

2019

Workforce Development Issues in the U.S. Virgin Islands



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Overview

Well-functioning labor market and workforce development policies contribute to increased productivity, competitiveness, profitability, and higher wages in an economy. Improvement of skills to increase employment, retention, and productivity among job seekers and to help employers to reduce the number of mismatches between job requirements and skills/aptitudes of job applicants.

When there are good matches between what employers want and what employees have to offer, all parties benefit, and the economy grows faster. When there are mismatches, employers slow hiring contributing to higher unemployment rates, lower incomes, lower productivity, less innovation, and less growth. Also, employers may be forced to demand more of existing workers leading to more stress and less job satisfaction for those workers. If employers cannot find the skill sets and aptitudes they need, they may suffer productivity losses and less dynamism. To compensate, employers may have to invest heavily in on the job training that implying higher cost of doing business and places smaller or startup firms that do not have the financial wherewithal to bear the additional cost of such training at a distinct disadvantage.

In order to foster growth, innovation, and overall economic development in an economy, human capital, investment, technology, and infrastructure must be synergistically developed and financed. Advanced technology, high rates of gross investment, and modern infrastructure, will not be sufficient to yield sustainable and broad-based development unless the labor force is educated, skilled, healthy, and productive. Labor and workforce development policies, therefore, should be key areas of consideration for public sector decision-makers, business owners, and labor unions.

The Workforce Innovation and Opportunity Act of 2014 (WIOA) creates a platform for coordinated action among public and private sector actors that is employee or job seeker driven. The WIOA in the USVI is implemented by three government agencies—Dept. of Labor (Title I- III) Dept of Education (Title-II) and Dept. of Human Services (Title IV). The main features are one common inscription form and a one-stop setup. The first State Unified Plan 2016-2019 was obviously affected by the hurricanes of 2017 but nonetheless, progress was made.

Purpose

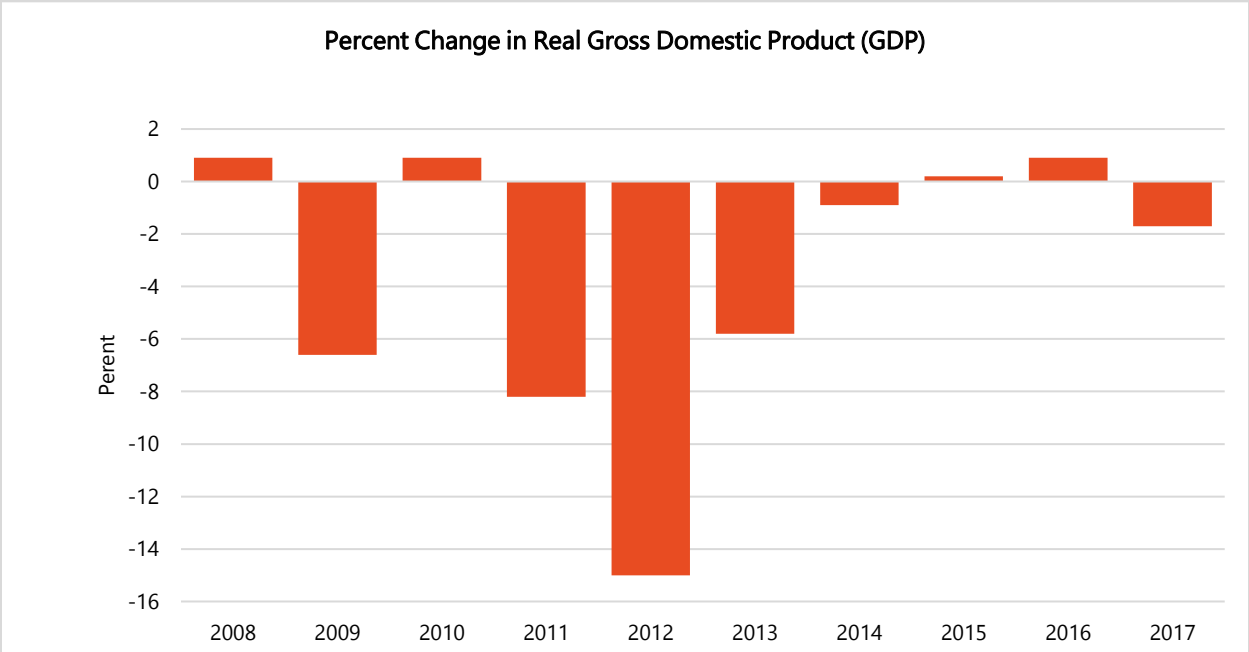
This presentation gives an overview of the economic situation, employment trends in the US Virgin Islands, reviews the results of a business survey from 2015 concerning employer perceptions of the labor market, and set the stage for discussions about the scope, scale, and effectiveness of several workforce development programs in the territory, and concludes with a summary of critical issues that need to be addressed in order to spur faster growth and reduce the misalignments in the labor market.

Economic Setting

Over the last decade or so the economy of the US Virgin Islands experienced more years of negative growth than positive and has seen its economic output shrink(See Figures 1 and 2). The performance is attributable in large part to three successive shocks, the Great Recession of 2008, the closing of Hovensa oil refinery in 2012, the territory's largest private sector employer at the time, and two direct landfall strikes of category hurricanes days apart in 2017. The recession on the US mainland reduced the number of visitors who came to the territory as tourists reducing the amount of export services. The Hovensa closing contributed to a sharp rise in unemployment and greatly reduced government tax revenue. The twin hurricanes of 2017 caused as estimated \$10 billion worth of damage, reduced consumer spending and

export of services. Major hotels closed and many small businesses faced interruptions. As a result, unemployment spiked, government tax revenues fell by half, output declined, and out migration increased. In the wake of the natural disasters, the employment sector that saw the most notable increases was construction. As of 2019, the recovery is still ongoing, and improvements have been recorded in (1) visitor arrivals; (2) job creation; (3) construction permits; (4) tax collection; and (5) federal spending. Nonetheless, levels attained are still not back to the pre-hurricane levels. The slowness in reopening large hotel properties and delays in the disbursement of federal disaster and relief funds have combined to dampen the pace of recovery.

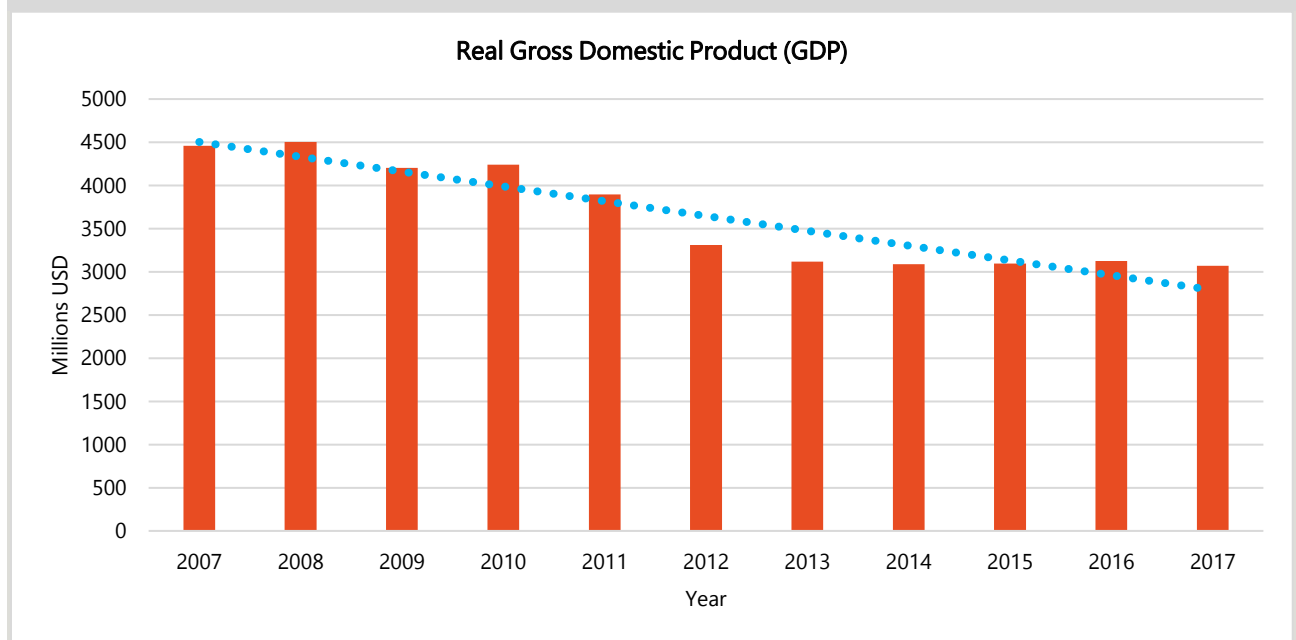
Figure 1: Percent Change in Real GDP



Source: BEA

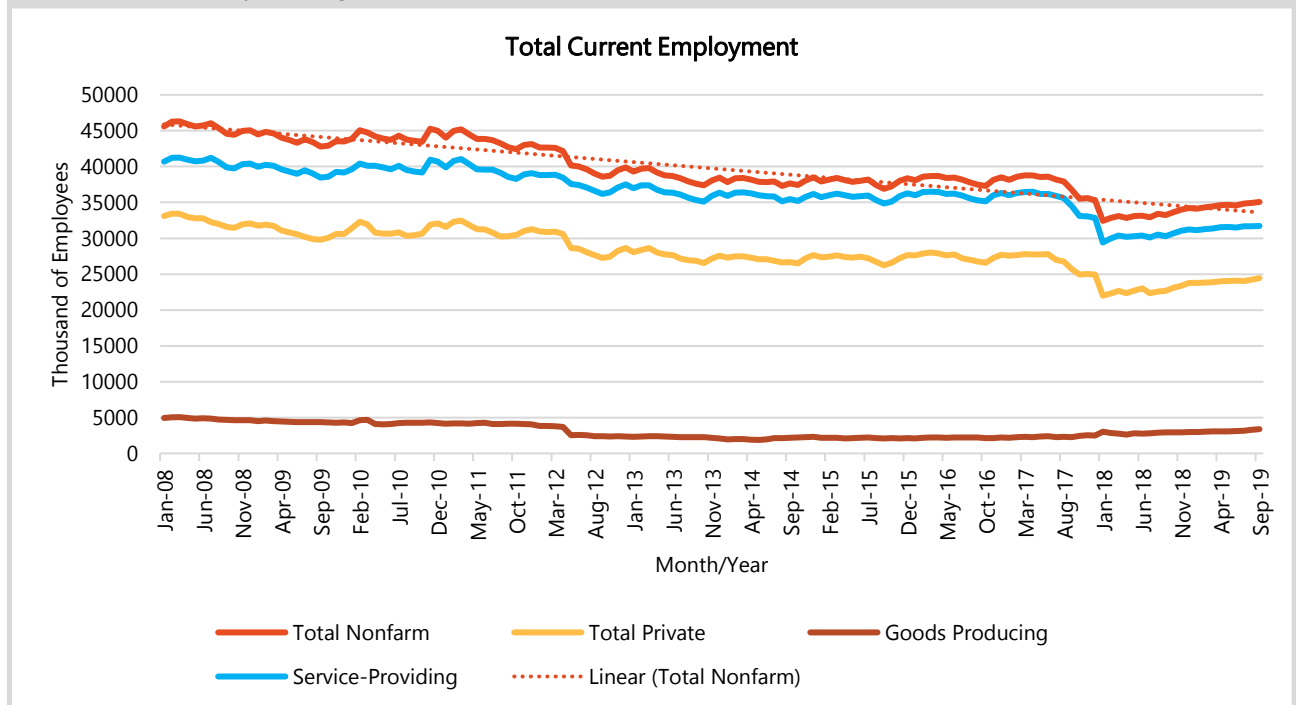
Note: Growth in 2018 and 2019 are expected to be positive. Release are delayed due to delays in completing audited financial statements of the territorial government.

Figure 2: Real GDP



Source: BEA

Likewise, total employment figures have shown a secular decline over the same period (Figure 3).



Source: VIDOL

a/ seasonally adjusted except for 2019

b/ included payroll employees, not self-employed.

Total nonfarm seasonally unadjusted employment has declined approximately by 10,534 over the last 11 years, from 45,613 in January 2008 to 35,079 in September 2019, a 23% drop. On the positive side, an inflection point seems to have occurred. The lowest employment figure occurred in January 2018. Since then employment has rebounded.

The percent increase amounts to an 8 percent increase. This increase is probably linked to the Federal disaster stimulus spending. The challenge going forward is how to sustain growth and employment gains as the disaster relief spending tapers out.

Principal Economic Challenges: How to Obtain Sustainable Growth and Diversification

The US Virgin Islands economy is undiversified economy and heavily dependent on tourism and related services. According to the World Travel and Tourism Council Caribbean, in 2018 tourism contributed 30.9 % of GDP in the US Virgin Islands, directly employed 5,500 person and visitor spending amounted to \$1.5 billion (WTTO, 2019). Tourism accounts for more than 90% of export services.

The specific sectors that are most impacted by tourism activities are:

- Accommodations: (hotels, guest houses, villas, timeshare condos, etc.)
- Transportation: Airlines, taxis, helicopter, car rental agencies, and ferries)
- Food and Beverage: Restaurants/bars
- Entertainment: night clubs, lounges, marine observatory parks and performing art events
- Retail Trade: Shop, especially those selling gifts, jewelry, electronics, handicrafts, perfume, liquor, art pieces, and luxury items such as high-end clothing and leather goods, crystal, etc.)
- Attractions: Tour and leisure operators such as museums, zipline, parasailing, horseback riding, kayak, diving, and boat charters, etc.

Tourism is a sector that in general utilizes low-skilled, low wage workers, and features high turnover. Outside of a few specialties in the hospitality and tourism, there are low barriers to entry. Most people in the hospitality and tourism sector, for example, do not need advanced academic degrees but in some cases, licensing is a requirement for boat captains, aircraft , and dive masters. In other cases, marine mechanics and culinary chefs need long training/apprentice and formal certification processes. In still other cases, and food handlers and bartenders need short term safety and sanitary courses.

Professional services and government employment have tended to remain stable over time. High-skilled and knowledge-intensive occupations have tended to be in short-supply. In order to grow and diversify the economy a well-trained and productive workforce will be key. Currently, construction employment is buoyant due to the need to rebuild and repair in the aftermath of the storms. Manufacturing is posed to increase with the opening of the Limetree oil refinery in 2020. But in general manufacturing and agriculture have not been important employment categories.

Demographic and Employment Trends

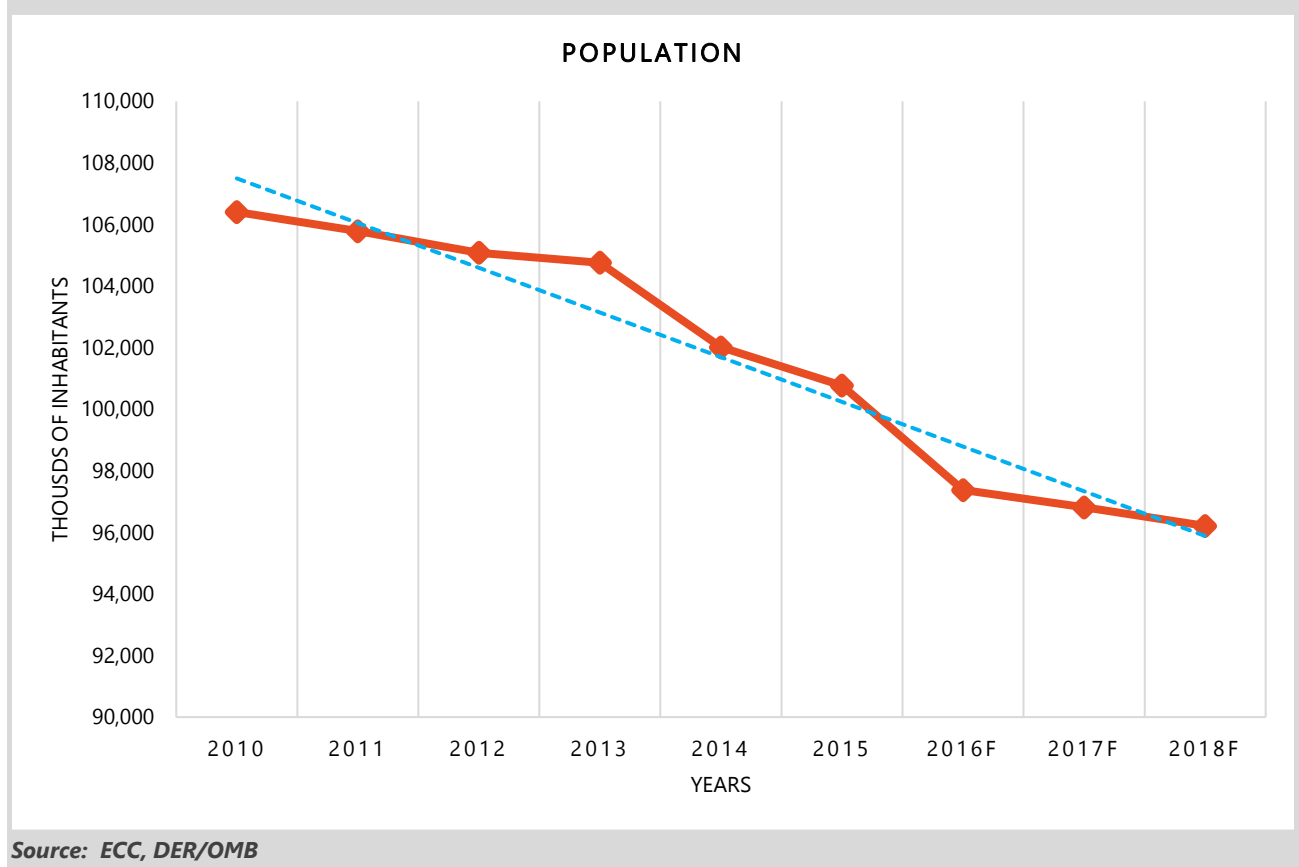
The demographic profile of the US Virgin Islands economy is not the most favorable if the goal is to have a highly productive, cost competitive workforce.

Declining Population

The US Census of 2010 reported that the territory had a population of 106,405 . Since then population growth been negative. Actual household surveys between 2011 and 2015 consistently documented a falling population. The

total population fell 5.2% between 2010 and 2015. The figures for 2016-2018 are forecasted but as can be seen in Figure 2, there is a secular decline.

Figure 2



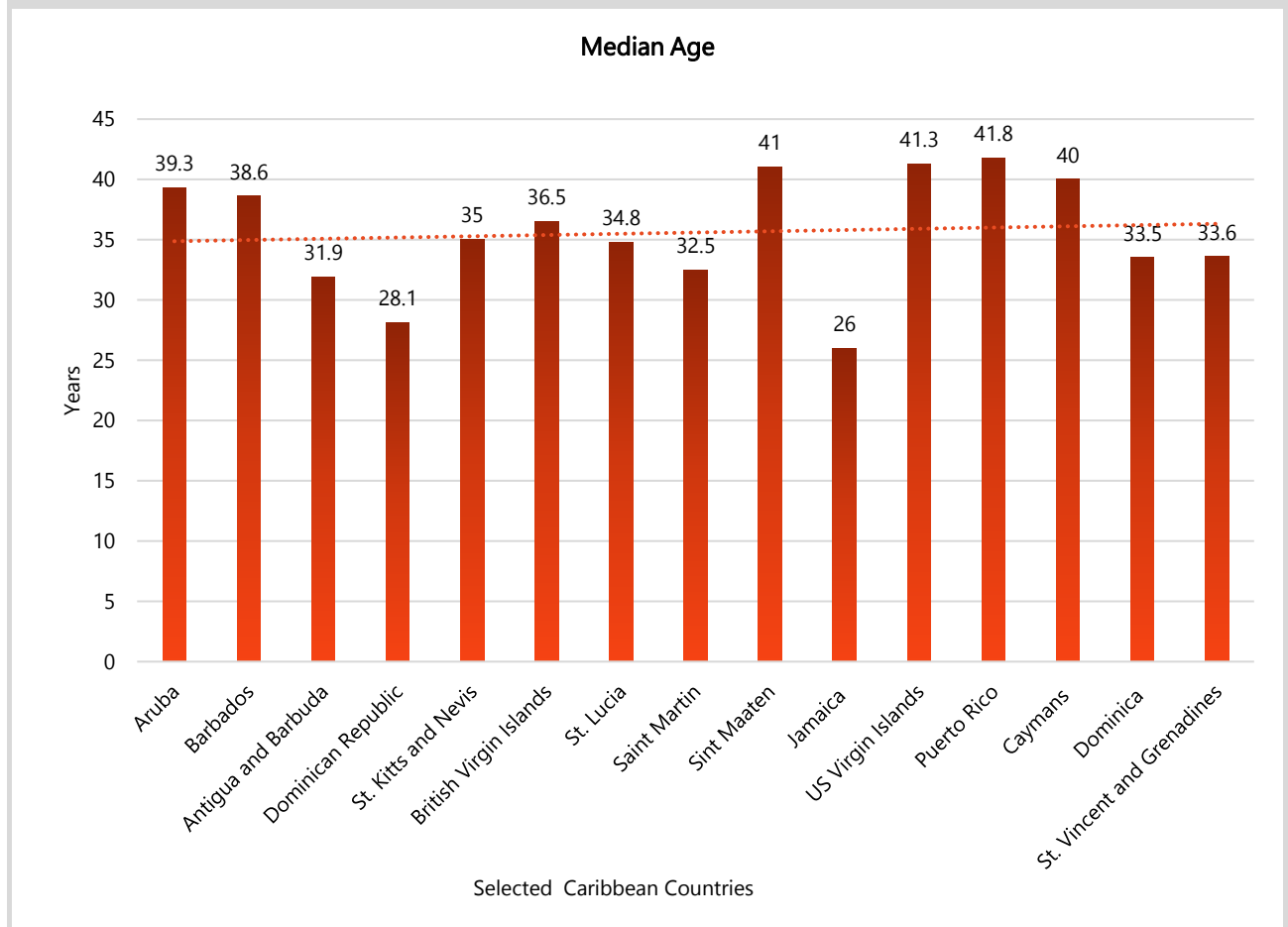
Aging Population

The population of the Virgin Islands is aging. The median age is estimated to be 41.3 years as of 2018 (CIA Factbook). In comparison, the median age of the US mainland is 38.1 and those of other insular territories are as follows: (1) Guam- 29; (2) American Samoa-25.5 ;(3) CNMI – 33.6; and (4) Puerto Rico -41.8 (World Population Review <http://worldpopulationreview.com/countries/median-age/>).

Moreover, the median age in neighboring Caribbean tourist destination markets who are direct competitors is markedly lower around 35 years for the majority (Figure 1). The U.S. Virgin Islands has the second highest median age after Puerto Rico and constitutes one of four states with a median age above 40.

The implication is that the dependency ratio in the USVI is likely to be much higher and that workers are past their prime years of productivity (Figure 3). A much older population implies that medical and health care costs are likely to be much higher than a jurisdiction with a younger profile.

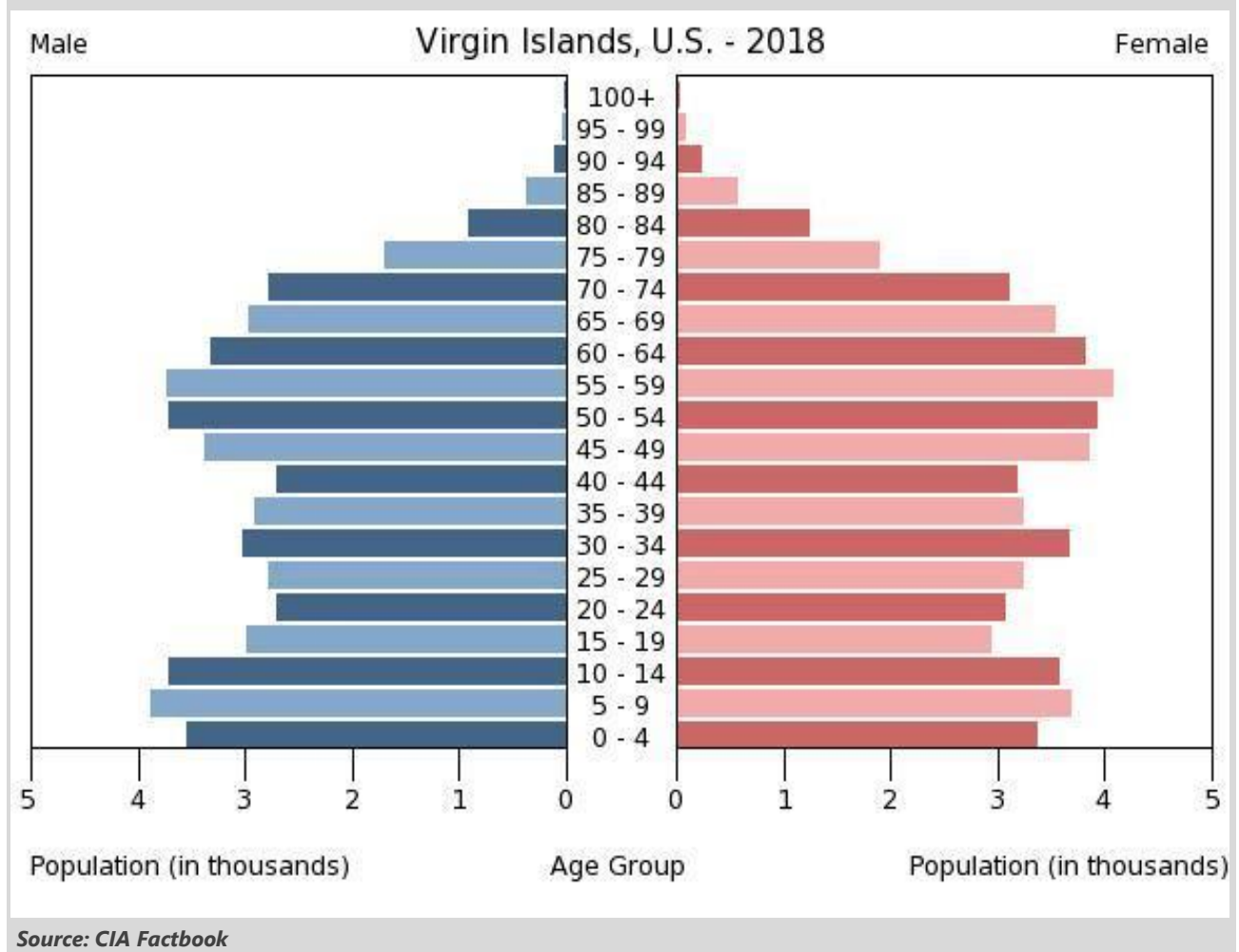
Figure 3



Source: CIA Factbook

The demographic structure of the population is a barrel and not the typical pyramid. The largest segment of the population is between 50-59 (See Figure 4). The structure of the population changes over time depending on the interplay of fertility, mortality, and international migration. In most emerging or developing states the majority of people are in their twenties. A structure such as the VI, suggests that the currently high dependency ratio (60) is likely to increase with time as more of the population transits out of the working age cohort of 18-64.

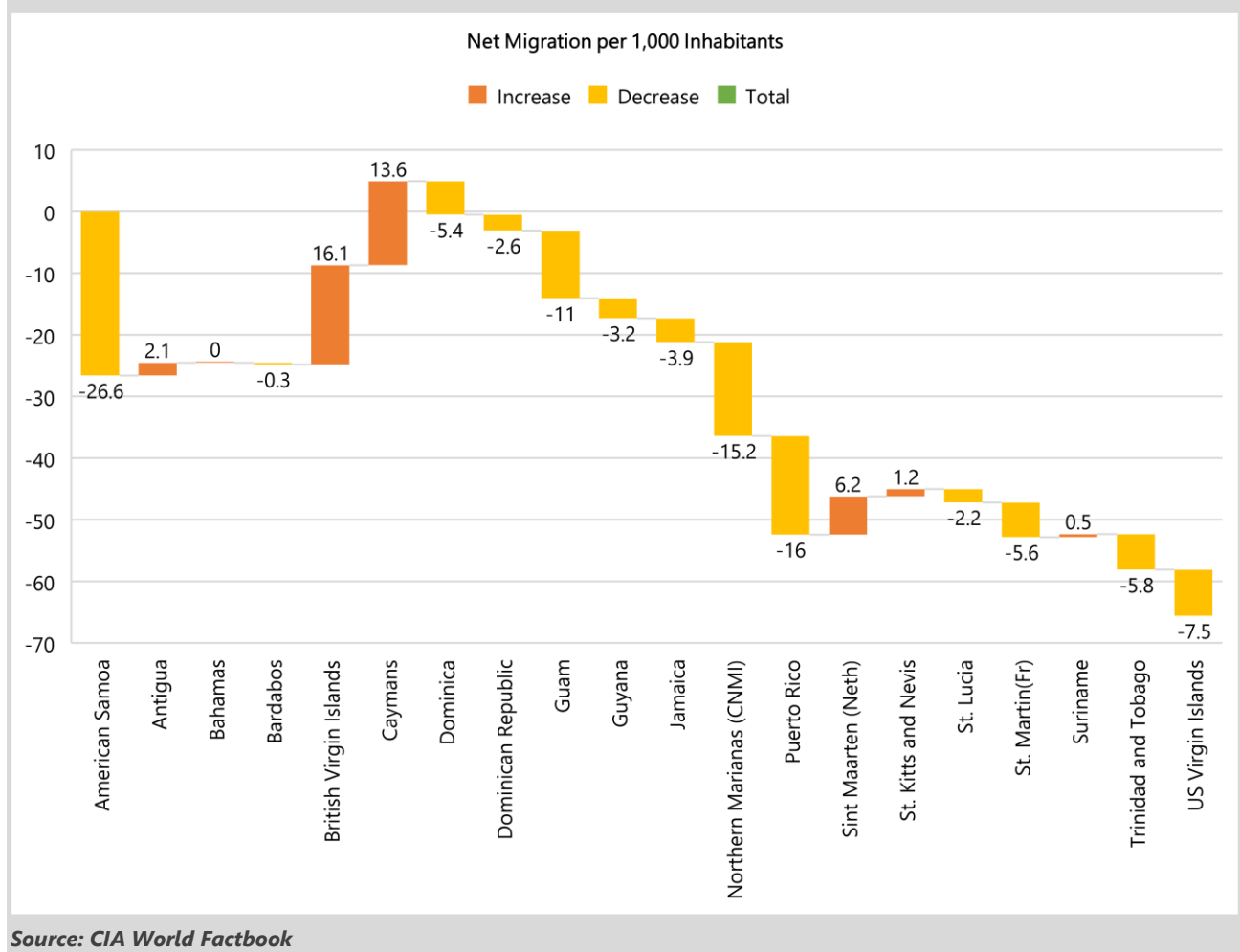
Figure 4: Population Distribution



Net Migration

The US Virgin Islands is also a community experiencing a high rate of net migration (See Figure 5). For 2018 estimates, the USVI is experiencing a net migration higher when compared to most Caribbean jurisdictions, 7 out of 18, have zero or positive net migration. Puerto Rico and the USVI have the two highest rates of net migration in the Caribbean region. The USVI only compares favorably with other US insular territories. Compared to other Caribbean locales. Compared to the other four US insular territories has the lowest rate of migration.

Figure 5: Net Migration per 1,000 Inhabitants



Educational Attainment

The tertiary level educational attainment in the US Virgin Islands is lower than Puerto Rico and the US mainland but much higher than other Caribbean and Central American states. The population share older than 25 that holds a bachelor’s degree or higher degree is 17% whereas it is 31.3% for the US mainland and 25.3% for Puerto Rico based on the US 2010 Census. In comparison to other states in the region for 2010 data, the US Virgin Islands is superior to Cuba (13.2%), Barbados (2.07%), Jamaica (8.37%) Guyana (.24%), Haiti(.67%) for 2010 data (Source: UNESCO Institute of Statistics). The implication is that Virgin Islands is not as competitive as mainland states in creating a knowledge intensive economy as the US mainland but is relatively better than other Caribbean states. Small, resource poor states that have built either knowledge-based economies such as Estonia or manufacturing plus knowledge-based economies such as Singapore, for example have tertiary education rates of 29-30% for 2010.

More recent and disaggregated household data shows that the USVI workforce has an almost bimodal distribution with a large percentage with a less than a HS diploma equal approximately equivalent to the share with some college, an associate, or a bachelor’s degree or higher. According to the most recent data obtained in the 2015 Virgin Islands Household Income Expenditure Survey, approximately 68 percent of the population above the age of 25 has a high school diploma or less, while 14% has a bachelor’s degree or better, and 15% some college

experience (Table 1). What is noteworthy is the percentage of tertiary education dropped from the 2010 census level of 17% to 14%, implying that more educated persons seem to have migrated between the two measurement points.

Table 1: Educational Attainment

Persons 25 and over	Number	Percent Share
Less the HS Diploma	2,2381	29.8
HS Diploma or GED	29,022	38.7
Some college no degree	8,656	11.5
Associate Degree	3,890	5.2
Bachelor's degree	8,515	11.3
Post bachelor's degree	2,572	3.4
Total	75,036	100

Source: VI Community Survey 2015

The same 2015 survey found that for persons sixteen year and older vocational training was either not available or was not pursued for 70%. Of those who had some vocational training, 30% reported receiving on the job training and 29% reported attended a technical college program. (2015 VIC)

Occupational Structure

When US Bureau of Labor statistics are analyzed, the most common occupations in the USVI are ones related to sustaining a tourism industry as would be expected. As can be seen in Table 2, the jobs associated with a tourism economy, tend to be low paying. When the 15 most overrepresented occupations are compared to the underrepresented jobs, there is a clear salary differential. The underrepresented jobs tend to pay more. If chief executives are excluded from the top 15 occupations, the average salary would drop from \$42,7722.67 to \$35,884.29.

The implication for those involved in workforce planning and developing, is that increasing employment should not only be the main concern but diversifying the occupations and making sure skillsets associated with higher paying positions are presented and demanded in the economy.

Table 2: Occupational Employment Structure and Estimated Wages, 2018

A. Top 15 Occupations Sorted by Location Quotient

LQ Ranking	Occupation	Location Quotient/a	Hourly Wage (USD)	Mean Annual Salary (USD)
1	Captains, Mates Water Vessels	19.63	22.62	47,060
2	Ground Maintenance Workers	11.47	14.58	30,340
3	Transportation Security Screeners	10.60	18.71	38,910
4	Agricultural and Food Science Technicians	6.82	17.48	36,350
5	Couriers and Messengers	4.84	14.13	29,390
6	Reservation, Transportation Ticket Agents and Travel Clerks	4.77	12.79	26,590
7	Security Guards	4.54	12.56	26,120
8	Postal Service Clerks	4.49	26.20	54,500
9	Tour and Travel Guides	4.42	15.63	32,510
10	Switchboard Operators, Including Answering Service	4.06	14.10	29,330
11	Childcare Workers	3.91	11.50	23,920
12	Chief Executives	3.77	66.93	139,210
13	Cargo and Freight Agents	3.39	14.33	29,810
14	Community and Social Service Specialists, All Other	3.36	23.63	49,140
15	Brick masons and Block masons	3.30	23.27	48,410
	Average Salary		20.56	42,772.67
	Average Salary if Chief Executives Excluded/b			35,884.29

A. Bottom 15 Occupations Sorted by Location Quotient

Occupation	Location Quotient/a	Hourly Wage (USD)	Mean Annual Salary (USD)
Computer User Support Specialists	0.49	22.34	46,470
Postal Service Mail Carriers	0.48	27.56	57,330
Industrial Truck and Tractor Operators	0.48	13.94	28,990
Management Analysts	0.46	34.45	71,660
Medical Assistants	0.43	15.25	31,730
Healthcare Support Occupations	0.42	15.06	31,330
Welders, Cutters, Solders, and Braziers	0.42	23.85	49,610
Arts, Design, Entertainment, Sports, and Media Occupations	0.41	20.26	42,130
Architecture and Engineering Occupations	0.36	29.02	60,360
Production Occupations	0.36	21.05	43,790
Human Resources Specialists	0.35	28.88	60,070
Computer Systems Analysts	0.34	25.74	53,550
Market Research Analysts and Marketing Specialists	0.33	16.01	33,310
Computer and Mathematical Occupations	0.32	28.30	58,860
Sales Representatives, Wholesale and Manufacturing,	0.21	20.71	43,080
Average		22.83	47484.67

Source: US Bureau of Labor Statistics 2018

Notes: a/ A location quotient > 1 means that that occupation category is overrepresented compared to national benchmark. If <1 category is underrepresented.

b/ If Chief Executives were excluded the average salary would be \$35884.29. EDC company heads, and public sector commissioners, directors, and heads of semi- and autonomous public institutions like WAPA, VIPA, WICO, and UVI skew the average upward.

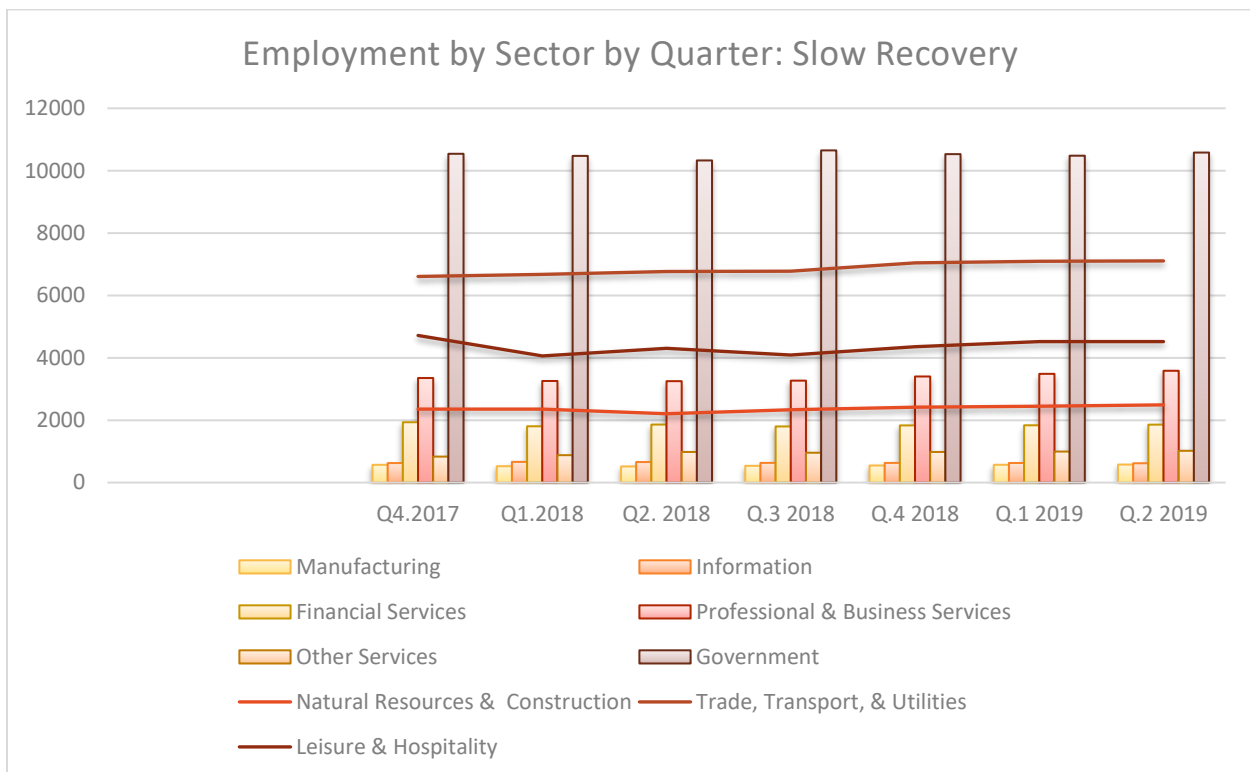
Pace of Employment Recovery

Since the 4th quarter of 2017, the first quarter that the hurricane effects were felt and reflected in data, the pace of recovery in terms of employment net gains has been moderate. Some of the categories showed little change from the 4th quarter to the 2nd quarter of 2019, namely government, manufacturing, and information services. The areas that showed consistent improvement was other service (+22 percent increase) and trade, transportation, and utilities (+7.9 percent increase). Areas that showed slight declines were financial services and leisure and hospitality. Areas showing a dip then a rebound were construction.

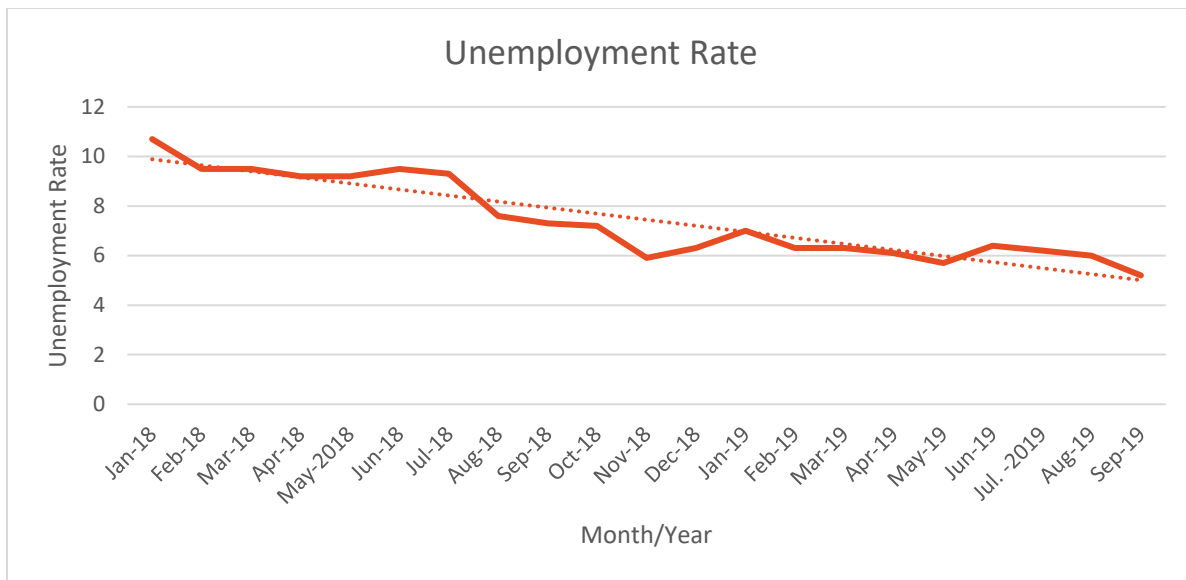
Table Amount of Employment

	Q. 4th 2017	Q.1 2018	Q.2 2018	Q.3 2018	Q.4 2018	Q.1 2019	Q.2 2019
Natural Resources & Construction	2,356	2,350	2,206	2,334	2,413	2,452	2,491
Manufacturing	569	523	516	536	546	570	576
Trade, Transport, & Utilities	6,608	6,674	6,765	6,776	7,042	7,091	7,107
Information	625	663	658	631	630	627	618
Financial Activities	1,934	1,804	1,860	1,799	1,832	1,836	1,857
Professional & Business Services	3,352	3,257	3,251	3,268	3,401	3,486	3,584
Leisure & Hospitality	4,716	4,060	4,305	4,093	4,360	4,516	4,520
Other Services	832	878	981	956	981	994	1,018
Government	10,542	10,475	10,329	10,651	10,531	10,481	10,582

Source: VIDOL



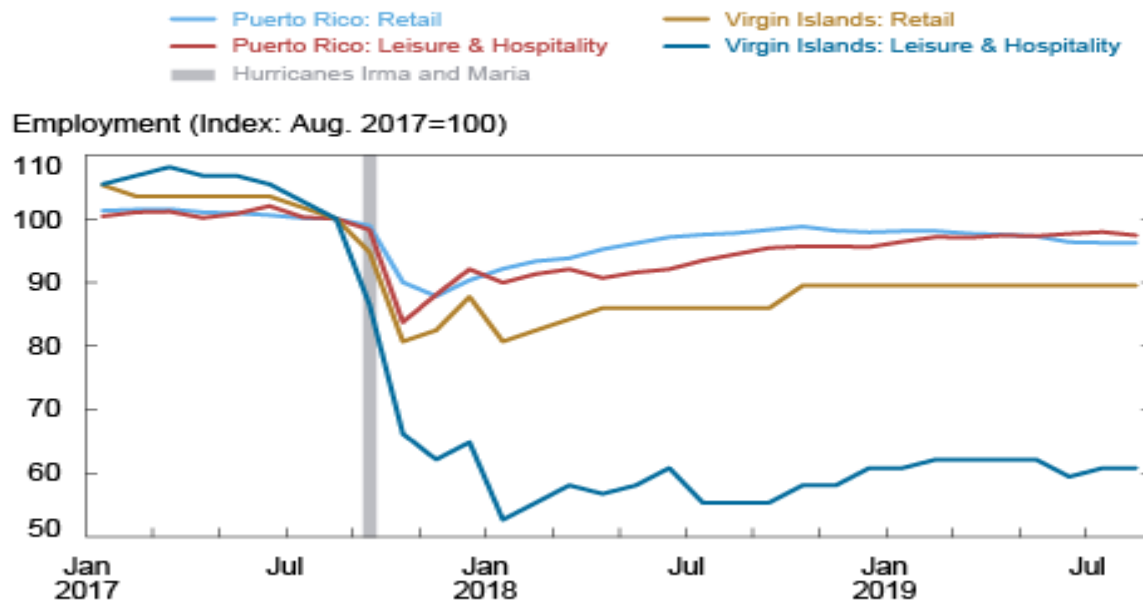
Source: VIDOL



Source: VIDOL

The pace of employment recovery has not been as strong as Puerto Rico which is a much larger, more sophisticated, and diversified economy compared to the USVI. Whereas the GDP of Puerto Rico in 2018 was \$101.3 billion nominal, the GDP of the VI is approximately \$3.8 billion nominal (26 times smaller). Whereas Puerto Rico has a manufacturing sector consisting of pharmaceuticals, petrochemicals, textiles, and electronics, and rum, and a service sector relying on finance, insurance, real estate, and tourism, the USVI economy is two legged, primarily dependent on tourism and rum.

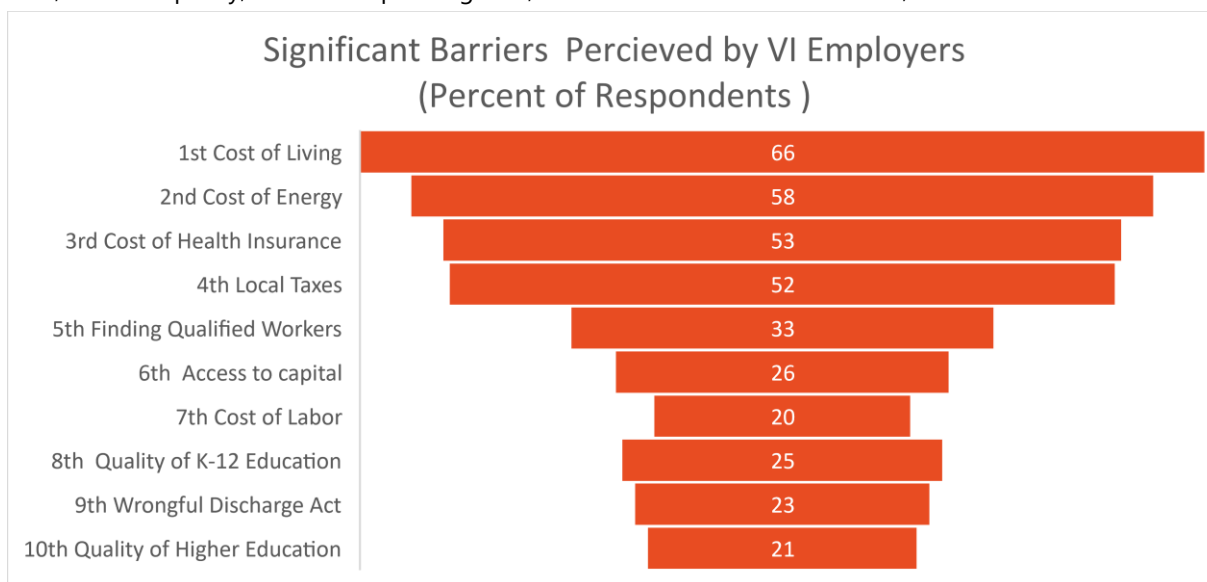
Lower-Wage Sectors Hit Much Harder in U.S. Virgin Islands Than in Puerto Rico



Sources: Bureau of Labor Statistics; Moody's economy.com; New York Fed staff calculations.

Skill Gaps and Deficiencies as Perceived by Employers

A 2015 Survey conducted by the Bureau of Economic Research found that 38% of employers have difficulties filling vacant positions. They complained of deficient “hard” and “soft” skills in the workforce. They noted that frequently “hard” skills” such as basic reading, verbal, writing skills (40%), computer technical skills(27%), and math and logical reasoning skills(25%) were lacking. In addition, “soft skills” such as customer service (59%), punctuality and reliability(52%), and time management (42%) were deficient. Employers cope with these weakness in the labor market by hiring less qualified persons, not filling positions, and granting more overtime to existing workers, and offering more on the job training. The skills shortages and mismatches result in increased workloads for existing staff, reduced quality, increased operating cost, erosion of customer satisfaction, and loss of revenue.



Conclusions and Recommendations

The Workforce Opportunity and Investment Act of 2014 provides a coordinated framework for comprehensive development of workforce development in the US, however, while it is necessary it is far from sufficient. First, K-12 educational institutions must be completely revamped for the demands of the 21st century. Quality has to improve significantly in K-12 in order to reduce the cost of remedial and supplemental interventions at latter stages. Secondary and tertiary educational institutions must be better aligned with and cognizant of industry trends and demand for emerging skills. The roles of community colleges, vocational training centers, and apprenticeship programs must be elevated. Third, private employers have to invest in on-the-job training, coaching, and mentoring. Humans must be seen as valuable, appreciating assets and not depreciating, expendable assets. Lastly, job seeker and employees must commit to a culture of constant learning, constant skill improvement, maintenance of marketability, and even reinvention. The days of working for one company for 25-20 years until retirement are gone. With the advent of disruptive technologies—robotics, artificial intelligence, quantum computing and the relentless advance of automation. The countries that have attained high levels of labor productivity and are renowned for

workforce development -Germany, Nordic countries, Japan, Singapore, S. Korea have been able to craft a system of education and workplace development that is seamless.

In the US Virgin Islands assessments of how WOIA has worked are not readily available. Many activities are ongoing but they still seen from a distance seem as fragmentary and lacking sufficient scale and quality to make noticeable impact. The most telling evidence that something is amiss is are three anecdotal observations. First, the majority or close to the majority of waitresses and waiters in territory are from the mainland and have some college or college degrees. They are overqualified for their positions and this is not a good use of talent. Second, the majority of construction workers are foreign born immigrants and many of them limited numeracy and technical skills that are building structures not to the highest quality standards. Third, most of the high aptitude youth migrate to the mainland. If the VI wants to diversify and become a knowledge-based economy, it will have to attract and retain a fair share of its ambitious and high-achieving youth.

From this presentation the USVI economy is facing the multiple challenges while in the midst of recovery from a major natural disaster. Currently, the recovery is being fueled by federal spending, but organic growth is needed to sustain and accelerate the growth and it is vital that a well-trained, well prepared workforce be in place. Some of the notable challenges include:

1. An aging and declining workforce with misaligned skill sets for current job demand.
2. A public educational system with achievement gaps.
3. No comprehensive and strategic plan as to how to meet the demands of emerging and future labor markets that will be shaped by disruptive technologies like robotics, artificial intelligence, quantum computing, 3D printing, synthetic biology, nanotechnology, and gene splicing and editing, and even more advances in automation.
4. Stagnant private fixed investment.
5. Weak infrastructure that increases the cost of doing business.
6. Fiscal constraints in the public sector.
7. An economy dominated in most part by small and micro businesses that may not have the financial wherewithal to finance or sustain massive on the job training programs.
8. Rising global and regional competitiveness in other tourism destination

Looking to the future the critical task is how to stimulate organic growth and diversification as federal disaster spending tampers. The immediate challenge for the WIB is how to maximize impact and go beyond. I humbly propose thinking about promoting low-cost E-learning platforms, formalizing more apprenticeship programs, creating more linkages between businesses and the university to shape course curricula and programs that directly serve to needs of employers, and promoting a culture of life-long learning and adaption. More strategic investments are needed beyond the 6 titles of WOIA. Foremost, would be to creation of a hospitality and restaurant training school to improve levels of customer service in the main industry of the employee coupled with ramped up programs to incubate dynamic, high-value, knowledge intensive businesses. A second important undertaking would be to create a construction school. The community must catch up quickly in preparing and retaining a good workforce.