Employment Change by Transit Mode and Station Distance Band

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Abstract

Literature suggests that fixed guideway transit stations should attract jobs, perhaps favoring those in certain economic sectors. There is scant evidence supporting the assertion, however. In this article, I report change in jobs by economic group from the Great Recession into recovery (2008 to 2011) by distance band from light rail transit (LRT), bus rapid transit (BRT), and streetcar transit (SCT) systems, and compare changes to the counties within which they operate (transit counties). Each mode has outcomes that are mostly unique from the others. Whereas LRT and BRT systems had higher increases in jobs in the first one eighth mile from transit stations than their transit counties, SCT systems had higher increases in the outmost distance band, from one half mile to one mile away from the nearest transit station. Within the first one half mile of transit stations, BRT systems accounted for all job growth compared to their BRT transit counties which actually lost jobs. The poorest performing distance band for all modes was from one eighth mile to one quarter mile from the nearest transit station; closer and more distant bands performed better. With some exceptions the office, education, health care, and arts-entertainment-recreation economic groups saw proportionately larger changes in jobs relative to transit counties across most distance bands than the manufacturing, light industrial, retail-lodging-food and knowledge economic groups. Implications are offered.

Employment Change by Transit Mode and Station Distance Band

Overview

Transit generates economic development, measured in terms of jobs attracted to transit oriented development (TOD) areas. A key reason is the influence of transit on advancing agglomeration economies. The American Public Transit Association notes:

> There has been significant attention in the transportation research field regarding the extent to which public transportation investment supports "agglomerations economies" -- the ability of business firms to realize productivity gains because of greater market access. One particular way to get at this same issue is to consider the emerging role of public transportation in enabling the growth of technology-oriented business sectors that are fast growing drivers of America's economy. To a significant degree, businesses in this sector of the economy tend to cluster (agglomerate) in specific urban locations – where they can best access research centers, information sharing and a large, skilled workforce (Weisbrod, Cuter, and Duncan 2013: 5)

Transit is an important component in the growth of cities and their metropolitan areas (Glaeser, 2010, 2011). Since World War II, however, the rise of the automobile has challenged this notion. Highway expansion has allowed metropolitan areas to become ever larger as economies of agglomeration in some sectors are exploited through dispersion (Ciccone and Hall, 1996). Nonetheless, if metropolitan areas grow too large, highway congestion becomes a counter-productive force (Bogart, 1998; Boarnet, 1997; Boarnet and Haughwout, 2000).

One role of modern-day transit is to offset the adverse effects of highway congestion effects on agglomeration economies. Voith (1998) characterizes public transit as essentially "noncongestible" and is best suited to sustaining agglomeration economies in downtowns and

secondary activity centers, and along the corridors that connect nodes (see also Nelson et al., 2009; Littman, 2009; Graham, 2007). Still, not all economic sectors benefit from agglomeration economies. What kinds of firms and jobs are attracted to transit? Does this vary by transit mode? This article helps contribute to an otherwise dearth of literature addressing these questions. It starts with a review of the scant research on the questions and proceeds with a research design. Results and implications follow.

Prior Research on Transit and Job Location by Sector

The leading study addressing these questions is that of Belzer, Srivastava and Austin (2011). They applied the Longitudinal Employment-Housing Dynamics (LEHD) database to census blocks within one-half mile of transit stations serving 34 transit systems from 2002 through 2008. Overall findings included:

- There was a one percent growth in employment in areas within one-half mile of transit stations;
- There was a 22 percent drop in land-intensive manufacturing jobs which likely have been replaced with higher-intensity land uses;
- The Arts, Entertainment, and Recreation, and Food and Accommodation sectors each grew by 14 percent; and
- The Health Care and Social Assistance, and Professional, Scientific, and Technical sectors posted gains of 10 percent and 9 percent, respectively.

There have been no comprehensive studies of the distribution of job change by economic sector since.

Research Design and Approach

This article expands on prior work by evaluating the change in jobs by economic sector for light rail transit (LRT), bus rapid transit (BRT) and streetcar transit (SCT) systems from the beginning of the Great Recession in 2008 well into recovery, 2011, and by distance band from transit stations. The latter is a new approach because literature mostly assesses job, housing, and other changes within one quarter to one half mile of transit stations (see Nelson et al. 2015).

Similar to Belzer, Srivastava and Austin, a pre-post research design is used but with important differences from their work, including:

- Calculating the change in employment among economic sectors between 2008 and 2011 (the most recent year for which LEHD data were available for this study);
- Focusing the analysis on just LRT, BRT and SCT systems operating since at least 2008;
- Evaluating change in employment by economic sector in multiple distance bands from transit stations—within and including distance bands of one-eighth mile (<=1/8 mile), more than one-eighth to less than or equal to one-quarter mile (>1/8 to <=1/4 mile), more than one-quarter mile to less than or equal to one-half mile (>1/4 mile to <=1/2 mile), and more than one-half mile to less than or equal to one mile (>1/2 mile to <= 1 mile);
- Comparing employment change by economic sector and distance to change in employment for "transit counties" being those counties within which the transit modes studied operate; and
- Using z-scores to test for the null hypothesis that changes over time are not significantly different from zero.

Not all LEHD jobs are included in the analysis. As the focus is on jobs for which destinations are work places in buildings, natural resources and construction jobs are not considered. Moreover, to simplify analysis, LEHD jobs are combined into roughly similar

economic groups in the manner shown in Table 1. There are overall expectations of the extent to which jobs in certain economic groups will be attracted to locations near transit stations. These are summarized here.

Manufacturing is commonly perceived as a land-intensive activity and, as such, one may expect manufacturing firms to seek locations where land prices are low—thus not in high-value urban areas such as within TODs. On the other hand, manufacturing processes that do not need much land but depend on high-quality labor may well find locations within TODs necessary to attract labor. Unfortunately, the LEHD database does not allow differentiation between land-extensive and TOD-attractive manufactures.

Light industrial activities are often land-extensive enterprises requiring inexpensive land, such as for warehousing and use of transportation equipment, probably away from high-value TOD areas. Yet because they can also include utility jobs, many of which are office-related or jobs based in an office though actually performed in the field, proximity to transit stations may be important.

Retail, lodging and food service activities would seem to generally locate where people are or where lower-cost lodging services are attractive, such as along freeway interchanges and suburban centers. On the whole, one may not anticipate many of these activities to be attracted to transit stations.

While it one may expect intuitively that *knowledge* sector jobs would be attracted to areas near transit stations, they may be attracted more to high-tech campuses and office parks not accessible to transit.

Office, education and *health care* activities are expected to be attracted to transit stations for the convenience of workers, students and clients to take advantage of agglomeration economies associated with clustering at transit centers summarized above.

Arts, entertainment and recreation activities come in many forms; among them, museums as well as performing arts and sports venues. Certain activities lend themselves to locations near transit stations but others do not.

The analysis is applied to the following transit systems:

- *Light rail transit systems*—Charlotte, Dallas, Denver, Houston, Minneapolis, Phoenix, Portland, Sacramento, Salt Lake City, San Diego and Seattle;
- *Bus rapid transit systems*—Cleveland, Eugene-Springfield, Kansas City, Las Vegas, Los Angeles, New York City (Bronx), Pittsburgh, and Salt Lake City; and
- *Streetcar transit systems*—Portland, Seattle and Tampa.

Results and interpretations are presented next.

Table 1
Combinations of NAICS Sectors into Economic Groups for Analysis

NAICS Code	NAICS Sector Title and Economic Group Name
	Manufacturing
31-33	Manufacturing
	Light Industrial
22	Utilities
42	Wholesale Trade
48-49	Transportation and Warehousing
	Retail-Lodging-Food
44-45	Retail Trade
72	Accommodation and Food Services
	Knowledge
51	Information
54	Professional, Scientific, and Technical Services
	Office
52	Finance and Insurance
53	Real Estate and Rental and Leasing
55	Management of Companies and Enterprises
56	Administrative and Support and Waste Management and Remediation Services
81	Other Services (except Public Administration)
92	Public Administration
	Education
61	Educational Services
	Health
62	Health Care and Social Assistance
	Arts-Entertainment-Recreation ("Arts-Ent-Rec")
71	Arts, Entertainment, and Recreation

Source: Adapted from the North American Industrial Classification System.

Results and Interpretations

Results are presented as follows. For each transit mode—LRT, BRT and SCT respectively, the numerical changes in jobs over the period 2008 through 2011 are reported for the transit counties as a whole and by distance band, followed by percentage changes and figures illustrating the percentage changes. In particular, six tables and three figures report changes in jobs by economic group over time and by distance band with respect to LRT, BRT and SCT systems, respectively. Tables include performance by the LRT counties for perspective. Tables also highlight those economic groups than performed better than the LRT counties as a whole (in bold figures).

LRT systems. Tables 2 and 3, and Figure 1, show results for LRT systems. Within the closest band (<=1/8 mile), nearly all economic groups gained jobs at a faster pace than their LRT counties, and this band gained jobs at a faster pace than those counties. The third and fourth distance bands (>1/4 mile to <=1/2 mile and >1/2 mile to <1 mile) also performed on the whole much better than their transit counties, though more economic sectors performed worse. Notably lacking in performance is the second distance band (>1/8 mile to <= ¼ mile). All economic sectors lost jobs and share of jobs relative to LRT counties, by a substantial margin. There are interesting interpretations.

A key interpretation is that employment is moving away from the second distance band into the first, third or fourth distance bands. Why? Three reasons are posited, both of which require future research to resolve. One is that transit accessibility attracts jobs that where in the second band to move closer, perhaps to capitalize transportation benefits. The other is that firms that cannot afford locating in the first band may not also be able to afford to locate in the second as the market drives up rents in each thereby pushing those jobs into the other hands. Third, transit may attract residential development to both the first and second bands, thereby displacing

certain jobs to outer bands. Indeed, while the first band shows gains overall, they are small perhaps reflecting competition from residential development. Future research will need to address these (and other) interpretations.

There are also three interesting sectoral differences. Manufacturing shows impressive gains in the first band. While manufacturing is usually associated with land-extensive firms, it also includes microbreweries, specialty garment and jewelry production, boutique electronics activities and so forth. Transit station proximity may be attractive to these specialized forms of manufacturing. This is especially noteworthy considering that LRT transit counties as a whole lost manufacturing jobs.

Office (as opposed to Knowledge) firms appear to be displaced from locations near transit stations into the third and fourth band. While many such firms may covet proximity to transit, they are outbid by other firms or residential development.

Education and health care activities seem especially attracted to the first distance band, and the third, though perhaps displaced from the second. One interpretation is that those activities that can afford the closest locations are attracted to the first band but if they cannot compete for first-band locations they move to the third band, by-passing the second.

Table 2
Economic Group Job Change by Light Rail Transit Station Distance Band, 2008-2011

Economic Group	LRT Counties	<=1/8 Mile	>1/8 to <=1/4 Mile	>1/4 to <=1/2 Mile	>1/2 to <=1.0 Mile
Manufacturing	(87,459)	**1,144**	(709)	(2,238)	**11,758**
Light Industrial	(47,266)	(817)	(1,535)	(1,957)	(2,882)
Retail-Lodging-Food	(32,447)	**3,331**	(5,575)	(1,290)	(196)
Knowledge	(10,112)	**2,970**	(3,284)	(12,906)	(1,170)
Office	119,811	(18,179)	(335)	**15,268**	**11,652**
Education	54,836	**6,009**	(2,957)	**7,415**	**514**
Health Care	186,715	**10,132**	(21,352)	**20,858**	(1,240)
Arts-Ent-Rec	6,921	**804**	(771)	(96)	(2,255)
Total	190,999	**5,392**	(36,519)	**25,054**	**16,180**

Note: Bold means the economic group within LRT station area distance band outperformed the central county as a whole. Unless the treatment figure is italicized, all comparisons are significant at p <0.01 based on z-scores.

Table 3
Percentage Change of Economic Group Job Change by Light Rail Transit Station Distance Band, 2008-2011 with Respect to Light Rail Transit Counties

Economic Group	LRT Counties	<=1/8 Mile	>1/8 to <=1/4 Mile	>1/4 to <=1/2 Mile	>1/2 to <=1.0 Mile
Manufacturing	-9%	**29%**	-15%	-22%	**22%**
Light Industrial	-4%	-9%	-11%	-8%	-10%
Retail-Lodging-Food	-2%	**9%**	-11%	-3%	-2%
Knowledge	-1%	**4%**	-5%	-17%	-2%
Office	4%	-11%	4%	**13%**	**12%**
Education	6%	**42%**	-7%	**18%**	**7%**
Health Care	16%	**48%**	-26%	**48%**	15%
Arts-Ent-Rec	4%	**23%**	-3%	3%	-16%
Total	2%	**5%**	-5%	**8%**	**6%**

Note: Bold means the economic group within LRT station area distance band outperformed the central county as a whole. Unless the treatment figure is italicized, all comparisons are significant at $p < 0.01$ based on z-scores.

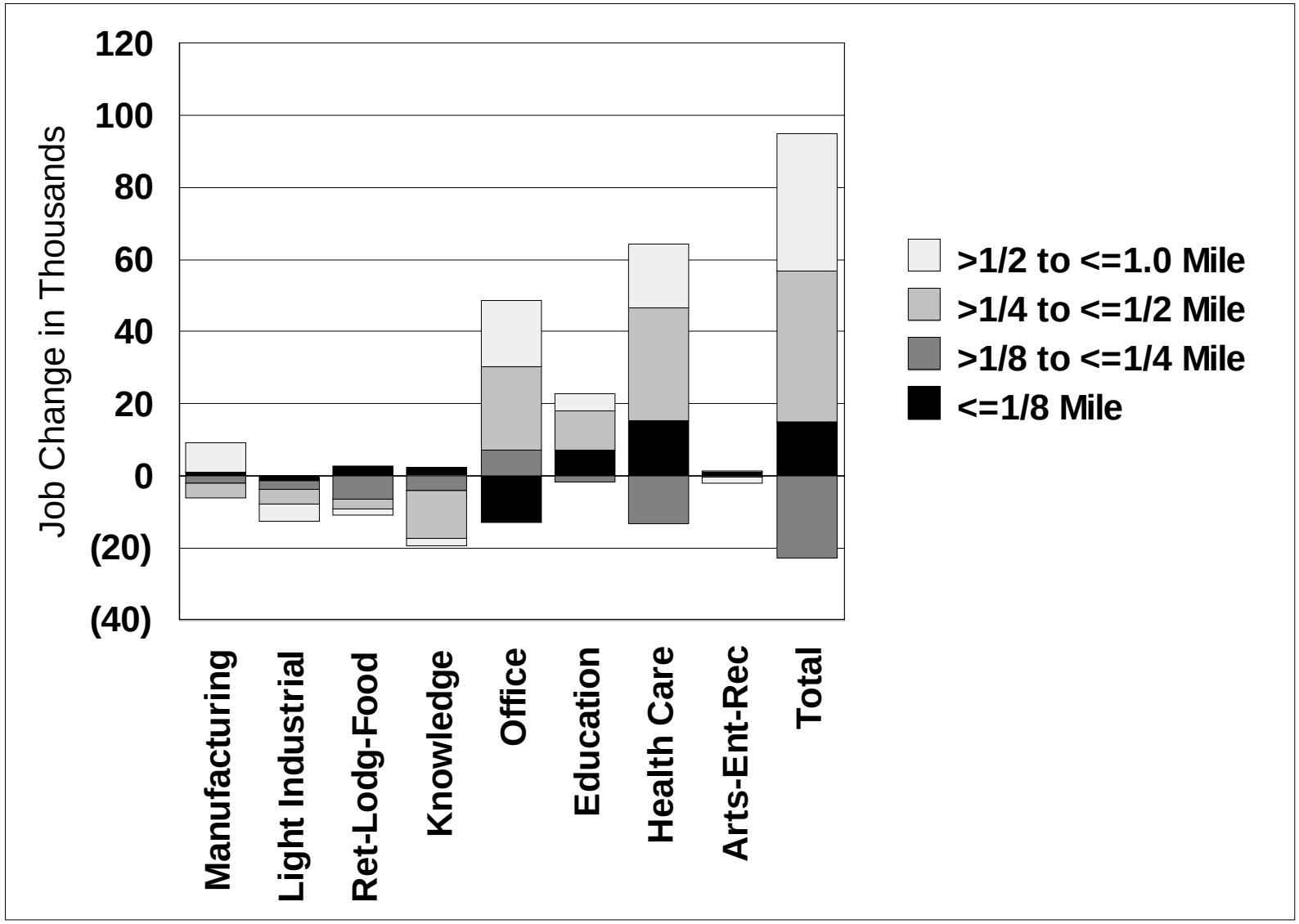

Figure 1
Percentage Change in Jobs by Economic Group by Light Rail Transit Station Distance Band, 2008-2011

BRT Systems. Results for BRT systems are reported in Tables 3 and 4, and illustrated in Figure 2. In contrast to LRT systems, the first three distance bands show gains and generally perform as well or better than BRT counties, while the outermost band performs poorly. Especially noteworthy is the first distance band which gains nearly 60,000 jobs while the BRT counties gained barely more than 1,000 jobs. The third distance band also added nearly 30,000 jobs; overall, the three innermost bands gained nearly 60,000 jobs while the outermost (fourth) band lost 25,000 jobs. Moreover, in the first and third distance bands, half or more of the economic groups performed better than the BRT counties.

A clear interpretation is that firms in a large share of economic groups appear attracted to BRT station proximity up to one-half mile away. Indeed, nearly half the increase in jobs is attributable to locations within the first distance band, <=1/8 mile. Nelson et al. (2013) found similar results for their case study of the Eugene-Springfield BRT system.

Notably, in contrast to LRT systems, growth in office jobs clearly favored the closest locations. Perhaps the reason is comparatively less demand for residential development near BRT stations, saving offices and other activities from having to compete with residential development for BRT proximity.

Table 4
Economic Group Job Change by Bus Rapid Transit Station Distance Band, 2008-2011

Economic Group	BRT Counties	<=1/8 Mile	>1/8 to <=1/4 Mile	>1/4 to <=1/2 Mile	>1/2 to <=1.0 Mile
Manufacturing	(109,253)	(657)	(577)	(5,257)	(6,774)
Light Industrial	(40,938)	**3,016**	*(518)*	*(1,216)*	(1,309)
Retail-Lodging-Food	(69,357)	**1,302**	(3,102)	**1,483**	(6,205)
Knowledge	(24,929)	(82)	(619)	(3,183)	(1,189)
Office	27,381	**48,531**	**3,743**	**9,047**	**3,671**
Education	54,611	(766)	**596**	**24,883**	(17,916)
Health Care	165,465	**7,333**	**567**	**2,762**	**6,227**
Arts-Ent-Rec	(1,747)	**383**	**533**	(247)	(1,942)
Total	1,233	**59,060**	**623**	**28,272**	(25,437)

Note: Bold means the economic group within BRT station area distance band outperformed the central county as a whole. Unless the treatment figure is italicized, all comparisons are significant at p <0.01 based on z-scores.

Table 5
Percentage Change of Economic Group Job Change by Bus Rapid Transit Station Distance Band, 2008-2011 with Respect to Bus Rapid Transit Counties

Economic Group	BRT Counties	<=1/8 Mile	>1/8 to <=1/4 Mile	>1/4 to <=1/2 Mile	>1/2 to <=1.0 Mile
Manufacturing	-14%	-28%	**-10%**	-23%	-17%
Light Industrial	-5%	**14%**	*-5%*	***-4%***	**-3%**
Retail-Lodging-Food	-4%	**6%**	-8%	**2%**	-9%
Knowledge	-3%	**-0%**	-6%	-8%	-4%
Office	1%	**48%**	**10%**	**8%**	**4%**
Education	7%	-13%	5%	**59%**	-30%
Health Care	15%	**34%**	3%	7%	9%
Arts-Ent-Rec	-1%	**3%**	**19%**	-5%	-21%
Total	0%	**26%**	0%	**8%**	-6%

Note: Bold means the economic group within BRT station area distance band outperformed the central county as a whole. Unless the treatment figure is italicized, all comparisons are significant at p <0.01 based on z-scores.

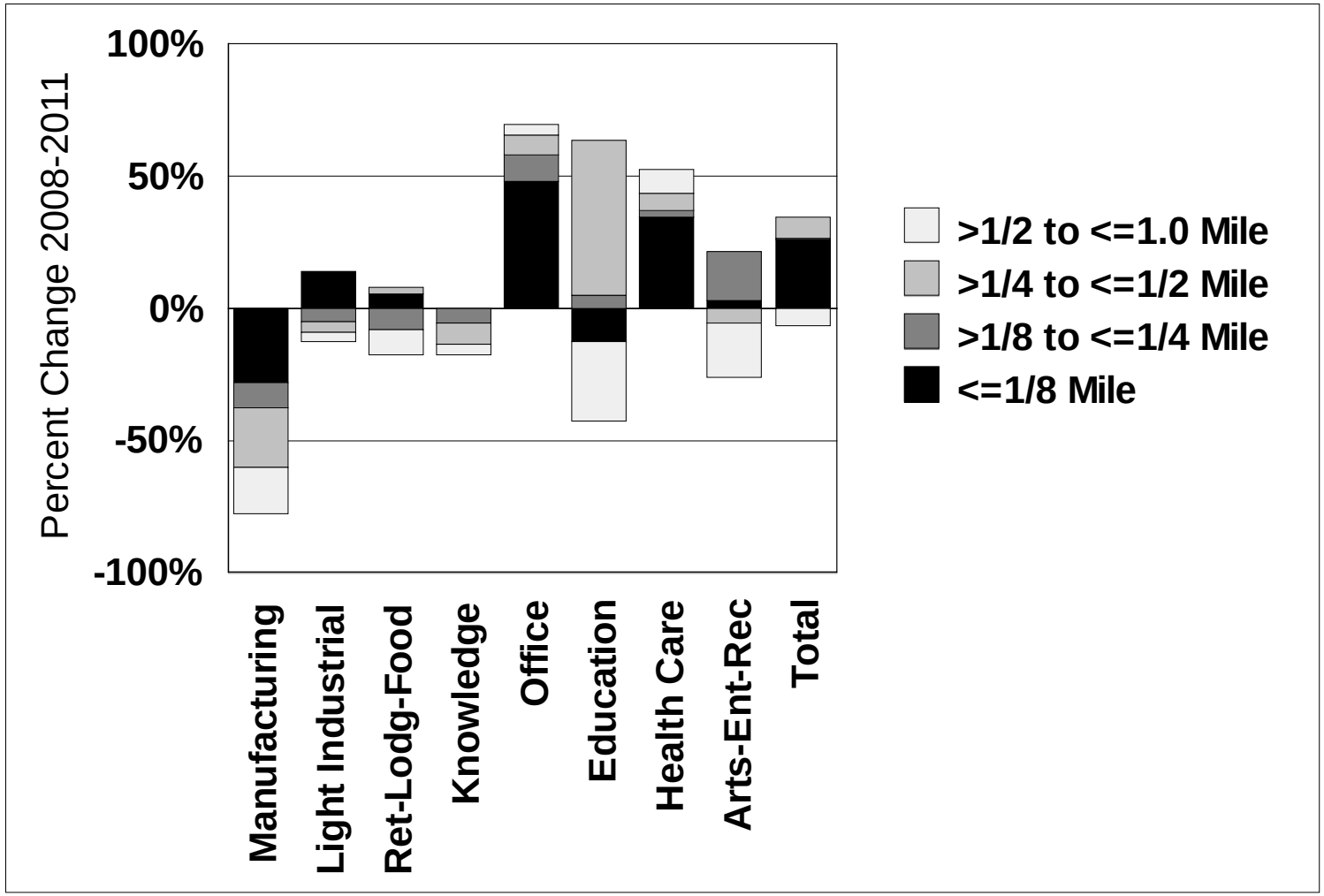

Figure 2
Percentage Change in Jobs by Economic Group by Bus Rapid Transit Station Distance Band, 2008-2011

SCT Systems. Decidedly even more different than LRT and BRT systems is the performance of SCT systems, which is presented in Tables 6 and 7, and illustrated in Figure 3. The two innermost distance bands clearly had no effect in attracting jobs among all the economic groups, but performed substantially better than SCT counties in the third and fourth distance bands—especially the third (>1/4 to <=1/2 mile). On the other hand, more jobs were added to the two outermost distance bands than the SCT counties as a whole.

One interpretation, subject to future research, is that being mostly in downtown and adjacent locations, SCT systems serve substantially existing development. Moreover, new development—at least in these downtowns (Portland, Seattle and Tampa), appear to be mostly high-density residential apartments and condominiums. It may be that as older structures become ripe for rehabilitation or replacement that jobs are displaced elsewhere in the downtown (the third and fourth distance bands) by high-value residential development.

Implications of this analysis are offered next.

Table 6
Economic Group Job Change by Streetcar Transit Station Distance Band, 2008-2011

Economic Group	SCT Counties	<=1/8 Mile	>1/8 to <=1/4 Mile	>1/4 to <=1/2 Mile	>1/2 to <=1.0 Mile
Manufacturing	(21,286)	*(191)*	(249)	(1,248)	(414)
Light Industrial	(11,940)	(4,740)	(985)	2,399	(1,970)
Retail-Lodging-Food	(4,348)	(1,020)	(948)	(1,142)	**1,356**
Knowledge	5,638	(2,373)	(2,179)	(109)	**1,005**
Office	6,205	(6,781)	(19,403)	***30,695***	(3,580)
Education	12,017	(74)	*246*	***2,312***	***2,176***
Health Care	36,404	(256)	*836*	**2,033**	**6,231**
Arts-Ent-Rec	(1,170)	**66**	*747*	(621)	**427**
Total	21,520	(15,369)	(21,935)	**34,319**	**5,231**

Note: Bold means the economic group within SCT station area distance band outperformed the central county as a whole. Unless the treatment figure is italicized, all comparisons are significant at p <0.01 based on z-scores.

Table 7
Percentage Change of Economic Group Job Change by Streetcar Transit Station Distance Band, 2008-2011 with Respect to Bus Rapid Transit Counties

Economic Group	SCT Counties	<=1/8 Mile	>1/8 to <=1/4 Mile	>1/4 to <=1/2 Mile	>1/2 to <=1.0 Mile
Manufacturing	-12%	*-16%*	-26%	-33%	-7%
Light Industrial	-5%	-71%	-30%	**32%**	-12%
Retail-Lodging-Food	-1%	-6%	-9%	-6%	**8%**
Knowledge	2%	-11%	-10%	-0%	**4%**
Office	1%	-22%	-35%	*73%*	-8%
Education	7%	-1%	**45%**	***8%***	***8%***
Health Care	15%	-4%	**26%**	**16%**	**23%**
Arts-Ent-Rec	-2%	**3%**	**170%**	-19%	**10%**
Total	1%	-17%	-23%	**24%**	**3%**

Note: Bold means the economic group within SCT station area distance band outperformed the central county as a whole. Unless the treatment figure is italicized, all comparisons are significant at p <0.01 based on z-scores.

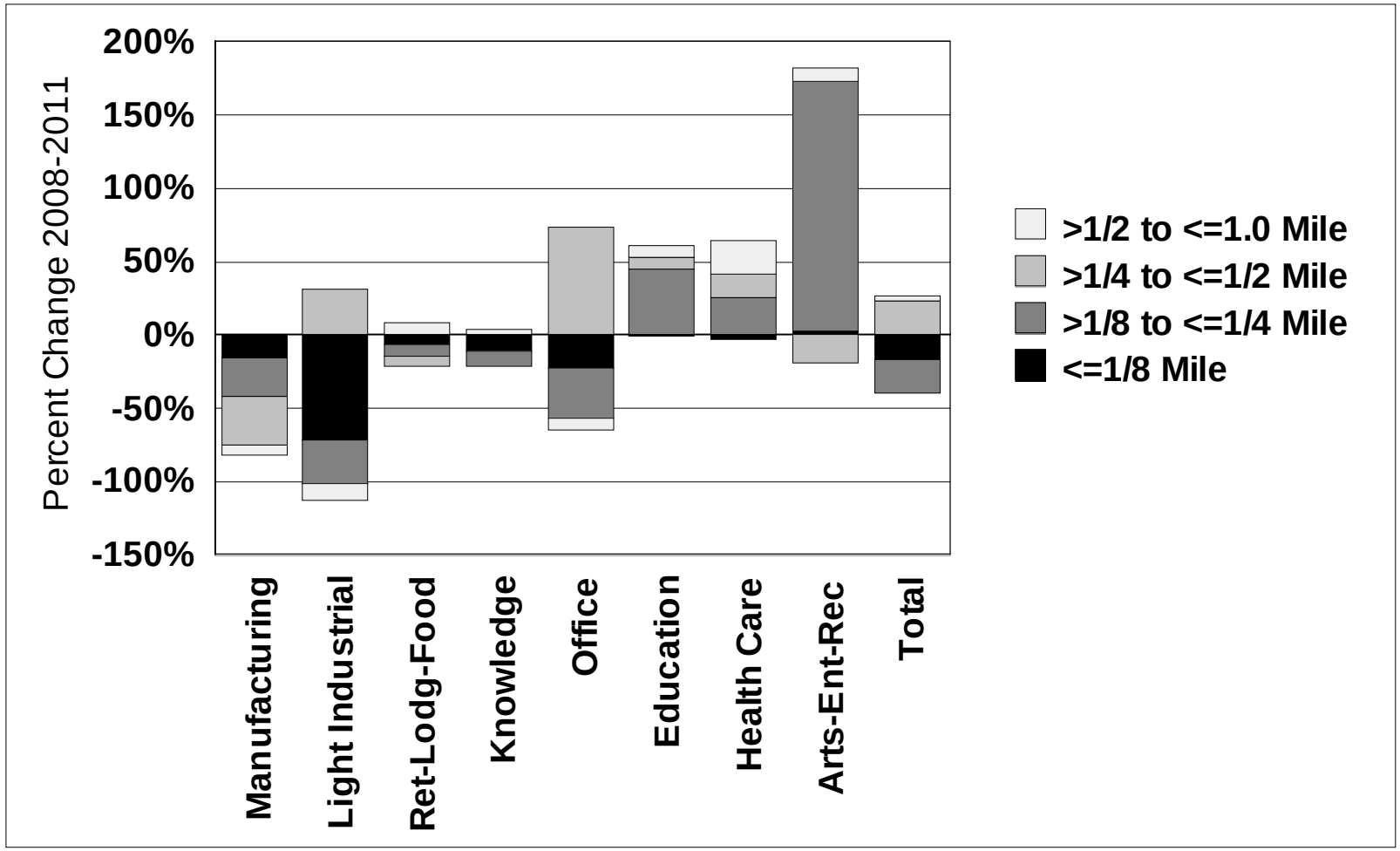

Figure 3
Percentage Change in Jobs by Economic Group by Streetcar Transit Station Distance Band, 2008-2011

Implications

Differences in the change in jobs by economic group between LRT, BRT and SCT transit modes are striking; it is nearly as though there is little in common among them. This assertion is reflected in the next four tables summarizing performance by each transit mode for each distance band, and associated figures illustrating these differences. Perhaps there are reasons related to the central purposes of each type of mode. Outcomes are reasonable based on each type, whether intended or not. For space reasons, I focus only on notable similarities and differences between transit modes with respect to transit station distance band. I invite readers to study the tables and figures for insights applicable to their contexts.

Light rail transit systems have the largest reach of all transit modes, often having the large number of guideway miles and stations, and often traversing multiple counties. They are designed to connect nodes to each other, and create new nodes at transit stations where none existed before. For the most part, they are also the oldest of the three types of transit systems studied. Incremental gains at stations that have already existed for years if not decades would be smaller than for newer transit modes that are mostly recent in implementation. That the innermost distance band performed well is to be expected. And as stations within that band may be mature in attracting new development, the outermost distance bands would be expected to attract the next waves of firms looking for LRT proximity, and perhaps at modest cost since they are farther away. The second band may need more time for the market to ripen to a point where the higher levels of capital investment needed to redevelop existing sites are justified. These may be good opportunities for public-private partnerships to accelerate redevelopment (see Nelson 2014).

In contrast, with the exception of Pittsburgh which has the world's second oldest system, bus rapid transit systems are new on the American transit scene. Being able to run along existing highways, BRT systems are also the least expensive to build though still up to 10 times more expensive per mile than expanding conventional bus routes (see Nelson 2015). But as they run along busy highways they may not attract residential development. Instead, nonresidential development—especially offices—appear to be attracted to BRT stations, at least during recession and into recovery. This is likely by design as BRT stations are located at places where market demand exists or is imminent. What is surprising is that taken as a whole among all BRT counties, BRT station areas dominate economic development.

In even greater contrast is the performance of streetcar systems. Among the modes, SCT systems serve very small areas that are also the most intensely developed and comprised of the highest value real estate in metropolitan areas. What is moderately surprising is the apparent displacement of jobs away from SCT stations to the bands between one-quarter mile and one mile away. Perhaps residential development is outbidding firms for locations nearest those stations. Future research is needed to determine this.

Because the analysis extended from the Great Recession into the early years of recovery, future analysis is needed to affirm the extent to which these trends continue or new ones arise. The role of changing demographics and residential preferences should also be addressed in future research. Survey research, market analysis and recent trends, for instance, suggest there is a mismatch between market demand for walkable communities that are accessible to transit, and supply (Nelson 2013).

For now, it appears that firms in different economic groups react differently to transit modes and transit station distance in ways that may not have been appreciated in prior research.

Table 8
Percentage Change in Economic Group Employment <= 1/8 Mile from Nearest Transit Station by Mode

Economic Group	LRT	BRT	SCT
Manufacturing	**29%**	-28%	-16%
Light Industrial	-9%	**14%**	-71%
Retail-Lodging-Food	**9%**	**6%**	-6%
Knowledge	**4%**	**-0%**	-11%
Office	-11%	**48%**	-22%
Education	**42%**	-13%	-1%
Health Care	**48%**	**34%**	-4%
Arts-Ent-Rec	**23%**	**3%**	**3%**
Total Change	**5%**	**26%**	-17%
Higher Performance Groups	***75%***	***75%***	***12.5%***

Note: **Bold** figures indicate positive change that is higher than transit counties for respective mode. This may include a negative figure that loses fewer jobs proportionately. "Higher Performance Groups" means percent of economic groups by mode that outperforms respective transit counties (***bold italics***).

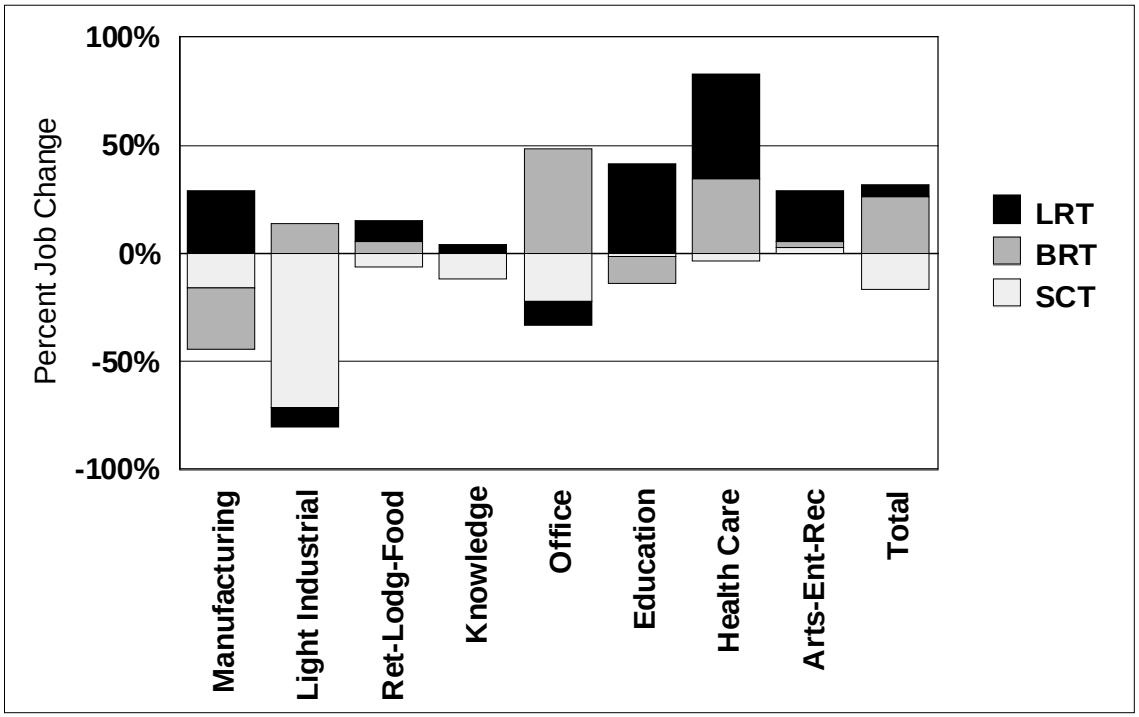

Figure 4
Distribution of Job Change by Sector by Transit Mode <=1/8-Mile from the Nearest Transit Station

Table 9
Percentage Change in Economic Group Employment >1/8 Mile to <= 1/4 Mile from Nearest Transit Station by Mode

Economic Group	LRT	BRT	SCT
Manufacturing	-15%	**-10%**	-26%
Light Industrial	-11%	-5%	-30%
Retail-Lodging-Food	-11%	-8%	-9%
Knowledge	-5%	-6%	-10%
Office	4%	**10%**	-35%
Education	-7%	5%	**45%**
Health Care	-26%	3%	**26%**
Arts-Ent-Rec	-3%	**19%**	**170%**
Total Change	-5%	0%	-23%
Higher Performance Groups	***0%***	***37.5%***	***37.5%***

Note: **Bold** figures indicate positive change that is higher than transit counties for respective mode. This may include a negative figure that loses fewer jobs proportionately. "Higher Performance Groups" means percent of economic groups by mode that outperforms respective transit counties (***bold italics***).

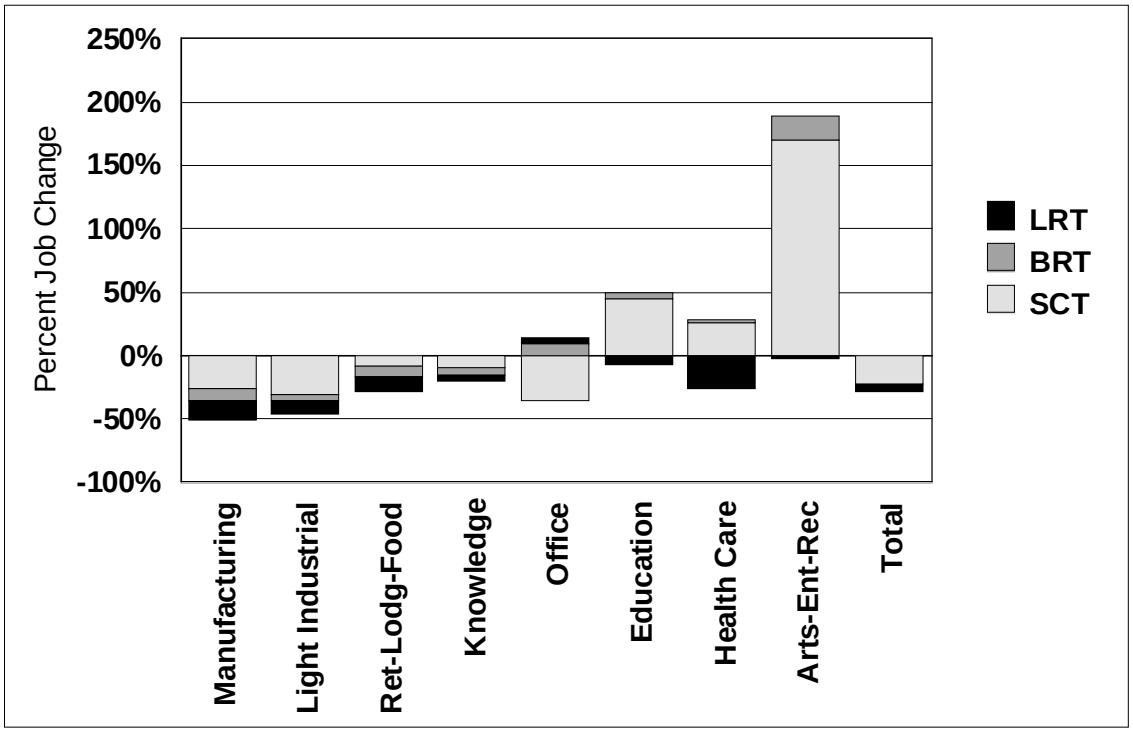

Figure 5
Distribution of Job Change by Sector by Transit Mode >1/8 Mile to <=1/4 Mile from the Nearest Transit Station

Table 10
Percentage Change in Economic Group Employment >1/4 Mile to <=1/2 Mile from Nearest Transit Station by Mode

Economic Group	LRT	BRT	SCT
Manufacturing	-22%	-23%	-33%
Light Industrial	-8%	**-4%**	**32%**
Retail-Lodging-Food	-3%	**2%**	-6%
Knowledge	-17%	-8%	-0%
Office	**13%**	**8%**	73%
Education	**18%**	**59%**	**8%**
Health Care	**48%**	7%	**16%**
Arts-Ent-Rec	3%	-5%	-19%
Total Change	**8%**	**8%**	**24%**
Higher Performance Groups	***37.5%***	***50%***	***37.5%***

Note: **Bold** figures indicate positive change that is higher than transit counties for respective mode. This may include a negative figure that loses fewer jobs proportionately. "Higher Performance Groups" means percent of economic groups by mode that outperforms respective transit counties (***bold italics***).

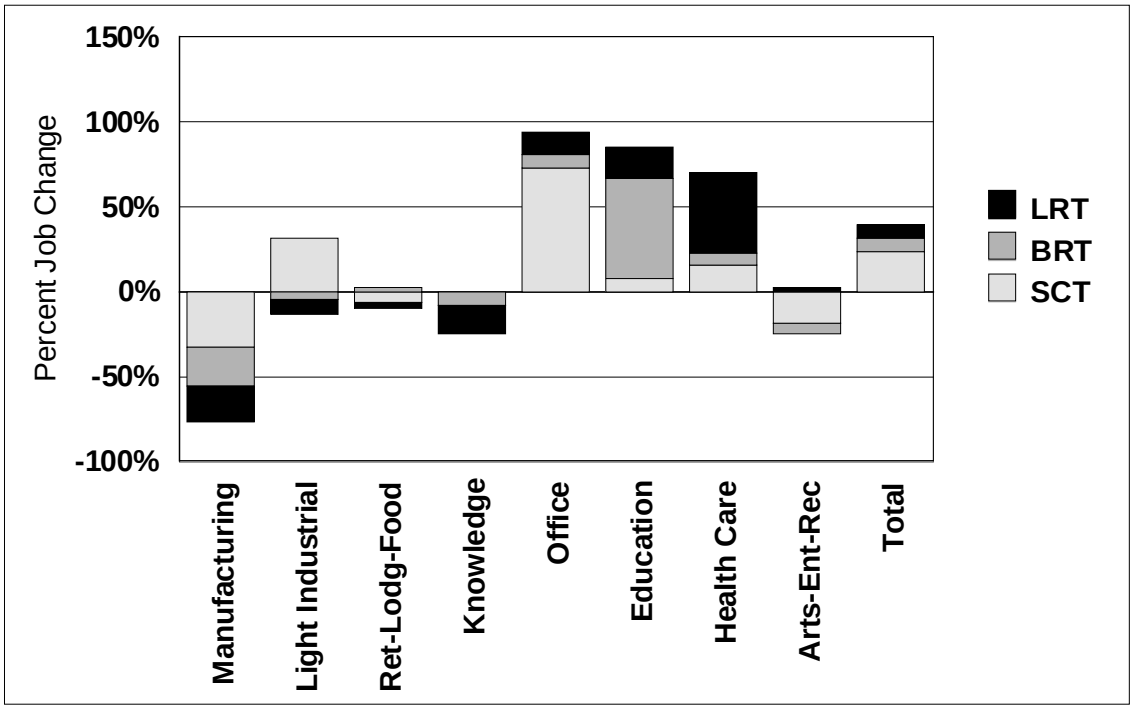

Figure 6
Distribution of Job Change by Sector by Transit Mode >1/4 Mile to <=1/2 Mile from the Nearest Transit Station

Table 11
Percentage Change in Economic Group Employment >1/2 Mile to <=1 Mile from Nearest Transit Station by Mode

Economic Group	LRT	BRT	SCT
Manufacturing	**22%**	-17%	-7%
Light Industrial	-10%	**-3%**	-12%
Retail-Lodging-Food	-2%	-9%	**8%**
Knowledge	-2%	-4%	**4%**
Office	**12%**	**4%**	-8%
Education	**7%**	-30%	**8%**
Health Care	15%	9%	**23%**
Arts-Ent-Rec	-16%	-21%	**10%**
Total Change	**6%**	-6%	**3%**
Higher Performance Groups	***37.5%***	***25%***	***62.5%***

Note: **Bold** figures indicate positive change that is higher than transit counties for respective mode. This may include a negative figure that loses fewer jobs proportionately. "Higher Performance Groups" means percent of economic groups by mode that outperforms respective transit counties (***bold italics***).

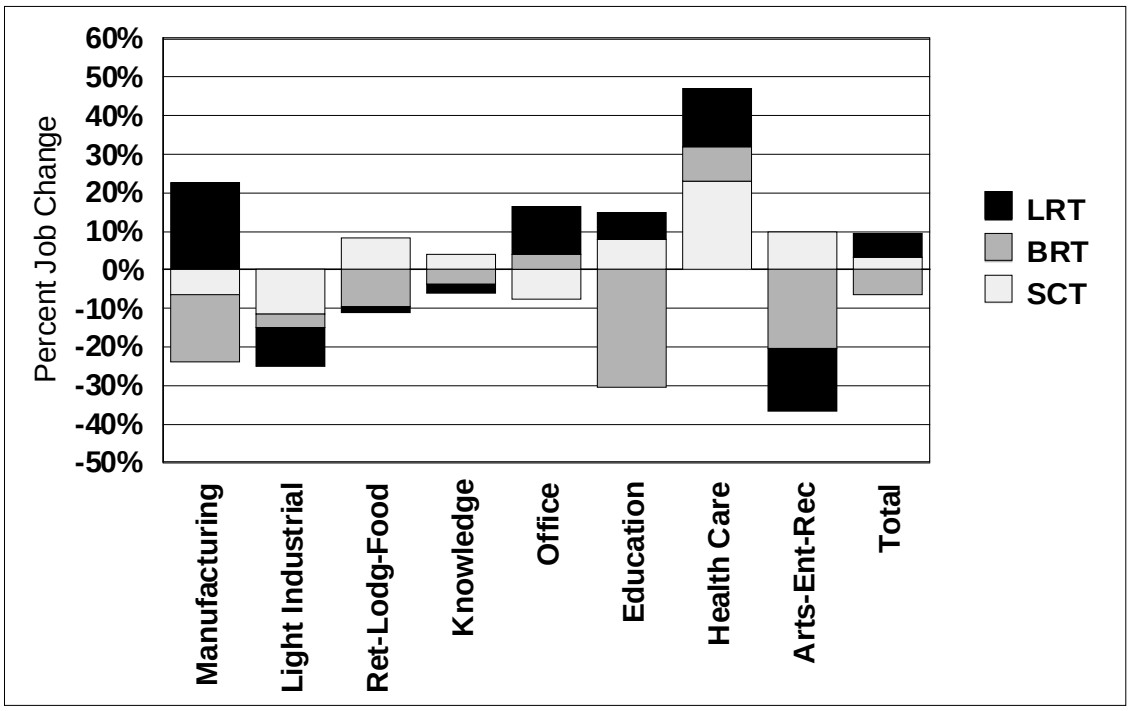

Figure 7
Distribution of Job Change by Sector by Transit Mode >1/2 Mile to <=1 Mile from the Nearest Transit Station

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