

ECONOMIC DIGEST

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In July...

Nonfarm Employment

Connecticut	1,696,000
Change over month	+0.24%
Change over year	+1.8%

United States	142,071,000
Change over month	+0.15%
Change over year	+2.1%

Unemployment Rate

Connecticut	5.4%
United States	5.3%

Consumer Price Index

United States	238.654
Change over year	+0.2%

Connecticut Job Vacancy Survey

By Andy Condon, Ph.D., Director of Research, DOL

In 2014, the Connecticut Department of Labor’s Office of Research, in partnership with the Office of Workforce Competitiveness, conducted a survey of Connecticut employers designed to estimate hiring demand and job vacancy characteristics by industry and occupation.

Survey Sample

Information was gathered through the survey of a stratified sample of 10,300 firms in five Labor Market Areas. Firms excluded from the sampling process include Government entities and businesses with no employees. The sample was stratified by industry “supersector,” Labor Market Area and firm employment size.

What Can You Find Out?

The Connecticut Job Vacancy Survey provides measures of:

- Number of job vacancies in the late July, early August period by Industry and Labor Market Area
- Breakdown of job vacancies by Standard Occupations and Occupation Groups
- Short-term labor market data that job seekers, employers, employment and training services and economic planners can use.

Definitions

For the purpose of this study, a job vacancy is a position that is currently open-for-hire and being actively recruited at the time of the survey. This study excludes job vacancies reserved for contract consultants, employees of contractors and others not considered employees of surveyed firms.

Sample Design and Survey Instrument

Information on job vacancies for the third quarter 2014 *Connecticut Job Vacancy Survey* came from a survey of 10,300 Connecticut private sector establishments. Surveyed employers were randomly selected from Connecticut’s Quarterly Census of Employment and Wages (QCEW). These establishments were selected from the universe of establishments that were doing business in Connecticut during the fourth quarter of 2013. Establishments were selected based on a sampling procedure that stratified by Labor Market Area, firm size and by twelve private sector industry “supersectors.”

Twelve major industry “supersectors,” defined by the 2012 North American Industry Classification System (NAICS), are represented in the survey sample. These sectors are described in Table 1.

Employers were asked to supply information on current job

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Division of Economic and Community Development

Table 1

NAICS INDUSTRY	INDUSTRY DESCRIPTION
Agriculture & Natural Resources & Mining	Firms engaged in growing crops, raising animals, harvesting timber, and harvesting fish and other animals from a farm, ranch, or their natural habitats.
Trade, Transportation and Utilities	Firms engaged in wholesale & retail merchandising, warehousing, transportation of people and freight, and the provision utility services including: electric power, natural gas, steam supply, water supply, and sewage removal.
Construction	Firms engaged in the construction of buildings and other structures, heavy construction, additions, alterations, reconstruction, installations, and maintenance and repairs.
Manufacturing	Firms engaged in the mechanical, physical, or chemical transformation of materials, substances, or components into new products.
Transportation and Warehousing	Firms engaged in the transportation of passengers and cargo, warehousing and storage for goods, scenic and sightseeing transportation, and support activities related to modes of transportation.
Information	Firms engaged in the production, processing and distribution of information and cultural products.
Finance and Insurance	Firms engaged in financial transactions, insurance products and real estate transactions.
Real Estate	Firms engaged in renting, leasing, or otherwise allowing for the use of tangible or intangible assets, and establishments providing related service.
Professional & Business Services	Firms specializing in performing professional, scientific, technical, and business activities for others.
Educational & Health Care Services	Firms providing instruction and training on a wide variety of subjects. Firms providing healthcare and social assistance to individuals.
Leisure & Hospitality Services	Firms engaged in providing services to meet the varied cultural, entertainment, and recreational interests of their patrons. Firms providing customers with lodging and/or preparation of meals, snacks and beverages for immediate consumption.
Other Services	Firms engaged in providing services not specifically provided for elsewhere in the classification system.

Table 2

MAJOR OCCUPATIONAL GROUP	SAMPLE OCCUPATIONS
Management	Educational Administrators, Marketing Managers, and Medical and Health Service Managers
Business and Financial Operations	Accountants, Financial Analysts, and Human Resource Specialists
Computer and Mathematical	Actuaries, Computer Programmers, and Computer Support Specialists
Architecture and Engineering	Architects, Chemical Engineers, and Drafters
Life, Physical and Social Science	Anthropologists, Chemists, and Geographers
Community and Social Service	Clergy, Health Educators, and Marriage and Family Therapists
Legal	Court Reporters, Lawyers, and Paralegals
Education, Training and Library	Librarians, Post-secondary Teachers, and Special Education Teachers
Art, Design, Entertainment Sports and Media	Coaches, Producers and Directors, and Radio Operators
Healthcare Practitioners and Technical	Dentists, Physicians, and Registered Nurses
Healthcare Support	Dental Assistants, Home Health Aides, and Pharmacy Aides
Protective Service	Animal Control Workers, Detectives, and Police Officers
Food Preparation and Serving Related	Cooks, Food Preparation Workers, and Waiters and Waitresses
Building, Grounds Cleaning and Maintenance	Housekeeping Cleaners, Janitors, and Pest Control Workers
Personal Care and Service	Child Care Workers, Hairdressers and Hairstylists, and Personal and Home Care Aides
Sales and Related	Cashiers, Insurance Sales Agents, and Retail Salespersons
Office and Administrative Support	Customer Service Representatives, Tellers, and Secretaries
Farming, Fishing and Forestry	Agricultural Inspectors, Animal Breeders, and Farmers
Construction and Extraction	Construction Laborers, Carpenters, and Electricians
Installation, Maintenance and Repair	Automotive Service Technicians and Mechanics, Motorcycle Mechanics, and Millwrights
Production	Butchers and Meat Cutters, Foundry Mold and Coremakers, and Machinists
Transportation and Material Moving	Airline Pilots, Bus Drivers, and Truck Drivers

Table 3

Survey Response Rates by Firm Size and Industry

Size	Sample	Received	Response Rate
Small (1 to 49 employees)	9,388	3,957	42.1%
Medium (50 to 249 employees)	450	174	38.6%
Large (250 or more employees)	495	205	41.4%
Total	10,333	4,336	42.0%

Industry	Sample	Received	Response Rate
Leisure & Hospitality	925	328	35.5%
Unclassified	37	8	21.6%
Construction	772	356	46.1%
Educational & Health Services	1,255	611	48.7%
Finance and Insurance	1,005	373	37.1%
Information	187	61	32.6%
Manufacturing	509	290	57.0%
Natural Resources & Mining	43	20	46.5%
Other Services	1,347	545	40.5%
Professional and Technical Services	1,945	834	42.9%
Trade, Transportation and Utilities	2,308	910	39.4%
Total	10,333	4,336	42.0%

vacancies including rates of pay, education and experience requirements, and benefits. Firms without job vacancies were also asked to return the survey reporting that information.

Employers provided numerous specific open-for-hire job titles. Analysts reviewed these job titles and matched them to appropriate Standard Occupational Classification (SOC) titles. The 2010 SOC structure used in this study is a set of six-digit occupational codes that is currently being used by a number of different agencies, including the Bureau of Labor Statistics and the Bureau of the Census, to classify occupations.

The 2010 SOC is a four-tiered structure with 840 detailed occupations that can be summarized into 461 broad occupations, 97 minor occupational groups, and 23 major occupational groups. For the purpose of this study, occupational information is presented at both the major occupational group and detailed

occupational levels. Major occupational groups included are in Table 2.

Survey Response Rates

The overall survey response rate for this round is 42.0% percent. Table 3 provides survey response rates by firm size and industry.

Summary of Findings

The results of the first Connecticut Job Vacancy survey indicate that there were 40,736 job vacancies under recruitment during the study period. Table 4 shows vacancy estimates by the major SOC group along with a standard error of the estimate and the resulting statistical confidence interval. The wider the confidence interval around the estimate, the less precise the estimate. Confidence intervals that include zero are considered not statistically different from zero.

While Management occupations led the list of statewide occupational vacancies, it should be noted that this type of occupation

appears commonly across all industry sectors. Other major groups with high numbers of vacancies include Food Preparation, Healthcare Practitioners, Business & Financial Operations, Computer & Mathematical, Transportation & Material Moving, Office & Administrative Support and Architecture & Engineering positions. The associated confidence interval bounds indicate the statistical precision of the vacancy estimate.

There were 399 occupations reported in the survey. The top twenty occupations ranked by number of vacancies are reported in Table 5. There is a mix of high paying professional/ technology positions, as well as occupations that tend to have high turnover – low paying and requiring little preparation and training.

Comparisons to Other Measures of Job Vacancies

An important component of this survey is to compare its results to other measures of job vacancies to determine accuracy and cost efficiency of these

Major SOC Group	Total Estimated Vacancies	Std. Err	95% Conf. Int. Lower Bound	95% Conf. Int. Upper Bound
Management	4,152	181.49	3,796.09	4,507.74
Food Preparation and Serving Related	3,827	503.66	2,839.10	4,814.06
Healthcare Practitioners and Technology	3,815	201.12	3,420.98	4,209.63
Business and Financial Operation	3,523	122.26	3,282.97	3,762.39
Computer and Mathematical	3,402	77.37	3,250.75	3,554.13
Transportation and Material Moving	3,270	693.33	1,910.72	4,629.42
Office and Administrative Support	3,163	185.96	2,798.03	3,527.23
Sales and Related	2,441	218.63	2,012.12	2,869.42
Architecture and Engineering	2,434	497.71	1,458.60	3,410.25
Installation, Maintenance, and Repair	1,521	169.08	1,189.99	1,852.97
Life, Physical, and Social Science	1,189	412.93	379.12	1,998.30
Arts, Design, Entertainment, Sports	1,165	306.15	564.87	1,765.37
Personal Care and Service	1,118	255.02	617.58	1,617.58
Healthcare Support	1,006	108.68	792.74	1,218.90
Construction and Extraction	919	122.52	679.20	1,159.64
Building and Grounds Cleaning and Maintenance	876	122.38	635.92	1,115.80
Community and Social Service	774	65.53	645.90	902.84
Production Occupations	699	62.38	576.25	820.83
Education, Training, and Library	635	51.63	534.02	736.47
Protective Service	565	198.23	176.16	953.46
Legal Occupations	190	32.00	127.74	253.23
Farming, Fishing, and Forestry	52	.	.	.

SOC Title	Total Estimated Vacancies	Std. Error	95% Conf. Int. Lower Bound*	95% Conf. Int. Upper Bound*
Registered Nurses	1,763	174.03	1,422.19	2,104.59
Software Developers, Applications	894	28.47	838.41	950.05
Cashiers	868	171.51	531.75	1,204.30
Management Analysts	848	41.45	766.45	928.99
Customer Service Representatives	807	125.27	561.23	1,052.46
Combined Food Preparation and Serving Workers, Including Fast Food	774	226.40	329.70	1,217.48
Nursing Assistants	747	95.80	558.92	934.59
Bus Drivers, School or Special Client	714	481.41	-230.33	1,657.40
Cooks, Restaurant	662	248.00	176.23	1,148.68
Agricultural and Food Science Technicians	642	256.62	138.42	1,144.70
Retail Salespersons	550	95.93	362.16	738.33
Laborers and Freight, Stock, and Material Movers, Hand	538	142.02	259.06	815.96
Taxi Drivers and Chauffeurs	507	164.99	183.43	830.40
Personal Care Aides	507	196.65	121.11	892.24
Accountants and Auditors	497	70.05	360.09	634.78
Stock Clerks and Order Fillers	458	73.60	313.46	602.06
Computer Occupations, All Other	433	34.71	364.86	500.96
Food Preparation Workers	431	117.28	201.48	661.37
Mechanical Drafters	427	256.26	-75.33	929.52
Driver/Sales Workers	425	371.98	-304.18	1,154.42

*Vacancy estimates that have Confidence Bounds that include 0 are not statistically different from 0. I.e., these estimates are not statistically significant.

Major SOC Group (as aggregated by HWOL)	% of Vacancies in Vacancy Survey	% of Vacancies in HWOL 8/14
Management & Business/Financial	18.9	17.8
Professional & Related	31.1	38.0
Services	20.5	9.8
Sales & Office	13.8	21.3
Construction & Maintenance	6.0	5.8
Production & Transportation	9.8	7.3
TOTAL	40,736	72,200

respective measures. Specifically, we compare results to counts obtained in the Conference Board Help Wanted Online (HWOL) Data Series internet scraped Job Ad reports. A properly conducted sample based survey should provide accurate counts of job openings within the confidence interval of the sample design. Firms were asked to count as vacancies only those positions that were actively under recruitment.

On the other hand, electronic job board scraping services should provide an accurate count of short-term job vacancies if all ads actually represent a job opening, ads are comprehensively collected and properly coded to industry and occupation and the duplicates

are effectively removed. Moreover, to be properly representative of the labor market, electronic job boards should contain the same proportional representation of industries as to the actual market.

As compared to the Connecticut Vacancy Survey, HWOL shows 177% more vacancies in the labor market. However, the Vacancy Survey estimate of total openings (40,736) is supported by the U.S. DOL Job Openings and Labor Turnover (JOLTS) survey for that time period. The JOLTS survey does not produce state level vacancy estimates, but by imputing Connecticut's share of the Northeast region's job vacancies it produced a value

much closer to the Connecticut Vacancy survey estimate. It appears that the HWOL estimates include some duplication and/or counts of job ads that are not true openings as defined in our study.

In addition, the distribution of vacancies across occupational groups differs considerably between the two programs. HWOL appears to overestimate the proportion of vacancies in the Professional and Sales & Office categories and significantly underestimate vacancies in Service fields.

For more information about the Job Vacancy Survey statistics or to obtain the complete listing of vacancies, contact the Office of Research at (860) 263-6255, or email us at dol.lmi@ct.gov. ■

GENERAL ECONOMIC INDICATORS

	1Q 2015	1Q 2014	CHANGE NO. %		4Q 2014
<i>(Seasonally adjusted)</i>					
General Drift Indicator (1996=100)*					
Leading	112.8	114.4	-1.6	-1.4	111.2
Coincident	114.7	112.6	2.1	1.9	114.1
Farmington Bank Business Barometer (1992=100)**	131.2	128.4	2.8	2.2	130.0
Philadelphia Fed's Coincident Index (July 1992=100)***	Jul 2015	Jul 2014			Jun 2015
<i>(Seasonally adjusted)</i>					
Connecticut	168.87	161.48	7.39	4.6	167.84
United States	174.59	168.70	5.89	3.5	174.17

Sources: *Dr. Steven P. Lanza, University of Connecticut **Farmington Bank ***Federal Reserve Bank of Philadelphia

General Drift Indicators are composite measures of the four-quarter change in three coincident (Connecticut Manufacturing Production Index, nonfarm employment, and real personal income) and three leading (housing permits, manufacturing average weekly hours, and initial unemployment claims) economic variables, and are indexed so 1996 = 100.

The **Farmington Bank Business Barometer** is a measure of overall economic growth in the state of Connecticut that is derived from non-manufacturing employment, real disposable personal income, and manufacturing production.

The **Philadelphia Fed's Coincident Index** summarizes current economic condition by using four coincident variables: nonfarm payroll employment, average hours worked in manufacturing, the unemployment rate, and wage and salary disbursements deflated by the consumer price index (U.S. city average).