



The Transformations of the Washington Region's and Arlington County's Economies: The Amazon Effect

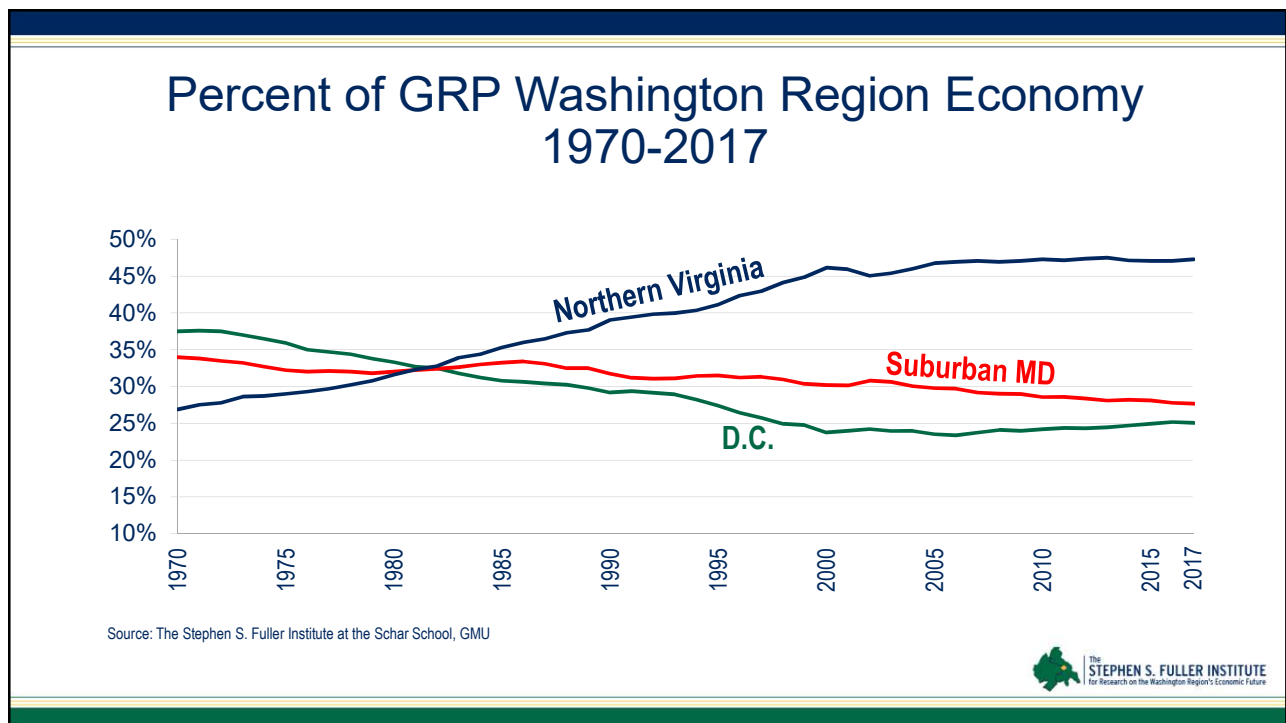
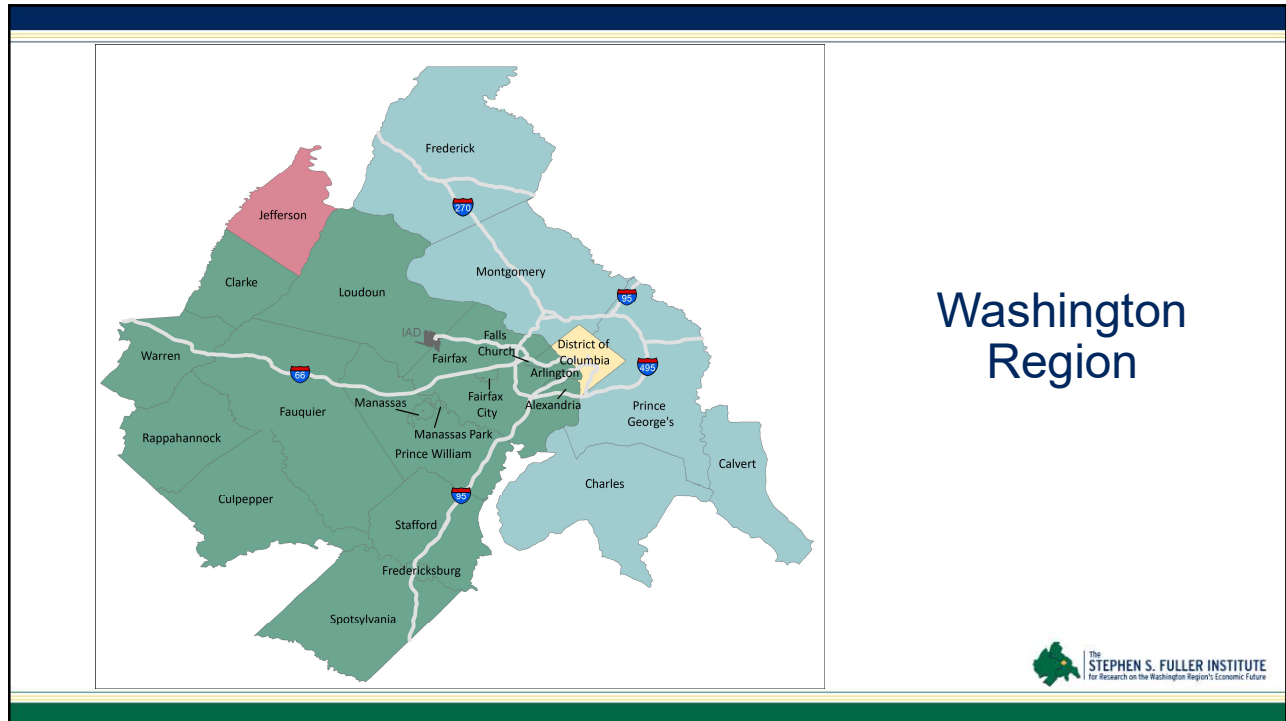
Stephen S. Fuller, Ph.D. and
Jeannette Chapman
The Stephen S. Fuller Institute
Schar School of Policy and Government
George Mason University



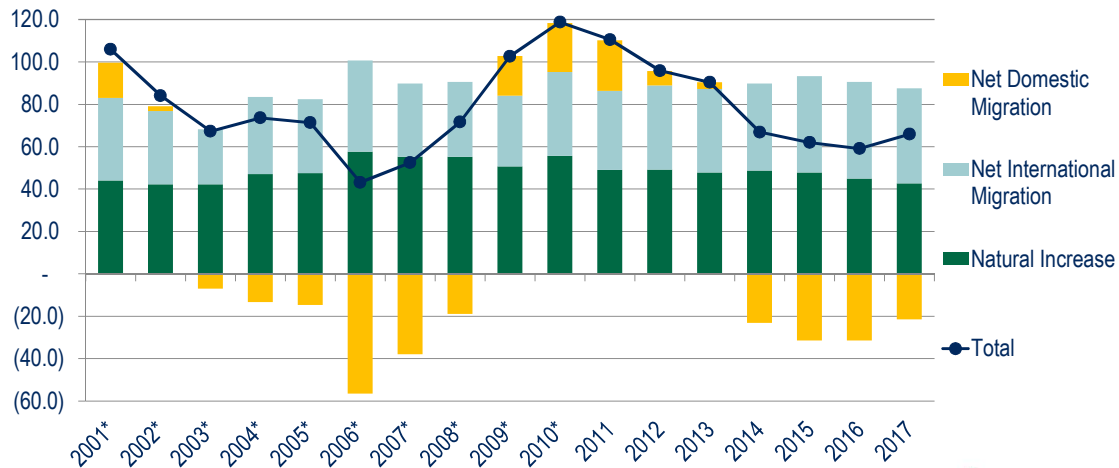
April 13, 2019

Fast Facts About the Washington Region





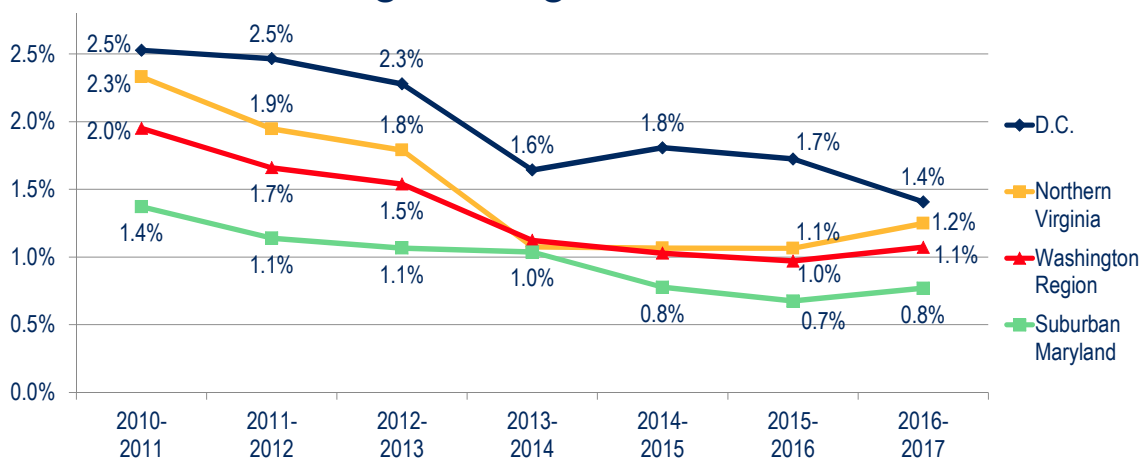
Population Growth By Component Change Washington Region (in 000s)



Sources: U.S. Census Bureau (Intercensal, v2009 and v2017 Population Estimates); The Stephen S. Fuller Institute at the Schar School, GMU
*Estimate



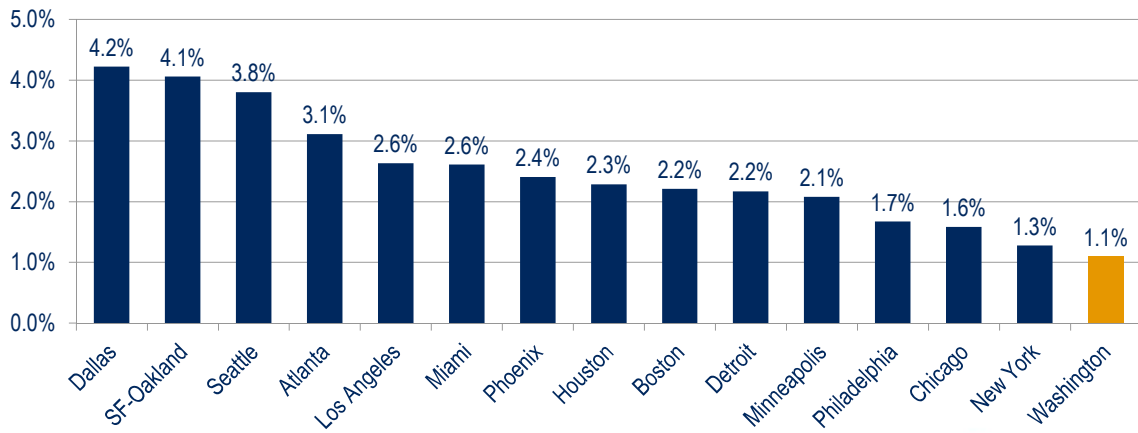
Population Growth by Sub-State Area Washington Region, 2010 to 2017



Sources: U.S. Census Bureau (v2017 Population Estimates); The Stephen S. Fuller Institute at the Schar School, GMU



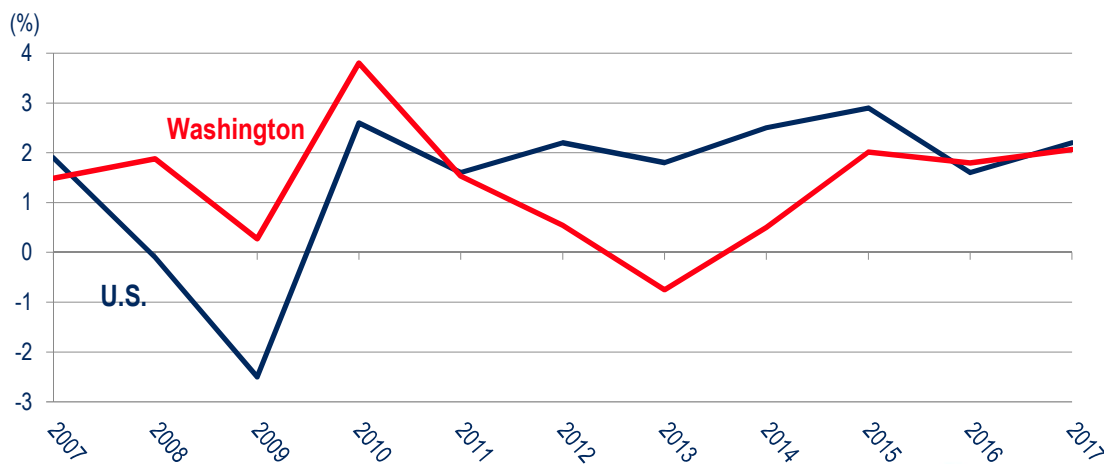
Average Annual GRP Change in the Largest Metros 2010-2017 (inflation-adjusted)



Sources: U.S. Bureau of Economic Analysis, The Stephen S. Fuller Institute at the Schar School, GMU



U.S. GDP and Washington MSA GRP 2007 – 2017 (Annual % Change)



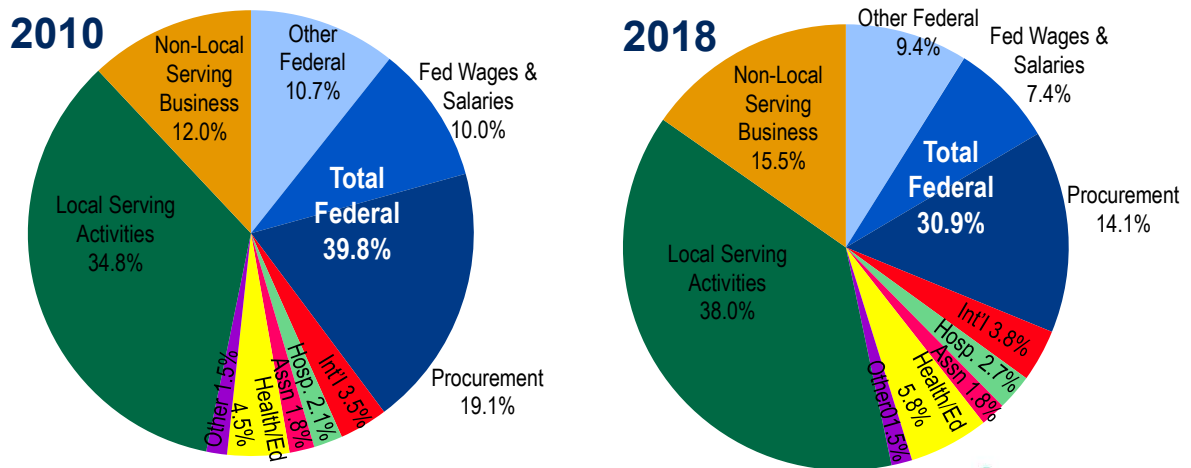
Sources: U.S. Bureau of Economic Analysis; The Stephen S. Fuller Institute at the Schar School, GMU



The Washington Region's Second Economic Transformation



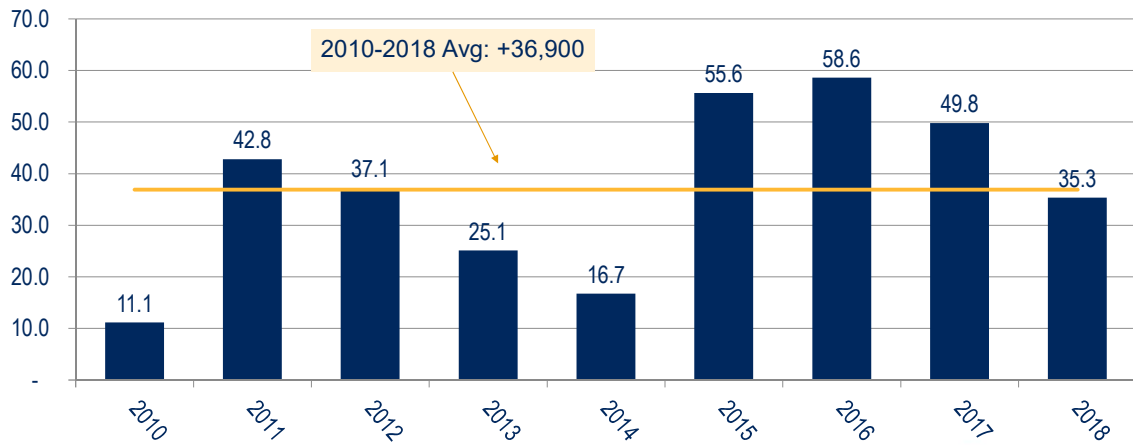
The Changing Structure of the Washington Region Economy



Source: The Stephen S. Fuller Institute at the Schar School, GMU; Forecast January 2019



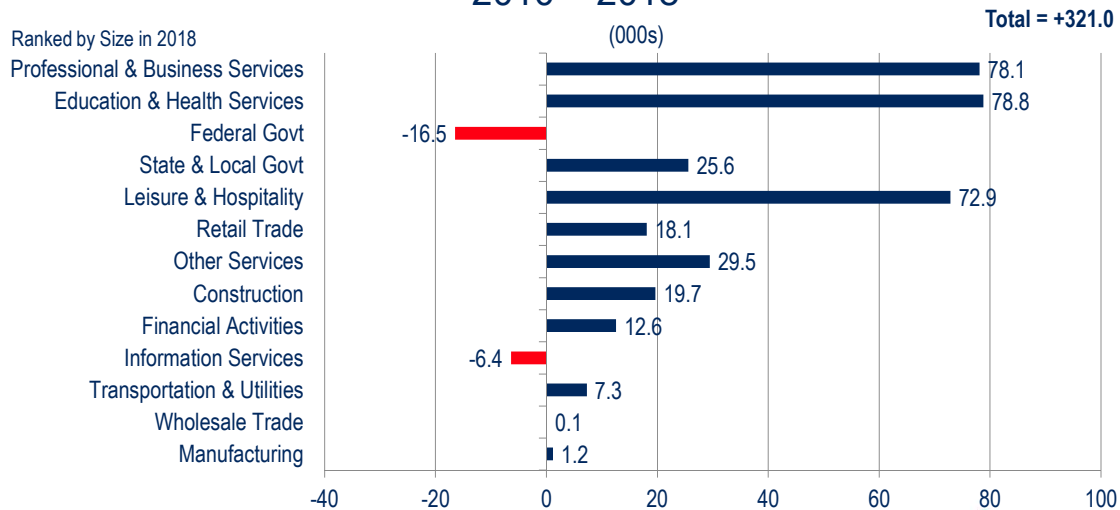
Job Change in the Washington Region 2010 – 2018 (in thousands)



Sources: U.S. Bureau of Labor Statistics (Not Seasonally Adjusted), The Stephen S. Fuller Institute at the Schar School, GMU
*Preliminary



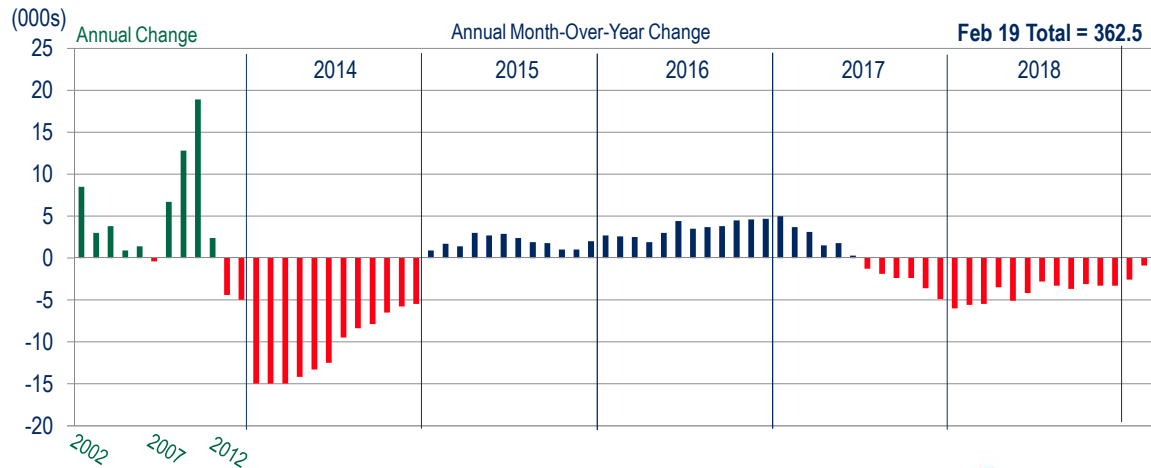
Washington MSA Job Change by Sector 2010 – 2018



Sources: U.S. Bureau of Labor Statistics (Not Seasonally Adjusted), The Stephen S. Fuller Institute at the Schar School, GMU



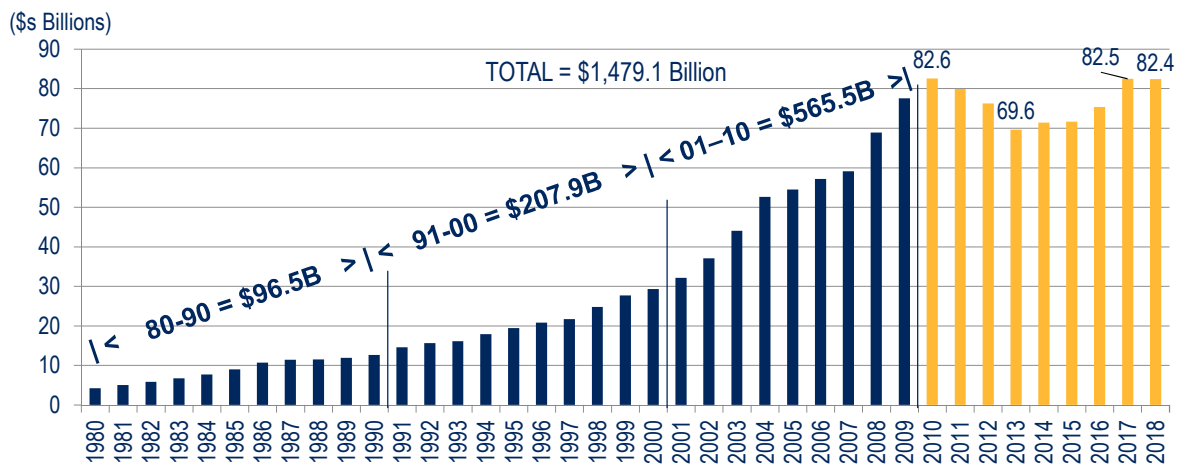
Federal Government Jobs Washington MSA



Sources: U.S. Bureau of Labor Statistics (Not Seasonally Adjusted), The Stephen S. Fuller Institute at the Schar School, GMU



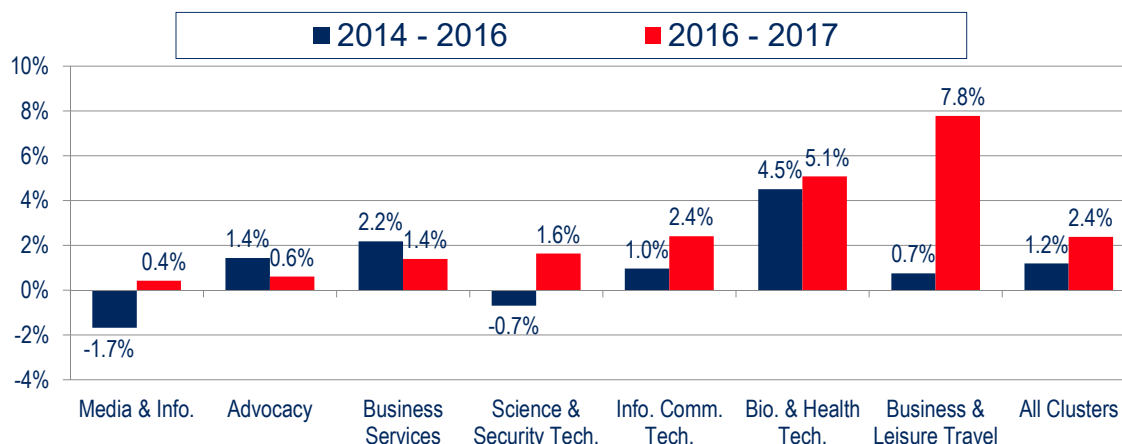
Federal Procurement in the Washington Region, 1980-2018



Source: US Census, Consolidated Federal Funds Report and USAspending.gov, The Stephen S. Fuller Institute at the Schar School, GMU



Growth Rates of the Washington Region's Advanced Industrial Clusters, Annualized Growth



Sources: U.S. Bureau of Labor Statistics (QCEW), The Stephen S. Fuller Institute at the Schar School, GMU



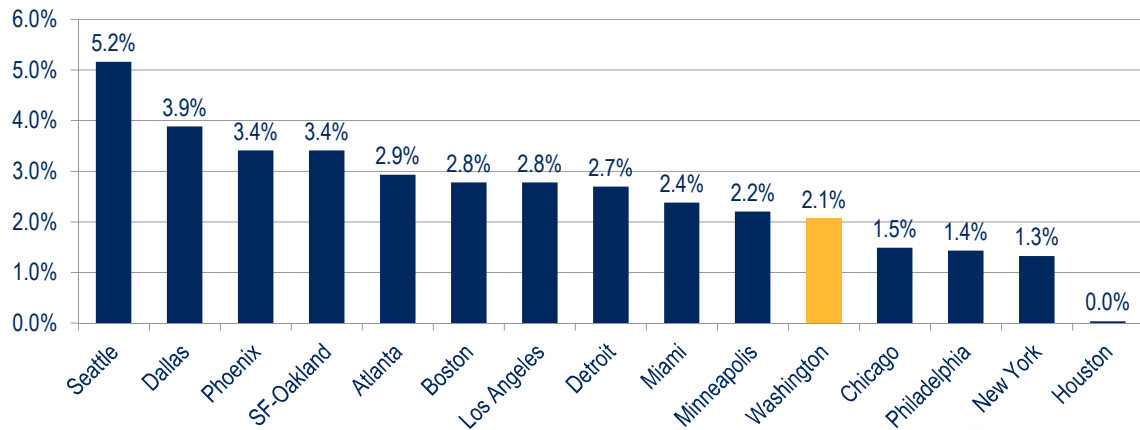
The GRP* Effects of Private Sector Job Change in the Washington Region (Jobs in 000s, in 2012 dollars)

	Recession	2010 - 2018
Job Change	-180.5	+321.0
GRP Value	\$145,711	\$110,397

Source: IHS Economics; The Stephen S. Fuller Institute at the Schar School, GMU
*Gross Regional Product



2017 GRP Change in the Largest Metros (inflation-adjusted)

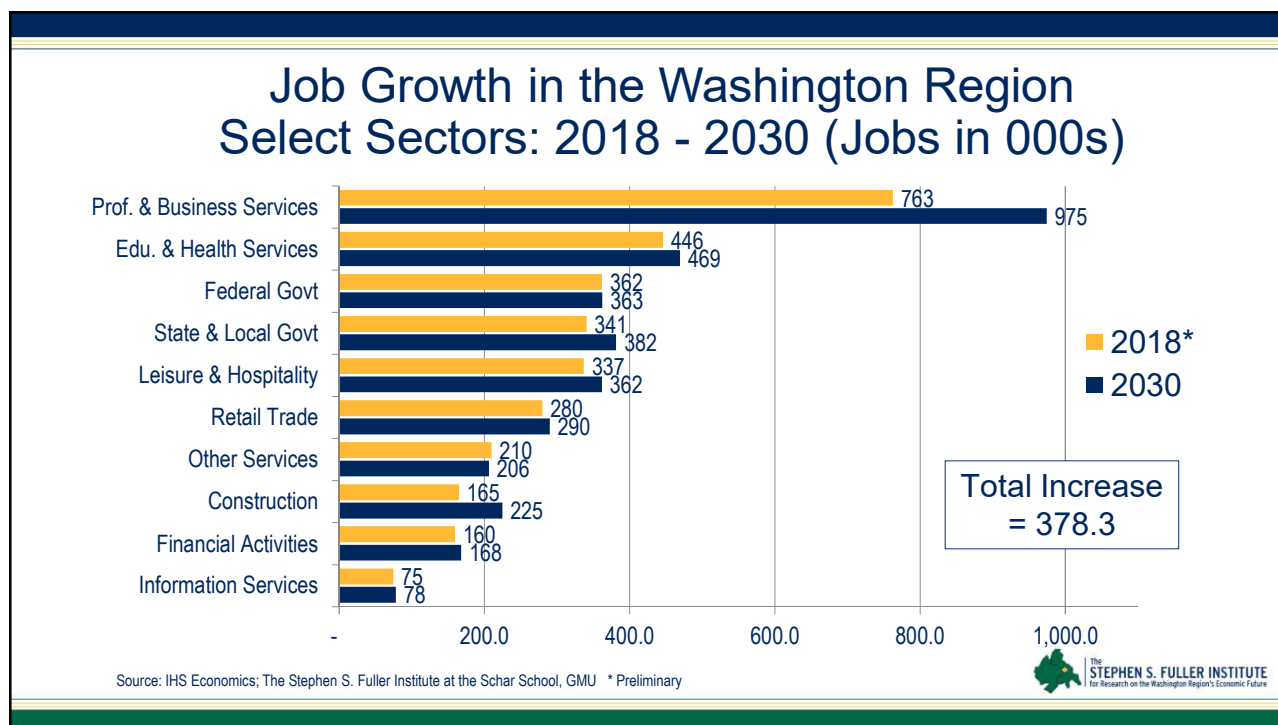
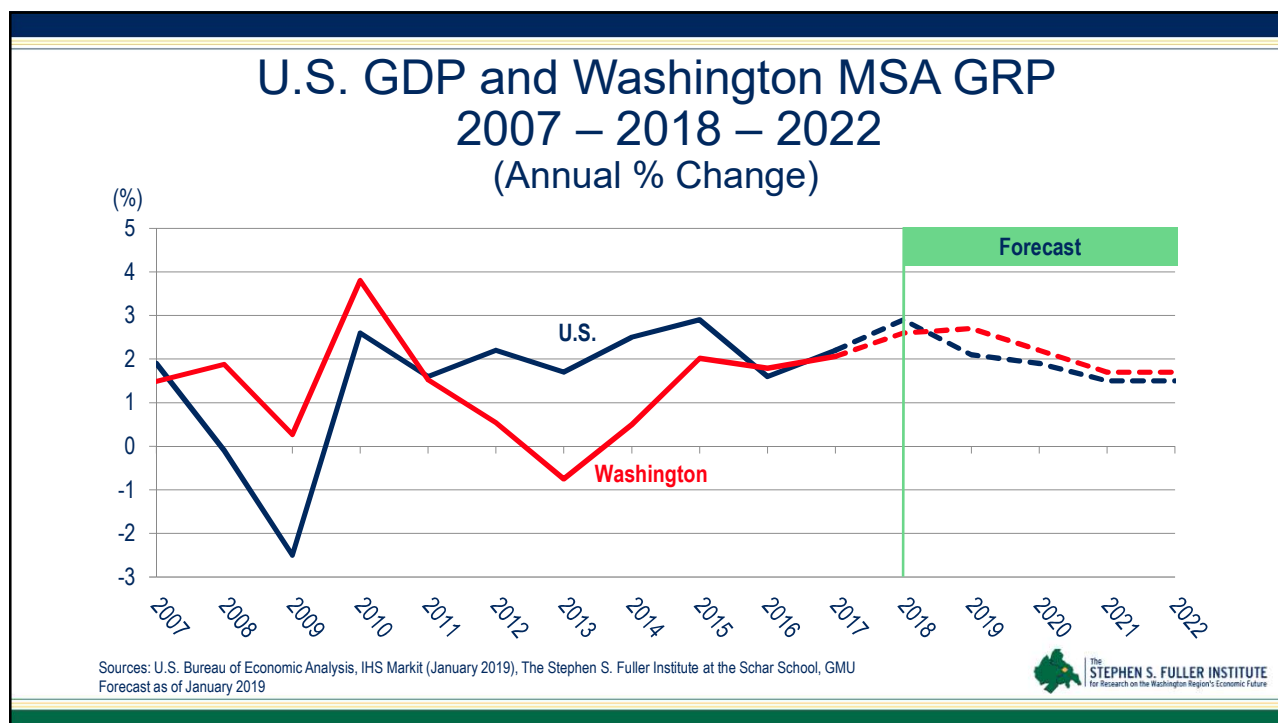


Sources: U.S. Bureau of Economic Analysis, The Stephen S. Fuller Institute at the Schar School, GMU



The Washington Region's Economic Outlook for the Next Decade?





Job Growth in the Washington Region: 2018 - 2030

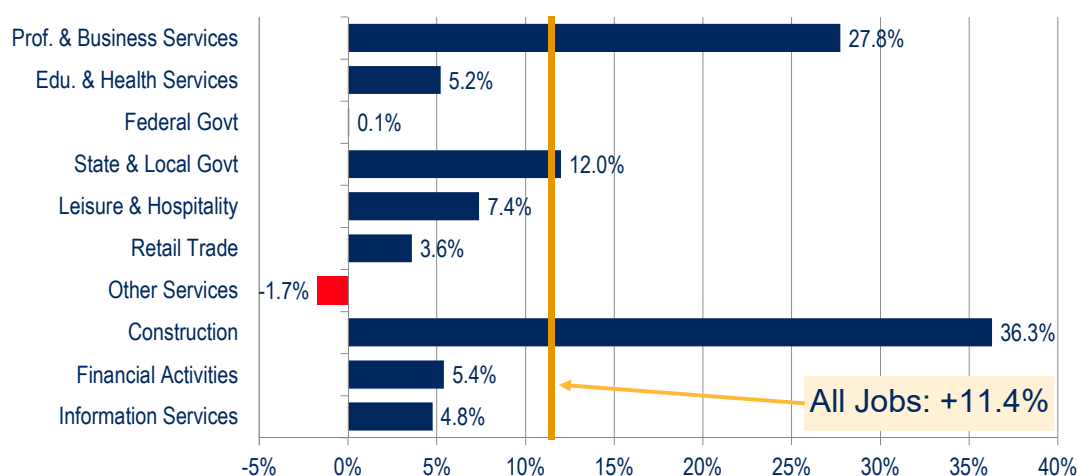
	Job Change (000s)	% of Total
Prof. & Business Services	211.7	56.0%
Construction	59.9	15.8%
State & Local Govt	40.9	10.8%
Leisure & Hospitality	25.0	6.6%
Edu. & Health Services	23.3	6.2%
Retail Trade	10.1	2.7%
Subtotal	370.9	98.1%
Total, All Sectors	378.3	100.0%

Source: IHS Economics; The Stephen S. Fuller Institute at the Schar School, GMU



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Job Change in the Washington Region Select Sectors: 2018 – 2030 (Ranked by Size in 2018)



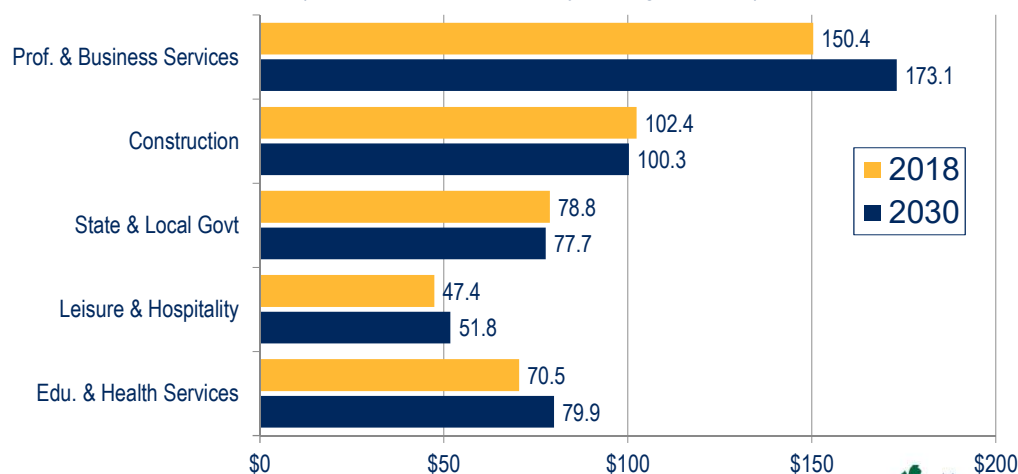
Source: IHS Economics; The Stephen S. Fuller Institute at the Schar School, GMU



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Average Job Contribution to GRP in the Washington Region: 2018 – 2030

(000s 2012 \$s, Ranked by Change in Jobs)



Source: IHS Economics; The Stephen S. Fuller Institute at the Schar School, GMU



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The GRP* Effects of Private Sector Job Change in the Washington Region (in 2012 dollars)

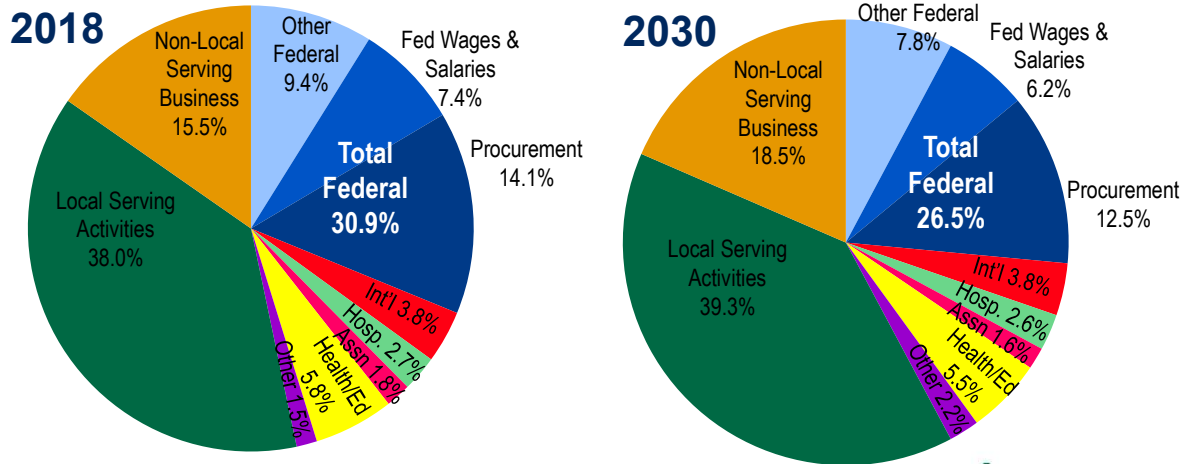
	Job Change (000s)	GRP* Value
Recession	-180.5	\$145,711
Expansion	+321.0	\$110,397
Forecast	+337.3	\$159,918

Source: IHS Economics; The Stephen S. Fuller Institute at the Schar School, GMU
*Gross Regional Product



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The Changing Structure of the Washington Region Economy



Source: The Stephen S. Fuller Institute at the Schar School, GMU; Forecast January 2019

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How will Amazon's HQ2 impact the Washington region's and Arlington County's economies?

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The Economic Impacts of Amazon's HQ2: Construction Outlays

	<u>Arlington County</u>	<u>Washington Region</u>
<u>Construction \$s</u>		
Direct Outlays	\$2.7 - \$4.1 billion	\$2.7 - \$4.1 billion
Total Output*	\$3.2 - \$4.8 billion	\$4.1 - \$6.2 billion
Personal Income	\$260 - \$390 m	\$1.3 - \$1.9 billion
Jobs Supported	2,500-3,800	25,900-39,400

Sources: VEDP, The Stephen S. Fuller Institute at the Schar School, GMU *reflect County and WMSA multipliers of 1.183 and 1.5241 respectively



The Economic Impacts of Amazon's HQ2: Post-Construction Outlays

	<u>Arlington County</u>	<u>Washington Region</u>
<u>Post-Construction \$s</u>		
Direct Outlays	\$1.3 – \$2.0 b	\$2.5 - \$3.8 billion
Total Output*	\$1.7 – \$2.5 b	\$4.2 – 6.4 billion
Personal Income	\$124 - \$186 m	\$1.2 - \$1.9 billion
Jobs Supported	1,150 – 1,735	38,400 – 58,375

Sources: VEDP, The Stephen S. Fuller Institute at the Schar School, GMU *reflects Arlington and MSA multipliers of 1.273 and 1.6804 respectively



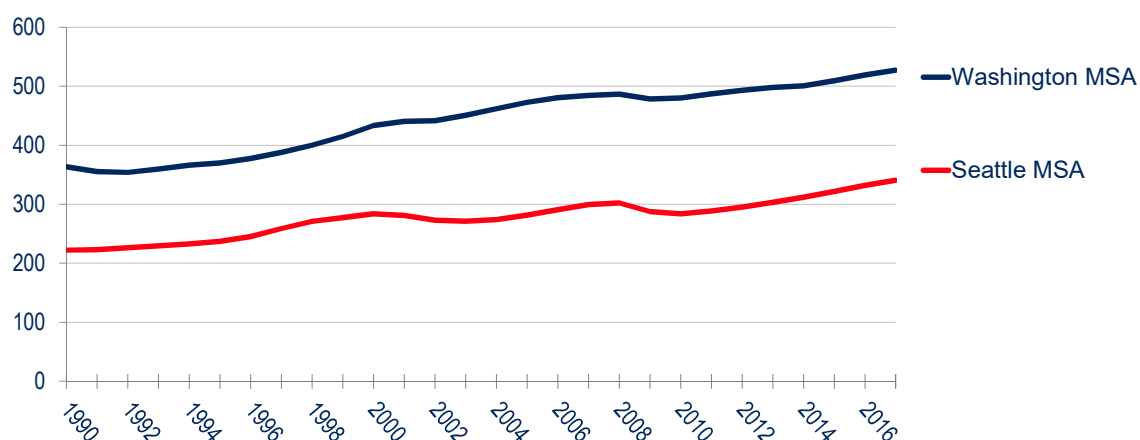
The Net Annual Fiscal Benefits of Amazon's HQ2 (in 2017 dollars)

	<u>@ 25,000 Jobs</u>	<u>@ 37,850 Jobs</u>
Arlington County	\$26.4 million	\$39.6 million
Commonwealth of Virginia*	\$162 million	\$243 million

Sources: VEDP, The Stephen S. Fuller Institute at the Schar School, GMU
*individual income and sales and use taxes = 81.3% of total state revenues.



Density by Metro Area: Jobs Per Land Square Mile



Sources: U.S. Bureau of Labor Statistics; The Stephen S. Fuller Institute at the Schar School, GMU



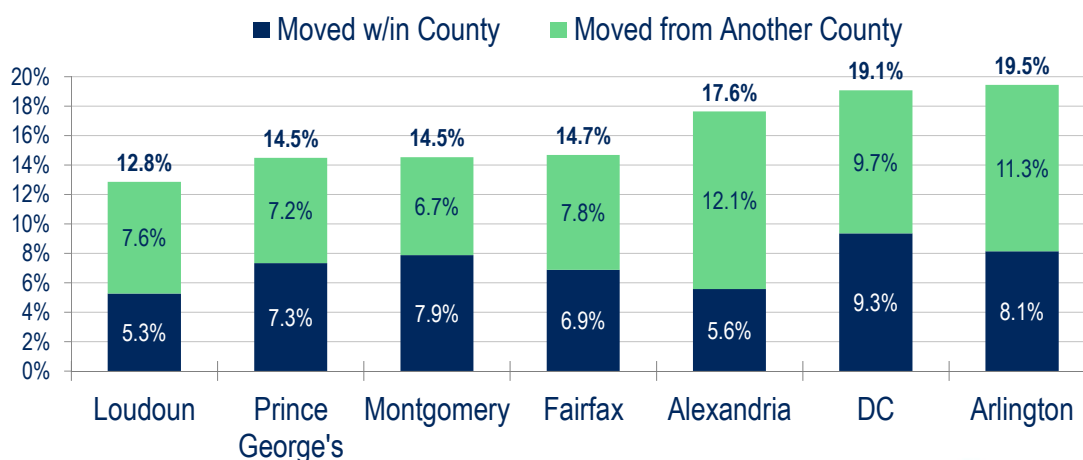
Density: Arlington County vs. City of Seattle

	Arlington County	Seattle City	Arlington as a % of Seattle
Sq. Mi.	26	83	31%
Residents	234,965	724,745	32%
--- Per Sq. Mi.	9,037	8,732	103%
Private Office Space (MMs SF)	32	55	58%
--- Per Sq. Mi.	1.2	0.7	186%

Sources: U.S. Census; Cushman & Wakefield; The Stephen S. Fuller Institute at the Schar School, GMU



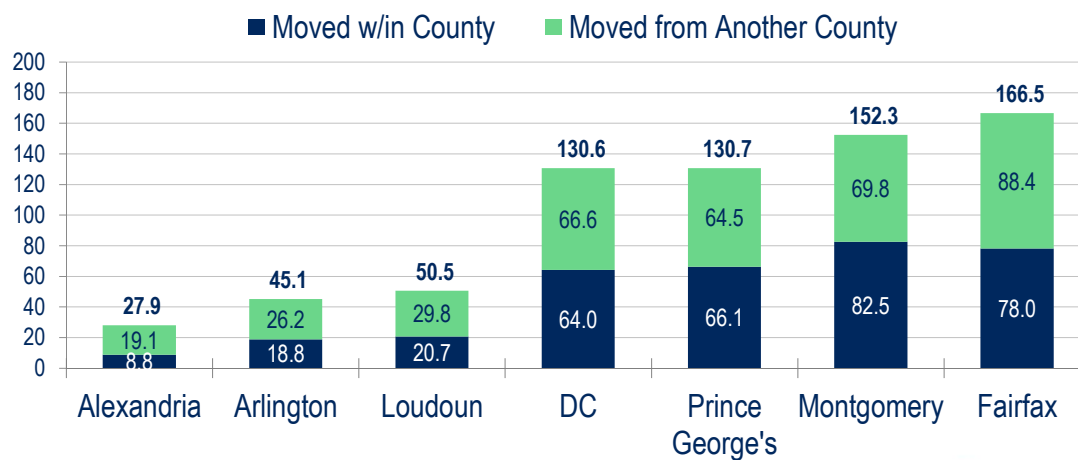
Share of Residents* That Moved in the Past Year By Place of Current Residence, 2017



Source: U.S. Census (2017 American Community Survey) The Stephen S. Fuller Institute at the Schar School, GMU
* Excludes children less than one years old



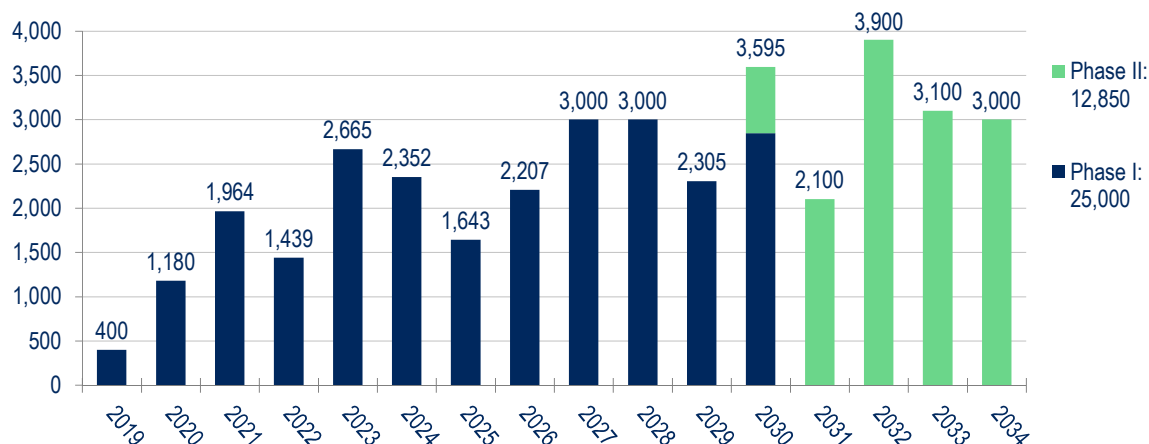
Number of Residents* That Moved in the Past Year By Place of Current Residence, 2017 (000s)



Source: U.S. Census (2017 American Community Survey) The Stephen S. Fuller Institute at the Schar School, GMU
 * Excludes children less than one years old

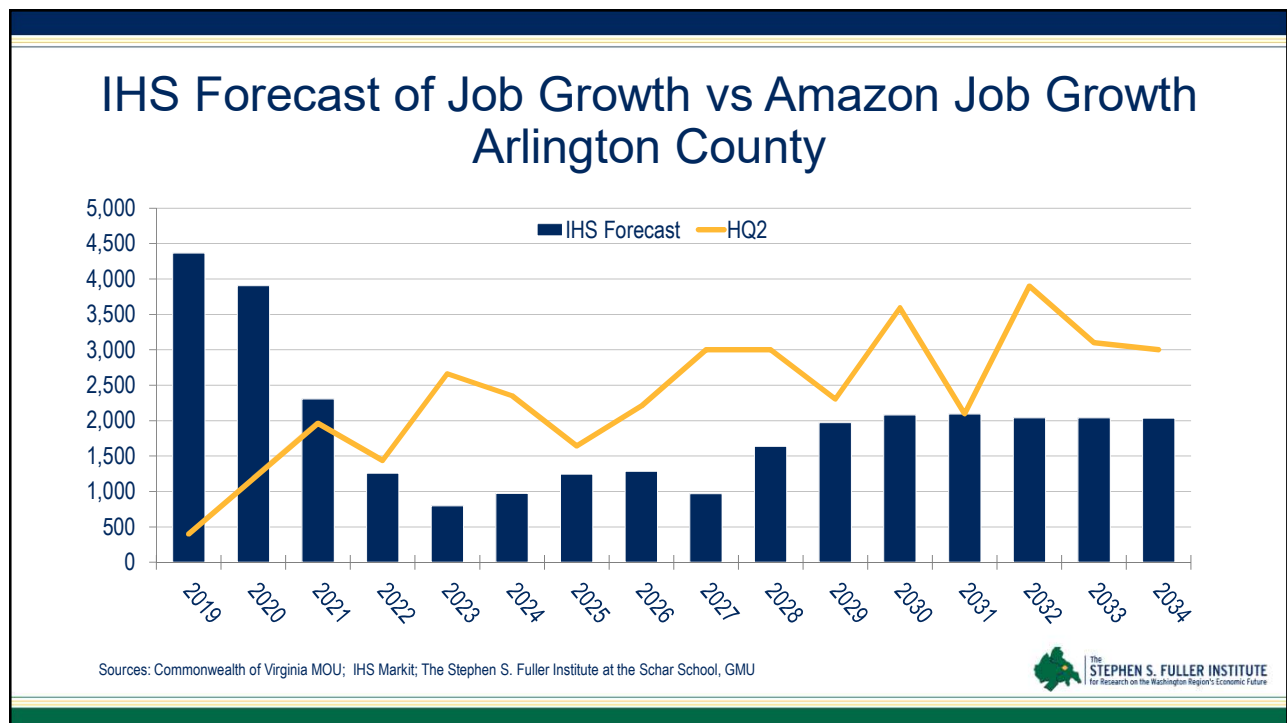
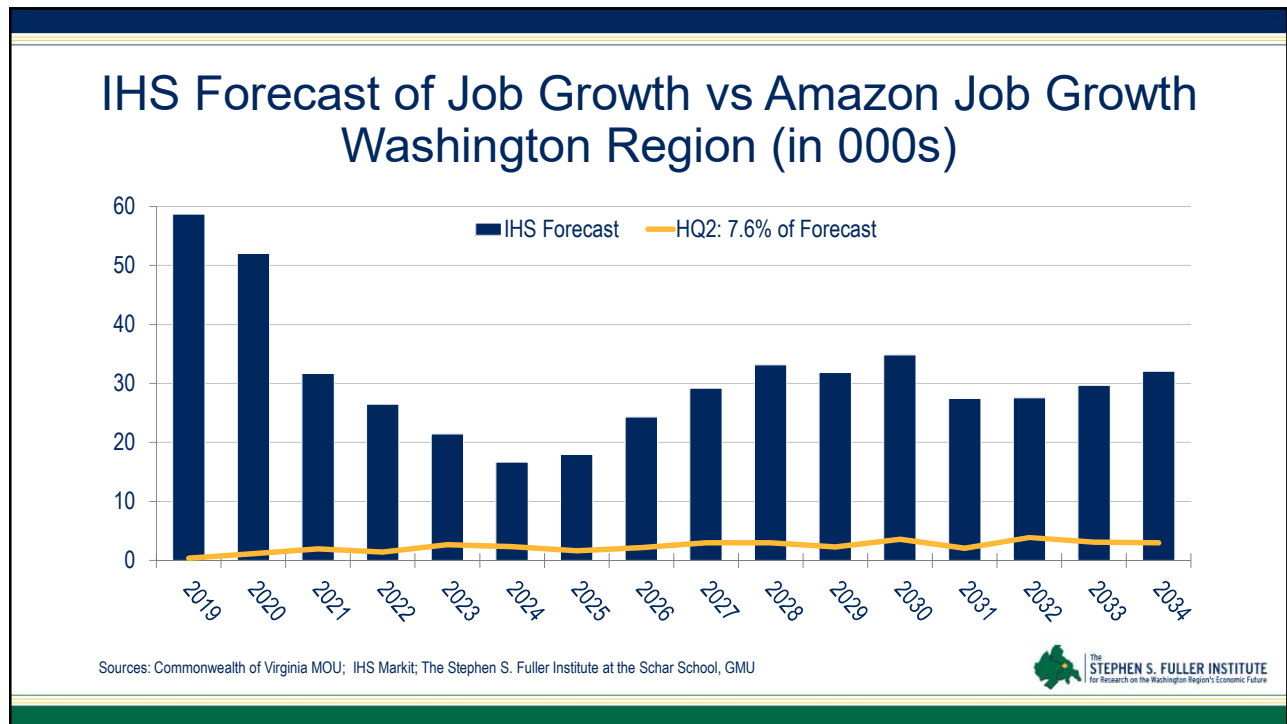


HQ2 Employment Schedule



Sources: Commonwealth of Virginia MOU; The Stephen S. Fuller Institute at the Schar School, GMU





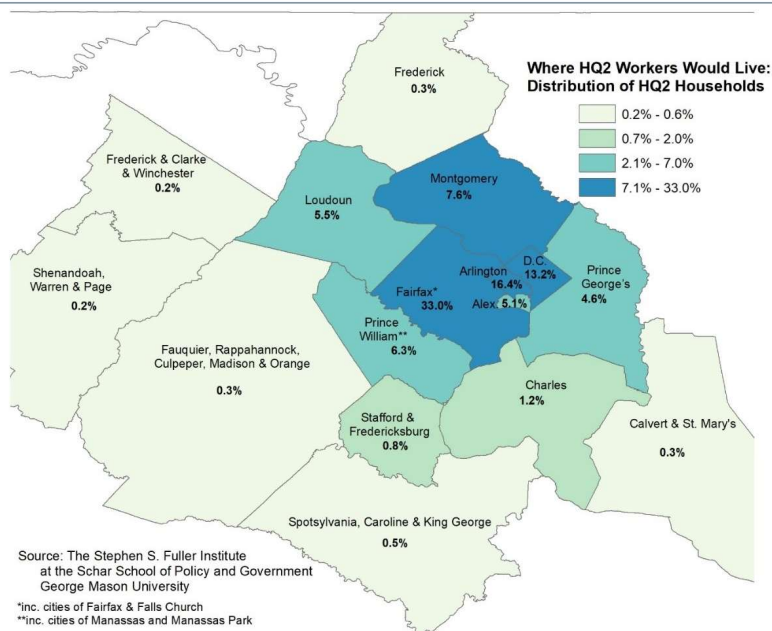
Amazon-Related Household at Full Build-Out Assumes 37,850 HQ2 jobs

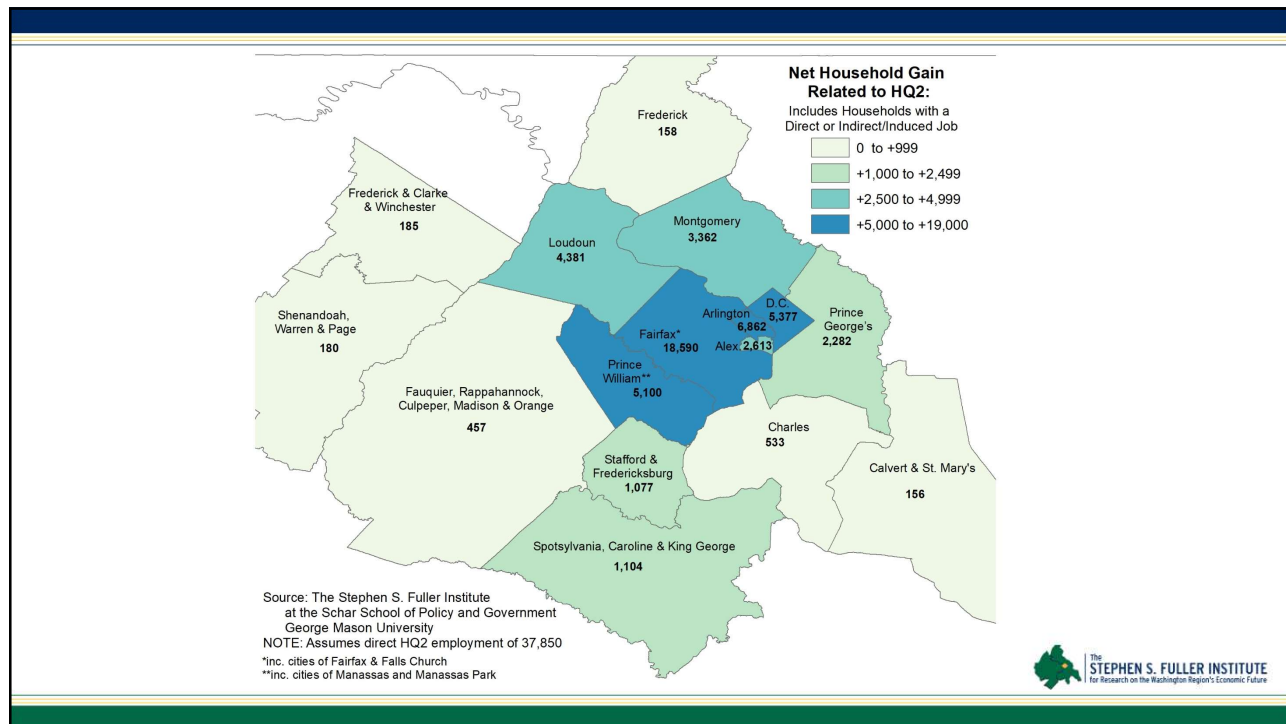
	Household w/ an HQ2 Job	Households w/ a Job Supported by HQ2 Spending (1)	Total
Arlington County, VA	6,097	766	6,862
Rest of Northern Virginia	19,219	14,104	33,323
Rest of Virginia	642	14,967	15,609
D.C.	4,909	469	5,377
Maryland	6,047	1,515	7,562
Elsewhere	363	508	871
Total (2)	37,276	32,328	69,604

Source: The Stephen S. Fuller Institute at the Schar School, GMU

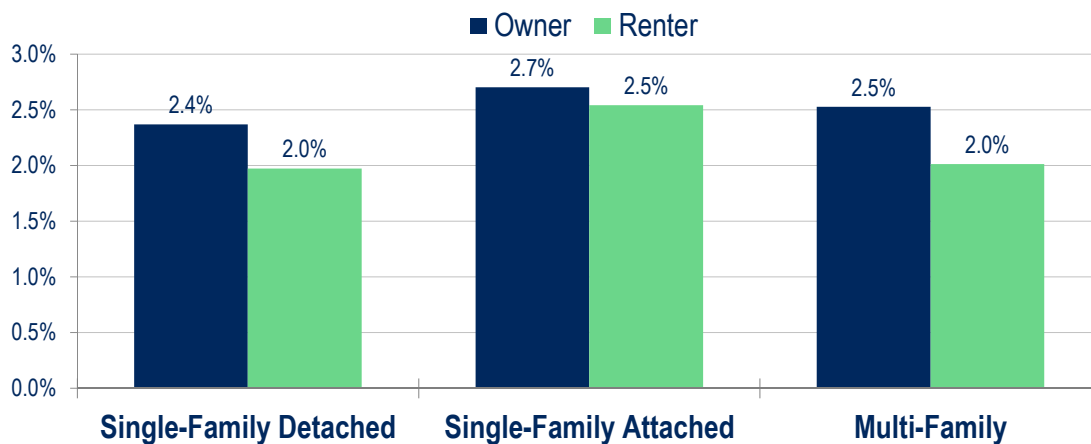
(1) Includes payroll and operations expenditures

(2) A small share of the workers holding HQ2-related jobs are anticipated to cohabitate either with another HQ2-related worker or become part of an existing household. Therefore, the number of households is projected to be fewer than the number of jobs. Only the indirect and induced jobs located in the Commonwealth were analyzed.





Amazon-Related Increase in Households by Unit Type from 2016 in the Washington Region



Sources: U.S. Census Bureau (2016 ACS Microdata); The Stephen S. Fuller Institute at the Schar School, GMU

Amazon-Related Renters in Select Jurisdictions

Assumes 37,850 HQ2 jobs, includes indirect & induced effects

	Renters at Full Build-Out	Renters in 2016	% HQ2 Renters of Total Renters
Virginia			
Arlington County	4,792	57,133	8.4%
Alexandria City	1,528	41,808	3.7%
Fairfax County*	4,893	134,425	3.6%
Prince William County**	1,087	49,891	2.2%
Loudoun County	716	25,552	2.8%
D.C.	2,968	169,875	1.7%
Maryland			
Montgomery County	625	132,098	0.5%
Prince George's County	396	121,333	0.3%

Sources: U.S. Census Bureau (2016 ACS Microdata); The Stephen S. Fuller Institute at the Schar School, GMU
 *Includes the cities of Fairfax and Falls Church ** Includes the cities of Manassas and Manassas Park



Amazon-Related Owners in Select Jurisdictions

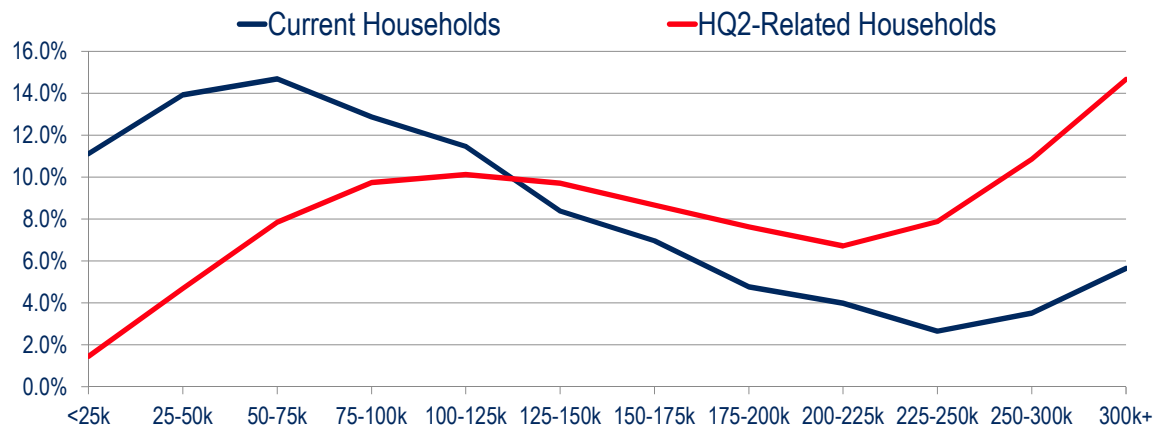
Assumes 37,850 HQ2 jobs, includes indirect & induced effects

	Owners at Full Build-Out	Closed Sales in 2017
Virginia		
Arlington County	2,071	3,030
Alexandria City	1,085	2,580
Fairfax County*	13,698	16,300
Prince William County**	4,013	8,330
Loudoun County	3,665	6,630
D.C.	2,410	8,900
Maryland		
Montgomery County	2,737	12,430
Prince George's County	1,886	10,230

Sources: RealEstate Business Intelligence, LLC; The Stephen S. Fuller Institute at the Schar School, GMU
 *Includes the cities of Fairfax and Falls Church ** Includes the cities of Manassas and Manassas Park



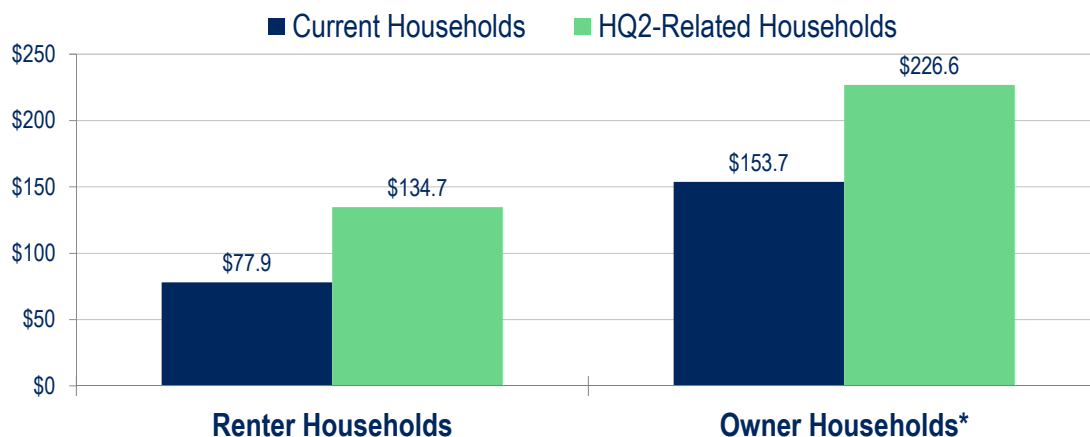
Distribution of Households by Household Income Washington Region



Sources: U.S. Census Bureau (2014-2016 ACS Microdata); The Stephen S. Fuller Institute at the Schar School, GMU
NOTE: in 2016 \$s



Average Household Income by Tenure Washington Region (in thousands of 2016 \$s)



Sources: U.S. Census Bureau (2016 ACS Microdata); The Stephen S. Fuller Institute at the Schar School, GMU
*Current owners who moved within the past year.



Thank You & Questions

For monthly reports on the Washington region's
economic performance go to:

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