briskly last spring and summer, the regional unemployment rate continued to decline. It fell to 5.2 percent in August 2019 from 6.1 percent in December 2018. It edged up only marginally in last year's final quarter despite the aforementioned rapid acceleration in the rate of labor force growth during that period.

Putting these labor force data together with those reflecting the altered distribution of employment gains last summer yields an interesting and noteworthy story that should be added to the minimum wage literature and the broader debate over minimum wage increases. In short, it appears that because last year's legislation differentially affected summer shore industries, many of the workers it enticed into the regional labor force shunned industries whose establishments tended to be shielded from last July's increase in the minimum wage (like retail trade and restaurants and bars).[16] *Based on last summer's overall regional job increase—which, again, was marginally higher than the historical benchmark—it seems clear that these enticed workers were successful in finding work despite their heightened level of job selectivity. Put otherwise, despite the minimum wage hike many regional employers were willing to hire workers at higher hourly wages given the opportunity, i.e., given job-seeking workers showed up on their doorsteps.* Last year's minimum wage legislation provided them those opportunities because it enticed many more workers into the labor force. (Last year's increase in the regional labor force was the largest since 2000.) The difference between $8.85 an hour (the minimum wage for regular workers prior to last year's minimum wage legislation) and $11 an hour (what a minimum-wage worker who jumped back into the regional workforce last spring/summer would now be earning given the legislated second rise in the minimum that occurred this January) is nearly 25 percent. By raising the annual value of a year-round full-time minimum wage job to $22,000, last year's legislation put an additional $358 per month (pre-tax) in such workers'

continued on page 10

continued from page 9

pockets. And, despite mainstream economic theory's prediction, it appears many regional employers were willing to put those extra dollars into those pockets.

III. Gaming Industry in 2019

By ANTHONY MARINO

Anthony Marino, M.A.

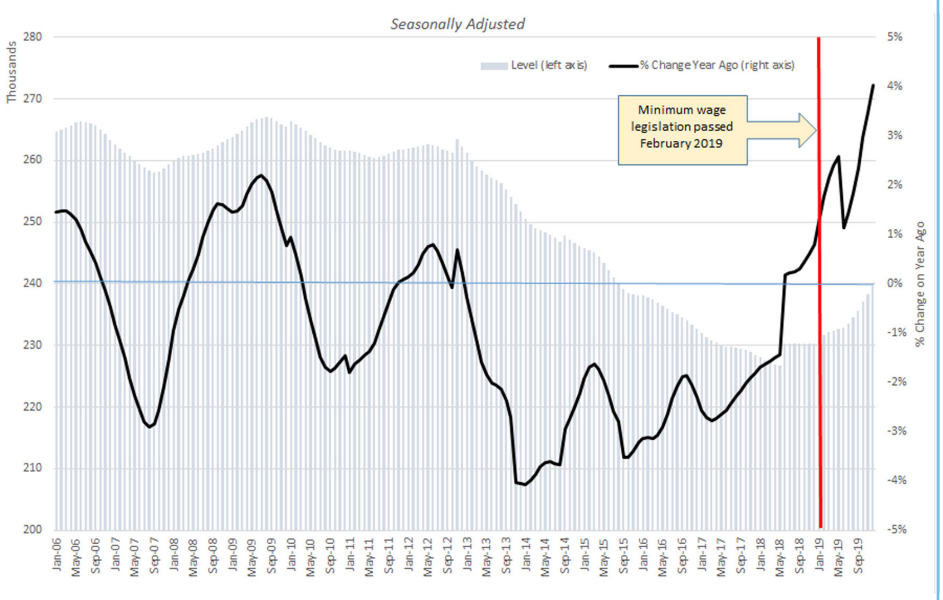
Anthony Marino was Deputy Executive Director of the Atlantic City Expressway at the start of the resort's casino era. He is now retired from SJTA and from Stockton University where he was an Adjunct Professor.

Casino gross gaming revenues soared in 2019 but profits did not

The Atlantic City casino industry continued its gross gaming revenue surge that began in late June of 2018 with the opening of two new casinos and the launch of legal sports wagering activity. As Table 1 shows, in 2019, total gross gaming win for the resort's nine casinos that operated all 12 months reached $3.293 billion dollars, $634 million dollars more than the $2.659 billion dollar win of the seven casinos without sports wagering that were open in 2017, nearly a 24 percent increase in two years. (Revenue numbers for 2018 are not comparable since the two new casinos operated only six months.)

The Internet Casino Gambling Gross Win row in Table 6 shows that the rapid two-year revenue growth of online casino gambling was actually more critical than sports wagering in boosting total gross win numbers between 2017 and 2019. Launched in November 2013, and growing slowly initially, internet casino gambling revenue accelerated in 2017 to $245.6 million dollars, and by 2019 nearly doubled to produce $482.7 million dollars, accounting last year for nearly 15 percent of total casino industry gross win.

Figure 5: The Effect of Last Summer's Minimum Wage Increase on the Southern New Jersey Labor Force



Source: U.S. Bureau of Labor Statistics.

What did brick and mortar casino win contribute to the two-year gross gaming revenue increase?

Atlantic City casinos now offer three gaming options. The original single component of Atlantic City gambling between 1978 and late 2013—brick and mortar casino gambling, also called "retail" gambling—despite the two newer options, still contributed the lion's share amount of $2.687 billion dollars in 2019, about 82 percent of the total.

Note in Table 6 that in 2006, the peak revenue year in the resort's casino history, Total Casino Gaming Win with 12 casinos was nearly $5.2 billion dollars, 100 percent stemming from brick and mortar operations that required actual visitation to the resort to gamble in person at casino slot machines and table games. By 2019 gambling via the two new options can occur anywhere within the state of New Jersey; no trip to Atlantic City is necessary.

Table 6: Atlantic City Gaming Industry Key Indicators, Selected Years

Indicators as of December 31 each year	2006 (Peak Revenue Year)	2017	2018	2019
Number of Licensed Casinos	12	7	9 after late June	9
Visitor-Trips*	34.5 mil.	24.1 mil.	24.8 mil.	25.5 mil.
Total Casino Gross Gaming Win	**$5.167 bil.**	**$2.659 bil.**	**$2.860 bil.**	**$3.293 bil.**
Brick and Mortar Casino Gross Win	$5.167 bil.	$2.413 bil.	$2.511 bil.	$2.687 bil.
Internet Casino Gambling Gross Win	$0	$245.6 mil.	$298.7 mil.	$482.7 mil.
Sports Wagering Gross Win	$0	$0	$50.2 mil.	$123.6 mil.
Gross Operating Profit	$1.381 bil.	$723.3 mil.	$576.7 mil.	N/A at print time
Number of Casino Employees	42,456	22,178	27,927	26,761
Gross Operating Profit Employee	$32,528	$32,613	$20,650	N/A at time of per publication

*Visitor-trip numbers are author's estimates.
Sources: New Jersey Division of Gaming Control monthly casino reports and New Jersey Casino Control Commision annual reports.

continued on page 11

continued from page 9

In both 2005 and 2006, shortly after the Borgata opened, nearly 35 million visit-trips were made to Atlantic City. A decade-long decline in gross gaming win began in 2007 that at first many attributed to the national economic recession of 2007 to 2009. Subsequent analysis suggests the major influence on decreasing casino revenues in Atlantic City during that period was actually the opening of Pennsylvania casinos in 2006 across the Delaware River in or near Philadelphia, and a few years later the launch of video machine gambling at two racinos across the Hudson River from New Jersey at Aqueduct Racetrack and Yonkers Raceway in New York.

As a result of this nearby competition, brick and mortar casino revenue in the resort fell annually until 2017. It increased again in both 2018 and last year because of the two new casinos - Ocean Casino Resort and Hard Rock - that opened in mid-2018. Their marketing efforts plus aggressive "comping" programs boosted tourism. Atlantic City Visitor Trips, as shown in Table 6, increased from 24.1 million in 2017 to about 25.5 million annual trips in 2019, an increase in two years of about 6 percent.

The gap between supply and demand

In 2019 the demand for the brick and mortar casino option expanded but not nearly enough to keep pace with all the new supply. If this trend continues through 2020, Atlantic City may experience another round of downsizing as it did from 12 casinos at the end of 2013 to seven by the end of 2016.

Table 7 tracks the brick and mortar win in the last three years for each of the seven casinos that were still open in 2017.

Collectively, these seven casinos had a retail gross win of $2.4 billion dollars in 2017. Their win decreased to $2.3 billion in 2018, and fell again to nearly $2.1 billion dollars in 2019, an approximate 11 percent decrease amounting to a brick and mortar gaming revenue loss of $262 million dollars in two years. However, when Hard Rock and Ocean Casino Resort 2019 revenues are added to the original seven-casino subtotal the industry's total gross retail win last year was nearly $2.7 billion dollars, an increase of 11.5 percent over two years.

That 11.5 percent increase in brick and mortar market demand, while welcome, was not nearly enough to cover the approximate supply increase of 25 percent to 40 percent between 2017 and 2019 of most casino indicators. For example, the two new casinos added about 3,800 new hotel rooms, an expansion of nearly 35 percent of rooms in the market. Similar increases of slot machine and table game numbers, food and beverage outlets, and casino parking spaces occurred according to New Jersey Casino Control Commission and DGE reports. All indicators increased at higher percentages than the increase in brick and mortar casino revenues won from gamblers who actually journeyed to Atlantic City.

Keep in mind that retail gambling still accounted for 82 percent of total industry win in 2019. Another important fact is that data in Casino Control Commission annual reports indicate that in Atlantic City, on-site slot machines have an average hold of about 8 percent to 9 percent annually while the average hold of all table games falls between 15 percent to 20 percent annually, and the sports wagering hold is only about 2 percent. Thus, brick and mortar gambling volume is very important to the profit potential of a casino as long as that casino doesn't go overboard in its comping strategy and closely manages other costs such as staffing levels.

The supply vs. demand gap triggered a gross revenue vs. profit gap.

It is critical to distinguish between the information contained in Monthly Gross Revenue Reports and each casino's Quarterly Financial Statement. In past DGE monthly gross win reports the following advisory appeared: "*Win reflects the net amount of money won by casinos. It is not profit.*" Missing in current reports, that advisory is nonetheless still operative. Leaps and bounds in total gross win that includes the recent significant contribution of sports wagering, internet casino gambling, and the two new casinos' brick and mortar revenues deflect attention from the cash flow, operating profits, and bottom line Net Income or Net Loss numbers in each casino's recent quarterly financial statements.

As an example of the difference, in the final 2018 Total Gaming Revenue report released by the DGE, Atlantic City casinos reported $2.738 billion dollars in gross gaming revenues. (Note: Caesars Interactive and Resorts Digital revenue numbers are excluded from this analysis).

Three months later, on April 8, 2019, the NJDGE released the 4th Quarter 2018 financial reports for each casino that included Statements of Income for the year. In those reports, total casino gaming revenues in 2018 were $1.576 billion dollars, or approximately $1.162 billion dollars less than the gross gaming revenue

Table 7: Brick and Mortar Gross Win by Atlantic City Casinos, 2017 to 2019

Casino	2017	2018	2019	Percent Change 2017 to 2019
Bally's	$211,024,548	$190,387,935	$176,010,260	-16.6%
Borgata	$755,095,858	$710,754,654	$709,560,969	-6.0%
Caesars	$325,061,407	$281,331,483	$270,988,246	-16.6%
Golden Nugget	$219,676,675	$221,342,863	$199,020,547	-9.4%
Harrah's	$363,705,437	$332,180,985	$312,035,515	-14.2%
Resorts	$190,508,308	$183,591,882	$176,371,879	-7.4%
Tropicana	$343,335,379	$339,515,770	$302,859,158	-11.8%
Subtotal	**$2,408,407,612**	**$2,259,105,572**	**$2,146,846,574**	**-10.9%**
Hard Rock	Not Open	$161,626,907	$324,000,867	N/A
Ocean Casino Rst.	Not Open	$90,021,732	$215,693,011	N/A
Total	**$2,408,407,612**	**$2,510,754,211**	**$2,686,540,452**	**11.5%**

Source: NJDGE monthly reports. Hard Rock and Ocean Casino Resort opened 6/28/18

continued on page 11

continued from page 9

amount announced the previous December, a rather significant 42 percent reduction.

Why the difference? The 2018 year-end December revenue number was the gross win amount before gaming taxes were deducted and before promotional allowances and promotional gaming credits ("comps" in casino lingo)) were also deducted from the gross revenue amount. Another way of stating it is that gross revenue includes quite a bit of "free" money or cash equivalents extended by casinos to select customers to incentivize them to risk their own money.

Once these special tax and comp costs of doing business common to the casino industry were deducted from gross casino win, and additional costs common to all businesses were also deducted, the two new casinos, Hard Rock and Ocean Casino Resort, showed combined gross operating losses in 2018 of $27 million dollars and $138 million dollars in bottom line Net Loss. But since both were start-up operations in 2018, those numbers were not unexpected.

However, six of the original seven casinos experienced decreases in 2018 compared to 2017 on their gross operating profit line ranging from -2.7 percent to -18.8 percent. That was not expected since both new casinos publicly predicted that they would expand the Atlantic City market without cannibalizing customers and revenues of the original seven casinos. They were wrong, as Table 7 documents. Note that the Percent Change column for the seven casinos showed 6 percent to nearly 17 percent decreases in 2019 retail win compared to their 2017 win.

Prospects for profits

(Author's note: This essay covers 2019 outcomes and was written prior to the recent public health crisis. Forward looking projections in these concluding paragraphs are likely to be affected by how long casinos are closed in 2020.)

Final 2019 Income Statements will be released in April. Given all of the above data and already published casino 3rd Quarter statements that cover the first nine months of 2019, it is likely that Hard Rock and Ocean Casino Resort will report Net Losses for the entire year as a result of their generous comping strategy and other start-up costs aimed at securing by the end of 2020 a solid position in the Atlantic City market.

We may also anticipate decreases in Net Income for the year for most of the original seven casinos. Gross operating profits, reflecting the enhanced costs due to increased competition within the local market, will likely also weaken for up to five of the original seven casinos, with the Borgata a notable exception to the trend.

In 2020, Atlantic City casinos will continue to find savings, particularly in personnel costs. By December of last year, employee numbers, as Table 6 attests, were down to 26,761 from 27,927 in December 2018, a decrease of 4.2 percent. Casinos are also likely to cut employee hours, especially in the winter and shoulder seasons in 2020.

Another move underway in the industry is the attempt to wrest better bottom line holds from their rapidly expanding internet casino gambling and sports wagering handles, most of which currently go to their app partners, not to the casinos, which is manifested by the development of their own proprietary online apps.

But external competition, especially from nearby Pennsylvania casinos, will continue to threaten all three components of the resort's gross gaming revenue stream in 2020, as will the added costs of generating more gross gaming revenue in the local market of nine casinos.

We should devote more attention to future Quarterly Financial Statements than to monthly Gross Revenue Reports to understand the challenges that the Atlantic City casino industry faces in coming months.

Appendix

The estimates shown in Table 1 rely on gross domestic product (GDP) data for metropolitan areas produced by the U.S. Bureau of Economic Analysis. As noted, the Atlantic City-Hammonton and Ocean City metropolitan areas were aggregated to create a southern New Jersey regional economy. State-level GDP data for industries are available for 2019, while metro-level data are only available for 2018. Thus, regional industry-based output figures for 2019 were first estimated by adding one percentage-point to observed rates of real output growth in state-based industries in 2019. For example, retail trade output increased 5.5 percent (in real terms) statewide in 2019. Thus, our estimate for the regional economy's retail trade output in 2019 equals its 2018 level multiplied by 1.065. The decision to modestly scale up state-based industry growth rates helps capture the regional economy's outperformance vis-à-vis the rest of the state last year. In particular, the regional economy's overall rate of job growth last year was nearly three times the state's (3.1 percent vs. 1.1 percent). This approach was used to estimate real output for sixteen major industries/sectors in the regional economy for 2019.

The model assumes that output in three of these industries is concentrated in the summer months. Specifically, it assumes this proportion is 40 percent in retail trade; 60 percent in FIRE (finance, insurance, real estate, rental and leasing); and, 50 percent in leisure and hospitality. Real estate—which includes summer shore rental and leasing activity—accounts for 92 percent of the regional economy's FIRE sector output. Based on historical averages, the twelve summer weeks account for approximately 30 percent of Atlantic City brick and mortar gaming industry win, while they account for roughly 70 percent of annual hotel and motel occupancy taxes in the region. Output for the remaining industries is assumed to be uniform across the year. Average weekly output for summer and non-summer weeks was computed for each industry.

Table A1: Estimating the Economic Fallout of the COVID-19 Pandemic on the Southern New Jersey Regional Economy*

Real GDP Decline in 2020			
Speed of Return to "Normalcy"	"COVID-19 Drag" Following Return to Normalcy		
	Small (5% decline)	Moderate (15% decline)	Significant (25% decline)
Fast: mid-June (2 summer weeks lost)			
$ Decline	-$1.8	-$2.9	-$4.0
% Decline	-9.7%	-16.0%	-22.2%
Moderate: mid-July (6 summer weeks lost)			
$ Decline	-$2.3	-$3.2	-$4.1
% Decline	-12.9%	-17.9%	-22.9%
Slow: mid-August (10 summer weeks lost)			
$ Decline	-$2.9	-$3.6	-$4.3
% Decline	-16.1%	-19.8%	-23.5%

Model assumes 30% decline in output for 10 week period between mid-March and end of May.
* Atlantic City-Hammonton and Ocean City Metropolitan Areas.
Source: Author calculations using U.S. Bureau of Economic Analysis GDP data for metropolitan areas.

Table A2: Estimating the Economic Fallout of the COVID-19 Pandemic on the Southern New Jersey Regional Economy*

Real GDP Decline in 2020			
Speed of Return to "Normalcy"	"COVID-19 Drag" Following Return to Normalcy		
	Small (5% decline)	Moderate (15% decline)	Significant (25% decline)
Fast: mid-June (2 summer weeks lost)			
$ Decline	-$2.5	-$3.7	-$4.8
% Decline	-14.0%	-20.3%	-26.6%
Moderate: mid-July (6 summer weeks lost)			
$ Decline	-$3.6	-$4.5	-$5.4
% Decline	-19.8%	-24.8%	-29.8%
Slow: mid-August (10 summer weeks lost)			
$ Decline	-$4.6	-$5.3	-$6.0
% Decline	-25.6%	-29.3%	-33.0%

Model assumes 50% decline in output for 10 week period between mid-March and end of May.
* Atlantic City-Hammonton and Ocean City Metropolitan Areas.
Source: Author calculations using U.S. Bureau of Economic Analysis GDP data for metropolitan areas.

These weekly summer and non-summer industry output figures were then combined with the model's two key parameters—the speed at which the economy returns to some semblance of normalcy (which determines the number of summer weeks that will be adversely impacted by the lockdown) and the future COVID-19 drag on economic activity post the lockdown—to estimate output year-to-date and over the remainder of 2020. Table 1 reflects these estimates relative to 2019.

As noted, the model's third key parameter reflects an assumption regarding the percentage of economic output lost in the regional economy between mid-March and the end of May (the ten-week period that roughly coincides with the start of the lockdown and the commencement of the summer shore season). Table 1 assumes this percentage is equal to 40 percent. Tables A1 and A2 show how the estimates change if this loss is 30 and 50 percent respectively.

Endnotes

1 "Doom and gloom: Economists' forecasts for GDP growth in 2020 vary widely" *The Economist*. April 4, 2020 print edition.
2 The model's data and key assumptions are described in the appendix.
3 It seems clear the pandemic will usher in a "new normal." Thus, a return to some semblance of normalcy won't resemble the pre-COVID-19 world. Rather, all that is meant here is that the current lockdown of non-essential businesses is lifted making reopening possible.
4 The appendix includes additional tables that rescale Table 1's estimates based on a higher (50) and lower (30) percentage of output lost during this period.
5 In this vein, it is worth pointing out that the lockdown has not only engendered and facilitated economic activities that are often not counted in formal economic measures like GDP (e.g., local-based sharing, volunteerism, and barter), but also increased demand in some parts of the formal economy as homebound families and individuals have been forced to reallocate their time and budgets in novel ways. To take but one example, online gaming (e.g., Xbox live) has experienced significant upticks in demand in recent weeks. While these types of consumer substitutions should be acknowledged they will fall far short of fully offsetting the enormous declines in spending across vast swaths of the economy.
6 In addition to these key industries, the convention industry is also important to the regional economy. Unfortunately, BEA output data for the industry are not available.
7 As has been widely discussed, an officially unemployed individual must be activity seeking paid employment. Needless to say, the current lockdown has rendered this definition moot.
8 Alternatively, employers who do not receive loan forgiveness under the Act's other provisions may be eligible to defer payment of payroll taxes owed through the end of calendar year 2020.
9 In economics parlance, a shuttered economy dramatically reduces the usual fiscal policy multiplier.
10 Benchmark revisions are performed every and are generally released in March (for states) and April (for metropolitan areas). The establishment (or, payroll, or nonfarm) employment estimates are developed each month from a sample of approximately 4,000 New Jersey employers. Each year (as required by the U.S. Bureau of Labor Statistics) the state's Department of Labor and Workforce Development revises previous employment estimates (approximately the prior 21 months of estimates) to a benchmark or universe count of employment derived from unemployment insurance records of New Jersey employers. The data collected through unemployment insurance records represent a nearly complete count of employment including, farms, forestry, and fisheries. More than 96 percent of total wage and salary civilian jobs are counted by the unemployment insurance program because employers are required by law to provide the state a quarterly count of the number of employees covered under unemployment insurance. The employment estimates produced via the annual benchmark revisions process thus provide a more accurate picture of recent job trends, as they redress limitations inherent in survey sample-based estimation techniques.
11 An employee may be paid the training wage of not less than 90 percent of the regular minimum wage for the first 120 hours of work in an occupation in which the employee has no previous similar work experience. Full details of last year's legislation are available at: https://nj.gov/labor/wagehour/lawregs/nj_state_wage_and_hour_laws_and_regulations.html
12 It should be noted that these characteristics were based on the Economic Policy Institute's (EPI) analysis of New Jersey workers that would benefit from an increase in the federal minimum wage to $15 per hour by 2024. By coincidence, New Jersey's legislation, as noted, ended up specifying this same increase and glide path. EPI's estimates of worker characteristics is based on its Minimum Wage Simulation Model using data from the Census Bureau, Bureau of Labor Statistics, and Congressional Budget Office.
13 In Atlantic City, 43 percent of all retail trade establishments have fewer than 5 employees, while an additional 23 percent have between 5-9 employees. In Ocean City, 64 percent of all retail trade establishments have fewer than 5 employees, while an additional 14 percent have between 5-9 employees. These data are drawn from the U.S. Census Bureau's County Business Patterns program (2017—the most recent year available).
14 Unfortunately, establishment employment data for restaurants and bars for Cape May is not broken out separately from accommodations.
15 While the increase in Atlantic City's large casino hotels employment last summer was also larger than average (in both absolute and proportional terms), their unionized workforces were largely unaffected—at least directly—by last summer's minimum wage increase.
16 While many retailers' small size allowed them to dodge the July 1 hike in the minimum wage, most restaurants and bars also did owing to the legislation's seasonal worker or tipped workers provisions. Regular workers saw their minimum hourly rise $1.15 from $8.85 to $10, while tipped workers saw theirs rise $0.50 from $2.13 to $2.63.

Oliver D. Cooke, Ph.D., Associate Professor of Economics,
William J. Hughes Center Policy Scholar
School of Social and Behavioral Sciences, Stockton University

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