Tomorrow's Economy

A Workforce Perspective

High Skills, High Wages 2012

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Workforce Training
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Themes

- There are sectors where labor demand will likely remain strong relative to other sectors: aerospace, health, IT
- Boomer retirement will result in demand for skilled workers, even in slow-growing industries and occupations
- There will be large numbers of low-skill jobs – though modest ability to interact with technology will be important in many of those jobs
- STEM occupations at mid and upper skill levels are likely to be in demand. This includes applied STEM, such as health care, manufacturing, production, installation, maintenance and repair.

Forecasted Changes in the Industrial Make-Up of Washington's Economy

Sector	Emp. 2009	Rev 2019	Avg. Ann Growth
TOTAL NONFARM	2,818,600	3,272,600	1.6%
Growing Faster than Average			
PROFESSIONAL and BUSINESS SERVICES	323,600	431,700	3.3%
Durable Goods	190,300	239,100	2.6%
Health Services and Social Assistance	323,800	395,900	2.2%
Education Services	47,700	56,800	1.9%
Growing at About Average Rate			
TRANSPORTATION, WAREHOUSING AND UTILITIES	90,500	105,800	1.7%
NATURAL RESOURCES and MINING	6,100	7,000	1.5%
WHOLESALE TRADE	122,600	140,200	1.4%
LEISURE and HOSPITALITY	269,200	307,100	1.4%
Growing Slower than Average			
CONSTRUCTION	158,700	177,200	1.2%
Government Educational Services	237,300	264,300	1.1%
RETAIL TRADE	309,200	343,100	1.1%
State and Local Government Other	240,200	263,300	1.0%
Non Durable Goods	75,100	82,100	0.9%
Little to No Growth			
OTHER SERVICES	106,400	110,700	0.4%
FINANCIAL ACTIVITIES	141,600	146,200	0.3%
Federal Government	72,800	72,700	0.0%

Detail - Forecasted Changes in the Industrial Make-Up of Washington's Economy

Industry	Rev 2019 Emp	Rev'd Ann Growth
TOTAL NONFARM	3,272,600	1.6%
Growing Faster than Average		
Employment Services	62,500	7.7%
Machinery & Electrical Equipment	27,100	6.6%
Primary & Fabricated Metals	31,800	4.6%
Computer and Electronic Product Manufacturing	28,000	4.0%
Software Publishers	69,000	3.4%
Professional, Scientific and Technical Services	213,600	3.3%
Wood Product Manufacturing	17,200	2.9%
Other Professional Services	120,800	2.7%
Health Services and Social Assistance	395,900	2.2%
Other Information	52,000	2.0%
Education Services	56,800	1.9%
Growing at About Average Rate		
Transportation and Warehousing	100,600	1.8%
Aerospace Product and Parts Manufacturing	96,800	1.7%
Logging	4,300	1.6%
Nonmetallic Mineral Product Manufacturing	10,400	1.6%
WHOLESALE TRADE	140,200	1.4%
Accommodation and Food Services	255,300	1.4%
Arts, Entertainment and Recreation	51,800	1.3%
Mining	2,700	1.3%

Growing Slower than Average		
Other Retail Trade	237,800	1.2%
CONSTRUCTION	177,200	1.2%
Other Non Durable Manufacturing	30,200	1.1%
Government Educational Services	264,300	1.1%
Food Manufacturing	42,500	1.1%
Other Durable Manufacturing	19,000	1.0%
Real Estate, Rental and Leasing	52,100	1.0%
State and Local Government Other	263,300	1.0%
Food and Beverage Stores	66,500	0.9%
Management of Companies and Enterprises	34,800	0.8%
Motor Vehicle and Parts Dealers	38,800	0.7%
Little to Negative Growth		
OTHER SERVICES	110,700	0.4%
Utilities	5,200	0.2%
Finance and Insurance	94,100	0.0%
Federal Government	72,700	0.0%
Paper Manufacturing	9,400	-0.3%
Other Publishing Industries	8,400	-0.3%
Other Transportation Equipment	8,800	-0.8%

Mid-Level Occupations With Highest Forecasted Future Job Openings

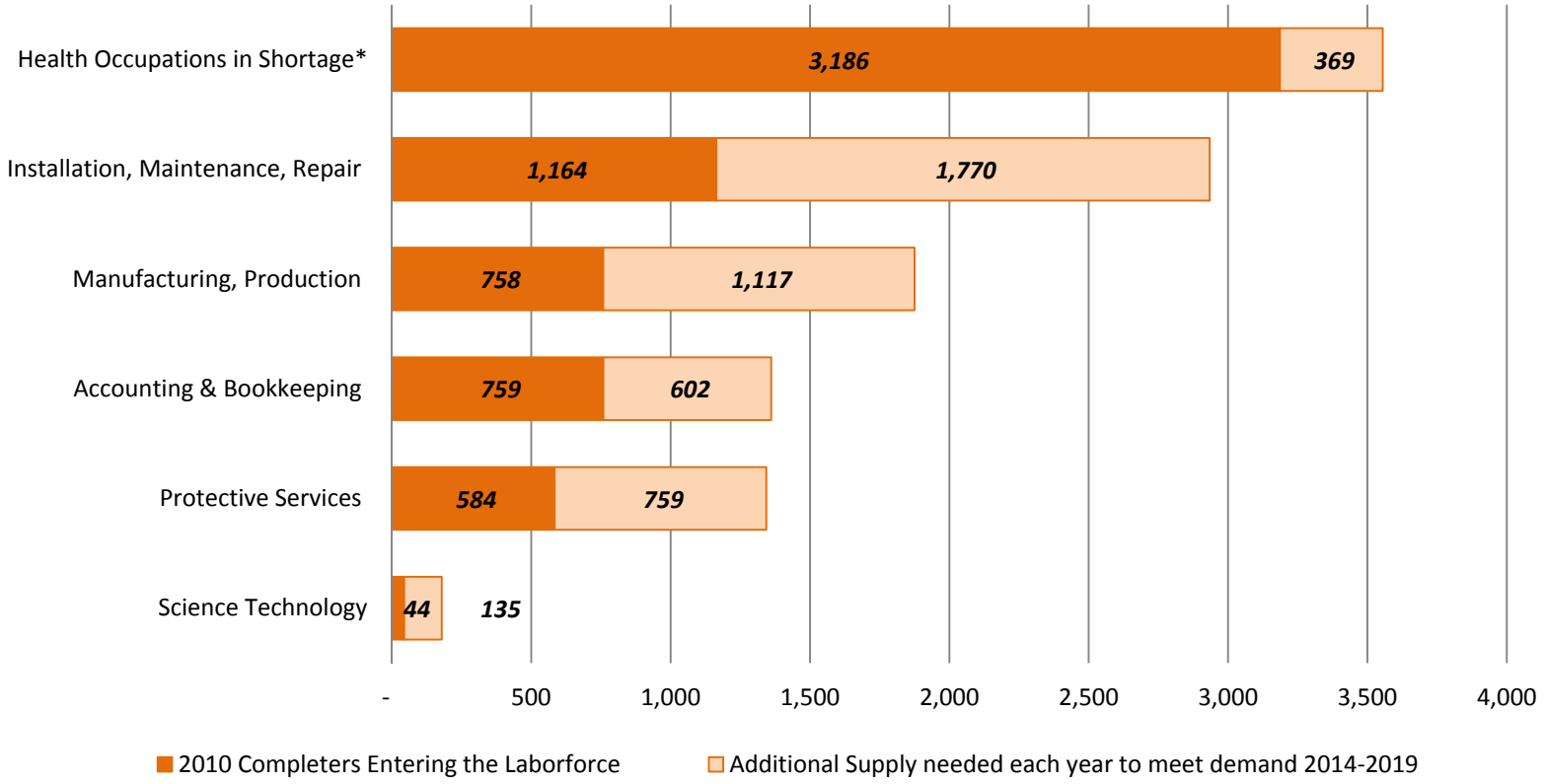
	Employment 2009	Average Annual Openings 2014-19
Registered Nurses	53,450	2,867
Carpenters	39,998	1,400
Teacher Assistants	33,886	1,343
Retail Sales Supervisors	34,737	1,103
Office and Administrative Support Supervisors	28,646	1,096
Computer Support Specialists	14,299	916
Cooks, Restaurant	23,542	879
Teachers and Instructors, General	26,922	853
Managers, All Other	19,583	852
Maintenance and Repair Workers, General	24,650	828
Construction and Extraction Supervisors	17,778	779
Medical Secretaries	18,465	661

	Employment 2009	Average Annual Openings 2014-19
Electricians	16,037	653
Non-Retail Sales Supervisors	14,325	541
Licensed Practical and Licensed Vocational Nurses	10,069	514
Fire Fighters	8,631	452
Plumbers, Pipefitters, and Steamfitters	11,861	446
Massage Therapists	7,420	400
Police and Sheriff's Patrol Officers	8,862	398
Computer Specialists, All Other	8,316	380
Food Preparation and Service Supervisors	15,391	380
Mechanics, Installers, and Repairers Supervisors	9,673	375
Cooks, Institution and Cafeteria	7,830	344
Hairdressers, Hairstylists, and Cosmetologists	17,305	327
Coaches and Scouts	9,161	322

Note: Net Openings not adjusted for size of current unemployed labor force in each occupation

Mid Level Gap Analysis

High Employer Demand Occupations at the Mid Level
2010 Supply compared to 2014-2019 Demand

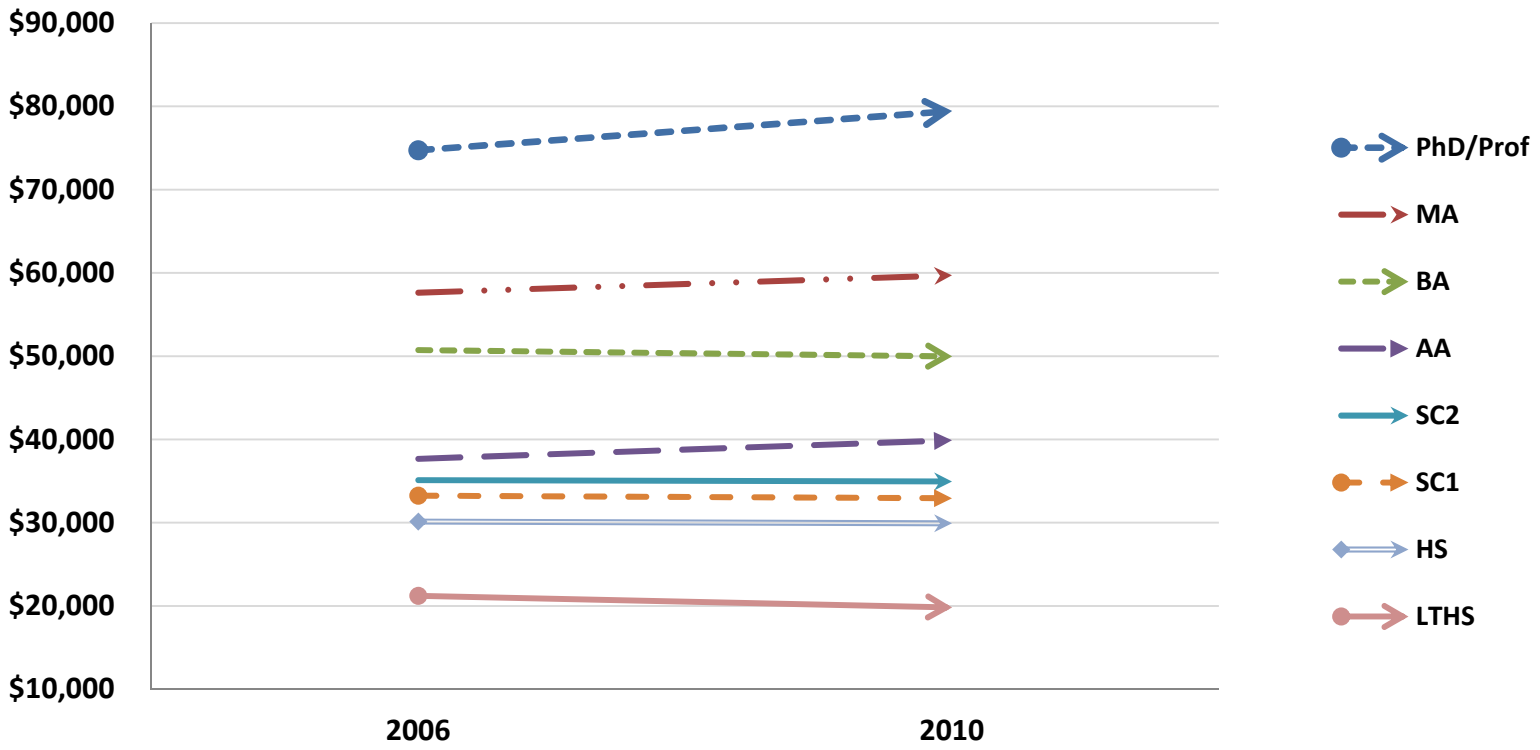


*includes only mid-level health occupations with projected shortages

Self-Employment Trends

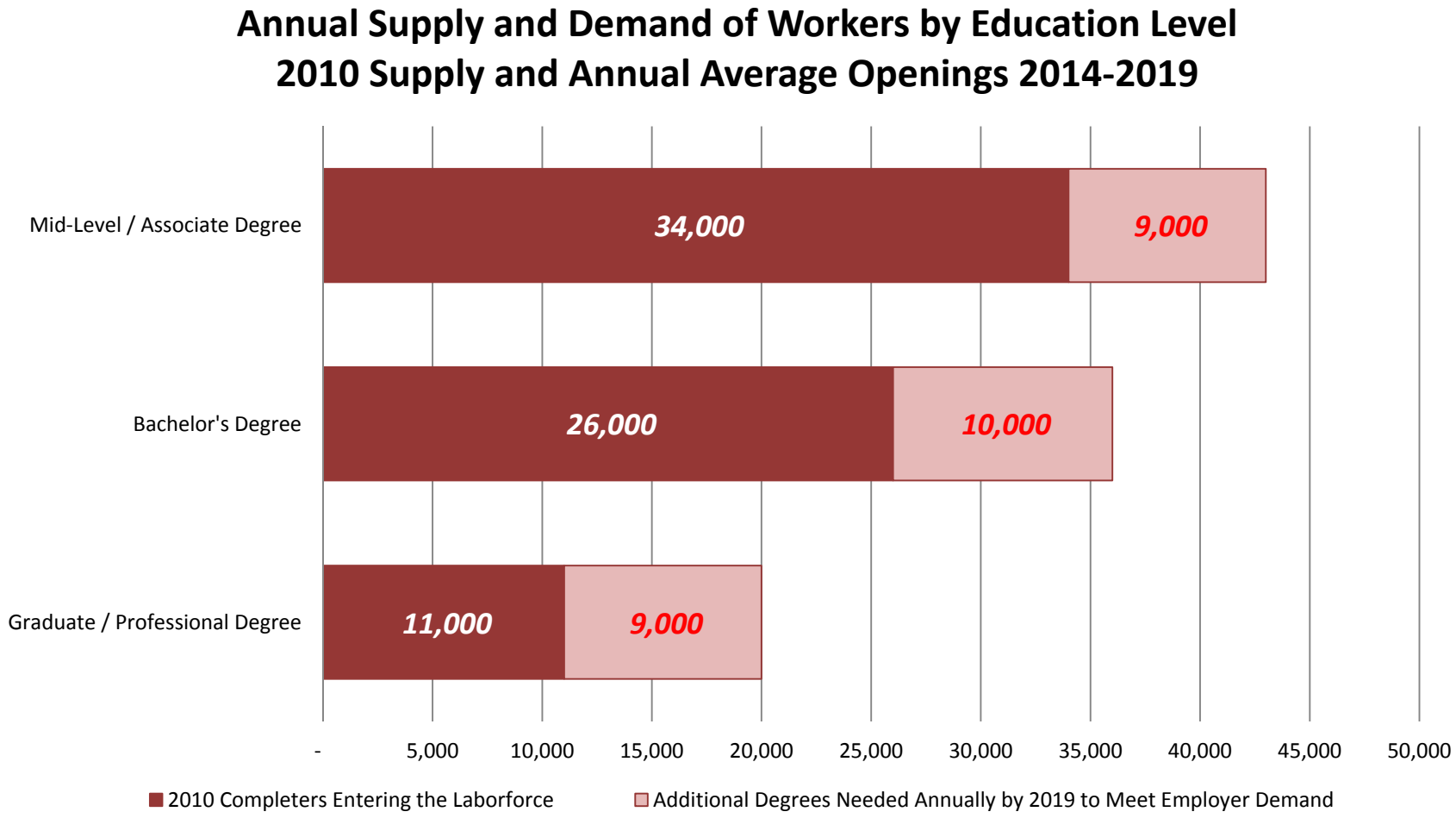
- The proportion of the state's civilian workforce that are self-employed was 10.3% in 2010, down about 1 percentage point since 2006.
- Industries with high levels of self-employment – Construction, Technical Services, Other Services, FIRE sustained those levels – a decline in agricultural unemployment is the exception.
- Of the industries with lower levels of self employment, there has been a big increase in self employment in Information, also an increase in Education, Health and Social Services, but a sizable decline in self-employment in Retail.

Relationship Between Earnings and Education and Training during Recession



Graduate and Associate Degrees gained 3-6%, less than High School lost 6%, others had small 0.5-1.5% losses

Keeping Up with Overall Trends in Workforce Skill Levels



Based on projecting trends in state workforce composition.

Technological Change and Changing Skill Demand - 2010 Employer Survey

- Employers expect increasing demand for higher levels of worker education
- Beyond job-specific skills, employers report difficulty recruiting for “soft” skills like communications and adaptability. Math most frequently a recruiting problem among the generic subject area skills
- Similar response about needed Entry level skill – soft skills like proactive learning, conflict resolution and cooperation - plus math, IT and reading (in that order)
- Use of computers by non-supervisory workers continues to rise - now ranges from 24% in Construction to 74% in High Tech

International Competition

- The continued rise of education levels in populous developing nations will bring competitive pressure on skilled and unskilled jobs whose product can be traded internationally
- The pace at which this will continue is difficult to predict, as it is influenced by many economic and political factors.

Competition will Wax and Wane

- There will be some instances of onshoring, due to supply chain problems, under-estimation of cultural problems, and changes in wage and foreign exchange rates. However the simultaneous expansions of populations and educational capacities will make international competition an unavoidable force.

Washington Advantages and Risks

- Washington is economically sensitive to international competition due to its heavy reliance on trade
- Washington has the advantage of being home to global leaders in two industries
- Washington also has strong natural advantages in some forest and agricultural raw materials