



*The Virginia Chamber
of Commerce BLUEPRINT Meeting*

***The Future of the Virginia Economy
Depends on Workforce Development***

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**The Performance of the Virginia
Economy: 2000-2022**




Virginia's Economic Performance and Outlook, 2000-2022

(in billions of 2005 dollars)

<u>Year</u>	<u>Gross State Product</u>	<u>Annual % Change</u>
2000	\$298.3	
2007	366.8	3.00
2010	374.7	0.65
2012	378.7	0.52
2017	433.1	2.75
2022	\$500.5	2.93

Sources: IHS Global Insight; GMU Center for Regional Analysis




Virginia's Economic Performance and Outlook, 2000-2022

(in billions of 2005 dollars)

<u>Year</u>	<u>GSP %*</u>	<u>Job Change</u>	<u>Average Annual</u>
2000			
2007	3.00	528,705	75,529
2010	0.65	- 106,428	- 35,476
2012	0.52	131,352	65,676
2017	2.75	448,016	89,603
2022	2.93	396,343	79,269

* annual percent change

Sources: IHS Global Insight; GMU Center for Regional Analysis




Virginia's Job Growth, 2000-2017 (annual percent change)

<u>Year</u>	<u>Total</u>	<u>P&BS*</u>	<u>Federal</u>	<u>Military</u>	<u>S&L**</u>
2000					
2007	1.0	3.5	0.3	- 0.6	1.6
2010	-1.1	2.2	3.8	- 1.7	0.3
2012	1.2	1.5	0.4	- 0.1	0.8
2017	1.7	3.6	- 1.3	0.2	0.3
2022	1.0	2.7	- 0.7	0.0	1.0

Sources: IHS Global Insight; GMU Center for Regional Analysis
 *professional and business services includes federal contractors
 **state and local government




Virginia's Job Growth, 2000-2017 (annual percent change)

<u>Year</u>	<u>Mfg</u>	<u>T&W*</u>	<u>Health</u>	<u>Retail</u>	<u>L&H**</u>	<u>Construc</u>
2000						
2007	-3.4	0.4	3.6	0.6	2.3	2.0
2010	-5.6	-2.3	3.4	-2.3	-0.4	-7.9
2012	-0.5	-1.5	2.6	1.0	2.3	-1.2
2017	1.2	3.3	3.1	0.8	0.6	7.5
2022	0.1	0.7	1.5	0.0	0.1	1.5

Sources: IHS Global Insight; GMU Center for Regional Analysis
 *transportation and warehousing
 **leisure and hospitality



Virginia and U.S. Economic Growth 2012-2017

(annual percent real change)

<u>Year</u>	<u>Virginia</u>	<u>U.S.</u>
2012	0.8	2.2
2013	1.3	1.6
2014	2.8	2.7
2015	3.4	3.5
2016	3.2	3.1
2017	3.0	3.0

Sources: IHS Global Insight; GMU Center for Regional Analysis



Net New and Replacement Job Growth in the Commonwealth of Virginia: 2012-2017 and 2017-2022




Commonwealth of Virginia Change in Jobs, Summary 2012 - 2017 - 2022

Year	Total Jobs	Net New (% Change)	Replacement (% Change)	Openings (% Change)
2012	4,871,288			
2012 - 2017	5,319,304	448,016	629,627	1,077,643
		9.2%	12.9%	22.1%
2017 - 2022	5,715,647	396,343	570,059	966,402
		7.5%	10.7%	18.2%

Sources: EMSI Complete Employment - 2013.2, GMU Center for Regional Analysis




Commonwealth of Virginia Change in All Jobs, 2012 – 2017

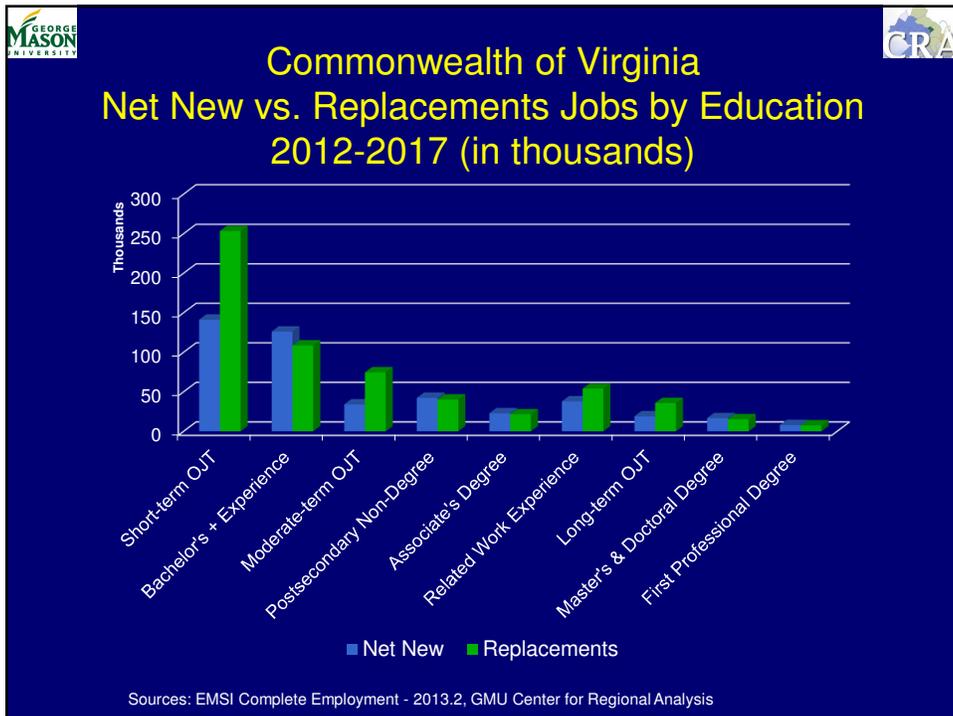
<u>Occupation 2-Digit SOC</u>	<u>Net New</u>	<u>Replacements</u>
Sales & Related	54,264	96,704
Business & Financial	48,619	34,066
Healthcare (All)	48,219	31,050
Office & Admin Support	43,406	76,074
Personal Care & Service	32,338	25,314
Educ., Training & Library	32,066	28,975
Computer & Mathematical	31,372	19,062
Food Prep & Serving	28,794	59,324
Management Occupations	24,937	38,990
Building & Grounds Maint.	22,154	19,480
All Others	81,846	196,871
Totals, All	448,016	629,627

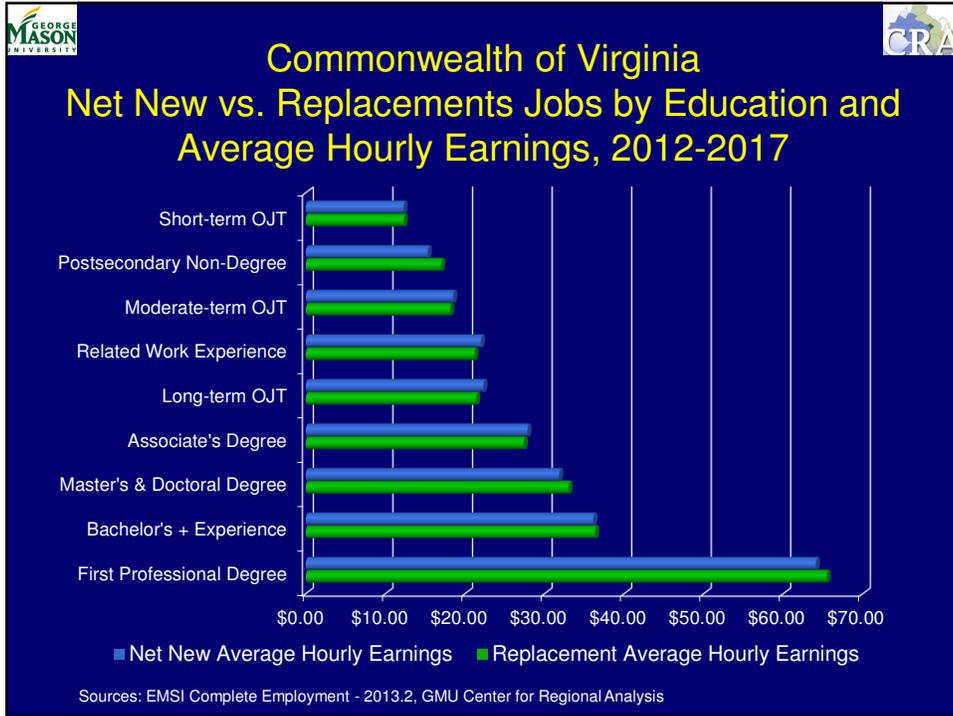
Sources: EMSI Total Employment - 2013.2, GMU Center for Regional Analysis

**Commonwealth of Virginia
Change in All Jobs, 2017 – 2022**

<u>Occupation 2-Digit SOC</u>	<u>Net New</u>	<u>Replacements</u>
Sales & Related	45,208	90,470
Office & Admin Support	41,160	71,045
Healthcare (All)	36,721	29,491
Business & Financial	35,530	33,503
Computer & Mathematical	28,693	18,493
Educ., Training & Library	28,424	27,586
Personal Care & Service	22,414	23,603
Construction & Extraction	21,798	26,009
Management Occupations	19,169	35,583
Food Prep & Serving	18,878	57,839
<u>All Others</u>	<u>98,352</u>	<u>156,089</u>
Totals, All	396,343	570,059

Sources: EMSI Total Employment - 2013.2, GMU Center for Regional Analysis





Net New Jobs in the Commonwealth of Virginia 2012-2017 and 2017-2022




Commonwealth of Virginia Net New Jobs, Summary 2012 - 2017 - 2022

Year	Total Jobs	Net New Jobs (% Total Jobs)	% Change
2012	4,871,288		
2012 - 2017	5,319,304	448,016	9.2%
		8.4%	
2017 - 2022	5,715,647	396,343	7.5%
		6.9%	

Sources: EMSI Complete Employment - 2013.2, GMU Center for Regional Analysis




Commonwealth of Virginia All Net New Jobs, 2012 – 2017

<u>Occupation 2-Digit SOC</u>	<u>Net New</u>	<u>% Total</u>	<u>% Change</u>
Sales & Related	54,264	12.1	8.9
Business & Financial	48,619	10.9	14.5
Healthcare (All)	48,219	10.8	15.7
Office & Admin Support	43,406	9.7	7.0
Personal Care & Service	32,338	7.2	16.2
Educ., Training & Library	32,066	7.2	12.4
Computer & Mathematical	31,372	7.0	14.9
Food Prep & Serving	28,794	6.4	9.1
Management Occupations	24,937	5.6	7.9
Building & Grounds Maint.	22,154	4.9	11.5
<u>All Others</u>	<u>81,846</u>	<u>18.3</u>	<u>5.4</u>
Totals, All	448,016	100.0	9.2

Sources: EMSI Complete Employment - 2013.2, GMU Center for Regional Analysis

Commonwealth of Virginia			
Major Sources of Net New Jobs, 2012 – 2017			
<u>Occupation 5-Digit SOC</u>	<u>Net New</u>	<u>% Total</u>	<u>% Change</u>
<u>Sales & Related</u>	54,264	12.1*	8.9
Real Estate Sales Agents	17,589	32.4	17.1
Retail Salespersons	9,678	17.8	7.3
Financial Serv. Agents	6,736	12.4	30.2
Door-to-Door Sales	(3,920)	(7.2)	(18.2)
<u>Business & Financial Serv.</u>	48,619	10.9*	14.5
Personal Financial Adv.	10,420	21.4	36.1
Management Analysts	9,771	20.1	14.8
Accountants & Auditors	4,903	10.1	10.1
Business Ops Specialist	3,841	7.9	10.2
<u>All Others</u>	345,133	77.0*	8.8
Totals, All	448,016	100.0	9.2

Sources: EMSI Complete Employment - 2013.2. GMU Center for Regional Analysis * % Total of All Net New Jobs

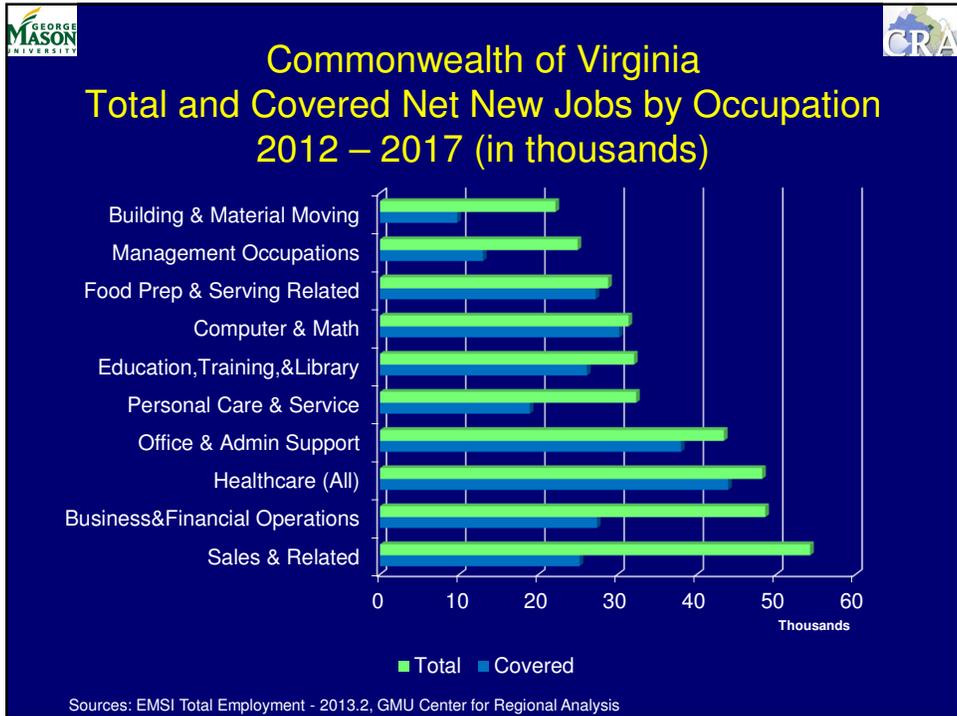
Commonwealth of Virginia			
Major Sources of Net New Jobs, 2012 – 2017			
<u>Occupation 5-Digit SOC</u>	<u>Net New</u>	<u>% Total</u>	<u>% Change</u>
<u>Healthcare (All)</u>	48,219	10.8*	15.7
Home Health Aides	8,875	18.4	46.2
Registered Nurses	8,605	17.8	13.3
Nursing Aides, Orderlies	4,030	8.4	10.8
Licensed Vocation Nurses	2,552	5.3	12.0
<u>Office & Admin Support</u>	43,406	9.7*	7.0
Office Clerks, General	8,841	20.4	8.2
Customer Service Reps	5,112	11.8	9.5
Bookkeeping & Acct Clerks	4,461	10.3	7.9
Receptionists & Info Clerks	4,056	9.3	12.6
<u>All Others</u>	356,391	79.5*	9.0
Totals, All	448,016	100.0	9.2

Sources: EMSI Complete Employment - 2013.2. GMU Center for Regional Analysis * % Total of All Net New Jobs

**Commonwealth of Virginia: Net New
by Educational Requirements, 2012-2017**

<u>Education</u>	<u>Net New</u>	<u>% Total</u>
Short-term OJT	141,172	31.5
Bachelor's & Experience	126,173	28.2
Postsecondary non-degree	42,246	9.4
Related Work Experience	37,902	8.5
Moderate-term OJT	34,054	7.6
Associate's Degree	22,821	5.1
Long-term OJT	19,015	4.2
Master's & Doctoral Degree	16,710	3.7
First Professional Degree	7,986	1.8
Total*	448,016	100.0

*Includes -67 Unclassified and Military Net New jobs
 ** Totals show underestimates due to suppressed data and may not add up
 Sources: EMSI Total Employment - 2013.2, GMU Center for Regional Analysis






Commonwealth of Virginia All Net New Jobs, 2017 – 2022

<u>Occupation 2-Digit SOC</u>	<u>Net New</u>	<u>% Total</u>	<u>% Change</u>
Sales & Related	45,208	11.4	6.8
Office & Admin Support	41,160	10.4	6.2
Healthcare (All)	36,721	9.3	10.3
Business & Financial	35,530	9.0	9.3
Computer & Mathematical	28,693	7.2	11.9
Educ., Training & Library	28,424	7.2	9.8
Personal Care & Service	22,414	5.7	9.7
Construction & Extraction	21,798	5.5	9.2
Management Occupations	19,169	4.8	5.6
Food Prep & Serving	18,878	4.8	5.5
All Others	98,352	24.8	6.3
Totals, All	396,343	100.0	7.5

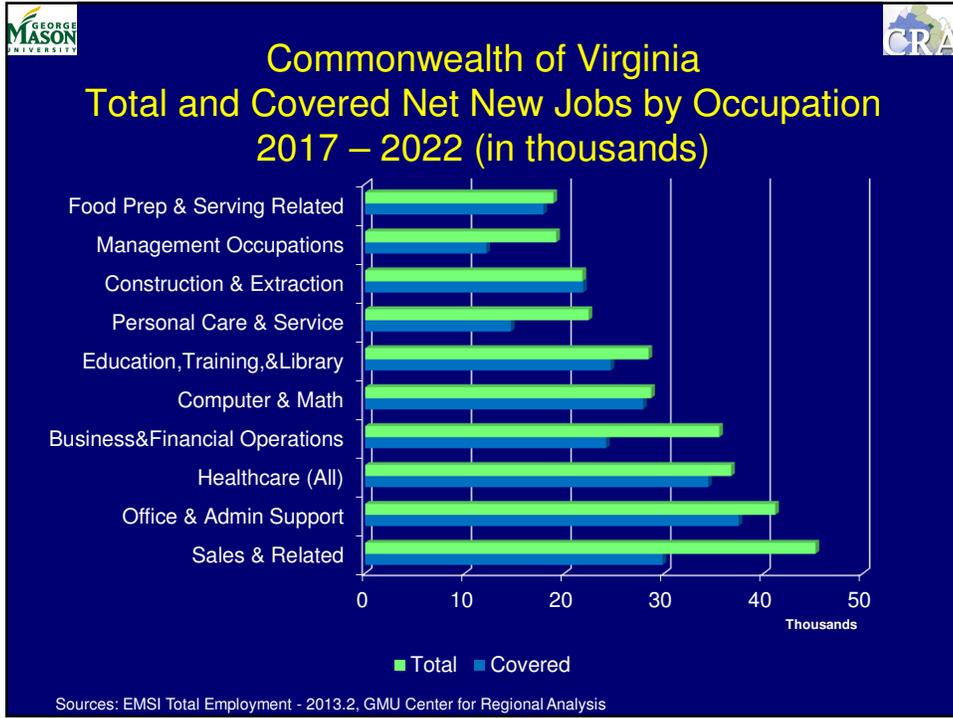
Sources: EMSI Complete Employment - 2013.2, GMU Center for Regional Analysis




Commonwealth of Virginia: Net New by Educational Requirements, 2017-2022

<u>Education</u>	<u>Net New</u>	<u>% Total</u>
Short-term OJT	129,946	32.8
Bachelor's & Experience	104,979	26.5
Moderate-term OJT	40,380	10.2
Postsecondary non-degree	31,561	8.0
Related Work Experience	28,532	7.2
Long-term OJT	21,936	5.5
Associate's Degree	18,506	4.7
Master's & Doctoral Degree	13,396	3.4
First Professional Degree	6,277	1.6
Total*	396,343	100.0

*Includes 819 Unclassified and Military Net New jobs
 ** Totals show underestimates due to suppressed data and may not add up
 Sources: EMSI Total Employment - 2013.2, GMU Center for Regional Analysis






Replacement Jobs in the Commonwealth of Virginia 2012-2017 and 2017-2022




Commonwealth of Virginia Replacement Jobs Summary 2012 - 2017 - 2022

Year	Total Jobs	Replacement Jobs (% Total Jobs)	% Change
2012	4,871,288		
2012 - 2017	5,319,304	629,627	12.9%
		11.8%	
2017 - 2022	5,715,647	570,059	10.7%
		10.0%	

Sources: EMSI Complete Employment - 2013.2, GMU Center for Regional Analysis




Commonwealth of Virginia All Replacement Jobs, 2012 – 2017

<u>Occupation 2-Digit SOC</u>	<u>Replacement</u>	<u>% Total</u>	<u>% Change</u>
Sales & Related	96,704	15.4	15.9
Office & Admin Support	76,074	12.1	12.3
Food Prep & Serving	59,324	9.4	18.8
Management Occupations	38,990	6.2	12.4
Transport & Material Moving	37,479	6.0	14.8
Construction & Extraction	34,768	5.5	15.3
Business & Financial	34,066	5.4	10.2
Production Occupations	33,166	5.3	18.1
Healthcare (All)	31,050	4.9	10.1
Educ., Training & Library	28,975	4.6	11.2
All Others	157,719	24.7	10.8
Totals, All	629,627	100.0	12.9

Sources: EMSI Complete Employment - 2013.2, GMU Center for Regional Analysis




Commonwealth of Virginia: Replacement Jobs by Educational Requirements, 2012-2017

<u>Education</u>	<u>Net New</u>	<u>% Total</u>
Short-term OJT	251,792	41.6
Bachelor's & Experience	107,409	17.7
Moderate-term OJT	73,002	12.1
Related Work Experience	53,765	8.9
Postsecondary non-degree	39,951	6.6
Long-term OJT	34,549	5.7
Associate's Degree	21,529	3.6
Master's & Doctoral Degree	15,215	2.5
First Professional Degree	7,482	1.2
Total*	629,627	100.0

*Included 772 Unclassified and Military Replacement jobs
 ** Totals show underestimates due to suppressed data and may not add up
 Sources: EMSI Total Employment - 2013.2, GMU Center for Regional Analysis




Commonwealth of Virginia All Replacement Jobs, 2017 – 2022

<u>Occupation 2-Digit SOC</u>	<u>Replacement</u>	<u>% Total</u>	<u>% Change</u>
Sales & Related	90,470	15.9	13.7
Office & Admin Support	71,045	12.5	10.8
Food Prep & Serving	57,839	10.1	16.8
Management Occupations	35,583	6.2	10.5
Business & Financial	33,503	5.9	8.7
Transport & Material Moving	33,257	5.8	12.3
Healthcare (All)	29,491	5.2	8.3
Educ., Training & Library	27,586	4.8	9.5
Construction & Extraction	26,009	4.6	11.0
Personal Care & Service	23,603	4.1	10.2
<u>All Others</u>	<u>141,668</u>	<u>24.9</u>	<u>9.2</u>
Totals, All	570,059	100.0	10.7

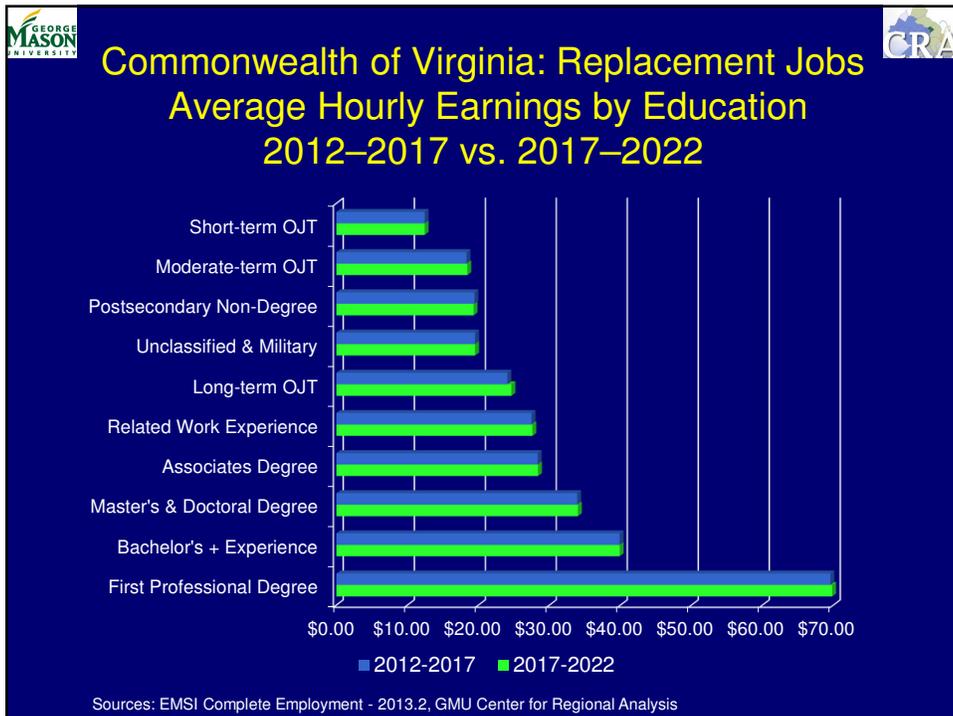
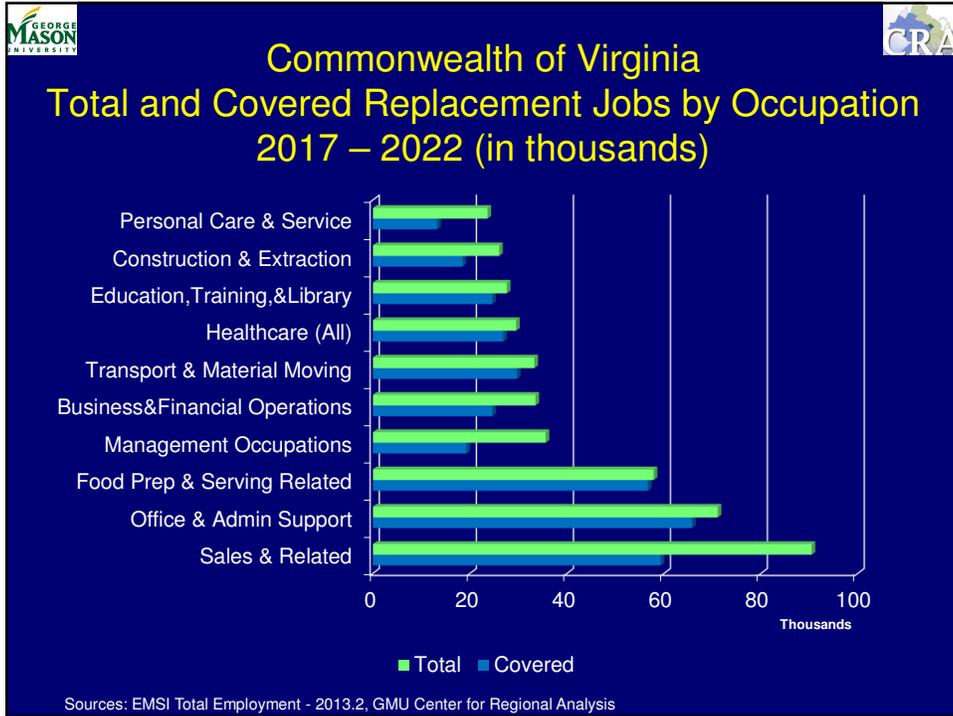
Sources: EMSI Complete Employment - 2013.2, GMU Center for Regional Analysis




Commonwealth of Virginia: Replacement Jobs by Educational Requirements, 2017-2022

<u>Education</u>	<u>Net New</u>	<u>% Total</u>
Short-term OJT	234,774	42.1
Bachelor's & Experience	101,730	18.2
Moderate-term OJT	62,728	11.2
Related Work Experience	49,902	8.9
Postsecondary non-degree	36,876	6.6
Long-term OJT	30,116	5.4
Associate's Degree	20,041	3.6
Master's & Doctoral Degree	14,412	2.6
First Professional Degree	6,988	1.3
Total*	570,059	100.0

*Included 231 Unclassified and Military Replacement jobs
 ** Totals show underestimates due to suppressed data and may not add up
 Sources: EMSI Total Employment - 2013.2, GMU Center for Regional Analysis





Framing Economic and Workforce Development Policies for Virginia's Next Ten Years



Summary of Economic Challenges Facing the Commonwealth of Virginia

- The Virginia economy has undergone a significant structural shift as a result of the Great Recession;
- Changing federal spending patterns have extended the structural shift in Virginia's economy since 2010;
- The next five years will be the most critical development period in recent history as the State's economic performance during this period will determine its competitive position going forward;




Summary of Workforce Challenges Facing the Commonwealth of Virginia

- The State's economy is currently lagging the national growth rate where historically it performed better;
- Overall economic growth is projected to be slower during the 2017-2022 period than between 2012-2017;
- The workforce requirements of Virginia's post-federally dependent economy reflect a combination of growth and demographic trends that are increasing the needs for "replacement" workers to backfill existing positions;




Summary of Workforce Challenges Facing the Commonwealth of Virginia

- Net new jobs in Virginia's economy will reflect a different mix of skills and educational requirements than replacement job openings; wages will differ, too;
- Demand for workers to fill new and replacement jobs will substantially exceed the supply of available workers in every major occupational category;
- In order to sustain a competitive economy, the State will need to increase its investments in education and skills training at all levels; initiatives should include:




Summary of Workforce Challenges Facing the Commonwealth of Virginia

- Extend early childhood development and pre-school readiness to all children statewide;
- Link basic education with workforce preparation in K-12 curricula for both academic and technical careers;
- Increase emphasis on skills training at the high school and post-high school levels;
- Maximize high school completion rates;
- Retain and up-skill workers currently in the workforce;
- Retain and re-position older workers to extend their useful work life beyond normal retirement age; and,




Summary of Workforce Challenges Facing the Commonwealth of Virginia

- Maintain a competitive quality-of-life and economic environment to make Virginia attractive to workers as they make choices to relocate domestically and internationally, thereby making the State a destination of choice during the looming worker-scarce era that will extend over the next decade.
- Future business investment will follow the workers. Having a sufficient supply of qualified workers will determine the growth potential of the State's economy and its competitive position nationally and globally.



Thank You
Questions

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