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PERRY COUNTY ECONOMIC ASSESSMENT AND DISCUSSION GUIDE

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This report is designed to provide a profile of, and discussion guide to, several key aspects of Perry County's economy. It provides a profile of Perry County economic data, a summary of the agricultural economy in the County, and a number of considerations to guide the interpretation and implications of the data presented. It is not intended as a comprehensive analysis. Further exploration of this data and additional data and information not detailed here, as well as a thorough discussion of the implications of these and other considerations are all required for a comprehensive picture of the county's recent structural changes and its future priorities and opportunities.

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EXECUTIVE SUMMARY

Economic Overview

Overall, Perry County's employment growth mirrored the state's between 2005 and 2014 (5%). Over this same period, Perry County's employment growth outpaced its population growth by 3 percentage points (5% vs. 2%).

Perry County is clearly dominated by several important industries: **government and government related enterprises; retail trade; construction; health care and social assistance; transportation and warehousing; and agriculture.**

From the perspective of *earnings growth*, only health care and social services outpaced the state averages for each of these major sectors from 2014-2015. Several other smaller industries (by percent) had earnings growth above the state average. These included manufacturing and educational services. Still other sectors had growth below the state averages including information; real estate and rental and leasing; arts, entertainment and recreation; and federal civilian government.

Related to employment growth, of the six largest employment sectors (government and related services; retail trade; construction; health care and social assistance; transportation and warehousing; and agriculture), **Perry County did better than the state average in terms of health care and social services (30% vs. 17%), agriculture (8% vs. 3%), and construction (-6% vs. -7%).** In the remaining major industries, Perry County trailed the state's growth in employment: government and related services (-13% vs. -4%), transportation and warehousing (6% vs. 11%); and retail trade (-6% vs. -4%).

Agricultural Overview

Farm enterprises accounted for 8% of Perry County total employment with total sales of \$140,401,000 in 2012.

Perry County is an important supplier of several farm products including milk, hogs and pigs, poultry and eggs and grain and oilseed.

Milk from cows is the single largest category in terms of sales value. Almost ninety four percent of agricultural sales resulted from five products, milk (19.9%), poultry and eggs (19.9%), hogs and pigs (18.6%), grain and oilseed (13.9%) and beef (12.5%)

While there is a fairly wide distribution of farm sizes and types across the county, the share of overall sales are dominated primarily by the largest farms – those \$100,000 or more in annual sales.

Farm numbers and the amount of land in farms both declined between 2007 and 2012. This change drove the average acreage per farm up slightly (6%). **It's also interesting to note that the growth in Perry County's farm proprietor's income outpaced the overall average for the state (25% vs. 13%) in this time period.**

Shift-Share Overview

Perry County's employment growth over 2009-2014 of 2.92% trailed the 6.64% growth of employment nationally by -3.72%. **Accounting for this difference was an industry mix inclined toward industries that experienced slower growth, coupled with the fact that a large share of local industries underperformed their counterparts nationally.**

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In terms of employment growth, *a number of industries in Perry County outperformed* what would have been expected nationally based on the make-up of Perry County's industries. These include **manufacturing; finance and insurance; professional scientific and technical services; educational services; other services; and other/suppressed industries**. Still other industries in Perry County had *growth rates that were below the national average, but above those for that particular sector* – including **farms; construction; retail trade; real estate and rental and leasing; military; and state government**. (It is worth remembering that 'outperforming' does not necessarily have to be a positive number. It could simply mean that Perry County's industries lost less than would have been expected, had its industries performed the same as all those nationally).

Conversely, industries that *under-performed those nationally* include **transportation and warehousing; information; health care and social assistance; federal civilian; and local government**.

Finally, after we account for national and industry specific influences, *a number of local sectors stand out as having a net positive regional shift* –indicative of some local comparative advantage. These industries include **farms; construction; manufacturing; finance and insurance' professional, scientific and professional services; military; other services; educational services and state government**.

Location Quotient Overview

From the perspective of the Location Quotient data, **manufacturing; professional and technical services; educational services; information; real estate and rental and leasing; arts and entertainment; and accommodations and food services** have LQs of .76 or less indicating that Perry County *is likely importing these goods or services from outside the county*.

Exporting industries – those likely exporting goods and services to neighboring counties, the state or nation include **construction; retail trade; transportation and warehousing; and other services except public administration**.

Overall Summary

While it's impossible to capture the many trends and changes occurring in Perry County several broad generalizations can be made. First, it is exceedingly clear that Perry County's economy *is very strongly linked the economies of the surrounding counties – particularly Cumberland and Dauphin*. While the data here provides only a cursory look at these linkages and inter-dependencies, keeping them in mind and exploring them more – and communicating regionally are likely to be important elements of building an effective long-term economic development strategy for the county.

Second, Perry County clearly has a strong agricultural base offering both challenges and opportunities in the coming years. Because much of the data for this industry was suppressed it may be worth additional investigation regarding the specific make-up and value chain linkages of the agricultural sector in the county to fully identify the most effective points of asset building and opportunities.

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INTRODUCTION

This report is designed to provide a profile of, and discussion guide to, several key aspects of Perry County's economy. It provides a profile of Perry County economic data, a summary of the agricultural economy in the County, and a number of considerations to guide the interpretation and implications of the data presented. It is not intended as a comprehensive analysis. Further exploration of this data and additional data and information not detailed here, as well as a thorough discussion of the implications of these and other considerations are all required for a comprehensive picture of the county's recent structural changes and its future priorities and opportunities.

In general, this report discusses the major highlights of the publically available data related to Perry County's economy. In some cases, in-depth tables are provided in the Appendices. Additional links and source information are provided throughout this report.

Discussion questions at the end of each major section and at the conclusion of this report are provided to serve as a springboard for the local discussions. These discussions will be critical to both interpret the implications of the data presented in this report and begin to develop strategies and priorities to address the issues most important for Perry County's long-term future.

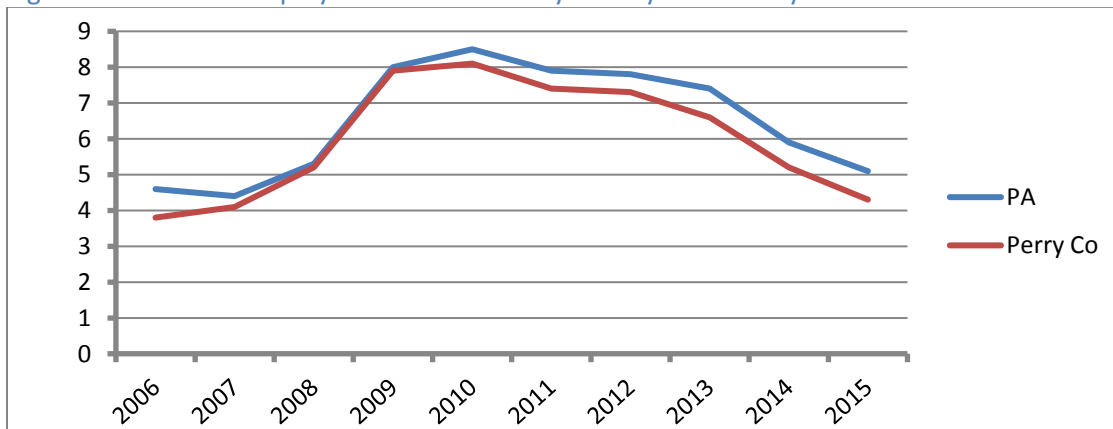
ECONOMIC OVERVIEW

This section begins with a look at unemployment, commuting patterns, employment characteristics and change at both the general and industry-specific levels. We then provide a snapshot of several additional data sets – namely income, population, and finally wages and salaries in both real and inflation-adjusted dollars. The data provided here is intended as a summary of major indicators in the economy. There is a wide range of additional and more detailed information available. As indicated above, a comprehensive assessment of both 'on the ground' and additional secondary data will be required in order to develop a complete assessment and effective economic development strategy.

Unemployment

While Perry County's unemployment rate was below the state's in the years 2006 through 2008 and equal to the state's in 2009, it has since remained below Pennsylvania's rate every year from 2010 through 2015. (Figure 1).

Figure 1. Annual Unemployment Rate for Perry County and Pennsylvania 2006 – 2015.



Source: Bureau of Labor Statistics Local Area Unemployment Statistics

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Employment

Perry County's economy employed 13,823 full and part-time individuals in 2014, a 5% increase over 2005 (Table 1). Wage and salary employees constituted 8,841 employees, while proprietors accounted for 5,342 jobs. Wage and salary employment declined by 4% between 2005 and 2014, while the number of proprietors increased by 24%. Proprietors is an important consideration because it's an indication of new business growth and potential.

Table 1. Total Full-time and Part-time Employment for Perry County, Wage and Salary Employment, Proprietors Employment 2005 and 2014.

	2005	2014	Change	% Change Perry Co	% Change PA
Total full-time and part-time employment	13,148	13,823	675	5%	5%
By type					
Wage and salary employment	8,836	8,481	(355)	-4%	2%
Proprietors employment	4,312	5,342	1,030	24%	29%
Farm proprietors employment	791	815	24	3%	-2%
Nonfarm proprietors employment 2/	3,521	4,527	1,006	29%	31%

Source BEA CA25 Local Area Data

(1)The estimates of employment for 2001-2006 are based on the 2002 North American Industry Classification System (NAICS). The estimates for 2007-2010 are based on the 2007 NAICS. The estimates for 2011 forward are based on the 2012 NAICS, (2) Excludes limited partners. Last updated: May 5, 2014, for restoration of employment estimates; new employment estimates for 2012; revised employment estimates for 2001-2011.

Table 2 below details the number and percent of jobs by industry in Perry County. Private nonfarm employment made up 78% of all jobs in 2014, while federal, state and local government comprised 15%, and farm employment made up 8% of the county's overall employment.

In the private sector, retail trade led the way in overall employment at 1,949 jobs (14%). This was followed by construction (1,386 jobs – 10%); transportation and warehousing (1,159 jobs – 8%); other services except public administration (1,129 jobs – 8%); health care and social assistance (1,068 jobs – 8%); and farm employment (1,065 – 8%). Together these industries comprised approximately 56% of total employment in the county in the 2014. Several sectors were not disclosed including forestry, fishing, and related activities, mining, utilities, wholesale trade, management of companies and enterprises and administrative and waste services. The not disclosed industry sectors contribute less than 12% of the county's employment.

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Table 2. Employment & Percent Employment by Industry, Perry County, 2014.

	Employment	Percent of Total
Total Employment	13,823	
Farm employment	1,065	8%
Nonfarm employment	12,758	92%
Private nonfarm employment	10,717	78%
Forestry, fishing, and related activities	(D)	
Mining	(D)	
Utilities	(D)	
Construction	1,386	10%
Manufacturing	633	5%
Wholesale trade	(D)	
Retail trade	1,949	14%
Transportation and warehousing	1,159	8%
Information	69	0%
Finance and insurance`	515	4%
Real estate and rental and leasing	438	3%
Professional, scientific, and technical services	500	4%
Management of companies and enterprises	(D)	
Administrative and waste management services	(D)	
Educational services	204	1%
Health care and social assistance	1,068	8%
Arts, entertainment, and recreation	154	1%
Accommodation and food services	509	4%
Other services, except public administration	1,129	8%
Government and government enterprises	2,041	15%
Federal, civilian	82	1%
Military	121	1%
State and local	1,838	13%
State government	420	3%
Local government	1,418	10%

D = Not disclosed

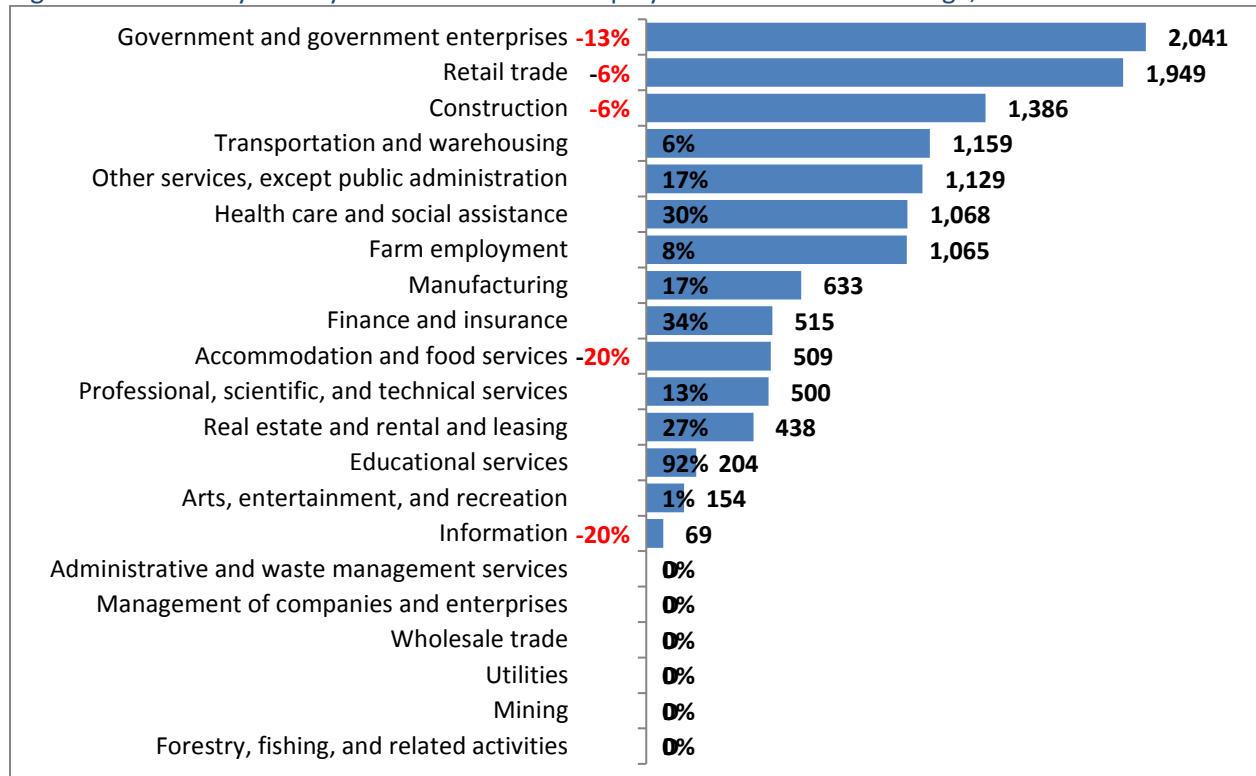
Source BEA CA25 Local Area Data (1) Estimates of employment for 2001-2006 are based on the 2002 North American Industry Classification System (NAICS). The estimates for 2007-2010 are based on the 2007 NAICS. The estimates for 2011 forward are based on the 2012 NAICS. Last updated: May 5, 2014, for restoration of employment estimates; new employment estimates for 2012; revised employment estimates for 2001-2011.

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Employment Change 2005-2014

Looking at total employment, however, tells us only part of the story. Equally important is an understanding of how the economy’s structure may be changing over time. Figure 1 depicts the 2014 number of full and part-time employees for the major industries in Perry County, ordered from highest to lowest number of employees, and the percent change in the number of full and part-time employees from 2005-2015 for each sector.

Figure 2. 2014 Perry County Full and Part-Time Employment and Percent Change, 2005-2014.



Source: BEA CA25 Local Area Data

Additionally, comparing local and state changes can also illuminate how Perry County is changing relative to activity going on in the overall economy. Table 3 details employment and change in jobs in Perry County’s economy from 2005 to 2014. The total number of jobs in the county increased by 675 (5%), which mirrors the 5% employment increase across the state. Industries that had significantly more growth in Perry County compared to Pennsylvania are highlighted in green. Those that had significantly less growth than the state are highlighted in yellow. For a more detailed discussion of these changes, see page 24 for the discussion of Perry County’s Shift Share Analysis.

As detailed in Table 3 and Figure 2, government and government enterprises was the largest employment sector in Perry County with 2,041 employees. In the private sector, retail trade was the largest employer with 1,949 jobs in the county in 2014 – and experienced a decrease of 118 (6%) jobs from 2005. This was followed by construction employing 1,386 people in 2014, a 6% decrease from 2006. Transportation and warehousing was the third largest private sector industry employer, employing 1,159 people in 2014 – a 6% increase since 2005. It should be noted, however, that Perry County’s job growth in this sector trailed Pennsylvania’s 11% growth rate. Other services except public administration was the fourth largest private sector employer in Perry County employing 1,129 people in 2014 a 17% increase from 2005. This sector’s growth rate was significantly larger than the 3% increase across Pennsylvania. Health care and social assistance was the fifth largest private sector

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employer in 2014 (1,068), growing by 30% from 2005. Employment growth in this sector was almost double that of the state (17%). The sixth largest private sector employer was the farm industry (1,065), which represented an 8% increase from 2005, exceeding Pennsylvania's 3% growth in this sector. It should also be noted that while educational services were a relatively small employment sector in the county, this sector almost doubled (92%) since 2005.

Table 3. Total Full-Time & Part-Time Employment (Number of Jobs) by Industry (1)

	2005	2014	Change	% Change Perry County	% Change PA
Total Employment (2)	13,148	13,823	675	5%	5%
Farm employment	990	1,065	75	8%	3%
Nonfarm employment	12,158	12,758	600	5%	5%
Private nonfarm employment	9,806	10,717	911	9%	6%
Forestry, fishing, and related activities	(D)	(D)			16%
Mining	(D)	(D)			131%
Utilities	13	(D)			0%
Construction	1,468	1,386	(82)	-6%	-7%
Manufacturing	543	633	90	17%	-14%
Wholesale trade	224	(D)			-3%
Retail trade	2,067	1,949	(118)	-6%	-4%
Transportation and warehousing	1,091	1,159	68	6%	11%
Information	86	69	(17)	-20%	-18%
Finance and insurance	383	515	132	34%	16%
Real estate and rental and leasing	346	438	92	27%	18%
Professional, scientific, and tech services	442	500	58	13%	12%
Management of companies & enterprises	-	(D)			44%
Admin and waste management services	373	(D)			11%
Educational services	106	204	98	92%	16%
Health care and social assistance	823	1,068	245	30%	17%
Arts, entertainment, and recreation	153	154	1	1%	21%
Accommodation and food services	635	509	(126)	-20%	11%
Other services, except public admin	964	1,129	165	17%	3%
Government and government enterprises	2,352	2,041	(311)	-13%	-4%
Federal, civilian	95	82	(13)	-14%	-10%
Military	132	121	(11)	-8%	-10%
State and local	2,125	1,838	(287)	-14%	-3%
State government	505	420	(85)	-17%	1%
Local government	1,620	1,418	(202)	-12%	-4%

D = Not disclosed

Source BEA CA25 Local Area Data

- (1) The estimates of employment for 2001-2006 are based on the 2002 North American Industry Classification System (NAICS). The estimates for 2007-2010 are based on the 2007 NAICS. The estimates for 2011 forward are based on the 2012 NAICS.
- (2) It is strongly suggested that readers consult BEA's 'Guide to Industry Classifications for International Surveys, 2012' provided in the Appendix for a full detailing of the industries that comprise each of the major categories identified in this report.

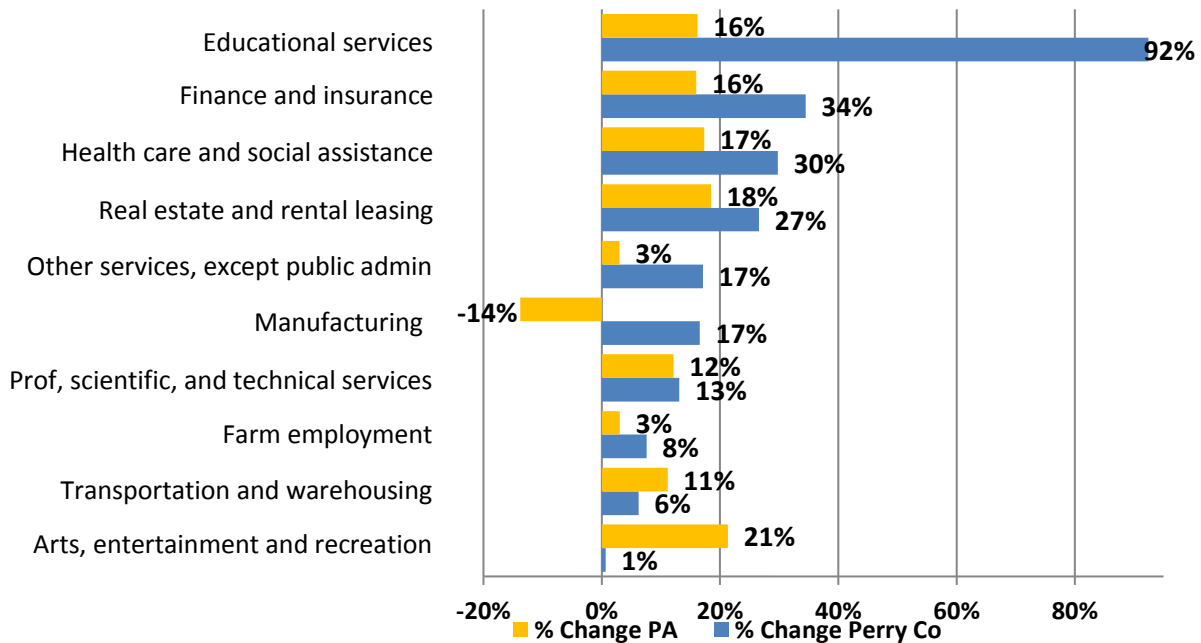
Last updated: May 5, 2014, for restoration of employment estimates; new employment estimates for 2012; revised employment estimates for 2001-2011.

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Employment Change for Perry County Growth Industries (2005-2014)

Figure 3 below compares the percent employment gain for Perry County and Pennsylvania for industries with employment growth in Perry County. All of industries with growth in employment in Perry County outpaced the growth rate in Pennsylvania, except arts, entertainment and recreation. The Perry County growth rate for four industries; educational services, finance and insurance, health care and social assistance and other services, except public administration significantly exceeded the Pennsylvania growth rate. The growth in employment for the arts, entertainment and recreation industry in Perry County (1%) was outpaced by the 21% growth in Pennsylvania

Figure 3. Percent Change in Employment (2005-2014) for Perry County Employment Growth Industries, Perry County and Pennsylvania.



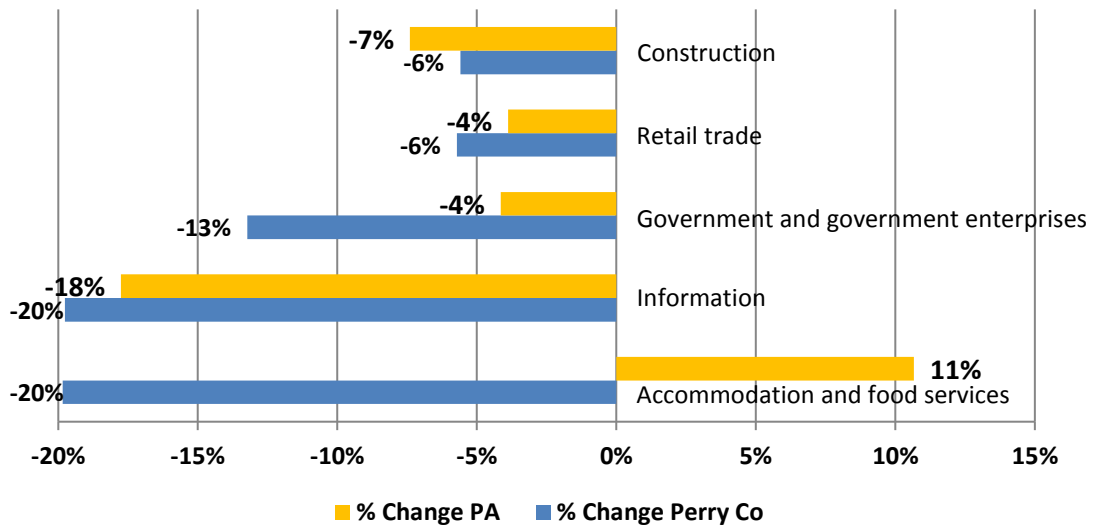
Source: BEA CA25 Local Area Data

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Employment Change for Perry County Employment Loss Industries (2005-2014)

Figure 4 below compares the percent employment loss for Perry County and Pennsylvania industries for the five industries that lost employment in Perry County. Four of these industries that lost employment in Perry County also had employment loss across Pennsylvania. It is important to note that accommodation and food services grew by 11% in Pennsylvania but lost 20% of its employees in Perry County between 2005 and 2014.

Figure 4. Percent Change in Employment (2005-2014) for Employment Loss Industries, Perry County and Pennsylvania.

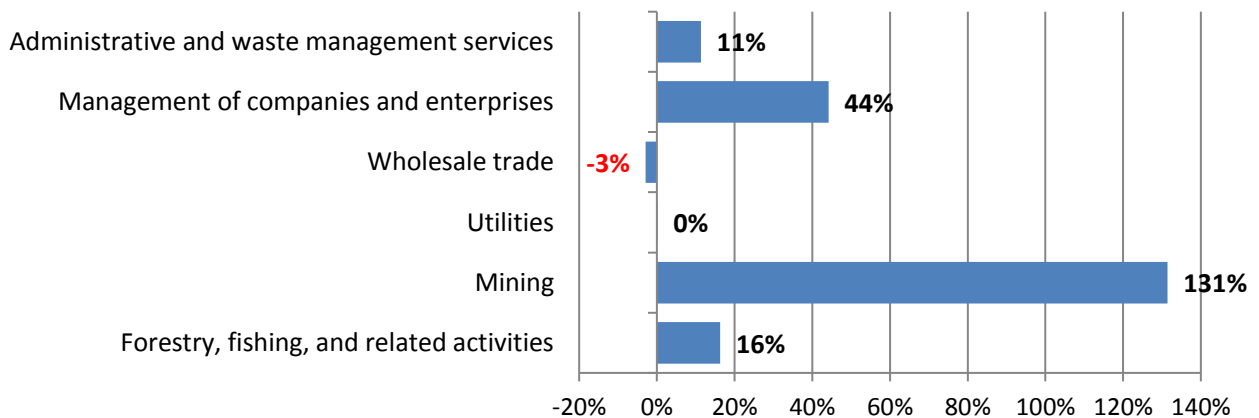


Source: BEA CA25 Local Area Data

Change in Employment in Pennsylvania (2005-2014) for Industries Not Disclosed in Perry County

Employment data for six industries was not disclosed. The employment change in these industries for Pennsylvania is detailed in Figure 5 below. Employment growth was positive in four of these industries.

Figure 5. Percent Change in Employment, Pennsylvania (2005-2014) for Employment Not Disclosed Industries in Perry County



Source: BEA CA25 Local Area Data

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Employee Migration to Perry County

Perry County industries employ workers that live both in and outside of the county. Table 4 and Figure 2 provide a look at the residence of employees working for Perry County businesses (annual average 2009 and 2013).

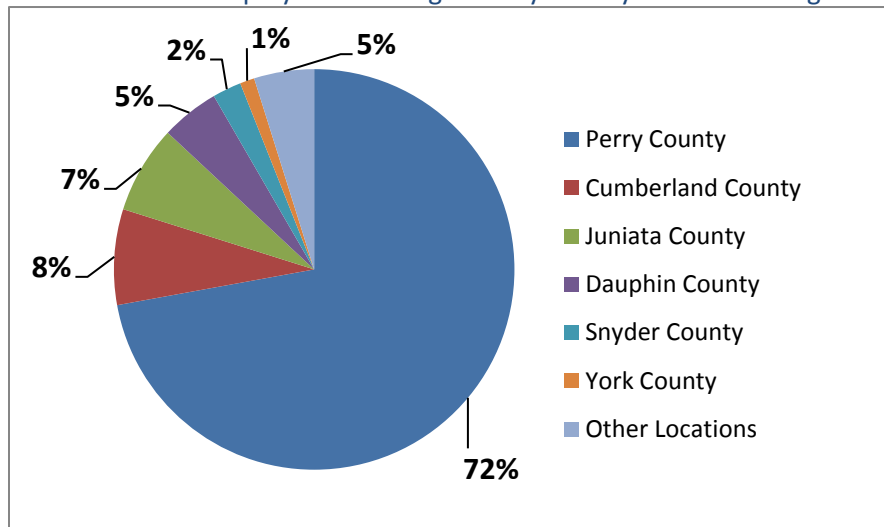
Seventy-two percent (7,205) of individuals employed by Perry County businesses (9,987) live in Perry County. Twenty percent of the county’s employees travel from three surrounding counties; Cumberland County (8%), Juniata County (7%) and Dauphin County (5%).

Table 4. Residence of Employees Working in Perry County: Annual Average 2009-2013

	Number	% Total
Perry County	7,205	72%
Cumberland County	771	8%
Juniata County	708	7%
Dauphin County	469	5%
Snyder County	233	2%
York County	117	1%
Other Locations	484	5%
Total	9,987	

*American Community Survey *estimated*

Figure 6. Residence of Employees Working in Perry County: Annual Average 2009-2013



*Source: American Community Survey *estimated*

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Employment Location of Perry County Residents

As indicated above, Perry County residents are employed by companies located inside and outside the county. Table 5 and Figure 3 provide a look at where Perry County residents are employed.

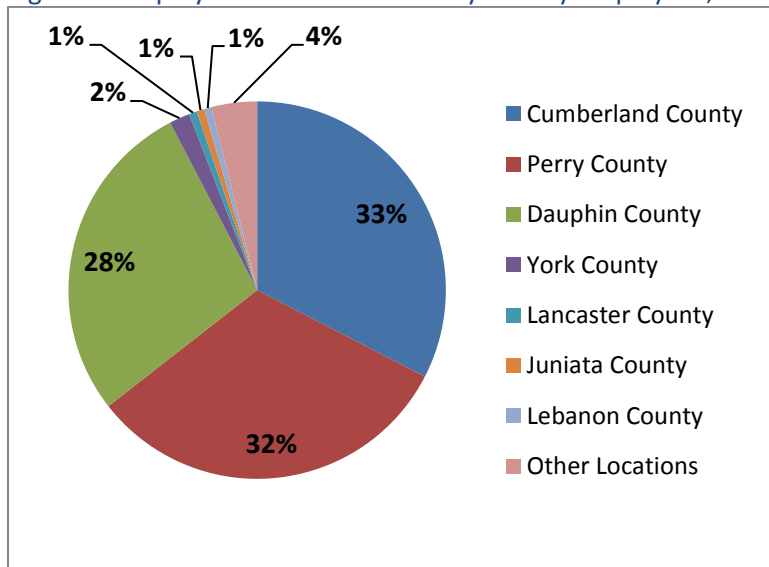
Businesses in the counties surrounding Perry County employed approximately 70% of Perry County workers. This is a clear indication that the Perry County economy is strongly tied to the regional economy and especially those of Cumberland (33%) and Dauphin (28%) counties.

Table 5. Employment Location of Perry County Residents: Annual Average 2009-2013

	Number	% Total
Cumberland County	7,363	33%
Perry County	7,205	32%
Dauphin County	6,309	28%
York County	396	2%
Lancaster County	157	1%
Juniata County	147	1%
Lebanon County	141	1%
Other Locations	883	4%
Total	22,460	

Source: American Community Survey *estimated

Figure 7. Employment Location of Perry County Employees, 2009-2013



Source: American Community Survey *estimated

Population and Income

Table 6 and Figure 8 detail Perry County's total personal income, population and per capita income for 2005 and 2014. Perry County's 2014 total nominal (non-inflation-adjusted) personal income was \$1,740,256,000, a 34% increase from 2005). In inflation-adjusted dollars (real dollars), this figure was \$1,432,109 and represented real income growth 10% nearly equaling Pennsylvania's 12% increase. *When we look at these numbers in relation to population and employment growth, we see that the county's population grew 2% from 2005 to 2014 (equal to*

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the state) while employment growth (Table 1) was 5 % and real personal income growth was 10%. Per capita personal income grew by 8%, nearly equaling the state’s per capita income growth of 9%.

Note: This overview does not consider a wide range of other relevant demographic and workforce characteristics that may be important to the long-term outlook for employment and job growth. For an accessible and comprehensive profile of Perry County, please see the Center for Rural Pennsylvania’s [County Profiles](#). These profiles include an array of useful income, population, housing, health, farm and other data that you may want to consider.

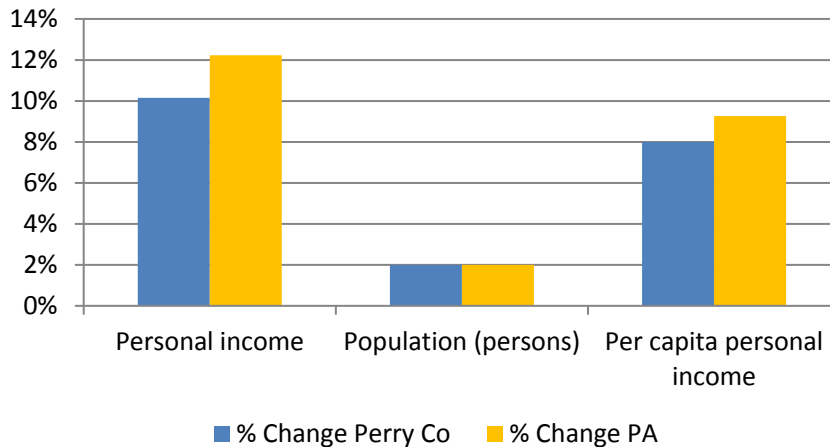
Table 6. Personal Income, Population and Per Capita Personal Income, Perry County, 2005-2014

	2005 (nominal)	2014 (nominal)	2014* (real)	% Change Perry County (real)	% Change PA (real)
Personal income (\$1,000)	\$ 1,300,166	\$ 1,740,256	\$ 1,432,109	10%	12%
Population (persons)	44,741	45,634		2%	2%
Per capita personal income (dollars)	\$ 29,060	\$ 38,135	\$ 31,382	8%	9%

*% Change inflation adjusted - \$1,000 in 2005 = \$1,212.17 in 2014

Source: BEA CA05 Local Area Data, Census Bureau midyear population estimates. Estimates for 2001-2012 reflect county population estimates available as of March 2013

Figure 8. Change in Personal Income, Population and Per Capita Income (2005-2014), Perry County and Pennsylvania.



Source: BEA CA05 Local Area Data

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Table 7 details the sources and changes in Perry County's earned income for 2005 and 2014. Wages and salaries decreased (in inflation adjusted dollars) by 2% in Perry County from 2005 to 2014, compared to a 7% increase in Pennsylvania. Proprietors' income in Perry County grew by 17%, compared to a 12% growth rate in Pennsylvania. Farm proprietor's income grew by 95% from 2005, outpacing the state's growth rate of 79%. Nonfarm proprietors' income in the county decreased by 3%. Income for this sector grew by 11% in the state. Wages and salaries comprise 67% of earned income in the county. Proprietors' income made up approximately 33% of total earned income in the county.

Table 7. Earned Income, Perry County, 2005-2014 (\$1,000)

	2005 (nominal)	2014 (nominal)	2014 Inflation Adjusted (real)	% Change Perry County *	% Change PA *
Wages and salaries	\$ 218,549	\$ 260,986	\$ 214,773	-2%	7%
Proprietors' income (1)	\$ 89,076	\$ 126,971	\$ 104,488	17%	12%
Farm proprietors' income	\$ 18,863	\$ 44,591	\$ 36,695	95%	79%
Nonfarm proprietors' income	\$ 70,213	\$ 82,380	\$ 67,793	-3%	11%

*% Change inflation adjusted - \$1,000 in 2005 = \$1,212.17 in 2014

Source: BEA CA05 Local Area Data

(1) Proprietors' income includes the inventory valuation adjustment and capital consumption adjustment

Wages and Salaries by Sector

In terms of 2014 wages and salaries, as indicated in Table 8, nonfarm earnings contributed 89.4% of wages and salaries in Perry County, while farm earnings contributed 10.6%. Private nonfarm earnings contributed 63.6% of the county's wages while government and government enterprises contributed 25.8% of wages in the county.

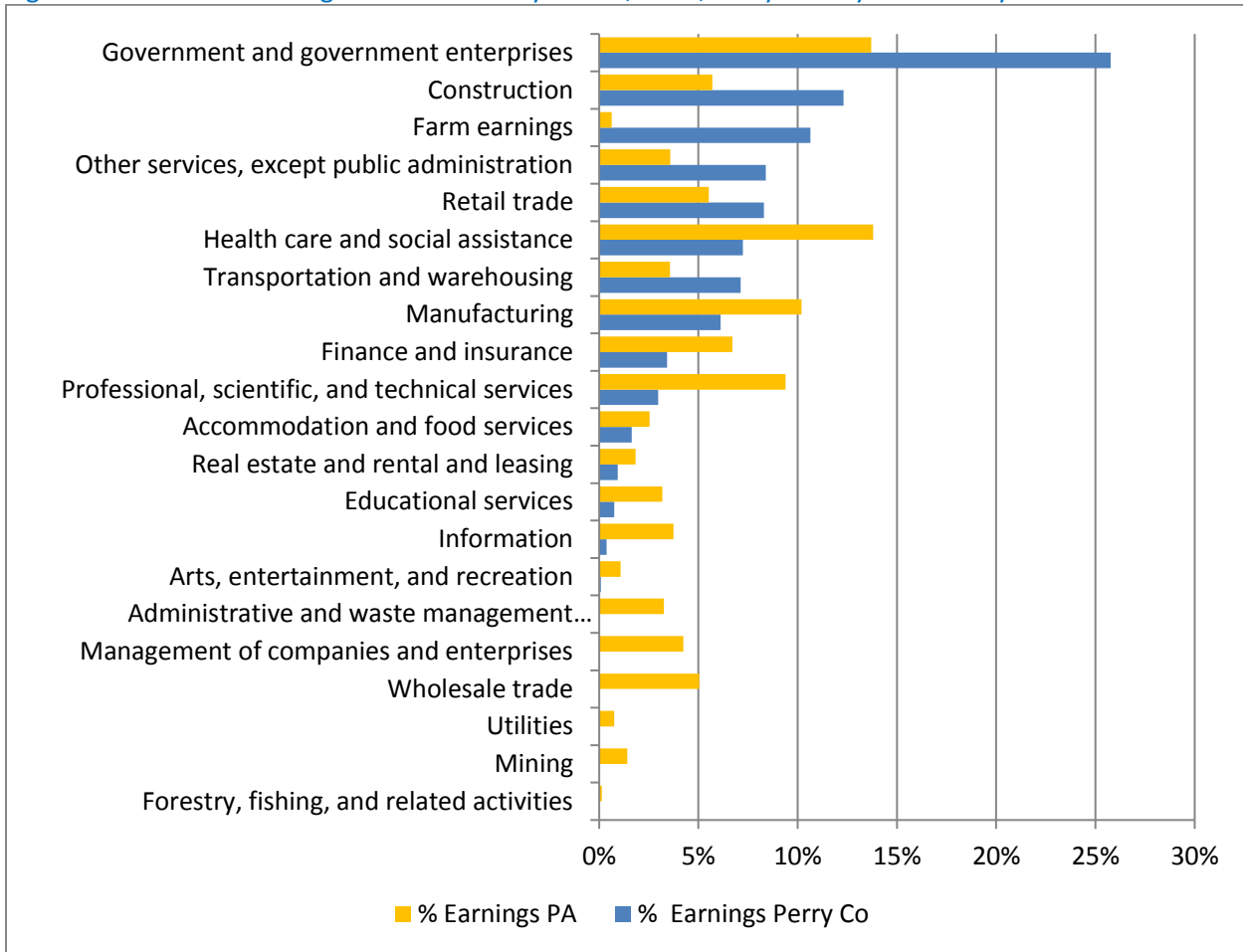
Wages were not disclosed for six of the private nonfarm industry sectors; forestry, fishing and related activities; mining; utilities; management of companies and enterprises and administrative services. These sectors account for just 1% of the total private nonfarm wages.

Figure 9 depicts the percent total wages and salaries in 2014 by industry for Perry County and Pennsylvania. Government and government enterprises contributed the largest percentage of Perry County's wages (25.8%). Rounding out the top six contributors to county wages was construction (12.3%), followed by farm earnings (10.6%) other services, except public administration (8.4%); retail trade (8.3%); health care and social assistance (7.2%); and transportation and warehousing (7.1%).

Figure 9 clearly demonstrates that a number of industries in Perry County contribute a much larger percent total wages than their contribution for Pennsylvania. These include government and government enterprises which contributed 26% of county wages, and 14% of state wages, with construction contributing 12% of county wages and 6% of state wages, farm earnings 11% of county wages and 1% of state wages. Conversely, several industries contributed a significantly larger percent total wages in Pennsylvania than in Perry County. These include health care and social assistance as 7% of county wages, and 14% of state wages, manufacturing 6% of county wages and 10% of state wages, finance and insurance 3% of county wages and 7% of state wages.

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Figure 9. Percent Total Wages and Salaries by Sector, 2014, Perry County and Pennsylvania.



Source BEA CAOS Local Area Data

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Table 8. Wages & Percent Wages by Sector, Perry County, 2014 (\$1,000)

	2014	Wages as % of Total
Total Wages	\$ 481,902	
Farm earnings	\$ 51,260	10.6%
Nonfarm earnings	\$ 430,642	89.4%
Private nonfarm earnings	\$ 306,500	63.6%
Forestry, fishing, and related activities	(D)	D
Mining	(D)	D
Utilities	(D)	D
Construction	\$ 59,341	12.3%
Manufacturing	\$ 29,490	6.1%
Durable goods manufacturing	\$ 16,355	3.4%
Nondurable goods manufacturing	(D)	D
Wholesale trade	(D)	D
Retail trade	\$ 40,000	8.3%
Transportation and warehousing	\$ 34,319	7.1%
Information	\$ 1,815	0.4%
Finance and insurance	\$ 16,456	3.4%
Real estate and rental and leasing	\$ 4,494	0.9%
Professional, scientific, and technical services	\$ 14,344	3.0%
Management of companies and enterprises	(D)	D
Administrative and waste management services	(D)	D
Educational services	\$ 3,643	0.8%
Health care and social assistance	\$ 34,917	7.2%
Arts, entertainment, and recreation	\$ 424	0.1%
Accommodation and food services	\$ 7,908	1.6%
Other services, except public administration	\$ 40,413	8.4%
Government and government enterprises	\$ 124,142	25.8%
Federal, civilian	\$5,623	1%
Military	\$3,594	1%
State and local	\$114,925	24%

D = Not disclosed

Source: BEA CA05 Local Area Data

Change in Wages and Salaries by Sector

As noted above, comparison both over time and with the state can also be illuminating. Wages and salaries within Perry County industries between 2005 and 2014 (adjusted for inflation) are detailed in Table 9 and Figure 10. The percent change identified in Table 9 compares 2005 dollars and inflation-adjusted 2014 dollars.

Five industry sectors in the county had a positive increase in earnings (highlighted in green). Farm earnings grew by 82% over the ten-year period, outpacing this sector's 60% increase in Pennsylvania. Educational services earnings increased by 66%, outpacing Pennsylvania's 26% increase in this sector. Earnings in the healthcare and social assistance sector in the county grew by 28%, while earning across the state in this sector grew by 19%.

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The manufacturing sector earnings grew by 22% compared to a 14% decline in this sector's earnings in Pennsylvania. Finance and insurance grew by 9% in the county compared to a 6% growth in the state. Other important sectors (highlighted in yellow) where Perry County's earnings trailed the state average by significant margins included information; real estate and rental and leasing; professional, scientific, and technical services; arts, entertainment and recreation; and accommodation and food services.

Table 9. Earnings by Industry, Perry County (\$1,000), 2005-2014

	2005 (nominal)	2014 (nominal)	2014 Inflation Adjusted (real)	% Change, Perry County (real)*	% Change PA *
Farm earnings	\$ 23,196	\$ 51,260	\$ 42,183	82%	60%
Nonfarm earnings	\$ 363,698	\$ 430,642	\$ 354,388	-3%	6%
Private nonfarm earnings	\$ 253,792	\$ 306,500	\$ 252,228	-1%	7%
Forestry, fishing, and related activities	(D)	(D)	D	D	9%
Mining	(D)	(D)	D	D	129%
Utilities	\$ 318	(D)	D	D	-1%
Construction	\$ 52,691	\$ 59,341	\$ 48,833	-7%	-8%
Manufacturing	\$ 19,854	\$ 29,490	\$ 24,268	22%	-14%
Durable goods manufacturing	\$ 8,693	\$ 16,355	\$ 13,459	55%	-16%
Nondurable goods manufacturing	(D)	(D)	D	D	1%
Wholesale trade	\$ 7,674	(D)	D	D	6%
Retail trade	\$ 37,907	\$ 40,000	\$ 32,917	-13%	-10%
Transportation and warehousing	\$ 28,439	\$ 34,319	\$ 28,242	-1%	4%
Information	\$ 3,413	\$ 1,815	\$ 1,494	-56%	16%
Finance and insurance	\$ 12,393	\$ 16,456	\$ 13,542	9%	6%
Real estate and rental and leasing	\$ 34,812	\$ 4,494	\$ 3,698	-89%	16%
Professional, scientific, and tech services	\$ 11,083	\$ 14,344	\$ 11,804	7%	15%
Mgmt. of companies & enterprises	(D)	(D)	D	D	58%
Admin and waste management services	\$ 4,098	(D)	D	D	12%
Educational services	\$ 1,803	\$ 3,643	\$ 2,998	66%	26%
Health care and social assistance	\$ 22,530	\$ 34,917	\$ 28,734	28%	19%
Arts, entertainment, and recreation	\$ 884	\$ 424	\$ 349	-61%	17%
Accommodation and food services	\$ 8,394	\$ 7,908	\$ 6,508	-22%	12%
Other services, except public admin	\$ 34,362	\$ 40,413	\$ 33,257	-3%	-5%
Government and government enterprises	\$109,906	\$ 124,142	\$ 102,160	-7%	0%
Federal, civilian	\$ 5,303	\$ 5,623	\$ 4,627	-13%	-5%
Military	\$ 4,403	\$ 3,594	\$ 2,958	-33%	-27%
State and local	\$100,200	\$ 114,925	\$ 94,575	-6%	2%

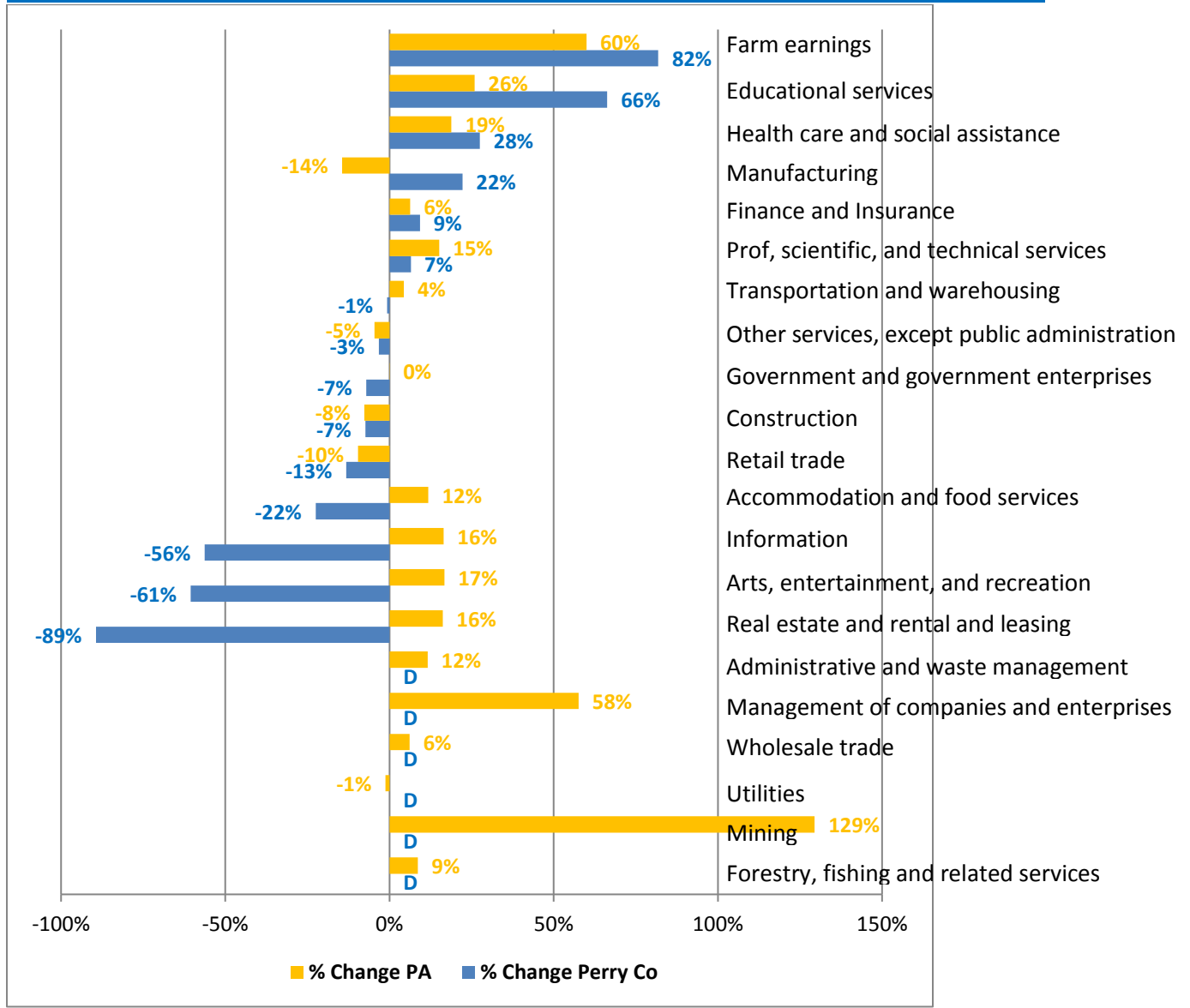
D = Not disclosed

*% Change inflation adjusted - \$1,000 in 2003 = \$801.30 in 2012

Source: BEA CA05 Local Area Data

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Figure 10. Percent Change in Wages and Salaries, 2005-2014, Perry County and Pennsylvania.



D = Not disclosed

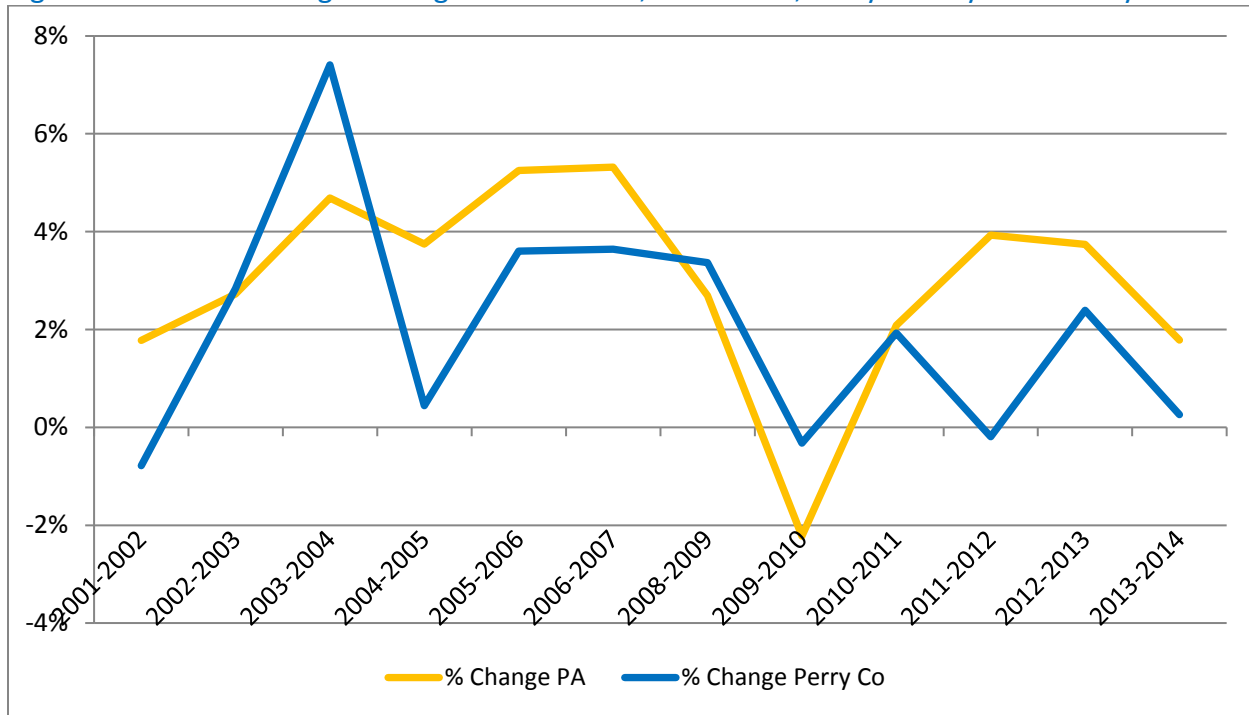
*% Change inflation adjusted - \$1,000 in 2003 = \$801.30 in 2012

Source: BEA CA05 Local Area Data

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Figure 11 compares the yearly change in wages and salaries from 2001 through 2014 for Perry County and Pennsylvania. The figure clearly shows that there is considerable difference in the growth or decline from year to year in wages and salaries in the Perry County and Pennsylvania economies. For example: The change in wages from 2001 to 2002 fell approximately -1% in Perry County, but grew nearly 2% in Pennsylvania. From 2002 to 2003 wages in Perry County and Pennsylvania grew approximately 3%. The change from 2003 to 2004 increased for both Perry County (approximately 7%) and the state (approximately 4.5%).

Figure 11. Percent Change of Wages and Salaries, 2001-2014, Perry County and Pennsylvania.



Employment and Earnings Compared: Perry County and Pennsylvania

Table 10 below provides a comparison of the share of employment and wages and salaries for Perry County and Pennsylvania in 2014. The percentages (share) of wages and salaries for three industry sectors (construction, farm employment, and manufacturing) were all larger (in percentage terms) than employment in each of these sectors (highlighted in yellow).

Construction accounted for 10% of the county's employment, but accounted for 12% of total wage and salaries. This sector's share of employment in the county (10%) was larger than at the state level (5%). Although the change in wages and salaries for the construction sector in both the county and state were negative, the county change (-7%) was less than the state's decrease (-8%).

Farm employment accounted for 8% of the county's jobs and 11% of wage and salaries. Employment growth in the county for this sector outpaced state growth by 2% (5% vs. 3%), while the change in wages for this sector was 82% compared to the state's 60% growth in wages.

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Manufacturing comprised 5% of the county's jobs and 6% of the wages and salaries. The county's employment change in this sector (17%) outpaced the state's loss of 14%, while county wage and salaries in this sector grew by 22%, compared to a loss of 14% in Pennsylvania.

Four other sectors provided more than 8% of the jobs in the county; retail trade (14%) transportation and warehousing (8%) healthcare and social assistance (8%) and other services except public administration (highlighted in green).

Retail trade contributed 14% of the jobs in the county compared to 10% for Pennsylvania. The county's employment change in this industry fell by 6% compared to a -4% change in the state. Change in wages and salaries for the county was -13% and -10% in the state.

Transportation and warehousing accounted for 8% of the county's jobs and 7% of the wages and salaries. The county's employment change in this sector (6%) was significantly less than the 11% gain in the state. Wages and salaries in this sector fell by 1% but grew by 4% in the state.

Health care and social assistance contributed 8% of the jobs to the county and 7% of the wages and salaries. The 30% employment change in the county for this industry was nearly double the 17% change across the state. Wages and salaries for the salaries in healthcare and social assistance industry in the county grew by 28%, considerably higher than the 19% increase in the state.

Other services except public administration contributed 8% of the county's jobs, and 8% of the wages and salaries. The industries 17% employment growth outpaced the 3% growth in the state. Wages and salaries for this industry fell by 3% in the county and 5% in the state.

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Table 10. Share of Employment, Percent Change in Employment, Share of Wages and Salaries and Percent Change in Wages and Salaries by Industry Sector, Perry County and Pennsylvania

Sector	2014 Share of Employment (%)		Percent Change in Employment (2005-2014)		2014 Share of Wages and Salaries (%)		Percent Change in Wages and Salaries (2005-2014)	
	County	PA	County	PA	County	PA	County	PA
Government and government enterprises	15%	11%	-13%	-4%	26%	14%	-7%	0%
Retail trade	14%	10%	-6%	-4%	8%	6%	-13%	-10%
Construction	10%	5%	-6%	-7%	12%	6%	-7%	-8%
Transportation and warehousing	8%	4%	6%	11%	7%	4%	-1%	4%
Other services, except public administration	8%	6%	17%	3%	8%	4%	-3%	-5%
Health care and social assistance	8%	14%	30%	17%	7%	14%	28%	19%
Farm employment	8%	1%	5%	3%	11%	1%	82%	60%
Manufacturing	5%	8%	17%	-14%	6%	10%	22%	-14%
Finance and insurance	4%	5%	34%	16%	3%	7%	9%	6%
Accommodation and food services	4%	6%	-20%	11%	2%	3%	-22%	12%
Professional, scientific, and technical services	4%	7%	13%	12%	3%	9%	7%	15%
Real estate and rental and leasing	3%	3%	27%	18%	1%	2%	-89%	16%
Educational services	1%	4%	92%	16%	1%	3%	66%	26%
Arts, entertainment, and recreation	1%	2%	1%	21%	0%	1%	-61%	17%
Information	0%	1%	-20%	-18%	0%	4%	-56%	16%
Forestry, fishing, and related activities	(D)	0%	(D)	16%	(D)	0%	(D)	9%
Mining	(D)	1%	(D)	131%	(D)	1%	(D)	129%
Utilities	(D)	0%	(D)	0%	(D)	1%	(D)	-1%
Wholesale trade	(D)	3%	(D)	-3%	(D)	5%	(D)	6%
Management of companies and enterprises	(D)	2%	(D)	44%	(D)	4%	(D)	58%
Administrative and waste management services	(D)	5%	(D)	11%	(D)	3%	(D)	12%

D = Not disclosed

Economic Summary

Overall, Perry County's employment growth has been the same as the state's between 2005 and 2014 (5%). In addition, over this same time period, Perry County's employment growth outpaced its population growth by 3% (5% vs. 2%). The implications of this disparity for long-term planning depends on a further analysis of economic and demographic data and the characteristics of these changes.

Perry County is clearly dominated by several important industries: **government and government related enterprises; retail trade; construction; health care and social assistance; transportation and warehousing, and agriculture.** From the perspective of earnings growth in these largest sectors, three industries (health care and social services, construction, and farms) had growth rates that exceeded (or declined less) than the state while government services, retail, and transportation all had growth rates lower than the state.

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Other smaller industries (by percent) that had earnings growth above the state average include manufacturing, educational services, finance and insurance, and other services, except public administration. Still, other sectors had growth below the state averages including information; real estate and rental and leasing; arts, entertainment and recreation; accommodation and food services; and professional, scientific and technical services.

Related to *employment growth*, of the county's six largest employment sectors (government and related services; retail trade; construction; health care and social assistance; transportation and warehousing; and agriculture), Perry County did better than the state average in terms of health care and social services (30% vs. 17%); agriculture (8% vs. 3%); and construction (-6% vs. -7%). In the remaining major industries, Perry County trailed the state's growth in employment growth: government and related services (-13% vs. -4%); transportation and warehousing (6% vs. 11%); and retail trade (-6% vs. -4%). In each of these sectors it is worth further investigation regarding the underlying factors that may be driving both changes over time within the county, and why differences in percent employment may have occurred between the county and state.

Related to employee migration, Perry County businesses and industries employed 9,987 people in 2009-2013. Seventy two percent of these employees lived in Perry County. There were 22,460 people from Perry County employed during this time period. Thirty three percent of these employees worked in Cumberland County, 32% in Perry County and 28% in Dauphin County.

Discussion Questions

Some of the questions you may want to consider as you think about the data detailed in this section include the following. You may think of a number of others as you begin to explore underlying causes and implications.

1. What are the characteristics or mix of nonfarm proprietors within the county that may account for proprietors' income to trail the state's by so much while simultaneously seeing employment growth in proprietors similar to growth in the state? Should this be a concern? Why or why not?
2. Is there an opportunity to expand small business development and proprietor's income in the county?
3. What local conditions may be influencing the relatively high growth rate in agriculture employment and earnings in Perry County (82% vs. 60% and 8% vs. 3% respectively)
4. What factors are influencing the relatively strong growth (in percentage terms) in educational services in Perry County?
5. What factors are influencing the relatively strong growth (in percentage terms) in health care and social services income and employment in Perry County? What implications does this have for the future?
6. What factors are influencing the relatively strong growth (in percentage terms) in manufacturing, and 'other services except public administration in Perry County? Does this provide either opportunities or challenges as we move forward?
7. What happened in Perry County's economy that might explain relatively large decreases earnings in Perry County's (as compared to PA's) information; real estate, rental and leasing; arts, entertainment and recreation; and accommodations and food services industries?

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8. What does it tell us that Perry County's employment grew by 3% over its population growth (5% vs. 2%)? Does this point to strengths that can be capitalized on or concerns that will need to be considered?
9. What additional demographic or workforce data would be useful to you as you begin to assess your long-term strategies?

PERRY COUNTY AGRICULTURE AND RELATED INDUSTRIES

The Perry County agricultural economy has two separate components: 1) the production component that is reflected by the county's farms and the products generated by these businesses, including firms that provide inputs to farms, and those businesses who process farm products and; 2) the consumption component that exists because Perry County residents must eat. This component includes businesses involved in food sales and distribution. The following data provides information that highlights Perry County's production agricultural economy and the businesses that use products produced by farms, as well as those that provide inputs and services to farms.

Perry County's Production Agricultural Economy

The United States Department of Agriculture conducts a nationwide census of agriculture every five years. This survey collects detailed information about production agriculture. Complete Census of Agriculture results are available at <http://www.agcensus.usda.gov/index.php>

In 2014, Perry County's 1,415 farms produced products valued at \$195.4 million and had an annual payroll of \$9.342 million (Table 11.)

Table 11. Production Agriculture Economy, Perry County, 2012

Number of farms	1,002
Value of production	\$140,401,000
Farm labor payroll	\$6,122,000
Workers employed > 150 days	316
Workers employed <150 days	378
Seasonal workers	7

Source: 2012 Ag Census

As noted above, Perry County's total agricultural sales in 2012 were \$140,401,000. This represents a 10% increase from 2007 (in inflation adjusted dollars) and a 24% increase in the average sales per farm. As detailed in Table 12, crops (defined broadly) comprised 20% of this total while livestock sales made up 80% of all sales in 2012.

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Table 12. Market Value of Products Sold, Perry County, 2007-2012, (Nominal and Real)

	2007 (nominal)	2012 (nominal)	2012 (real)	Percent Change
Value of production (\$1,000)	\$105,052	\$140,401	\$115,540	10%
Crop sales (\$1,000)	\$13,543	\$27,727	\$22,817	68%
Livestock sales (\$1,000)	\$91,508	\$112,674	\$92,723	1%
Average per farm	\$104,842	\$157,932	\$129,967	24%

Source: 2012 Ag Census

*Real dollars – inflation adjusted based on 2007 dollar values (\$1,000 in 2007 = \$875 in 2012)

Property Taxes Paid by Farms

Property taxes paid by farms totaled \$179,706,000 in 2015 compared to \$187,962,100 in 2012, representing a 0.04% decrease between 2012 and 2015 (*State Tax Equalization Board Landuse Report, Perry County*). There was also an 11% decrease in the number of farms over this same period (Table 14). Perry County farmers have 85,278 acres of land enrolled in the Clean and Green program according to the 2015 Farmland Preservation Annual Report. Conservation easements cover 487 acres on four county farms have been purchased by the state and county government.

Land in Farms

In 2012, the county's 889 farms made up 135,075 acres or 41% of Perry County's total land area (Table 13). Overall farm numbers declined 11% between 2007 and 2012, while land in farms declined by 6%. Taken together, the average size of all farms grew by 6%.

Table 13. Farms, Land in Farms, and Market Value of Products Sold, Perry County, 2007-2012

	2007	2012	Percent Change 2007-2012
Farms (number)	1,002	889	-11%
Land in farms (acres)	144,375	135,075	-6%
Average size of farm	144	152	6%

Source: 2012 Ag Census

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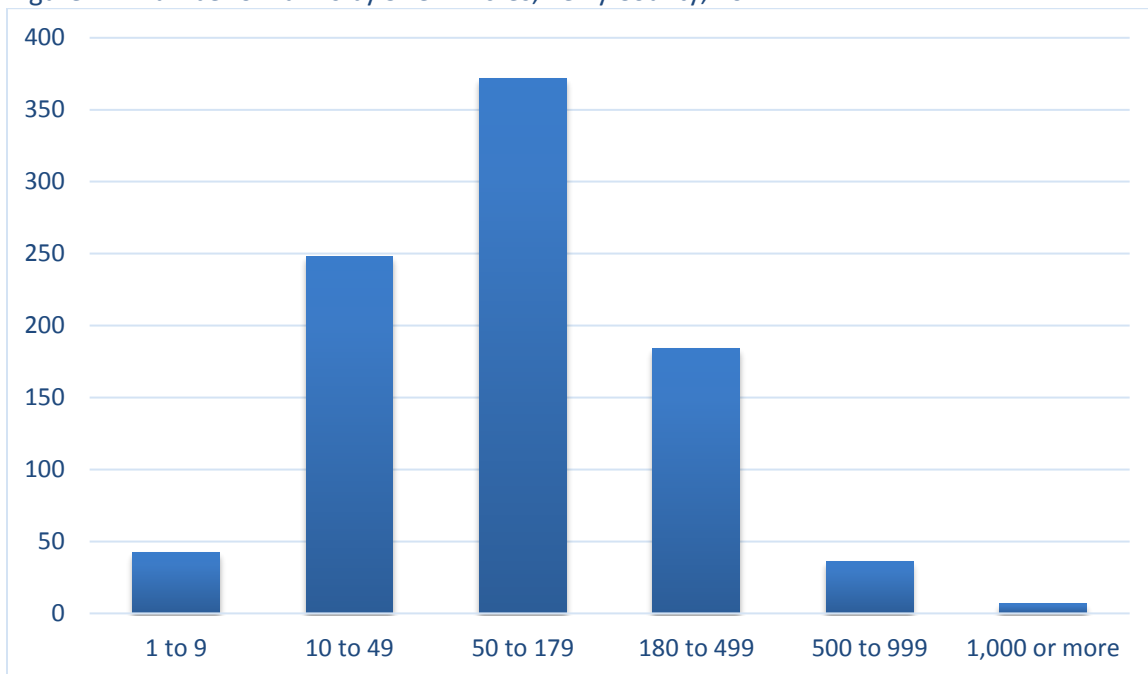
As detailed in Table 14 and Figure 4, just over a third of the county's farms are less than 50 acres in size, while 42% are between 40 and 179 acres and 26% are larger than 180 acres.

Table 14. Size of Farms by Number and Percentage

	Number of Farms	% of Farm Acreage
1 to 9 acres	42	5%
10 to 49 acres	248	28%
50 to 179 acres	372	42%
180 to 499 acres	184	21%
500 to 999 acres	36	4%
1,000 acres or more	7	1%

Source: 2012 Ag Census

Figure 12. Number of Farms by Size in Acres, Perry County, 2012



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Farm Types and Sales

Table 15 classifies the county's farms by the type of products they produce. Oilseed and grain farming is undertaken by the largest number of county farms followed by beef cattle ranching and farming and other crop farming.

Table 15. Products Produced by Perry County Farms (2012) (number and percent of farms)

Farm	Number	Percent of Farms (1)
Oilseed and grain farming	342	38%
Vegetable and melon farming	34	4%
Fruit and tree nut farming	31	3%
Greenhouse, nursery, and floriculture prod.	28	3%
Christmas trees	25	3%
Other crop farming	286	32%
Beef cattle ranching and farming	292	33%
Dairy cattle and milk production	127	14%
Hog and pig farming	50	6%
Poultry and egg production	129	15%
Sheep and goat farming	56	6%
Animal aquaculture and other animal prod.	60	7%
TOTAL	889	100%

Source: 2012 Ag Census

(1) Numbers do not equal exactly 100 due to rounding

Additional agricultural strengths include Perry County's position as the 3rd highest producer of hogs and pigs \$26,143,000 (2012) in the state; 6th in number of turkeys produced (154,836), and 9th in pullets and laying flock replacement.

As noted earlier in Table 13, Perry County's 899 farms generated \$140,401,000 in sales during 2012. Ninety four percent of these sales were generated by 227 farms that had sales of \$100,000 or more (26% or all farms) (Table 16). Forty nine percent of all farms in the county had annual sales of less than \$10,000.

Table 16. Farm Sales & Number of Farms and Contribution to Farm Sales by Amount of Farm Sales, Perry County, 2012

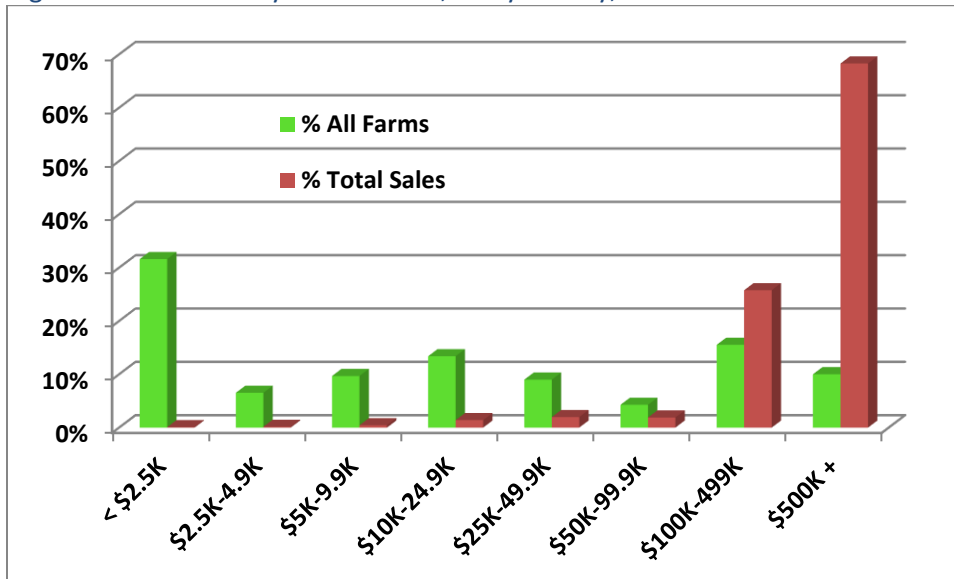
	Sales (1,000)	% of Total Sales	# Farms	% All Farms
< \$2.5K	\$112	0.1%	281	32%
\$2.5K-4.9K	\$215	0.2%	58	7%
\$5K-9.9K	\$624	0.4%	86	10%
\$10K-24.9K	\$1,968	1.4%	119	13%
\$25K-49.9K	\$2,772	2.0%	80	9%
\$50K-99.9K	\$2,661	1.9%	38	4%
\$100K-499K	\$36,175	25.8%	138	16%
\$500K +	\$95,875	68.3%	89	10%
Total	\$140,401	100.0%	889	100%

Source: 2012 Ag Census

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Chart 5 below compares the percent of farms by size and percent of overall annual sales by farm size, Perry County, 2012.

Figure 13. Farm Size by Annual Sales, Perry County, 2012



Source: 2012 Ag Census

As outlined in Table 17, dairy products generated roughly 29% of Perry County’s agricultural product sales in 2012, followed by poultry and egg production (20%), hog sales (19%), grain (14%) and beef (13%). Together these three categories account for approximately 94% of all farm sales in the county.

Table 17. Sales by Product, Perry County, 2012

	Value (\$1,000)	% Total Ag Products Sales
Grain	\$19,478	13.9%
Vegetable	\$1,249	0.9%
Fruit and tree nut farming	\$165	0.1%
Greenhouse and nursery,	\$2,569	1.8%
Christmas trees	\$185	0.1%
Other crop farming	\$4,081	2.9%
Beef farming	\$17,614	12.5%
Milk production	\$40,454	28.8%
Hog and pig farming	\$26,143	18.6%
Poultry and egg production	\$27,946	19.9%
Sheep and goat farming	\$290	0.2%
Other animal prod.	\$131	0.1%
TOTAL	\$140,401	99.9%

Source: 2012 Ag Census

*Total doesn't = 100 due to rounding.

Consumption-Based Agricultural Economy

The consumption-based agricultural economy is comprised of businesses that process and market agricultural products and businesses that provide inputs to farms. Industries that are often considered part of the consumption-based agriculture economy include food service and drinking places, food and beverage stores and grocery and food wholesalers. Table 18 details the employment numbers for food service and drinking places (379), and food and beverage stores (485). It is not possible to see the complete picture of the consumption-based agricultural economy because the number of individuals employed in the grocery and food wholesalers sector are not disclosed for Perry County.

The production agricultural economy consists of those industries that produce agricultural products, or manufacture products generated from land owned by farms. Industries often considered part of the production agriculture economy include farm employment, forestry and logging, agriculture and forestry support, food manufactures and wood product manufactures. Table 18 details the employment numbers for farm employment (1,065), agriculture and forestry support (3) and wood product manufactures (125). Employment numbers for forestry and logging and food manufactures are not disclosed for Perry County. It should be noted that some of the agricultural products used by these sectors are also secured outside of the county.

Table 18. Agricultural Production and Consumption-Based Employment, Perry, Juniata and Cumberland Counties, 2012

	Perry County	Juniata County	Cumberland County
Production Agricultural Economy			
Farm Employment*	1,065	870	1,680
Forestry and Logging	D	D	D
Agriculture and forestry support	3	D	D
Food manufacturers	D	D	2,629
Wood product manufacturers	125	606	200
Consumption-Based Agricultural Economy			
Food service & drinking places	379	D	8,691
Food & beverage stores	485	223	3,348
Grocery & food wholesalers	D	5	545

D = Not disclosed

Source - Bureau of Labor Statistics (www.bls.gov) Note: (1) D Indicates the data is not disclosed.

*BEA CA25 Local Area Data

The *consumption* and *production* agricultural economies in Perry County overlap, but not completely, and do not necessarily depend upon each other. There is little doubt that only a relatively small proportion of the food consumed in Perry County comes from farms in the county. Even if all the county's farms went out of business, consumers would still be able to purchase food grown on farms in other counties, states, and countries, just as they currently do. Perry County farms, similarly rely upon county consumers for only a portion of their sales.

The relationship between the consumption and production agricultural economies creates economic development opportunities. The county has a large market of residents who must continually buy food products from somewhere. If they're not buying from local farms and food manufacturers, their food dollars simply leave the county, and thus are unavailable to be spent on other goods and services.

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Agricultural Summary

Farm enterprises account for 8% of Perry County total employment with total sales of \$140,401,000 in 2012.

Perry County is an important supplier of a number of commodities such as milk, hogs and pigs, poultry and eggs and grain and oilseed

Milk from cows is the single largest category in terms of sales value. Almost ninety four percent of agricultural sales resulted from five products, milk (19.9%), poultry and eggs (19.9%), hogs and pigs (18.6%), grain and oilseed (13.9%) and beef (12.5%)

While there is a fairly wide distribution of farm sizes and types across the county, sales are dominated primarily by those farms with \$100,000 or more in annual sales.

Farm numbers and the amount of land in farms both declined between 2007 and 2012. This change drove the average acreage per farm up slightly (6%). It is also interesting to note that the growth in Perry County's farm proprietor's income outpaced the overall average for the state (25% vs. 13%) during this time period.

Discussion Questions

Some of the important questions you may want to consider as you think about the data detailed in this section include the following. You may think of a number of others as you begin to explore underlying causes and implications.

1. Is the fact that most agricultural sales come from the largest farms worth looking into further? Does any of this suggest opportunities for growth that may not be currently recognized? Why or why not?
2. Are there niches in the county's agriculture sector that can be capitalized on? What additional information would you need to make these determinations?
3. How much integration is there currently between the county's agricultural production and its agriculture-related industries? Is this worth exploring in greater detail?
4. Is there employment data that is not disclosed in the secondary data for agricultural and agriculture related industries that would be helpful to identify opportunities that would build this sector of the county's economy? What data would be needed? How might you collect that data? Is it worth collecting this data?
5. Is there an opportunity to explore stronger linkages between the county's farm products, consumers, local institutions businesses, and food manufacturers?

SHIFT-SHARE ANALYSIS

Shift-share analysis examines the sources of change in local employment growth or decline, identifying local advantages, as well as pinpointing growth or potential growth industries. Like many other economic tools, the shift-share technique is a descriptive tool that should be used in combination with other analyses to help better understand the county's key industries. The analysis compares the employment change that occurred within a county to the overall employment changes occurring nationally, and to the national employment

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changes occurring within each individual sector of the economy. It helps to identify how much of local employment changes occur due to (1) trends within the overall national economy; and (2) trends specific to important sectors within the county's economy. Changes which cannot be explained by these national and sector trends are considered as having occurred because of some local comparative advantage or disadvantage.

As an example; the overall national economy grew by 6.64 percent between 2009 and 2014, and the manufacturing sector nationally fell by 2.60 percent. If the manufacturing sector in Perry County simply followed these national trends, it would be expected to have gained 4.04 percent of its jobs (6.64% national trend + -2.60% industry trend). Yet employment in the manufacturing sector in Perry County actually grew by 32.43 percent during this same time period. So the manufacturing sector outperformed what would be expected by 28.39% (see table below). This much larger than expected increase must be due to some local comparative advantage.

Actual Growth in the Manufacturing Sector		National Growth		Industry Mix		Regional Shift
32.43	=	6.64	+	-2.60	+	28.39

*Percent growth figures may not add due to rounding by a factor of $\pm 0.01\%$.

Table 19 contains the shift-share results for all sectors in Perry County. Differences between the extent and composition of local employment growth with comparison to the nation are broken down into the *hypothetical* components: national growth, industry mix, and regional shift. Each component attempts to account for a separate aspect of the disparity between the overall changes in employment locally vs. nationally from 2009 to 2014.

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Table 19: Shift-Share Components, Perry County 2009-2014

Major Industry	Actual Growth		National Growth (4)		Industry Mix (5)		Regional Shift(6)	
	Percent	Net	Percent	Net	Percent	Net	Percent	Net
Farm Employment	1.14	12	6.64	70	-5.88	-62	0.38	4
Construction	1.46	20	6.64	91	-5.79	-79	0.62	8
Manufacturing	32.43	155	6.64	32	-2.60	-12	28.39	136
Retail Trade	1.83	35	6.64	127	-2.05	-39	-2.76	-53
Transportation and Warehousing	-1.86	-22	6.64	78	5.18	61	-13.68	-162
Information	-17.86	-15	6.64	6	-6.95	-6	-17.55	-15
Finance and Insurance	30.38	120	6.64	26	-2.83	-11	26.58	105
Real Estate and Rental and Leasing	2.82	12	6.64	28	1.35	6	-5.17	-22
Professional, Scientific, and Technical Services	11.61	52	6.64	30	2.39	11	2.58	12
Educational Services	41.67	60	6.64	10	5.11	7	29.91	43
Health Care and Social Assistance	0.00	0	6.64	71	4.34	46	-10.98	-117
Other Services (except Public Administration)	10.47	107	6.64	68	2.11	22	1.73	18
Federal Civilian	-12.77	-12	6.64	6	-10.00	-9	-9.41	-9
Military	-1.63	-2	6.64	8	-11.90	-15	3.63	4
State Government	-4.76	-21	6.64	29	-7.11	-31	-4.29	-19
Local Government	-15.09	-252	6.64	111	-9.62	-161	-12.11	-202
Other/Suppressed Industries*	9.38	143	6.64	101	6.27	96	-3.53	-54
Total Employment	2.92	392	6.64	892	-1.32	-177	-2.40	-322

Source: Calculations by the Pennsylvania Regional Economic Analysis Project (PA-REAP) with data provided by the U.S. Department of Commerce, Bureau of Economic Analysis May 2014 SHIFTSHAREB. *The "Other/Suppressed Industries" category portrayed in this table represents a combined total of those industries for which data were unavailable due to confidentiality restrictions. Those industries that are combined include: Forestry, Fishing, and Related Activities; Mining; Utilities; Wholesale Trade; Management of Companies and Enterprises; Administrative and Waste Services; Arts, Entertainment, and Recreation; Accommodation and Food Services. Note: Percent growth figures may not add due to rounding by a factor of ± 0.01%.

As indicated in Table 19, a number of Perry County industries (highlighted in grey) experienced growth larger than the national and industry growth averages including manufacturing; finance and insurance; professional scientific and technical services; educational services; other services; and other/suppressed industries. Still, other industries in Perry County had growth rates that were below the national average, but above those for that particular sector – including farms; construction; retail trade; real estate and rental and leasing; military; and state government (highlighted in green).

Other county industries are local industry groups that under-performed what would have been expected by national or industry trends (highlighted in yellow). These include transportation and warehousing; information; health care and social assistance; federal civilian; and local government.

Finally, after we account for national and industry specific influences, a number of local sectors stand out as having a net positive regional shift –indicative of some local comparative advantage. These industries (highlighted in aqua) include farms; construction; manufacturing; finance and insurance’ professional, scientific and professional services; military; other services; educational services and state government. It is worth noting the suppressed industries. While these industries generally did better than the national or industries in

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general (because Perry County is relatively dependent of these industries), the regional shift was negative rather than positive.

In each of these cases the critical question to ask is: ‘What is occurring in Perry County that would account for either more or less growth than would have been expected?’

Shift-Share Summary

Perry County's employment growth over 2009-2014 of **2.92%** trailed the **6.64%** growth of employment nationally by **-3.72%**. Accounting for this difference was an industry mix inclined toward industries that experienced slower growth, coupled with the fact that a large share of local industries underperformed their counterparts nationally.

Actual Growth -	=	National Growth	+	Industry Mix	+	Regional Shift
2.92 (392)	=	-6.64 (892)	+	-1.32% (-177)	+	-2.40% (-322)

*Percent growth figures may not add due to rounding by a factor of ± 0.01%.

As indicated in Table 19, while the majority of Perry County's industries outperformed what would have been expected nationally based on the make-up of the county's industries (highlighted in green and grey), a number of others under-performed expectations including transportation and warehousing; information; health care and social assistance; federal civilian; and local government. Additional information to help you better understand Shift Share Analysis can be found in the Appendix.

Discussion Questions

1. Perry County's growth lagged behind overall employment growth nationally. While some of this can be attributed to the fact that the county's industry mix includes industries that, on the whole, grew more nationally, what might be some of the factors that contribute to the fact that several Perry County industries have on average *under-performed* their counterparts nationally?
2. Conversely, a number of industries *outperformed* national trends (manufacturing; finance and insurance; professional scientific and technical services; educational services; other services; and other/suppressed industries) and those that experienced growth rates below the national average but above those for that particular sector (including farms; construction; retail trade; real estate and rental and leasing; military; and state government). Why might this have been the case?
3. Are there specific industry groups that stand out as either particularly strong or problematic (relative to the national expectations)?
4. What do the Shift-Share results suggest in terms of the county's economic development strategy? Can the county place a priority on creating a different industry mix? Are there things that can be done locally to enhance those industries that are doing either particularly well or poorly?

LOCATION QUOTIENTS

In a nutshell, the location quotient helps you identify exporting and importing industries. This is important in terms of understanding the extent to which community needs are being met (or not) by local businesses (importing). Often, the location quotient reinforces what you already know about your local economy; but just as often, it uncovers things you did not know or, at least, changes your perceptions. The real strength of the tool is that it is a simple, yet effective educational resource. Calculating a location quotient is a straightforward process, and, in practice, most often uses employment data that is widely available.

Simply put, the location quotient identifies how local industries stack up with national averages. In practice, location quotients are often used to identify importing and exporting industries. An exporting industry is one where the industry not only meets the local demand for its products, but also produces enough so it can sell outside of the region. An importing industry is one where local production levels are insufficient to meet local demand.

When interpreting the data, a location quotient greater than 1.0 indicates that the economy is generally self-sufficient, and may even be exporting the good or service of that particular industry. (As a rule of thumb, a location quotient greater than 1.25 almost certainly identifies exporting industries.) On the other hand, a location quotient less than 1.0 suggests that the region tends to import the good or service. (The applicable rule of thumb is that a location quotient less than 0.75 indicates an importing industry.) (Shields 2003)

The following BLS data highlights the Location Quotients at only the sector level for Perry, Juniata, and Cumberland Counties. The complete data set – down to the sub-sector level – is provided in the Appendix.

Location Quotient – Perry, Juniata, and Cumberland Counties 2015

Calculated Using the Quarterly Census of Employment and Wages Data Bureau of Labor Statistics Location Quotient Calculator

As highlighted in Table 20 below, manufacturing; professional and technical services; educational services; information; real estate and rental and leasing; arts and entertainment; and accommodations and food services have LQs of .76 or less, indicating that Perry County is likely importing these goods or services from outside the county (highlighted in yellow).

Conversely, while a LQ of more than 1.0 suggests Perry County may be an exporting county as it relates to these goods and services, a LQ of 1.25 almost certainly suggests that it is exporting. Industries that might be considered ‘exporting’ industries include: construction; retail trade; transportation and warehousing; and other services except public administration (highlighted in green).

It is also useful to compare Perry County’s LQs with those of Juniata and Cumberland counties. In a number of cases there are considerable disparities between these counties. The critical question is – *what is happening in either Perry County (or its neighboring counties) that makes this the case, and what does this suggest for the County’s economic development opportunities and strategy.*

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Table 20. Location Quotients Calculated From Quarterly Census of Employment and Wages Data, Perry County, Juniata County, Perry County Pennsylvania, 2015

INDUSTRY	Perry County	Juniata County	Cumberland County
Base Industry: Total, all industries	1.00	1.00	1.00
Agriculture, forestry, fishing and hunting	ND	ND	0.26
Mining, quarrying, and oil and gas extraction	ND	ND	0.12
Utilities	ND	NC	0.28
Construction	1.76	0.98	0.63
Manufacturing	0.75	4.05	0.74
Wholesale trade	ND	0.69	0.66
Retail trade	1.47	0.82	1.04
Professional and technical services	0.44	ND	0.97
Management of companies and enterprises	ND	ND	2.09
Administrative and waste services	ND	0.35	1.17
Educational services	0.47	NC	1.19
Health care and social assistance	0.96	0.64	0.86
Transportation and warehousing	4.02	1.28	3.19
Information	0.21	0.28	0.70
Finance and insurance	0.90	0.71	1.41
Real estate and rental and leasing	0.36	0.24	0.71
Arts, entertainment, and recreation	0.13	0.80	0.50
Accommodation and food services	0.76	0.70	0.78
Other services, except public administration	1.63	0.79	1.13
Unclassified	NC	NC	NC

Source: *Calculated from Quarterly Census of Employment and Wages Data Bureau of Labor Statistics Location Quotient Calculator*

Footnotes:

(ND) Not Disclosable

(NC) Not Calculable, the data does not exist or it is zero

Location Quotient: Ratio of analysis-industry employment in the analysis area to base-industry employment in the analysis area divided by the ratio of analysis-industry employment in the base area to base-industry employment in the base area.

Additional information to help you better understand Location Quotient Analysis can be found in the Appendix.

Location Quotient Summary

From the perspective of the Location Quotient data, manufacturing; professional and technical services; educational services; information; real estate and rental and leasing; arts and entertainment; and accommodations and food services have LQs of .76 or less, indicating that Perry County is likely importing these goods or services from outside the county (or going outside county to purchase these goods and services)

Exporting industries – those likely exporting goods and services to neighboring counties, the state or nation include: construction; retail trade; transportation and warehousing; and other services, except public administration.

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Discussion Questions

1. Why might those industries that are importing goods and services from outside the county be doing so? Does this matter? How much does it matter?
2. Why might those industries that are exporting goods and services outside the county be doing so? What factors may be contributing to this circumstance? Does this matter? How much does it matter?
3. What, if anything, could be done from an economic development strategy perspective to address the needs of either importing or exporting industries?

OVERALL SUMMARY RESULTS

The sections of this report provide analyses of Perry County's employment, wages and salaries, competitive advantages of industry sectors (Shift Share Analysis) and import/export status (Location Quotient) of industry sectors. Table 21 summarizes key information from employment data, competitive advantage, and import/export status by industry sector.

As indicated in Table 21, seven industry sectors (government and government enterprises; retail trade; construction; health care and social assistance; other services except public administration; transportation and warehousing, and farms) generated 71% of jobs the residents living in Perry County. Of these seven major industries, all but health care and social services had employment averages above those of the state (green). The percent declines in employment for two of these sectors (government and government enterprises and retail) trailed the percent change across Pennsylvania. All the other sectors in these 7 major industries had higher growth rates (or smaller declines) than the state. It should also be noted that several other smaller industries outpaced employment growth in the county including manufacturing; finance and insurance; real estate and rental and leasing; and educational services (yellow).

The Shift Share analysis indicates that manufacturing, finance and insurance, and educational services have a competitive advantage in Perry County (aqua), while the Location Quotients suggests that retail trade, construction, transportation and warehousing and other services except public administration, are likely exporting industries (grey). (Note. Location Quotient is not calculated for government and government enterprises.)

Conversely, the LQ data suggests that Perry County is very likely importing services in the professional, scientific and technical services; real estate and rental and leasing, educational services; arts, entertainment and recreation; and information.

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Table 21. Summary Matrix: Share of Employment, Percent Change in Employment, Shift-Share (Local Share) and Location Quotient for Industry Sectors, Perry County and Pennsylvania

Sector	2014 Share of Employment (%)		Percent Change in Employment (2005-2014)		Competitive Advantage (Shift-Share - Local Share, %)	Import/Export (Location Quotient)	
	County	PA	County	PA	County	County	PA
Government and government enterprises	15%	11%	-13%	-4%	(NC)	(NC)	(NC)
Retail trade	14%	10%	-6%	-4%	-2.76	1.47	0.90
Construction	10%	5%	-6%	-7%	.062	1.76	1.03
Transportation and warehousing	8%	4%	6%	11%	-13.68	4.02	1.17
Other services, except public administration	8%	6%	17%	3%	1.73	1.63	1.06
Health care and social assistance	8%	14%	30%	17%	-10.98	0.96	1.22
Farm employment	8%	1%	5%	3%	0.38	(D)	1.08
Manufacturing	5%	8%	17%	-14%	28.39	0.75	1.09
Finance and insurance	4%	5%	34%	16%	26.58	0.90	1.05
Accommodation and food services	4%	6%	-20%	11%	(D)	.76	0.83
Professional, scientific, and technical services	4%	7%	13%	12%	2.58	0.44	0.92
Real estate and rental and leasing	3%	3%	27%	18%	-5.17	0.36	0.70
Educational services	1%	4%	92%	16%	29.91	0.47	1.15
Arts, entertainment, and recreation	1%	2%	1%	21%	(D)	0.13	(D)
Information	0%	1%	-20%	-18%	-17.55	.021	1.50
Forestry, fishing, and related activities	(D)	0%	(D)	16%	(D)	(D)	(D)
Mining	(D)	1%	(D)	131%	(D)	(D)	(D)
Utilities	(D)	0%	(D)	0%	(D)	(D)	(D)
Wholesale trade	(D)	3%	(D)	-3%	*(D)	0.75	1.09
Management of companies and enterprises	(D)	2%	(D)	44%	*(D)	(D)	(D)
Administrative and waste management services	(D)	5%	(D)	11%	(D)	(D)	(D)

D = Not disclosed *Not calculated

Industry sectors are listed from largest to smallest percent of total employment.

OVERALL QUESTIONS AND CONSIDERATIONS

1. What opportunities are there to increase employment in those sectors that have a competitive advantage in Perry County?
2. What might be done to improve Perry County's competitive advantage for those that do not have a competitive advantage?
3. What might be contributing to the county's lagging growth in wages and salaries?
4. What additional information would help you better understand Perry County's economy? Where might you find that information?

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