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Economic Analysis

Of

Interstate Commute Patterns

In the Greater Philadelphia Region

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Economic Analysis of Interstate Commute Patterns In the Greater Philadelphia Region

Introduction

This paper examines the basic economic impact of interstate commuting patterns in the 11-county Greater Philadelphia Region, from 1990 to 2000. The work is a continuation of analysis begun in the autumn of 2003, for the Greater Philadelphia Chamber of Commerce.

At that time, KLIOS, Inc. prepared material to complete a series of economic competitiveness forums. Part of the background research was an examination of daily business commuting patterns, using data from the 2000 Census. That work illustrated the physical integration of the region, where almost eight percent of daily business commutes are interstate and nearly 35 percent are intercounty.

In the previous analysis, physical integration was a proxy for economic integration. In this new analysis, wage data is introduced into the picture. The result is a more complete view of the region's interconnected nature, showing the value of wage flows across intraregional borders.

In addition, journey-to-work data from 1990 is added to the analysis, providing an historic perspective on changing regional patterns.

Methodology

The analysis begins with journey-to-work data from the decennial Census in 1990 and 2000. Part of the reported information is county of residence and county of work location. The region defined as the Greater Philadelphia Region in this paper includes eleven counties in three states:

- Delaware—New Castle;
- New Jersey—Burlington, Camden, Gloucester, Mercer, Salem;
- Pennsylvania—Bucks, Chester, Delaware, Montgomery, Philadelphia.

Worker flows from county of residence to county of work were examined within the 11-county region for both years, and a table was created (Table 1) showing interstate journey-to-work activity, absolute and percentage changes. Data for journey-to-work activity that began in the 11-county region (i.e., residence) but where the workplace was outside the region was excluded from the analysis.

Next, total wages and total employment for each county were used to calculate an average wage for each county for both 1990 and 2000 (Table 2).

The average wages were then combined with worker flows to calculate the 11-county aggregate interstate wages, absolute and percentage changes (Table 3).

Key Findings

1. Interstate and intercounty commutes represent significant shares of journey-to-work activity in the region, illustrating the interconnectedness across jurisdictional boundaries such as counties and states.
   - Interstate share of combined interstate and intrastate journey-to-work activity was about 8 percent, or 210.8 thousand daily business commutes in 2000.
   - Intercounty share of combined interstate and intrastate journey-to-work activity was about 32 percent, or 817.7 thousand daily business commutes in 2000.
   - Intercounty commutes increased 6 percent over the decade, while interstate activity was up 2 percent. This is in line with slow regional employment over the decade.
   - Over the decade, commuting activity to and from Delaware increased, while activity between Pennsylvania and New Jersey declined.

2. Over the decade, there was evidence of convergence, with respect to average wages across counties.
   - In general, the average wage grew more rapidly for counties that began from a lower base in 1990. Conversely, counties with high average wages in 1990, showed slower growth.
   - This is evidence of "backfilling," where less densely populated, lower wage (i.e., rural) portions of the region attracted more development for a number of reasons.

3. Interstate and intercounty wage flows (Table 3) within and across the 11-county region are substantial.
   - Total wages for commuters within the 11-county region were over $100 billion in 2000.
   - Interstate wages were $8.3 billion, and intercounty wages were $32.5 billion in 2000.
   - By comparison, a recent study published by the Federal Reserve Bank of Chicago[1], estimates 1999 gross metropolitan product (GMP) for the Philadelphia-Wilmington-Atlantic City, PA-NJ-DE-MD metropolitan statistical area as $193 billion. While the regions are not identical, they share similarities—the point is that interstate and intercounty flows are significant contributors to regional output.
   - Intercounty wage flows grew 21.5 percent over the decade, compared with 15 percent wage growth for all intraregional flows.

[1] Testa, William, Thomas Klier and Alexei Zelenev, "Estimating U.S. metropolitan area export and import competition," Economic Perspectives; 4th Quarter 2003. pp. 13-27.

Table 1: Interstate journey-to work activity			
Journey-to-work (2000)			
From / *To*	*DE*	*NJ*	*PA*
Delaware	-	3,578	20,386
NJ	6,942	-	98,971
PA	25,528	55,397	-
Total interstate = 210,802 (share = 8.2%)			
Total intercounty = 817,746 (share = 31.8%)			
Total trips = 2,570,060			
Journey-to-work (1990)			
From / *To*	*DE*	*NJ*	*PA*
Delaware	-	3,151	15,553
NJ	5,392	-	99,269
PA	19,921	63,382	-
Total interstate = 206,668 (share = 8.0%)			
Total intercounty = 771,632 (share = 30.0%)			
Total trips = 2,571,363			
Journey-to-work, change ('90-2000)			
From / *To*	*DE*	*NJ*	*PA*
Delaware	-	427	4,833
NJ	1,550	-	-298
PA	5,607	-7,985	-
Journey-to-work, percent change ('90-2000)			
From / *To*	*DE*	*NJ*	*PA*
Delaware	-	13.6%	31.1%
NJ	28.7%	-	-0.3%
PA	28.1%	-12.6%	-
Note: Totals do not include travel outside the 11-county region.			

	Table 2: Average wages by county			
	2000	1990	90-2000	
New Castle	$40,491	$37,222	$ 3,269	8.8%
Burlington	$37,597	$25,326	$12,271	48.5%
Camden	$35,130	$27,864	$ 7,266	26.1%
Gloucester	$32,055	$20,122	$11,933	59.3%
Mercer	$44,657	$41,537	$ 3,120	7.5%
Salem	$39,231	$29,552	$ 9,679	32.8%
Bucks	$34,059	$24,017	$10,042	41.8%
Chester	$43,762	$28,838	$14,923	51.7%
Delaware	$36,828	$26,565	$10,263	38.6%
Montgomery	$43,810	$41,324	$ 2,486	6.0%
Philadelphia	$39,700	$39,947	($ 247)	-0.6%

Table 3: Interstate wage flows ($000 unless otherwise noted)			
Interstate wage flows (2000)			
From / *To*	*DE*	*NJ*	*PA*
Delaware	-	$ 132,854	$ 811,296
NJ	$ 281,090	-	$3,890,950
PA	$1,033,661	$2,199,558	-
Total interstate wages = $8,349,410 (share = 8.2%)			
Total intercounty wages = $32,499,113 (share = 31.9%)			
Total wages = $101,763,089			
Interstate wage flows (1990)			
From / *To*	*DE*	*NJ*	*PA*
Delaware	-	$ 86,438	$ 496,700
NJ	$ 200,703	-	$3,691,617
PA	$ 741,506	$2,086,025	-
Total interstate wages = $7,302,989 (share = 8.3%)			
Total intercounty wages = $26,745,689 (share = 30.2%)			
Total wages = $88,457,652			
Interstate wage change ('90-2000)			
From / *To*	*DE*	*NJ*	*PA*
Delaware	-	$ 46,416	$ 314,596
NJ	$ 80,388	-	$ 199,333
PA	$ 292,156	$ 113,532	-
Interstate wage percent change ('90-2000)			
From / *To*	*DE*	*NJ*	*PA*
Delaware	-	53.7%	63.3%
NJ	40.1%	-	5.4%
PA	39.4%	5.4%	-
Note: Totals do not include travel outside the 11-county region.			