AIRBNB AND THE HOTEL INDUSTRY IN VIRGINIA BEACH: COMPETITIVE DEVELOPMENTS AND ISSUES

By virtually every conventional measure of economic activity, the City of Virginia Beach is doing well. Median household income in the City is rising; housing starts and housing prices have swung upward; and, hotel revenues have reached an all-time high, not the least because hotel occupancy rates have increased. Population continues to grow, albeit at more modest rates than between 1970 and 1990, and the number of jobs located in the City has recovered smartly from its recession low. The City's unemployment rate hovers around 4.3 percent, dramatically lower than the almost 10.0 percent rate recorded at the depths of the Great Recession.

Virginia Beach's hotels and motels, one of the anchors of the City's economy, recovered very nicely from the twin blows of the Great Recession and federal spending sequestration. Actual hotel revenues increased 37.3 percent between 2006 and 2016 (15.3 percent when adjusted for price inflation). REVPAR---revenue per available room---increased 33.2 percent (11.8 percent in real, inflation-adjusted terms). In this regard, Virginia Beach easily outperformed Hampton Roads, where the overall rate of increase in real REVPAR was a miniscule .8 percent, and Virginia, where real REVPAR actually contracted by 3.5 percent.

Further, Virginia Beach now hosts increasing numbers of well-compensated employees whose jobs require higher level skills. These individuals often work in health care and financial services, but also provide a diverse variety of other technical services. The City's job mix has changed subtly in the direction of more complex, higher paid positions.

In the midst of these beneficent developments, however, the City is devoting increased time and attention to the accelerating size and importance of "gig economy" developments within its borders. One of these involves Airbnb, an international Internet-based marketplace that allows individuals to list and book accommodations. Because Virginia Beach hosts millions of tourists annually, and is rich in conventional hotel-based accommodations, the entry of Airbnb into this market has important long-run implications for the City.

The phenomenon of Airbnb is best viewed in a larger context. Airbnb is one part of a larger wave that has upended long-established ways of doing business. When a respected publication such as the *Wall Street Journal* publishes an extensive article entitled, "The End of Employees" accompanied by plentiful data, and opines that "Never before have big employers tried so hard to hand over chunks of their business to contractors," one can be confident that significant change really is underway.[1]

Airbnb and similar rental hosting firms such as HomeAway and Oasis fall into this category of disruption. Property owners or lessees who rely upon Airbnb to rent their homes or apartments have become one of the *Wall Street Journal's* contractors and have the freedom to enter or leave room and home rental markets at their whim. In early February 2017, more than two million Airbnb contractors in more than 191 countries had chosen to contract with guests in some fashion. We should note, however, that in Virginia Beach, Airbnb still is a small phenomenon and in late 2016 accounted for only about four percent of all rooms being offered to

[1] Lauren Weber, "The End of Employees," *Wall Street Journal* (February x, 2017), www.wsj.com.

visitors. Currently, Airbnb is attracting more attention than its actual size and market penetration probably merit. Of course, this could change rapidly.

Our primary focus in this report is upon Airbnb rather than the gig economy in general and therefore initially we will outline the current size and characteristics of the hotel industry in Virginia Beach and related tourism. This background is important because it provide a notion of what is at stake with respect to Airbnb. In essence, with whom is Airbnb competing and what can we expect?

Next, we will provide data describing Airbnb's growth within Virginia Beach and compare Virginia Beach to other cities in this regard. Where is Airbnb growing most rapidly and why? How is Virginia Beach different (or the same)? What taxes are being collected?

This will be followed by our estimates of where we believe the Airbnb phenomenon is headed and evaluate alternate policy stances the City might adopt as this occurs.

Finally, the progressive development of the gig economy contains implications for a wide range of activities----not simply Airbnb---that involve city governments. We will sketch some of these possibilities in this report and consider how the City might prepare itself for these developments.

I. THE HOTEL/MOTEL MARKET IN VIRGINIA BEACH

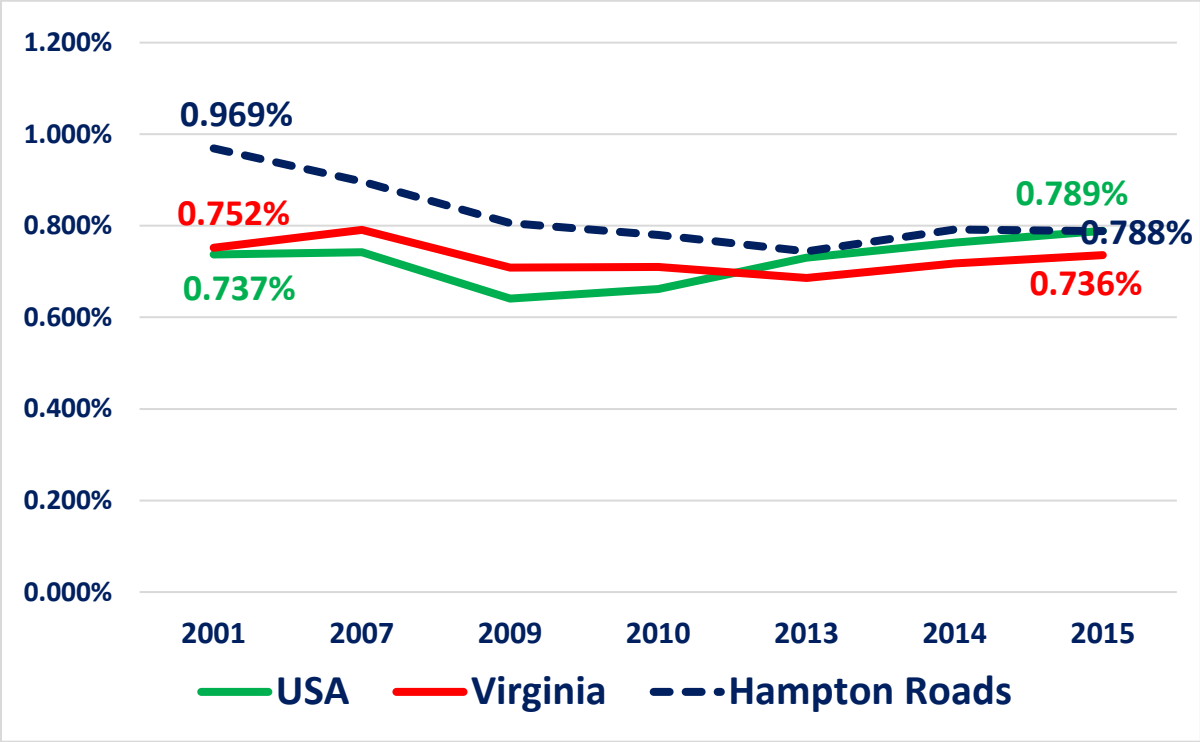
It is important to understand is that even while the hotel market in Virginia Beach has experienced a robust recovery over the past decade, the same thing generally has not been true for Hampton Roads as region. In addition to the REVPAR data just reported, Graph 1 shows that as a percentage of the value of gross product, the hotel industry in Hampton Roads now is

relatively less important today than it was in 2001**. Relatively speaking, therefore, the hotel industry is a less important part of our region's economic activity today than it was at the turn of the century.**

Graph 1

Percent of the Value of Gross Domestic Product

Accounted for by Hotel Revenues: United States, Virginia and Hampton Roads, 2001-2015

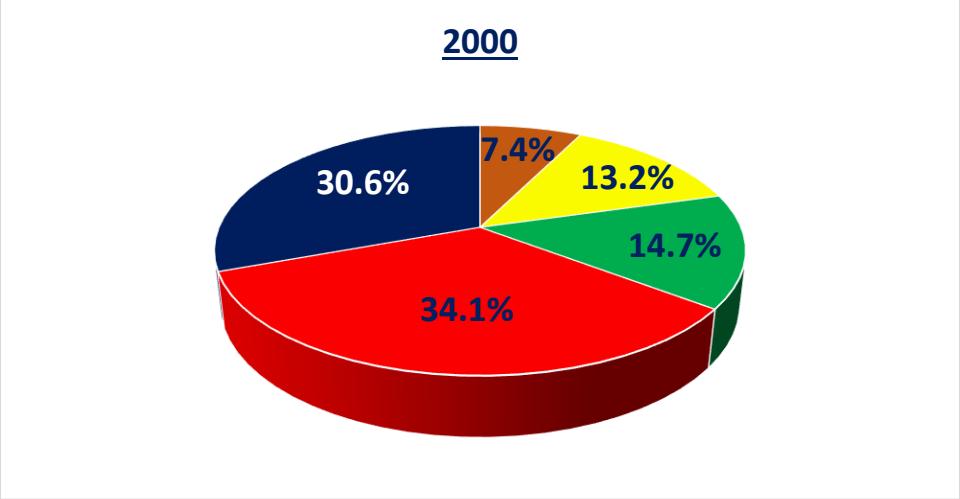


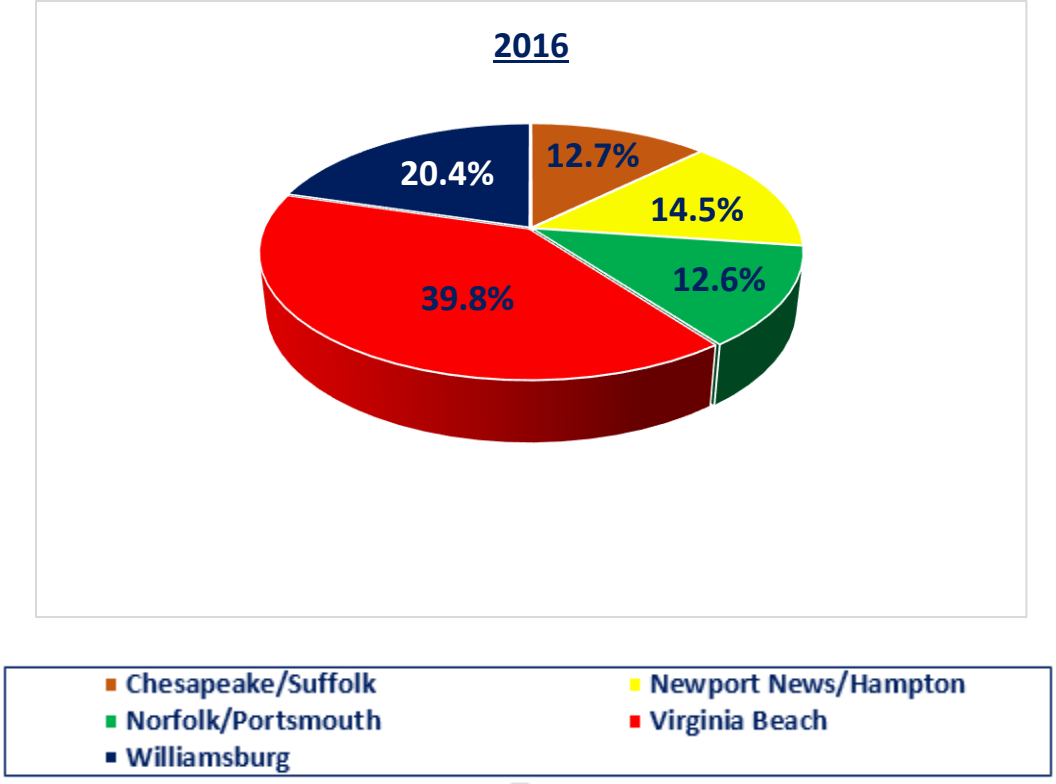
Source: Center for Economic Analysis and Policy, Old Dominion University

This has occurred because other important parts of the region's hotel industry have struggled. The Historic Triangle (Williamsburg, Yorktown, Jamestown) in particular has encountered challenges. Indeed, the Historic Triangle's share of total hotel revenues in Hampton Roads declined from 30.6 percent in 2000 to only 20.4 percent in 2016 (see Graph 2). Meanwhile, Virginia Beach's market share increased from 34.1 percent in 2000 to 39.8 percent in 2016. Virginia Beach's prosperity has been roughly matched by the Historic Triangle's decline. The Chesapeake/Suffolk market also exhibited noticeable growth.

Graph 2

Hotel Revenue Market Shares of Selected Areas of Hampton Roads in 2000 and 2016 According to Smith Travel Research





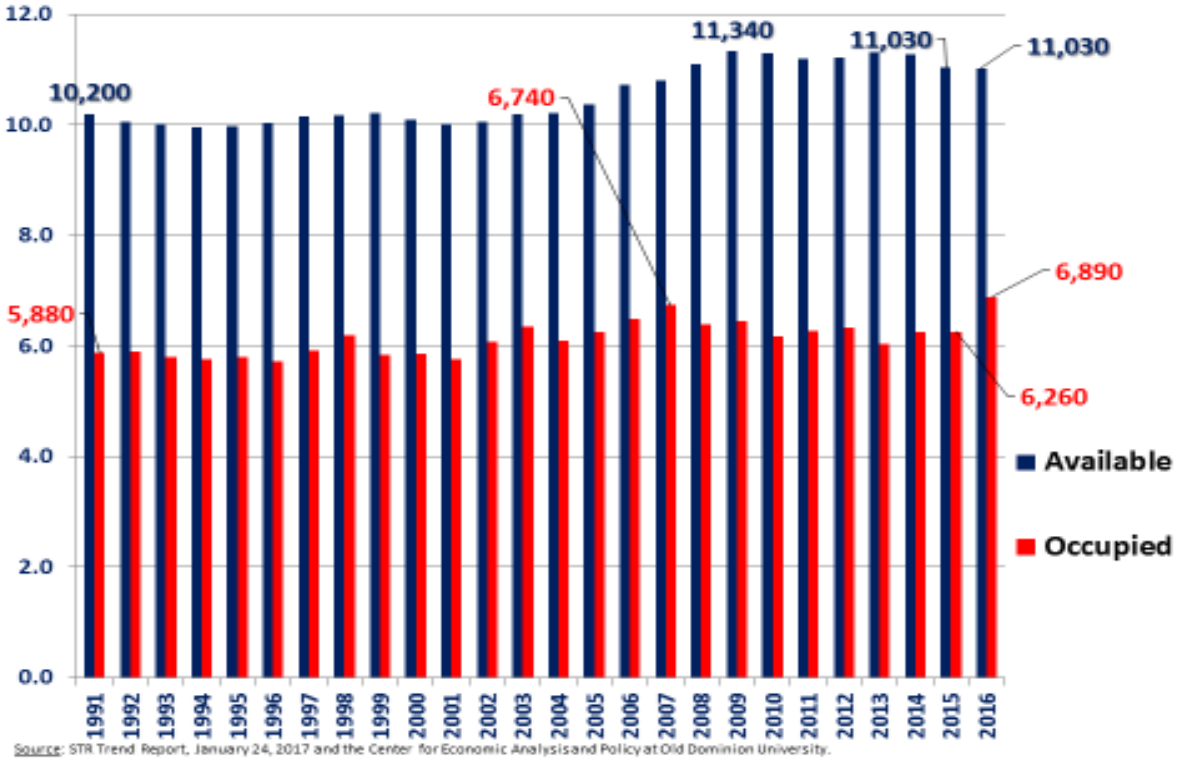
Available and Occupied Hotel Rooms in Virginia Beach

Graph 3 reports the number of hotel rooms available and occupied in Virginia Beach on an annual basis between 1991 and 2016. These numbers do not include Airbnb. **The average annual number of hotel rooms available in Virginia Beach reached its peak in 2009 at 11,340 and slowly declined thereafter to 11,030 in 2016. Meanwhile, the average annual number of rooms occupied reached its maximum in 2007 at 6,740 and gradually declined until 2015. 2016 saw a spurt upward to 6,890. In some ways, this was an optimal result---fewer rooms, but more occupied.**

Graph 3

Average Available and Occupied Hotel Rooms:

Virginia Beach 1991-2016



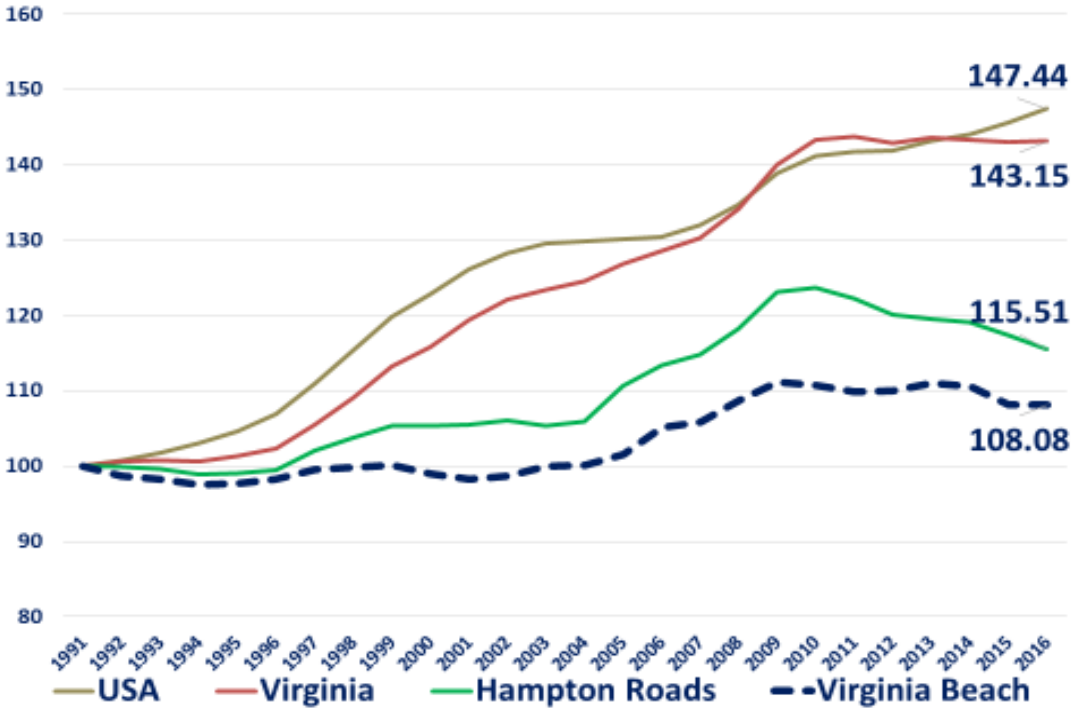
How does Virginia Beach compare to Hampton Roads, Virginia and the United States in terms of available and occupied hotel rooms? Graph 4 indexes each value at 100 because of their very different sizes. One can see that there has relatively little growth in the portfolio of available hotel rooms in Virginia Beach over the past 25 years. As we will point out below, however, that has held some advantages for the City's hoteliers because the somewhat restricted supply of rooms plus the disappearance of some less attractive rooms has enabled them to push their rates upward.

Graph 4

Indexed Hotel Rooms Available

USA, Virginia, Hampton Roads and Virginia Beach, 1991 to 2016

(1991 = 100)



Source: STR Trend Report, January 24, 2017 and the Center for Economic Analysis and Policy at Old Dominion University.

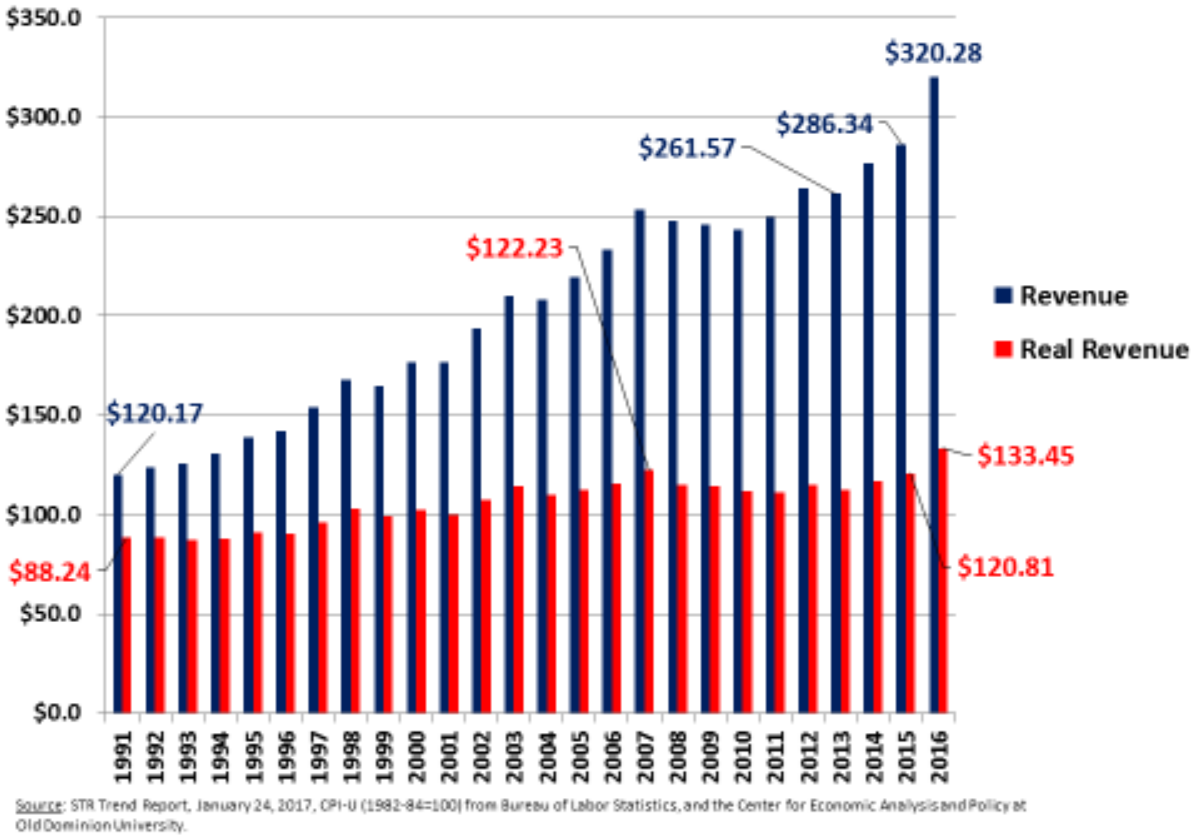
Hotel Room Revenues in Virginia Beach

Graph 5 reveals that hotel revenues in Virginia Beach have trended strongly upward, interrupted only by the Great Recession. The average annual growth rate over the past twenty-five years has been 3.99 percent. In real, price-adjusted terms, however, the story is different; the growth rate there has been only 1.67 percent annually.

Graph 5

Hotel Room Revenue in Virginia Beach: 1991-2016

(Millions of $)



Source: STR Trend Report, January 24, 2017, CPI-U (1982-84=100) from Bureau of Labor Statistics, and the Center for Economic Analysis and Policy at Old Dominion University.

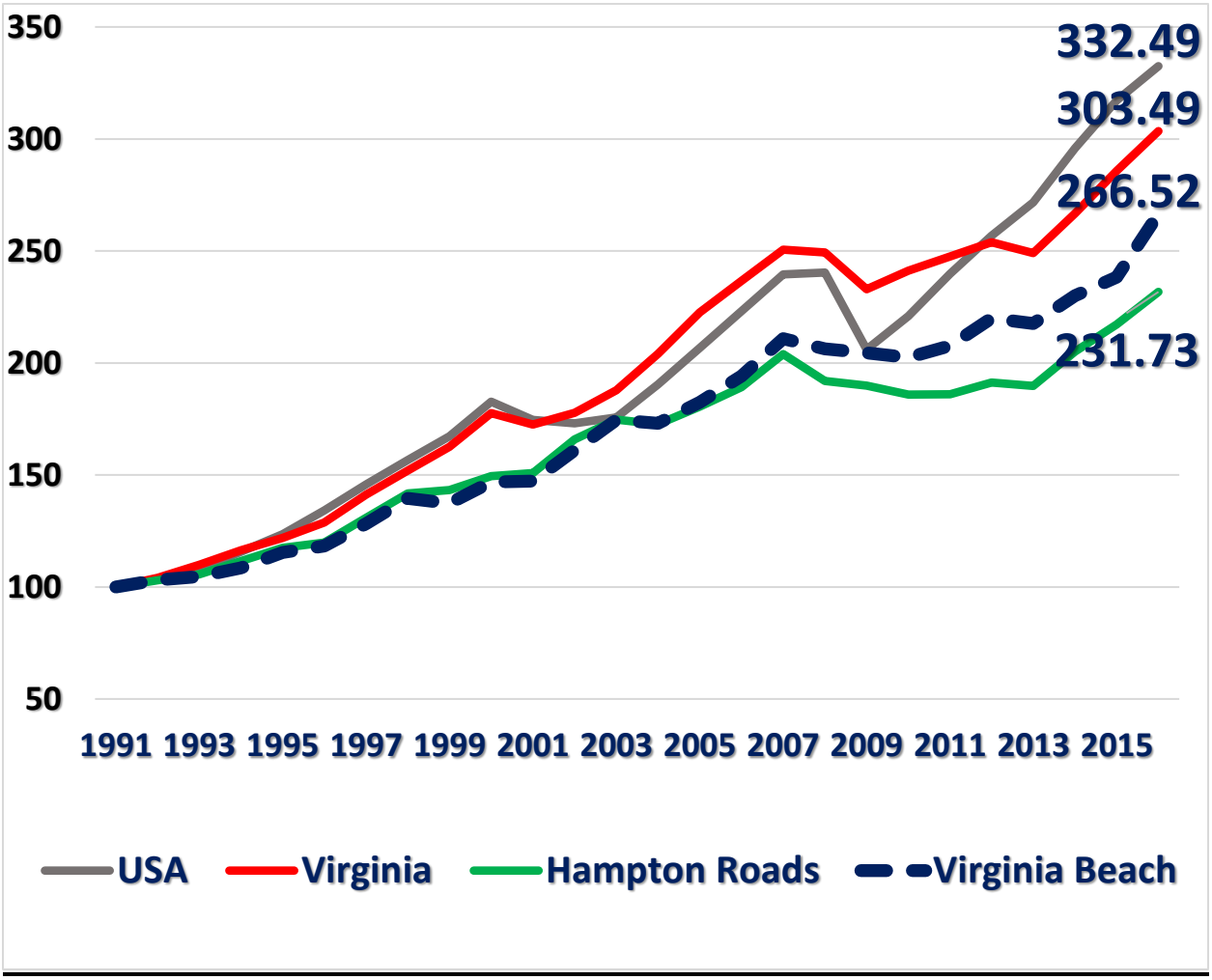
One can see in Graph 6 that hotel revenues in Virginia Beach grew faster than those in Hampton Roads over the past 25 years, but more slowly than those in Virginia and the United States. The data in Graph 6 once again confirm the trend we noted in Graph 1---relatively speaking, the hotel industry has become a less important part of the local and regional economies as time has passed.

Graph 6

Growth in Hotel Room Revenue from 1991 to 2016:

USA, Virginia, Hampton Roads and Virginia Beach

(1991 = 100)



Source: STR Trend Report and the Center for Economic Analysis and Policy.

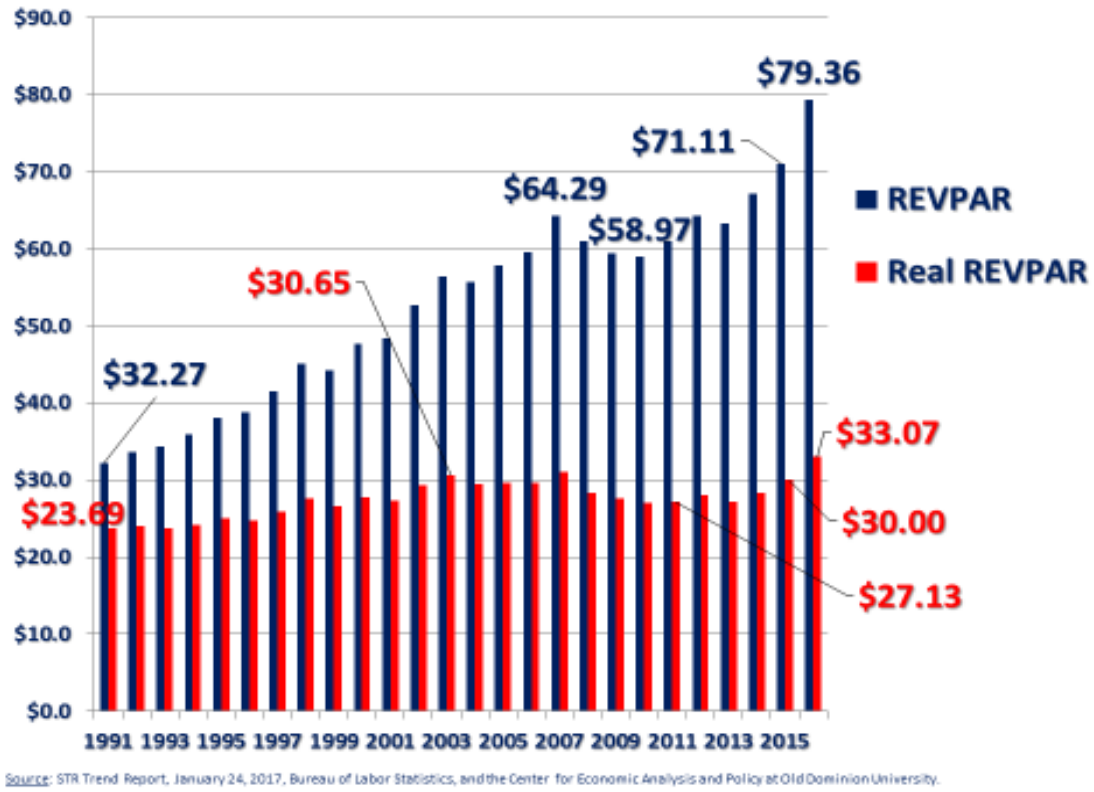
Revenue Per Available Room (REVPAR) in Virginia Beach

Revenue per available room (REVPAR) is in many ways the coin of the realm in the hotel industry because it incorporates both supply and demand influences. More than any other single variable, it provides the best clue to individual hotel and industry profitability. Graph 7

illustrates very nice increases in REVPAR in Virginia Beach over the past 25 years, but less audacious, though still attractive increases in real, price-adjusted REVPAR.

Graph 7

Revenue Per Available Room (REVPAR) in Virginia Beach: 1991-2016



Source: STR Trend Report, January 24, 2017, Bureau of Labor Statistics, and the Center for Economic Analysis and Policy at Old Dominion University.

Hotel REVPAR in Virginia Beach has trended upward very smartly over the past twenty-five years. One can see in Graph 8 that REVPAR in Virginia Beach is almost $20 higher than the comparable Hampton Roads number and more than $11 higher than that for Virginia. Among other things, this is another reflection of the restricted supply, higher price approach to hotel marketing that Virginia Beach adopted over the past quarter century. Query whether this

was deliberate. Regardless, it has supported the profitability of the traditional lodging sector in the City. Still, as we see in a section below, this strategy may make the traditional hotels more vulnerable to the challenge of Airbnb.

Graph 8

Hotel REVPAR from 1991 to 2016:

USA, Virginia, Hampton Roads and Virginia Beach

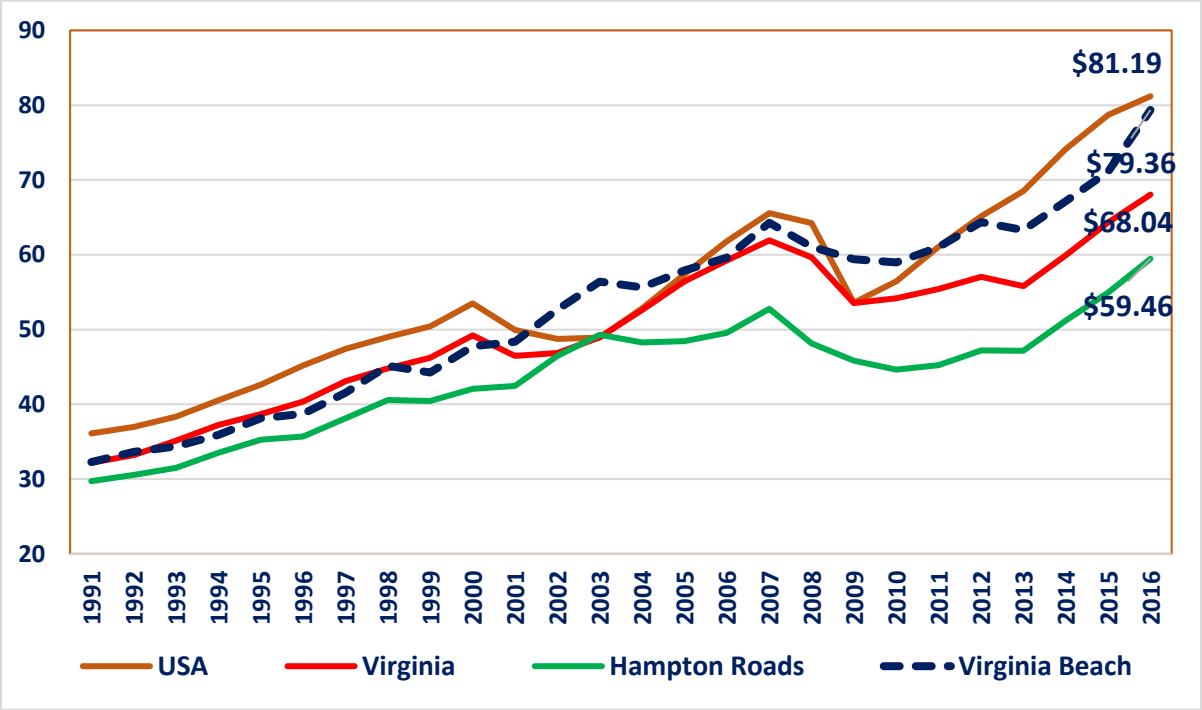


Table 1 compares REVPAR in Virginia Beach to a variety of other locations and provides growth rate information for each location. Between 2007 and 2016, Virginia Beach's REVPAR growth exceeded all other major areas of Hampton Roads as well as that of Virginia (though not the United States). This reflects, among other things, the considerable dependence

Table 1

REVPAR in Selected Markets: 2007 and 2016

	2007	2016	Percent Change	Real Percent Change
USA	$65.55	$81.19	+23.9%	+7.0%
Virginia	$61.91	$68.04	+9.9%	-5.1%
Hampton Roads	$52.93	$59.46	+12.3%	-3.0%
Virginia Beach	$64.62	$79.36	+22.8%	+6.1%
Williamsburg	$47.47	$56.35	+18.7%	+2.6%
Newport News/Hampton	$41.49	$43.47	+4.8%	-9.5%
Norfolk/Portsmouth	$54.05	$54.68	+1.2%	-12.6%
Chesapeake/Suffolk	$52.90	$49.93	-5.6%	-18.5%

Source: STR Trend Report, January 24, 2017, CPI-U (1982-84=100) from Bureau of Labor Statistics, and the Center for Economic Analysis and Policy at Old Dominion University.

of Virginia Beach, Hampton Roads and Virginia on federal spending, especially defense spending. Federal budget sequestration has adversely affected many parts of the economic life of Hampton Roads, the hotel industry included.

The Changing Mixture of Hotel Rooms in Virginia Beach

For at least one decade, the mixture of conventional hotel rooms in Virginia Beach has trended in the direction of those that are more upscale and as a consequence merit higher daily rental rates. Table 2 confirms this. Economy rooms have been disappearing and upscale rooms

becoming much more numerous. Taken together, this has pushed up REVPAR in both categories, though these developments reflect different influences.

In the case of economy rooms, they have declined in number, but have benefitted from the overall decline in the number of hotel rooms in Virginia Beach. Relatively speaking, they have become somewhat a scarce commodity and therefore have been able to charge higher rental rates. The same rationale applies to the upscale rooms, but they also have been able to charge higher prices because their general level of quality has increased at the same time.

Table 2

The Changing Mixture of Hotel Rooms: Virginia Beach, 2006 and 2014

	2006	2014	Percentage Change
Supply of Upscale Rooms	2,365	3,019	+27.7%
Supply of Economy Rooms	2,698	2,661	-1.4%
Demand for Upscale Rooms	1,590	1,942	+22.1%
Demand for Economy Rooms	1,601	1,531	-4.3%
REVPAR at Upscale Hotels	$83.5	$93.0	+11.4%
REVPAR at Economy Hotels	$37.9	$40.2	+6.1%

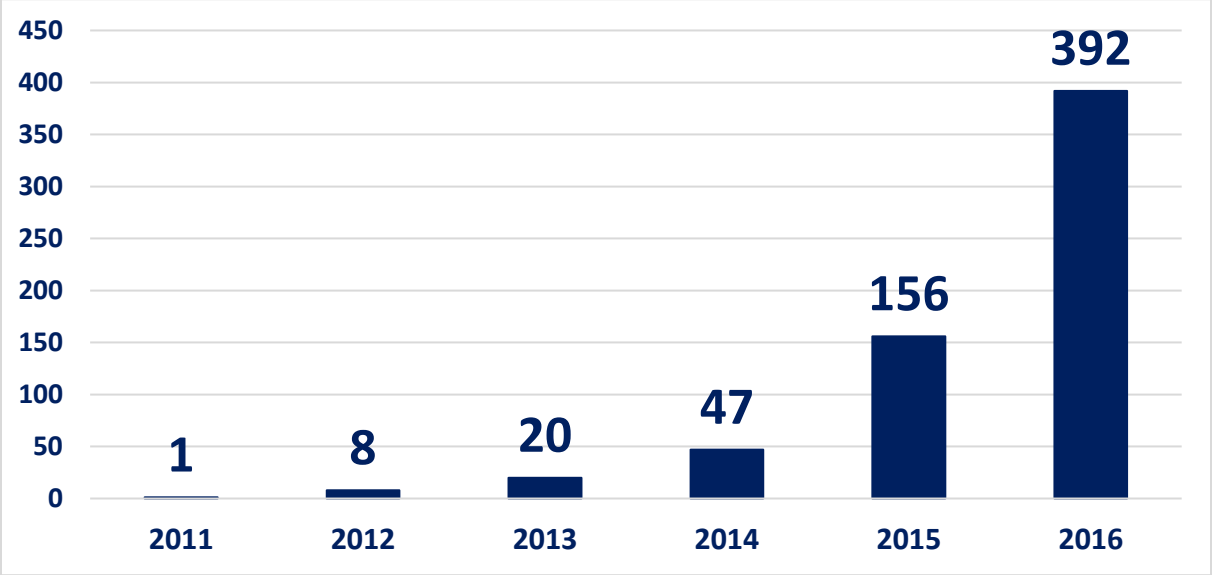
Source: 2014 Virginia Beach Hotel Supply & Demand Analysis February 2016, and the Center for Economic Analysis and Policy at Old Dominion University.

II. AIRBNB IN VIRGINIA BEACH AND HAMPTON ROADS

To track Airbnb's activities in Virginia Beach, one must rely upon data produced by Airdna, a separate and independent organization that generates numbers and analytics focusing on vacation rental entrepreneurs and investors. Per Airdna (whose data we use throughout this report), currently "active" Airbnb listings in Virginia Beach grew from only one in 2011 to 392 in 2016, more than doubling each year since 2011 (see Graph 9). Airdna classifies a listing as active if it has a confirmed booking in a month, or if it is currently live on Airbnb, or if the host has updated the calendar for the listing, or if the host actively responds to inquiries about the property. The number of available properties listed at the end of each month increased from 109 in January 2015 to 464 in December 2016 (Graph 10).

Graph 9

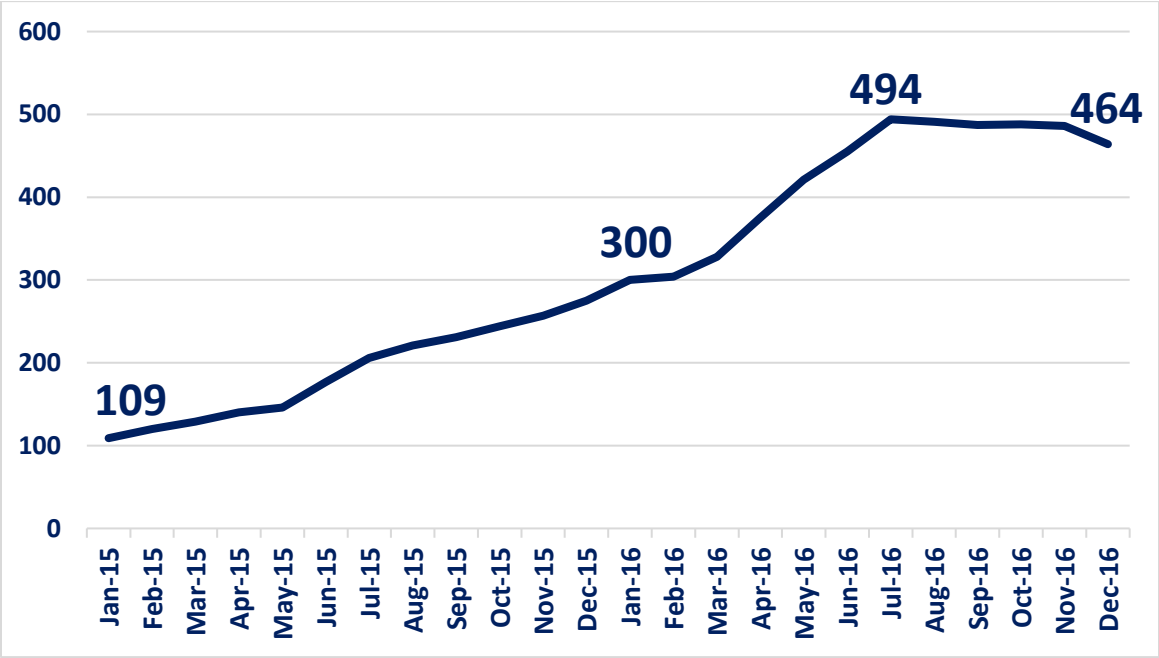
Active Airbnb Listings in Virginia Beach



Source: Airdna Market Report, March 2017

Graph 10

Airbnb Total Listings in Virginia Beach by Month



Source: Airdna Market Report, Virginia Beach, January 2017

From January 2015 to December 2016, even though December is a low point in the tourism season in Virginia Beach, the number of available Airbnb properties increased by 325 percent.[2] Over the same period, per Smith Travel Research, the supply of conventional hotel rooms increased by only 1.2 percent.

Airbnb frequently talks in term of "listings." An Airbnb listing may consist of a shared room, a private room, studio apartment, or several rooms within a house that are available for rent.

[2] This is consistent with the reported national Airbnb growth rate in revenues in 2016 of 138 percent. During this time, Airbnb's revenues grew from an estimated $2.4 billion in 2015 to $5.7 billion in 2016. Chris Kirkham and Greg Bensinger, "Hotel Group Assails Airbnb Model," *Wall Street Journal*, 269 (March 20, 2017), B4.

The number of listings understates the number of rooms available through Airbnb. This is a very important point to consider when one attempts to estimate Airbnb's share of the overall hotel market in Virginia Beach.

> **Airbnb easily is the most prominent** of a dozen or so peer-to-peer room/apartment/home rental firms that have appeared in recent years. The function of these firms is to facilitate contracting rental space, often in vacation-oriented locations or large cities. Some of these firms are highly specialized. Mister B&B focuses on gay renters; Noirbnb on African-Americans; Perfect Experience on large European cities; HomeExchange on trading homes. HomeAway is the largest among these other competitors, though VRBO is a long-established competitor.

In January 2017, 358 of the 454 Airbnb listings in Virginia Beach were active listings and we estimate that these 358 listings offered 655 rooms available for rent daily (see Table 3). Only 33 percent of these listings were for one room (which could be shared, private, or studio). For each active listing, on average, there were 1.8 rooms on the Airbnb marketplace (compared to an average of 1.6 for the entire United States in fourth quarter, 2015).[3] This means that many of the most active listings for Virginia Beach for the period in question were for multiple rooms, confirming that listings understate the number of rooms Airbnb offers for rent daily.

Our "more Airbnb rooms than listings" conclusion is consistent with a recent study performed for the American Hotel and Lodging Association by CBRE, a well-known national real estate firm. While the Association is hardly a neutral party in terms of its attitudes toward Airbnb,

[3] Airdna and CBRE data quoted in Jason Clampet, "Airbnb's Real Threat to U.S. Hotels Using Industry Metrics," *Skift* (February 13, 2016), https://skift.com/2016/02/03/measuring-airbnbs-real-threat-to-u-s-hotels-using-industry-metrics.

its commissioned study concluded that one-third of Airbnb's revenues now come from individuals and investors who own or control multiple units (see Graph 11). Indeed, it appears that some landlords have concluded it is more profitable for them to use Airbnb and companies such as Expedia's HomeAway to rent their homes on a nightly or weekly basis rather than lease those homes for longer periods of time such as a year. The Association fervently argues (perhaps correctly) that the parties who function in this fashion in essence are hotels, albeit operating without having to comply with all of the rules and regulations confronting standard hotels.

Table 3

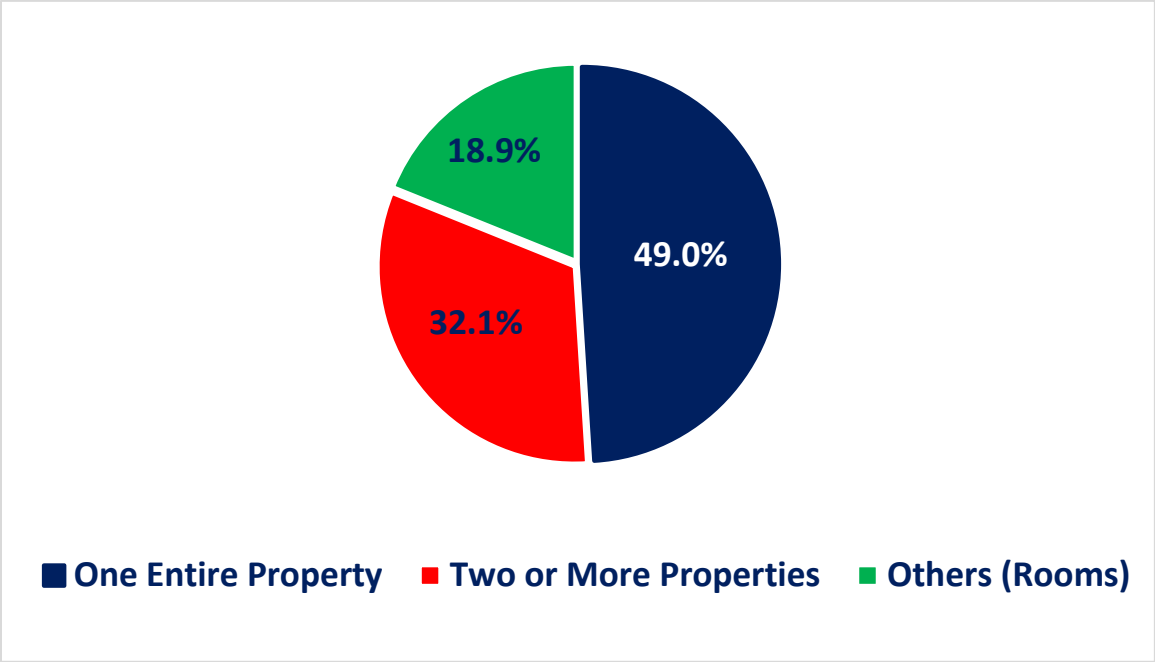
Active Airbnb Listings - Virginia Beach– January 2017

Number of Bedrooms	House	Apartment	Other	Total Listings	Estimated Rooms
Shared Room	5	3	0	8	8
Private Room	99	16	31	146	146
Studio	0	8	5	13	13
1 Room	5	25	16	46	46
2 Rooms	6	22	28	56	112
3 Rooms	20	3	13	36	108
4+ Rooms	42	1	10	53	212
Totals	177	78	103	358	655

Source: Airdna Market Report, Virginia Beach, January 2017 and authors' calculations

Graph 11

Airbnb Revenue Sources, United States 2016



Source: Chris Kirkham and Greg Bensinger, "Hotel Group Assails Airbnb Model," *Wall Street Journal*, 269 (March 20, 2017), B4.

Not surprisingly, the Association advocates a legal and enforcement crackdown on Airbnb operators, who increasingly have become viable competitors to the Association's members. The Association's reaction in this regard is similar to that observed when any established industry is confronted with a new viable competitor who appears to be upending previously well-established rules. Witness the reactions of taxicab companies to Uber and Lyft, established commercial banks

to Internet competitors such as Synchrony and Quicken, some universities to online learning, and of course dozens of competitors across many industries to Amazon, Facebook and Google.

Daily Rooms Available

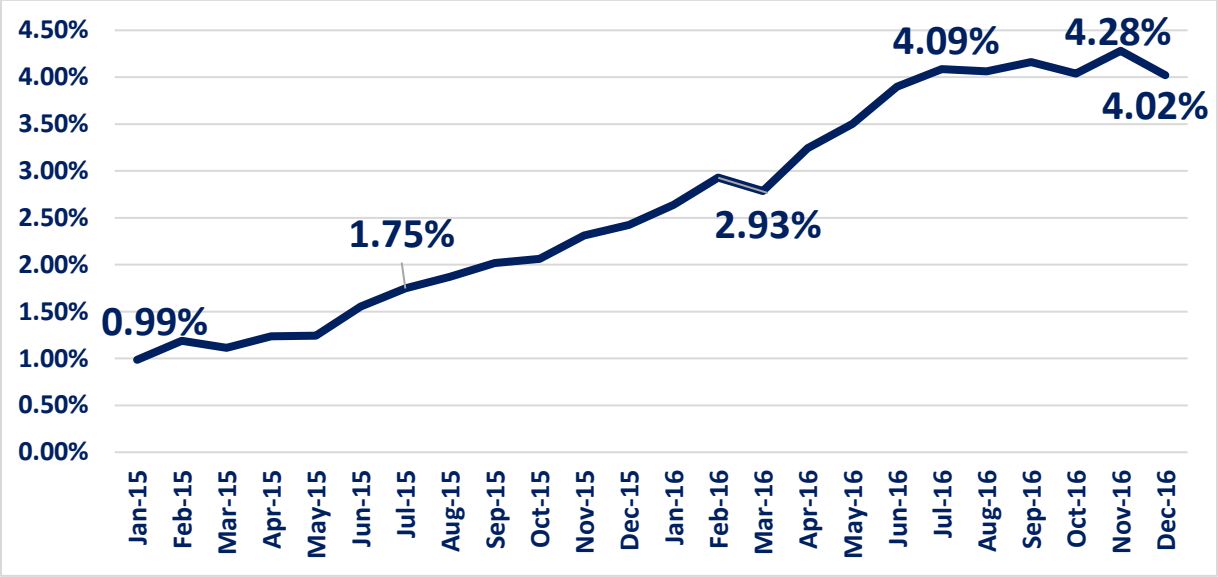
One can use end-of-month Airbnb data (which actually come from Airdna) to estimate the daily number of rooms available in Virginia Beach via Airbnb. In December 2016, for example, there were 464 properties listed for rent on Airbnb. This translates to an estimated 464 * 31 days = 14,384 Airbnb room nights available during the entire month of December 2016. **However, if the typical listing really involved 1.8 rooms, then there were 14,384 * 1.8 = 25,891 room nights potentially available through Airbnb in Virginia Beach in December 2016. This was approximately four percent of rooms available in the overall lodging market in Virginia Beach (Graph 12).**[4]

One can quibble about the precise number of rooms actually available via Airbnb in Virginia Beach and one should remember that Airbnb is not the only such rental firm in operation. Even so, it is clear that Airbnb has grown steadily since 2014 and while still relatively small, is becoming an increasingly important part of the lodging market in Virginia Beach. Interestingly, a 2015 analysis of Airbnb growth rates ranked neighboring Norfolk number two in the United States in terms of its year-over-year growth rate in Airbnb listings as of Third Quarter 2015.

[4] Compare this to an approximate 1.8 percent share of market for Airbnb in New York, San Francisco and Los Angeles in September 2015 according to Airdna and CBRE as cited in Jason Clampet (see note 3).

Graph 12

Airbnb Rooms Occupied as a Percent of Total Lodging Rooms Occupied in Virginia Beach



Source: Airdna Market Report, Virginia Beach, January 2017 and authors' calculations

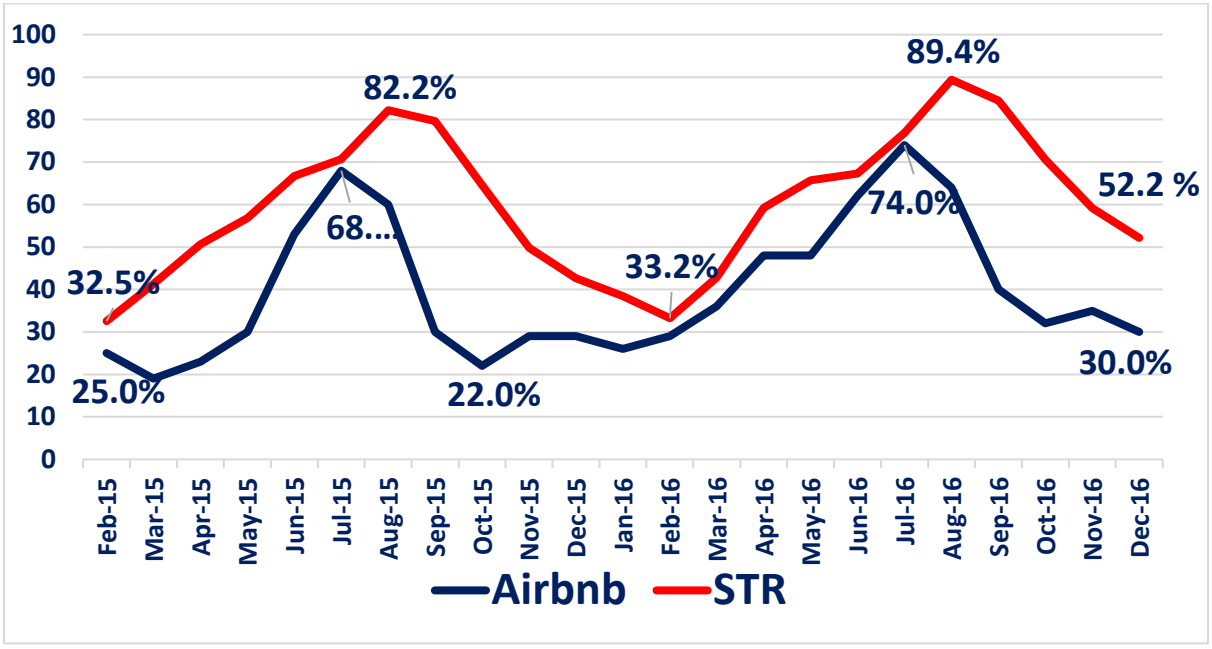
Occupancy Rates

Occupancy data for traditional hotels coming from Smith Travel Research (STR) are not strictly comparable to the data supplied by Airdna for Airbnb because of the "listings not equal to rooms" situation we noted above. B**etween February 2015 and December 2016, however, Airbnb's occupancy rates per listing were below those of the traditional lodging sector every single month.** On average, the traditional lodging sector recorded an occupancy rate of 61.7 percent for 2016---significantly higher than Airbnb's 43.7 percent (see Graph 13). Occupancy rates for both segments of the market are highly seasonal and predictably increase after New Year's Day until peaking in the summer months. As the summer tourist season winds down, occupancy rates of both segments decline. In this regard, there is little difference in Airbnb's behavior and

that of the traditional sector: the simple correlation coefficient between the occupancy rates of two is 0.93.

Graph 13

Occupancy Rates for Traditional and Airbnb Lodging for Virginia Beach



Source: Airdna Market Report and Smith Travel Research, 2017

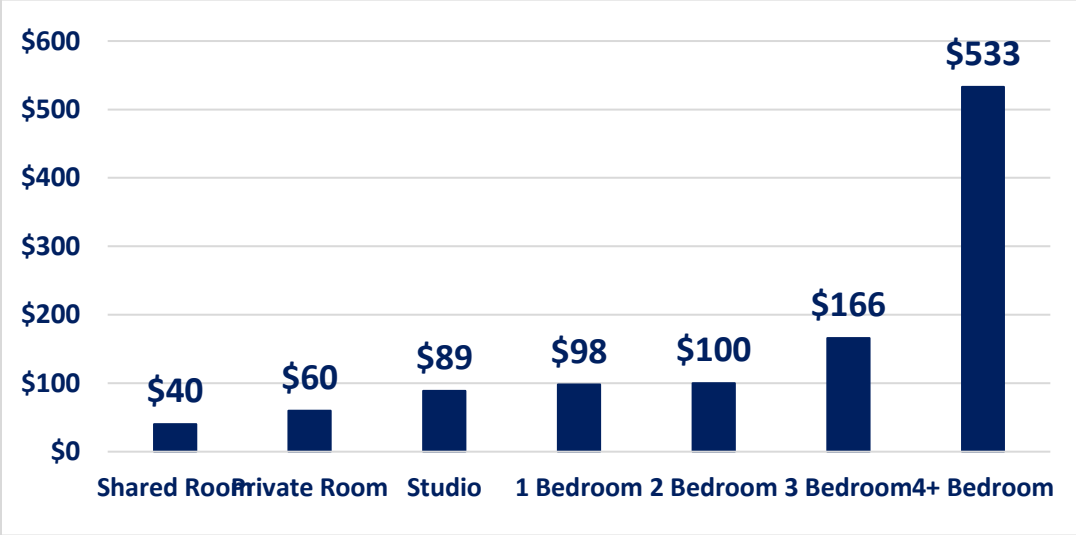
Average Daily Rate (ADR)

Average Daily Rate (ADR) is a standard metric used in the hotel industry because it captures the price guests actually pay as opposed to advertised prices. Graph 6 drives home this point. The Airbnb ADR for a four plus room rental is nine times that of its ADR for a single private room. Unless adjusted for such differences, comparing the ADRs of Airbnb versus the traditional lodging sector is not very useful.

Airbnb's ADR per listing consistently has been higher than that of traditional hotels and motels (see Graph 14). However, if we deflate the Airbnb ADR by 1.8, which is our estimate of the ratio of rooms to listings for Airbnb in Virginia Beach, then the two series look rather similar. The dotted line in Graph 15 depicts the adjusted ADR value for Airbnb after we have accounted for the average number of rooms per listing. The prevailing wisdom is that Airbnb's rooms often are superior to typical conventional hotel rooms,[5] but Airbnb does not appear to be earning more revenue per rented room than the traditional lodging sector. Hence, the hypothesis that Airbnb frequently skims the most expensive rooms in the market may not always hold water.

Graph 14

Airbnb Average Daily Rate Virginia Beach, January 2017



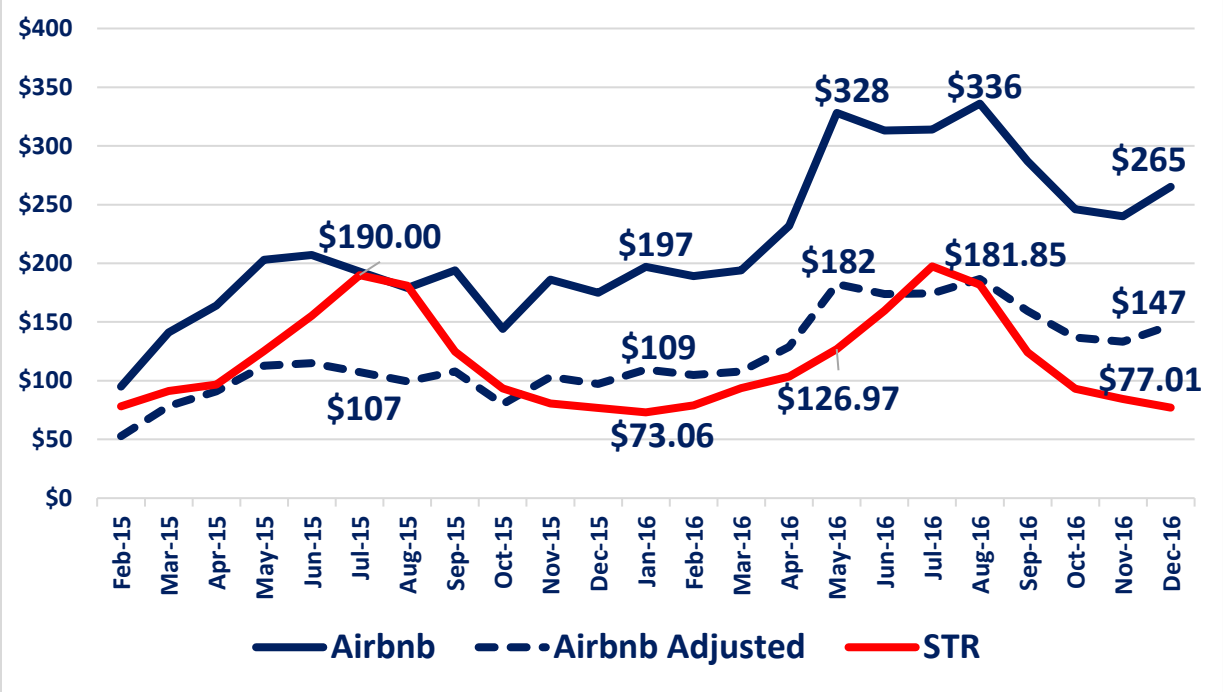
Source: Airdna Market Report, Virginia Beach, January 2017

[5] See among several, Jason Clampet (note 3 above), who assumes that Airbnb rooms typically "have more services and features than a hotel room, including kitchens, additional bedrooms, and parking…"

Graph 15

Average Daily Rate per Airbnb Listing and STR Traditional Lodging Sector Rooms:

Virginia Beach, 2015-2016



Source: Airdna and Smith Travel Research

Revenue per Available Room (REVPAR)

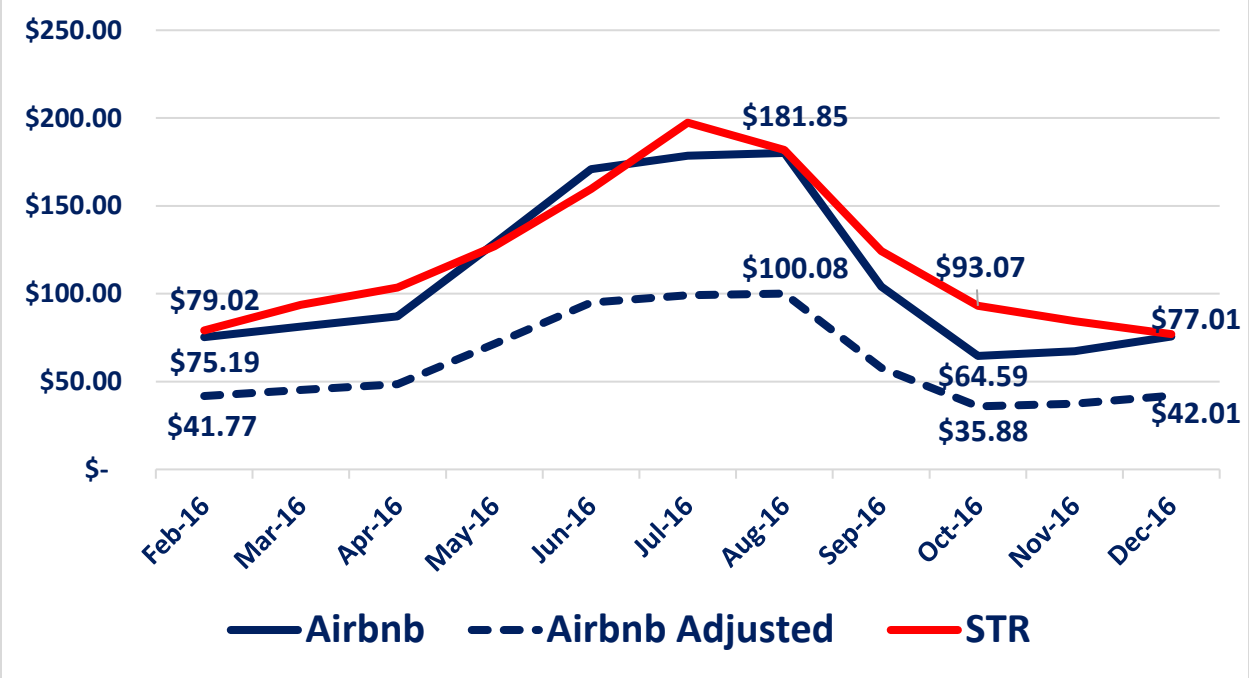
Revenue per Available Room (REVPAR) is an important performance metric for the lodging industry because it incorporates both supply and demand influences. REVPAR tells the average revenue earned per available room, not the average revenue earned per room eventually rented, which is ADR. ADR can be deceptive if many rooms sit unrented.

REVPAR looks virtually the same for Airbnb and the traditional hotels (see Graph 16), but recall again that Airbnb's REVPAR is per listing, not per room. **After we again perform the 1.8**

room per listing adjustment (the dotted line in Graph 16), it is immediately apparent that Airbnb hosts on average are reaping far less REVPAR than the conventional lodging sector hotels.

Graph 16

REVPAR Per Listing or Room: Virginia Beach, 2016



Source: Airdna Market Report and Smith Travel Research

Does this mean that Airbnb is uneconomic? Far from it. The virtue of being an Airbnb host is that one can decide not to rent any rooms at any time, especially if the rooms are in one's own home. To the extent that Airbnb and similar competitors are merely an add-on activity that earns additional revenue for a family, this is an entirely tenable, even desirable situation.

The traditional hotel sector does not enjoy the same luxury. Either hotels fill their rooms, or they suffer financially. At the limit, they go broke. The same might be said of Airbnb investors in multiple room homes, some of which almost approach the size of small apartment houses. Such investors appear to be a more important part of the Airbnb world than Airbnb officials tend to admit. Nevertheless, the predominant Airbnb host remains someone who usually is not aggrieved if he/she does not rent a room on a specific day. Therefore, one would expect the average Airbnb host to earn lower REVPAR because the host is only a part-time supplier of rooms (perhaps during tourist season) and simply may not care too much when those rooms are not rented.

Comparing Virginia Beach to Other Markets

How does Virginia Beach compare to other markets? We have selected eleven similar cities in the South and several other mature Airbnb markets in the United States for comparison. In all these cities, Airbnb listings grew rapidly from 2011 through 2016 (see Table 4). While some of the rapid growth can be attributed to the initially small number of the overall listings, even those markets with relatively large Airbnb listing pools saw double and triple digit growth over this period. Compared to other markets of similar size, the Airbnb market segment in Virginia Beach grew the fastest from 2015 to 2016.

Virginia Beach is also markedly different with regards to the distribution of rentals. Using active listing data from March 2017, we can see in Table 5 that over one-quarter of listings in Virginia Beach were for four-plus bedroom listings, ten percentage points higher than the next city, Nashville. This may reflect what one local termed "The Sandbridge Effect," whereby many large, four-plus bedroom buildings exist in Sandbridge and elsewhere along the Oceanfront that

are rented to large groups for weekends or entire weeks. Parenthetically, these also tend to be the Airbnb properties that generate the most complaints concerning unruly behavior, illegal parking, trash, and the like.

Table 4

Currently Active Airbnb Listings: Selected Cities, 2011-2016

	2011	2012	2013	2014	2015	2016	Growth 2015-2016
Arlington	30	53	94	178	448	982	119.20%
Charleston	10	28	74	156	395	906	129.37%
Jacksonville	4	8	18	45	132	311	135.61%
Lynchburg	5	..	..	14	74	172	132.43%
Nashville	18	50	147	525	1,600	3,400	112.50%
New Orleans	65	200	545	1,100	2,400	4,600	91.67%
Norfolk	2	6	8	14	63	153	142.86%
Portland	82	226	527	1,100	2,200	3,800	72.73%
Richmond	4	9	25	71	459	642	39.87%
Roanoke	..	1	3	9	38	90	136.84%
Savannah	17	35	106	166	283	619	118.73%
Virginia Beach	1	9	20	47	156	392	151.28%

Source: Airdna Market Reports

Table 5

Distribution of Active Airbnb Listings: Selected Cities, March 2017

	Studio	1 Bedroom	2 Bedroom	3 Bedroom	4+ Bedroom
Arlington	6.45%	45.66%	32.37%	9.83%	5.68%
Charleston	4.26%	28.61%	32.60%	23.52%	11.00%
Jacksonville	4.38%	32.50%	34.38%	19.38%	9.38%
Lynchburg	11.84%	28.95%	31.58%	15.79%	11.84%
Nashville	4.50%	22.44%	31.48%	25.80%	15.79%
New Orleans	6.51%	37.22%	34.57%	14.04%	7.66%
Norfolk	5.75%	25.29%	43.68%	14.94%	10.34%
Portland	15.42%	41.59%	27.66%	9.86%	5.48%
Richmond	6.19%	37.61%	28.76%	19.47%	7.96%
Roanoke	8.16%	34.69%	24.49%	24.49%	8.16%
Savannah	4.43%	35.82%	34.75%	15.60%	9.40%
Virginia Beach	6.86%	23.53%	27.45%	16.18%	25.98%

Source: Airdna Market Reports

With respect to occupancy, the seasonality of Airbnb occupancy in Virginia Beach is the predominant factor to consider. Data in Table 6 reveal that Airbnb occupancy in the first quarter of 2016 in Virginia Beach was the lowest among all the selected cities. Occupancy rates increased across all the sample cities in the second quarter and in most cities in the third quarter. While occupancy declined for all the cities in the fourth quarter of 2016, the declines were steepest in Virginia Beach. This suggests a rather obvious conclusion: Airbnb in Virginia Beach (compared to a city such as Arlington) is tied closely to the ebb and flow of the tourism market.[6]

[6] A coefficient of variation measures how variable a magnitude is relative to its average value. Because tourism is such a seasonal activity, the coefficient of variation for monthly REVPAR in Virginia Beach is the highest of any city in our sample. For Airbnb in Virginia Beach, when the temperature rises, so does Airbnb activity---more so than for any other city in our sample.

Table 6

Average Airbnb Occupancy Rates: Selected Cities, 2016

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Arlington	**57.67%**	**70.67%**	**66.33%**	**57.67%**
Charleston	**43.33%**	**63.67%**	**55.00%**	**44.67%**
Jacksonville	**64.00%**	**61.33%**	**58.33%**	**58.00%**
Lynchburg	**30.67%**	**39.00%**	**45.00%**	**44.33%**
Nashville	**44.00%**	**59.33%**	**55.67%**	**46.67%**
New Orleans	**47.33%**	**52.67%**	**38.00%**	**43.00%**
Norfolk	**34.00%**	**49.33%**	**53.33%**	**42.67%**
Portland	**56.00%**	**74.00%**	**84.67%**	**60.33%**
Richmond	**38.33%**	**51.00%**	**55.33%**	**51.67%**
Roanoke	**32.00%**	**53.67%**	**58.67%**	**47.67%**
Savannah	**48.33%**	**56.33%**	**51.67%**	**44.00%**
Virginia Beach	**30.33%**	**52.67%**	**59.33%**	**32.33%**

Source: Airdna Market Reports

While Airbnb rentals in Virginia Beach may have lower REVPAR in 2015 than comparable tourist destinations such as Charleston and New Orleans, the growth in Virginia Beach's Airbnb REVPAR was higher than most of the surveyed cities (Table 7). Comparing similar months in 2015 and 2016, Virginia Beach's Airbnb REVPAR grew almost 64 percent from May 2015 to May 2016 and about 50 percent from October 2015 to October 2016. The May 2015 to May 2016 increase for Virginia Beach was only behind that of Lynchburg, an Airbnb market that is ¼ the size of Virginia Beach. Comparing October 2015 to October 2016, Virginia Beach's Airbnb REVPAR was only behind Norfolk.

Table 7

Nominal Airbnb REVPAR Per Listing: Selected Cities, 2015 and 2016

	May-15	Oct-15	May-16	Oct-16	Growth May-May	Growth Oct-Oct
Arlington	$ 83.43	$ 77.00	$ 99.82	$ 86.86	19.65%	12.80%
Charleston	$ 97.71	$ 92.29	$ 134.11	$ 111.86	37.24%	21.21%
Jacksonville	$ 42.86	$ 51.29	$ 54.11	$ 47.00	26.25%	-8.36%
Nashville	$ 81.43	$ 100.43	$ 128.93	$ 133.14	58.33%	32.57%
New Orleans	$ 95.14	$ 90.71	$ 106.79	$ 86.57	12.24%	-4.57%
Norfolk	$ 58.29	$ 35.86	$ 69.82	$ 54.57	19.79%	52.19%
Portland	$ 70.71	$ 79.14	$ 84.11	$ 77.43	18.94%	-2.17%
Richmond	$ 54.14	$ 52.71	$ 67.32	$ 70.00	24.34%	32.79%
Virginia Beach	$ 59.71	$ 39.14	$ 97.68	$ 58.86	63.58%	50.36%
Savannah	$ 81.57	$ 74.57	$ 114.11	$ 111.00	39.89%	48.85%
Lynchburg	$ 38.00	$ 37.00	$ 63.93	$ 50.14	68.23%	35.52%
Roanoke	$ 56.86	$ 50.57	$ 48.75	$ 54.14	-14.26%	7.06%

Source: Airdna Market Reports

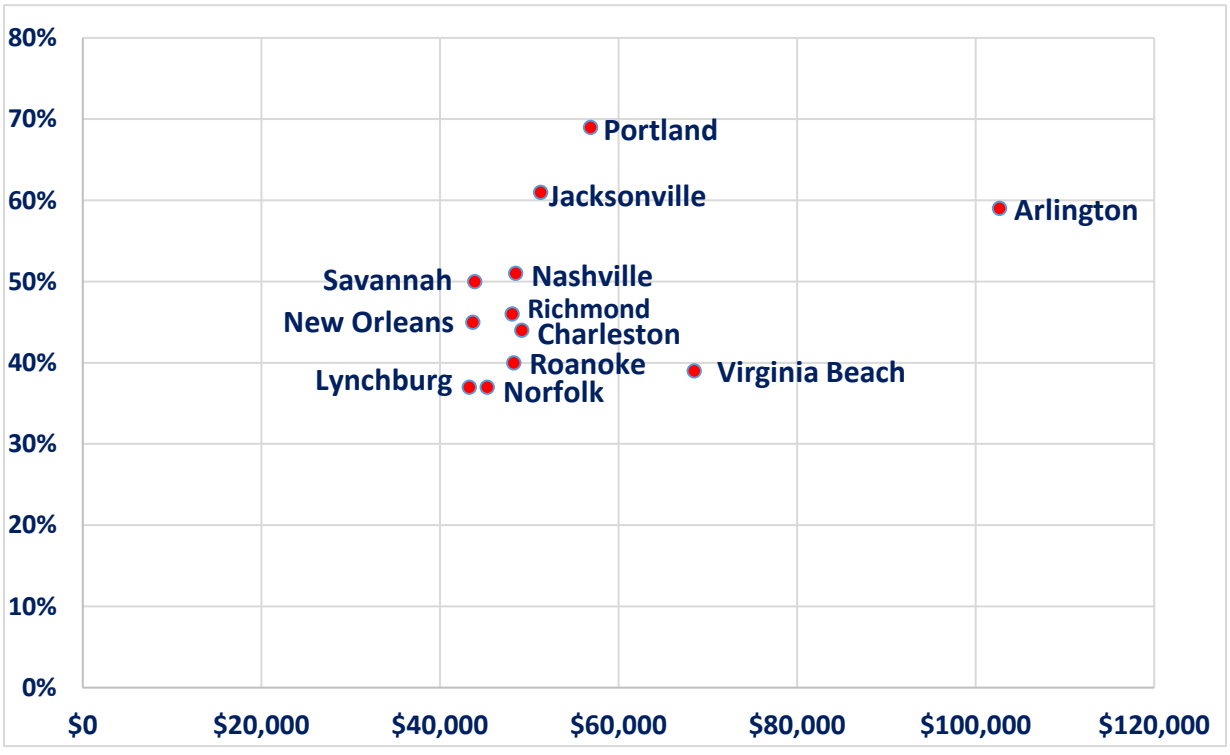
At least in the context of Hampton Roads, Virginia Beach is a city with higher income households. Further, there has been a trend in recent years for higher proportions of tourists and guests coming to Virginia Beach to have higher incomes, to stay a bit longer, and to spend more money while in Virginia Beach. Does income have anything to do with Airbnb activity? This is a complex question than it first appears because Airbnb activity clearly reflects a variety of factors, including of course how important a tourist attraction a city is, separate from income. However, it could be that upper income households are more likely to become Airbnb hosts because they are well suited to serving as periodic, occasional Airbnb hosts.

Graph 17 records the relationship between the median household income in 2016 and Airbnb occupancy rates in Virginia Beach and our eleven other cities. It is immediately apparent

that among these cities, Virginia Beach and Arlington boast the highest household incomes. However, Arlington's Airbnb occupancy rate per listing is 20 percent above that of Virginia Beach. On the other hand, Portland has a much higher occupancy rate than Virginia Beach, yet a lower median household income. We tested the statistical proposition that a city's median household income has something to do with its Airbnb occupancy rate, but found no relationship. **Speaking more generally, a city's location, its connection to major urban attractions, its desirability as a tourist attraction, and the pricing of its traditional hotels are more important determinants of that city's Airbnb activity than is the income in that city.**

Graph 17

Median Household Income and Median Airbnb Occupancy Rates, Selected Cities, 2016



Source: Airdna Market Reports and Bureau of Economic Analysis

Turning next to how Airbnb revenues are earned, we examine total earnings earned by Airbnb landlords from various types of rentals in 2016. **Virginia Beach stands out from other cities in this regard because it has the highest percentage of revenue earned through listings for four bedrooms of more.** (see Table 6). Virginia Beach's share of revenues from four bedrooms or more rentals (36.6 percent of revenue earned) eclipsed that of New Orleans (36.2 percent), Savannah (34.1 percent), and Charleston (30.2 percent).

If tax revenue collections are a major concern for the City of Virginia Beach, then the data in Table 6 strongly suggest that the City's focus should be upon the multiple bedroom Airbnb properties. Almost three-quarters of all Airbnb revenue earned by Airbnb hosts in Virginia Beach is derived from multiple bedroom properties.

Table 6

Distribution of Airbnb Earnings by Rental Type: Selected Cities, 2016

	Shared Revenue	Private Revenue	Studio Revenue	1-Bedroom Revenue	2-Bedrooms Revenue	3-Bedrooms Revenue	4-Bedrooms Revenue
Arlington	3.06%	8.79%	9.78%	15.60%	19.90%	17.08%	25.80%
Charleston	1.09%	7.50%	10.93%	15.48%	16.37%	18.40%	30.22%
Jacksonville	2.41%	9.84%	12.11%	14.77%	17.23%	17.90%	25.73%
Lynchburg	0.00%	10.76%	12.57%	15.98%	20.45%	11.93%	28.30%
Nashville	2.60%	6.74%	11.90%	13.16%	14.17%	20.78%	30.66%
New Orleans	3.05%	6.31%	10.29%	11.18%	14.82%	18.14%	36.22%
Norfolk	0.56%	11.28%	11.62%	16.17%	20.96%	18.78%	20.62%
Portland	3.78%	7.23%	12.28%	12.65%	16.04%	21.03%	26.98%
Richmond	2.85%	6.95%	9.05%	14.49%	14.77%	19.49%	32.39%
Roanoke	0.00%	10.35%	15.09%	14.71%	17.80%	19.74%	22.30%
Savannah	1.76%	9.37%	11.42%	11.96%	15.72%	15.67%	34.11%
Virginia Beach	1.04%	9.66%	2.26%	12.12%	17.65%	20.67%	36.59%

Source: Airdna Market Reports

Table 7 provides additional detail based upon our estimates of Airbnb activity in Virginia Beach between September 2014 and February 2017. Note that we estimate that 79.9 percent of the lodging taxes for which Airbnb hosts are liable in Virginia Beach would be paid by hosts who rent full houses, apartments or condos. The same is true for the Commonwealth's sales tax collections. The percentage is smaller for the City's occupancy tax---55.9 percent, but it far less lucrative to the City than the lodging tax.

Table 7

Estimated Airbnb Activity in Virginia Beach, September 2014-February 2017

Dates	Estimated Virginia Beach Airbnb Revenues	Estimated Number of Nights	Estimated Revenue Per Night	Estimated Associated Lodging Taxes	Estimated Associated Occupancy Taxes	Estimated Associated Virginia Sales Tax Collections
Full House/Apt/Condo						
Sep. 2014 to Dec. 2014	$65,834	528	$ 124.68	$5,267	$528	$3,950
Jan. 2015 to Dec. 2015	$771,011	4,556	$ 169.23	$61,681	$4,556	$46,261
Jan. 2016 to Dec. 2016	$4,831,689	18,840	$ 256.46	$386,535	$18,840	$289,901
Jan 2017-Feb 2017	$644,233	1,976	$ 326.03	$51,539	$3,952	$38,654
Totals	$6,312,767	25,900	$ 243.74	$505,021	$27,876	$378,766
Private Rooms						
Sep. 2014 to Dec. 2014	$19,041	224	$ 85.01	$1,523	$224	$1,142
Jan. 2015 to Dec. 2015	$327,159	3,835	$ 85.31	$26,173	$3,835	$19,630
Jan. 2016 to Dec. 2016	$1,143,958	14,637	$ 78.16	$91,517	$14,637	$68,637

Jan 2017-Feb 2017	$86,462	1,419	$ 60.93	$6,917	$2,838	$5,188
Totals	$1,576,621	20,115	$ 78.38	$126,130	$21,534	$94,597
Shared Rooms						
Sep. 2014 to Dec. 2014	$0	0	$0	$0	$0	$0
Jan. 2015 to Dec. 2015	$1,240	34	$ 36.47	$99	$34	$74
Jan. 2016 to Dec. 2016	$12,990	364	$ 35.69	$1,039	$364	$779
Jan 2017-Feb 2017	$974	32	$ 30.42	$78	$64	$58
Totals	$15,203	430	$ 35.36	$1,216	$462	$912
Grand Totals	$7,904,590	$46,445	$357	$632,367	$49,872	$474,275

Assumptions:

Lodging tax 8%
Occupancy tax = $1 until Dec. 2016
Occupancy tax = $2 thereafter
State sales tax = 6%

Source: Airdna Reports

The moral to the story told by the data in Tables 6 and 7 is that if the City devotes many resources to forcing compliance from hosts renting studio rooms or single bedrooms, it seems likely that the costs of doing so would exceed the incremental revenues received. This is not where the revenue is. The hundreds of small Airbnb hosts who come and go from the market and are difficult to track and would present significant challenges to enforcement personnel. **Further, we predict that specialized Airbnb imitators will rise in importance as they address the specific circumstances of populations ranging from gay people and Catholics to women and military veterans. The point is that the more of these hosting organizations there are, the**

more difficult it will be for the City of Virginia Beach to enforce any ordinances that putatively apply to such operations.

Even so, the City probably could reduce its own costs of compliance and enforcement by negotiating an agreement with Airbnb that in essence utilizes the Airbnb itself to ensure the payment of taxes by individual Airbnb hosts. Airbnb has concluded such agreements in several cities, including San Francisco. This would change the cost/benefit calculus by reducing the City's costs. Otherwise, seeking compliance from many small Airbnb hosts may turn out to generate more costs than benefits.

There is another fundamental conclusion to be drawn from our analysis. Given the contractual, sometimes almost casual nature of the Airbnb phenomenon, it is not an easy task for the City of Virginia Beach to collect taxes due from Airbnb hosts. **Any tax based upon revenues or sales will be challenged by problems connected to tracking and identifying both Airbnb hosts and their activities. This dictum applies both to the City's lodging and occupancy taxes and to the Commonwealth's sales tax.**

Identification and collection problems may diminish, however, if it is income rather than sales that are subject of taxation. Airbnb and related hosts may believe they can thumb their noses at the City of Virginia Beach, but they are less likely to hold that attitude with respect to the federal government's Internal Revenue Service, which possesses a variety of digitized tools to identify scofflaws and some impressive penalties to inspire cooperation.

Perish the thought---a City income tax, perhaps piggy-backed on the state or federal income taxes, may be the wave of the future for Virginia Beach---if it is serious about

collecting taxes due from Airbnb hosts and the multitude of other gig-economy entrepreneurs who increasingly will inhabit the City's economic environment. We make this observation not because we are advocates of income taxes, but rather as dispassionate observers of economic trends. Sales-related taxes may become increasingly difficult to collect.

Is There a Connection Between ADR, REVPAR and the Growth of Airbnb in Virginia Beach?

Costs and prices make a difference, or so at least academic economists tell their students. With this in mind, **it should not escape readers that Airbnb has grown more rapidly in Virginia Beach than in any of our eleven comparison cities and that this meteoric growth occurred when the price of a typical hotel room (measured by either ADR or REVPAR) was rising much more rapidly in Virginia Beach than either in Hampton Roads or in Virginia. REVPAR in Virginia Beach, for example, rose 34.6 percent between 2011 and 2016 in Virginia Beach, but only 25.6 percent in Virginia.**

Supply side adjustments contributed to this. The absolute number of hotel rooms available in Hampton Roads declined almost 2,500 between 2009 and 2016 and fell a little bit more than 300 in Virginia Beach itself.

While a more rigorous analysis would be required to render a definitive judgment, *prima facie* it appears that the pricing behavior of Virginia Beach hotels is partially responsible for the rapid growth of Airbnb in the City. Alert consumers look for opportunities to substitute less expensive goods for those that are more expensive and rental rooms are no exception. Rising hotel room prices stimulate tourists and those on business to contemplate alternatives, including Airbnb. The bottom line is that while rising hotel room

prices may initially seem to be an attractive tonic when applied to the bottom lines of hotels, they subsequently may result in hotels losing market share to competitive alternatives such as Airbnb.

Prior to the advent of Airbnb and its competitors, hotels in Virginia Beach enjoyed some degree of market power. If a tourist or other guest decided to come to Virginia Beach, there were few alternatives to traditional hotels other than bed and breakfasts, or perhaps staying in a more distant location such as Norfolk. The rise of Airbnb changed this. Visitors now have alternatives that were absent ten years ago. Additionally, they now can utilize the Internet to make detailed price comparisons.

Unless truly revolutionary action is taken by the City Council, it is safe to say that Airbnb and similar rental contractors are not going to disappear. Nevertheless, traditional hotels in Virginia Beach have three major avenues open to them to enable them to become more competitive with respect to Airbnb-like hosts. First, they can be more modest in terms of future price increases and perhaps even adjust their current prices by means of special sales or offerings. Second, they can make their properties and offerings more enticing such that a stay at their properties is more personal, engaging and memorable (qualities many Airbnb customers say attract them to Airbnb stays). Third, the City can make the Oceanfront more attractive by addressing issues such as traffic control, parking availability and cost, and perceived safety. If such developments do not occur, then simple, but straightforward economic analysis suggests that Airbnb's growth in Virginia Beach will continue apace.

III. POLICY ALTERNATIVES

It is not blindingly obvious where the public interest resides in the debates concerning the activities of Airbnb and similar firms in Virginia Beach because there are competing points of view, each of which is supported by some favorable evidence. A rough definition of the public interest is that it coincides with activities that do the most good for the most people. Measuring what generates the most public good for the most people, however, is a difficult task. If it were easier, then our political and economic debates would not be so harsh and confrontational.

Nonetheless, if we adopt the "most good for the most people" view, then we can observe that it is not the job of government to protect existing firms and industries from new, more efficient, or more attractive competitors who would serve the mass of consumers better and do so at lower prices. If it were, then horse and buggy manufacturers and producers of 8-Tracks and cassettes still would be dominant because both would have been protected from new competition. The cost of their continued dominance, however, clearly would have been a lower standard of living for citizens and consumers.

Enabling citizen consumers to spend their dollars where they wish is a welfare-maximizing stance for government to adopt, provided this consumption does not generate undesirable side effects such as pollution, noise, traffic congestion, crime, unsanitary conditions that impact public health, and the like. As a general rule, challenging competing firms to meet "the market test"---that is, offer goods and services at prices and levels of quality that are attractive to consumers and do not generate the side effects just noted---not only is an equitable approach that treats all citizens and firms the same, but also generates the best overall results for the citizenry. "Best overall" here means presenting consumers with a larger selection of goods and services at lower prices.

An important question relating to Airbnb in Virginia Beach is whether all parties are being treated the same---literally whether all participants (Airbnb and traditional hotels alike) have had to meet the same market test under the same rules. We believe the answer is no and that some Airbnb hosts have consciously evaded (and been able to avoid) City regulations and taxes.

This said, it is not clear to us that it would be wise for the City to devote substantial resources to ensuring that every Airbnb-type host completely satisfies all the City's ordinances. By our calculations, Airbnb hosts who rent single or shared single rooms accounted for no more than about one percent of the total number of rooms available in Virginia Beach during the past year. Further, they account for only about one-fifth of the City's potential tax revenues from Airbnb-like activities. Further, these hosts do not often appear to be the sources of behavioral problems (noise, trash, crime, etc.).

The City would be wise to devote its scarce enforcement resources to identifying and obtaining compliance from Airbnb hosts offering two or more rooms for rent. Plainly speaking, this is where the revenue is and evidence suggests that any behavioral problems that Airbnb generates are concentrated among these properties as well. This is not the same as saying that the City will ignore ordinances that apply to the Airbnb small fry. Instead, it is a rational economic calculation that expending resources on such does not make much sense, just as members of the City's police force do not arrest every motorist who is traveling 32 MPH in a 30 MPH zone.

At the limit, the City might consider amending its ordinances so that they apply only partially or not at all in some cases to property owners who rent nothing more than single rooms. These Airbnb hosts have relatively little impact on traditional hotels or City revenues. Further, as more and more specialized Airbnb-like host firms enter the market, the enforcement task will become insuperable unless agreements are forged with the host firms that oversee the guest hosts.

The City usefully can imitate San Francisco in terms of its relationship with Airbnb. San Francisco negotiated an agreement with Airbnb that, among other things, uses the Airbnb administrative structure to collect taxes due from Airbnb hosts. If Virginia Beach is able to replicate this, then the revenues it receives from small Airbnb-like hosts plausibly could exceed the costs required to collect them.

In any case, compliance with certain ordinances always presents challenges to cities. **If the City is serious about its ordinances that relate to larger Airbnb-like hosts, then it must consider arresting and prosecuting exemplary large Airbnb hosts who clearly have been flouting its ordinances. It should not be difficult to identify the most egregious violators. This would send a message to Airbnb hosts concerning their collective and individual obligations to obey the law, pay requisite taxes, and monitor their properties.**

Finally, to return to a theme developed above, traditional hotel operators would be well advised to reevaluate their pricing and quality strategies. Airbnb and similar rental hosting firms are not going to go away. In contrast to Uber, which is losing several billion dollars per year and has yet to demonstrate a viable business model, Airbnb is a profitable enterprise that already in August 2016 was valued at $30 billion when its raised $850 million in a private

offering.[7] To place this in perspective, this is about 25 percent higher than the value of the entire Hilton Hotel chain.

The notion that the meteoric growth of Airbnb-like hosts can be choked off by punitive law enforcement is naïve. Nor would this be a good idea. Airbnb and similar rental hosting firms appear to be meeting the market test and traditional hotels need to ensure that they do so as well.

IV. THE IMPLICATIONS OF THE GIG ECONOMY FOR VIRGINIA BEACH

It would be short-sighted for anyone to view the Airbnb phenomenon as an isolated development. Instead, Airbnb is one part of a much larger economic/social trend that some have chosen to term the "gig economy." This is a world characterized by temporary arrangements tailored to a specific situation. In the gig world, employees are not permanent; rather, they are temporary contractors who accomplish a task and then move on to something else (or nothing at all) with another employer, or even the same employer, but for a different, delimited task.

A gig employee is similar to the plumber or electrician home owners hire to come in, fix a problem, and leave. There is no commitment or expectation on the part of either party for additional work. Gig economy workers often obtain their work by using an Internet website or mobile app that matches them with potential employers. It is Craig's List multiplied many times over.

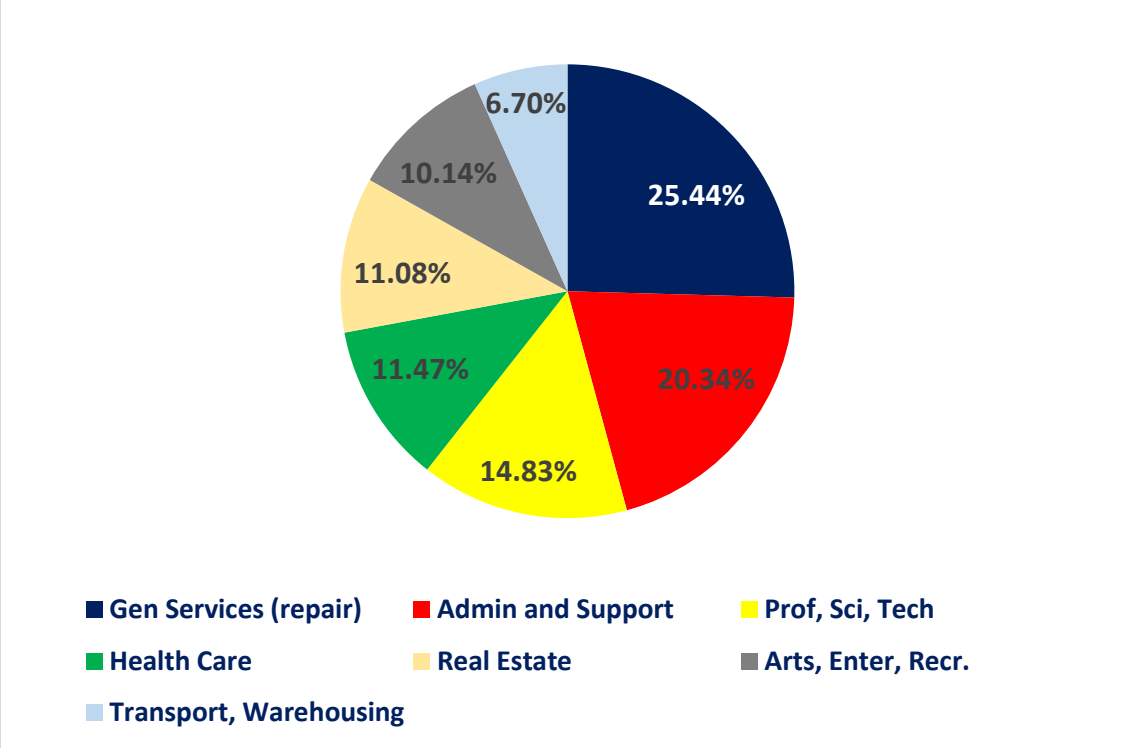
The Internet now fulfills many of the same functions that labor halls and rough and tumble bull pens historically did when grape growers or wheat farmers needed temporary, very

[7] Matt Rosoff, "Airbnb Is Now Worth $30 Billion," *Business Insider* (August 6, 2016), www.businessinsider.com.

short-term workers to help them harvest. Today, the Internet is an employment agency. In addition to agriculture, we now are talking about shopping around for people who can satisfy diverse tasks such as computer programming, the desire to develop a new web page, shipyard construction, beauty shop treatments, income tax preparation, summer seasonal work with tourists, painting a building, a need for a German to English translator, teaching a specific college course, performing legal work, conducting risk assessment, etc.---the list is seemingly endless. Graph 18 provides a notion of what segments of the economy gig economy workers inhabit.

Graph 18

Relative Size of Gig Economy Work by Economic Sector

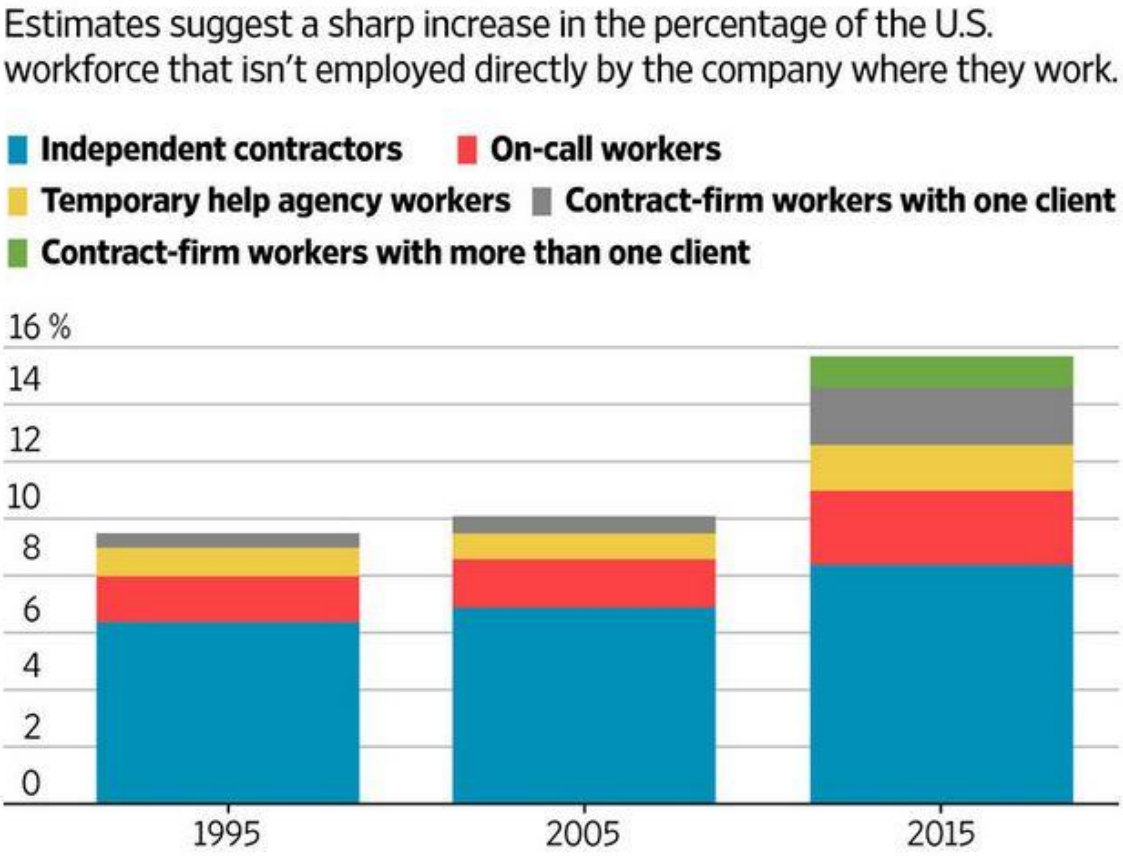


Source: Bureau of Labor Statistics, www.bls.gov/careeroutlook/2016/article/what-is-the-gig-economy.htm.

It is tempting to say, "This has been happening for decades; it isn't anything new." True. What we are seeing today differs mostly in degree. There is much more gig activity occurring in 2017 than in years previous and more occupations and tasks are being filled or satisfied by gig workers than ever before. Intuit predicts that 40 percent of all workers will be gig employees by 2020.[8] Graph 19 below illustrates the dramatic growth in contract and temporary employees in the U.S. economy.

[8] *Intuit 2020 Report. Ten Trends That Will Shape the Next Decade.* https://http-download.intuit.com/http.intuit/CMO/intuit/futureofsmallbusiness/intuit_2020_report.pdf.

Graph 19



Source: *Wall Street Journal*, 269 (February 3, 2017), A10.

These are among the major implications for the City of Virginia Beach.

- **The City will be dealing with many more workers who don't fit traditional categories, are not accustomed to applying for things such as business licenses, may or may not be willing to pay established taxes (or even be aware they exist), can be**

difficult to track down, and who actually may be located thousands of miles away from Virginia Beach. If the City wishes to enforce its usual rules, then this will require additional resources---without any guarantee that the benefits will outweigh costs in some situations. I.e., the City must commit itself to doing benefit/cost analysis of its enforcement and avoid passing ordinances that in essence unenforceable. Some laws and regulations simply may turn out to be too expensive to enforce.

- **The City itself, seeking to economize and do the best for its citizen taxpayers, likely will choose to hire more temporary workers.** Does the City wish to place limits on its employment of contractual workers even if this turns out to cost more money?
- **The City must decide what levels of fringe benefits (if any) it will provide contractual employees, particularly when their employment period is lengthy, or when the individual is employed repetitively.** I.e., how long or often must someone be employed in order for the City's obligations to such employees change?
- **The City will find that the gig economy workers who actually do reside in Virginia Beach (though perhaps only for a period of time) will play larger demands upon the City's schools and social services and perhaps on other agencies such as law enforcement and the judicial system. For better or worse, permanence of residence and permanence of employment are significant predictors of positive social behavior.**
- **Virginia Beach K-12 schools will find that increasing proportions of their students will come and go because their parents or guardians literally are footloose, or their financial circumstances have changed.** Teachers will find the membership of the

students in their classes increasingly volatile and consequently they won't have records on those students.

- **The City may conclude that many conventional measures of achievement such as college degrees do not fit the gig world as well as certificates and certifications.** Thus, being certified as a project manager, court reporter, EMT, Internet network specialist massage therapist, or licensed nurse often is more important than having earned a baccalaureate degree. The gig economy is filled with such workers, but pay scales and fringe benefit programs often do not fit them. Nor do most cities reimburse employees who pursue and complete such certifications even though many governmental units pay for conventional college courses. Some rethinking is needed here and more flexible compensation schemes are required.
- **If we put aside seasonable agricultural work, then the gig economy currently is proportionately overrepresented with Caucasians, many of whom are well educated and even wealthy.** To the extent that the City employs gig economy workers, it may find that these workers are not representative either of Virginia demographics or the population of Virginia Beach. The City must be pro-active if it wishes a different outcome. This is not an easy task because the marketplaces for big employees reinvent themselves on a daily or weekly basis. Many are not amendable to traditional affirmative action prescriptions.

The writers of this report all are economists in the Department of Economics at Old Dominion University. Higher education is an "industry" in which the percentage of all faculty who hold academic tenure has fallen to 35 percent. Professors and administrators alike averred

this would not be allowed to occur---but happen it did anyway. The City of Virginia Beach would be well advised to keep these and similar examples in mind as it contemplates how it should organize itself to deal with the rising importance of the gig economy.