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Metropolitan Briefing Book, 2005

Craig Wollner
Portland State University

Sheila A. Martin
Portland State University

Deborah Elliott
Portland State University

Barry Edmonston
Portland State University

Masud Hasan
Portland State University

See next page for additional authors

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Authors

Craig Wollner, Sheila A. Martin, Deborah Elliott, Barry Edmonston, Masud Hasan, Joseph Cortright, John Provo, Jill Fuglister, and Eric Jessup



METROPOLITAN BRIEFING BOOK

2005

Presented by the Institute of Portland Metropolitan Studies
College of Urban & Public Affairs
Portland State University

PORTLAND STATE
UNIVERSITY

INSTITUTE OF PORTLAND METROPOLITAN STUDIES

The Institute of Portland Metropolitan studies was created to better connect the resources of higher education to the issues and needs of the six-county, bi-state Portland Vancouver metropolitan area (Clackamas, Clark, Columbia, Multnomah, Washington and Yamhill counties). If you are not already familiar with the Institute, please take a look at our mission statement and a roster of the IMS board members at the end of this publication. If you would like to read further about our projects and initiatives or download additional copies of this publication, please visit our web site: www.upa.pdx.edu/IMS/. Or call us directly at 503-725-5170.

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INTRODUCTION

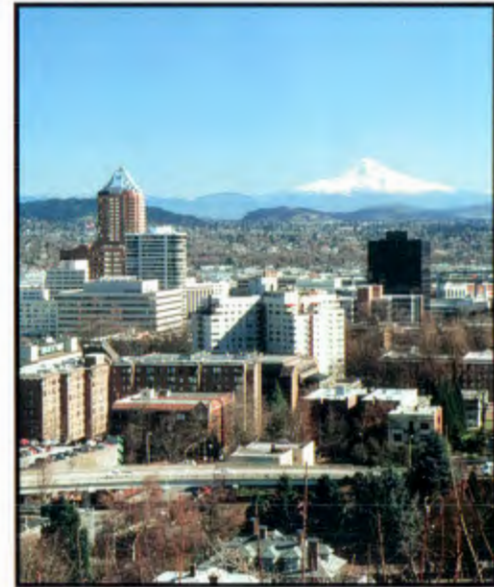
Welcome to the fifth edition of the Metropolitan Briefing Book!

The Institute of Portland Metropolitan Studies (IMS) was created to connect the resources of higher education to the issues and needs in the six-county, bi-state Portland-Vancouver metropolitan area (Clackamas, Clark, Columbia, Multnomah, Washington, and Yamhill Counties). We have included the IMS mission statement and roster of IMS board members in this publication to give readers a clear sense of who we are and how we serve the region. You can find out about all of our initiatives and download additional copies of this publication from our web site: www.upa.pdx.edu/IMS/.

The theme for this edition of the Metropolitan Briefing Book is “Portland at the Crossroads.” We chose this theme because the region is emerging from the recession, and we are observing changes in many of the factors that influence the everyday experiences of region’s citizens. Although we have become used to a certain pace of change, recessions tend to accelerate transformations, particularly those affecting the economy. Thus, the citizens of the Portland-Vancouver region find themselves adapting to changing expectations at work, learning to communicate with different kinds of people in their neighborhoods and workplaces, and dealing with a shifting array of social and economic challenges.

The nature and intensity of the challenges that people face daily influence their sense of urgency about issues confronting our leaders and citizens. To provide a better understanding of the priorities of our citizens and leaders, Craig Wollner and Deborah Elliott summarize the results of the 2005 Critical Issues Survey. The survey reveals an unusual agreement among citizens and leaders that the most important issue facing our region is the creation of jobs and the health of our economy.

In our second essay, Sheila Martin and Amy Vander Vliet shed light on the recent performance of the region’s economy using stereo vision—examining the region’s industries as well as its occupations. The region’s strength in manufacturing led the growth of the 1990s, but as manufacturing continues to fall as a percentage of the U.S. economy, the Portland region’s business leaders continuously face the challenge of identifying the markets and technologies in which we have a competitive advantage that is difficult to replicate. That competitive advantage is increasingly contained in the unique talents of our workforce. Martin and Vander Vliet demonstrate the need for continuous innovation by citing the stories of two local companies that have survived challenges due to technological and market changes.



Shifting demographics are a very visible sign of change in our region. Barry Edmonston and Masud Hasan of the Population Research Center review the components of demographic change and provide a picture of the region's residents over the next two decades. Portland's population growth has exceeded growth for the United States, but that differential has declined over time. People continue to move to the region in disproportionate numbers, and like much of the rest of the nation, the region is becoming more ethnically diverse.

Unlike much of the rest of the nation, the Portland-Vancouver metropolitan area is gaining population in the critical demographic group that Joe Cortright calls "The Young and the Restless." His essay on the influence and importance of this group points out that the competition for this talent will become even more intense. We must protect our ability to attract and retain these workers as an important asset to the region's economy. Cortright suggests that initiatives for attracting and retaining the young and the restless should be a key component of our economic development strategy.

Economic, demographic, and social changes inevitably result in an assessment of whether these changes have been "fair." John Provo and Jill Fuglister discuss in their essay the history of equity considerations in planning in the Portland Region. Using the Regional Affordable Housing Strategy as an example, the authors discuss the political dimensions of equity and the importance of finding a common language for debating alternative aspects of fairness in planning.

Finally, we confront one of the changes most visible to many citizens: the increasing congestion of our highways. To the average citizen, traffic congestion is primarily an inconvenience that robs us of valuable time. But this congestion actually is indicative of problems with important implications for our economy and for our ability to take advantage of new opportunities for trade as the world emerges from recession. Eric Jessup illustrates the importance of freight mobility on our economy and analyzes the critical issues facing leaders as they allocate resources among the many urgent transportation infrastructure needs.

We hope this 2005 Briefing Book stimulates discussion among our leaders and citizens about these important issues. Please visit our web site at www.upa.edu/IMS/ or call us to find out about other publications, initiatives, and events related to these and other issues facing the Portland-Vancouver metropolitan region. We also want to hear from you about how we can make this publication better in the future. Our thanks go to our contributors for their excellent work, and to Beth Dillon and Meg Merrick whose assistance has made this publication possible.

Sheila A. Martin



Director, Institute of Portland Metropolitan Studies

Craig Wollner



Associate Dean,
College of Urban and Public Affairs
Portland State University



PORTLAND-VANCOUVER METROPOLITAN AREA



Critical Issues 2005 1

Portland’s Regional Economy: The Dynamics of Change 5

Population Outlook for the Portland Vancouver Metropolitan Area 17

Talent, Place, and Prosperity: Metro Portland’s Changing Labor Market and Economic Outlook 27

Environment, Economy, and Equity: Can We Find a Language for Fairness
in Regional Planning? 35

Trade, Transportation, and Freight Mobility: Invest Now or Pay Later? 45

Table 1. The Metropolitan Critical Issues Ranking, according to the General Public

2004	2002
1. Strong economy and jobs	1. Lifelong quality education
2. Access to affordable health care	2. Strong economy and jobs
3. Lifelong quality education	3. Access to affordable health care
4. Visionary, credible leadership	4. Police, fire, and other public safety concerns
5. Police, fire, and other public safety concerns	5. Visionary, credible leadership
6. Protection and enhancement of the environment	6. Protection and enhancement of the environment
7. Diverse, integrated transportation system	7. Diverse, integrated transportation system
8. Valuing diverse racial and ethnic backgrounds	8. Containing growth, UGBs
9. Containing growth, UGBs	9. Valuing diverse racial and ethnic backgrounds
10. Diverse, affordable housing	10. Diverse, affordable housing

Table 2. The Metropolitan Critical Issues Ranking, according to the Opinion Leaders

2004	2002
1. Strong economy and jobs	1. Strong economy and jobs
2. Lifelong quality education	2. Lifelong quality education
3. Access to affordable health care	3. Visionary, credible leadership
4. Visionary, credible leadership	4. Diverse, integrated transportation system
5. Diverse, integrated transportation system	5. Access to affordable health care
6. Protection and enhancement of the environment	6. Protection and enhancement of the environment
7. Containing growth, UGBs	7. Containing growth, UGBs
8. Diverse, affordable housing	8. Diverse, affordable housing
9. Police, fire and other public safety concerns	9. Police, fire and other public safety concerns
10. Valuing racial and ethnic backgrounds	10. Valuing racial and ethnic backgrounds

by Craig Wollner, Professor, Associate Dean, College of Urban & Public Affairs, Portland State University

Deborah Elliott, and the staff of the Survey Research Laboratory, Portland State University

INTRODUCTION

Biennially, the Institute of Portland Metropolitan Studies (IMS) undertakes to identify the most compelling concerns, problems, and dilemmas facing citizens of the Portland metropolitan region. The region is defined as Clackamas, Columbia, Multnomah, Washington, and Yamhill Counties and Clark County in Washington. IMS staff analyzes the results of two Critical Issues List surveys, one of area residents at large conducted by the Survey Research Laboratory (SRL) of Portland State University (PSU), and the other a mail survey of regional opinion leaders. The opinion leaders are elected and appointed officials serving in jurisdictions throughout the six-county metropolitan region, academic experts in regional affairs, and citizen activists. The two surveys are compared and contrasted for points of congruity and contrast between the two cohorts surveyed. Staff completed 374 phone surveys of the general public; 424 of the region's opinion leaders mailed back responses. This essay presents the results.

The comparative results in the 2004 survey cycle, which are summarized in Tables 1 and 2, yield a number of interesting insights:

- ❑ For the first time since 1994, education is not the most critical issue to either or both of the survey groups, although it continues to be a preoccupation of both opinion leaders and the public.
- ❑ The most important issue for both groups is a strong economy and jobs.
- ❑ Affordable health care continues to be an issue of great concern to both opinion leaders and the general public.
- ❑ Police, fire, and public safety is not an item of the highest priority to either group despite the well publicized threat of terrorism.

In what follows, we discuss these findings in greater detail. The exact wording of each of the issues, as voiced by the telephone surveyors and printed in the mail survey for ranking by respondents, is bolded in the text of the essay.

In the interest of brevity, this essay omits discussion of frequencies, sample size, error and confidence, and other data. The entire report on the Critical Issues List survey of the general public by the Portland State University Survey Research Lab and of the mail-back survey can be viewed at: <http://www.upa.pdx.edu/IMS/home/homeindex.html>.

QUALITY OF LIFE

A separate question was asked on both surveys: "on a scale of 1 to 10, how would you rate overall quality of life in the region, with 1 being the worst and 10 the best?" The average rating for each of the groups surveyed is below.

General Public:	7.78
Opinion Leaders:	7.36

A DISCUSSION OF COMPARATIVE RESULTS: the general public and the opinion leaders

The Top Three Issues

The foremost concern of the region's general public over the last eight years, as revealed by these surveys has reliably been the state of education. Although education generally has topped the issues list for the opinion leaders as well, they dropped it to second place in 2002, identifying **"Developing and maintaining a strong economic infrastructure that provides stable, family-wage jobs, and a fair, equitable tax base to support public services"** as their greatest priority. This year both surveys revealed that the economy/jobs issue is the number one concern. This finding is understandable because the state and regional economy, based significantly on manufacturing and other ailing sectors, has so far refused to recover from the 2001-2002 recession with the speed or power of other parts of the nation. As the region's economic woes drag on affecting households, local and state treasuries, and businesses and industries, both the public and its leaders clearly agree that the situation must be dealt with swiftly and efficiently. For some among the general public, the issue of the recovery focuses not as might be expected on creating more jobs, but on reforming tax policy so as to stimulate job creation. Two basic polarities exist: one respondent claims that the correct approach is "redesigning state tax policy so that . . . we have a sales tax and that we balance taxes among sales, property and income. I think this is the number one first priority for supporting all these critical issues." On the other side, a respondent urges "reduction or elimination of a lot of the taxes because they limit growth." Com-

mentary by opinion leaders also reflects the theme of tax fairness and simplification, although their analysis sometimes looks beyond taxes as a driver of the labor market and economy. “Metro’s regional planning is hurting the city’s economic opportunities—time to eliminate them?” one respondent asks rhetorically. “Jobs, jobs, jobs,” asserts another, going on to recommend “revision of economics away from corporate outsourcing and toward regional small manufacturing with all kinds of incentives for this shift.” Another blames the environmental sensitivity of the region for poor economic performance, noting that Portland has “wonderful fresh air, green trees, access to the Columbia River, but [it’s] difficult to make a living here—very few family wage jobs.”

The second leading issue this year for the public is **“access to affordable health care for all sectors of the community”** as compared to 2002 when it was #3. For the opinion leaders, health care is #3, moving up from the fifth position in 2002. Occupying the second slot for them is “lifelong quality education.” The strong showing of this issue in both polls tracks with the upward spiral of health care costs locally and nationally over the last several years, the growth in numbers of the uninsured in the region on both sides of the Columbia and the nation (including cuts in benefits and the shrinking of the rolls of the Oregon Health Plan), and the devaluation of the health benefits packages of the employed thanks to inflation, characterized by more stringent stop loss provisions resulting in higher deductibles and restrictions on providers.

At the same time, the opinion leaders’ choose **“ensuring lifelong quality education (pre-K-12, community college, college, graduate school) that is accessible to all, addresses different learning styles, and supports the regional workplace”** as their second most critical issue (the public ranked it third). Their concern for this issue, which has chronically topped both lists as the region’s most critical issue, indicates the extent to which it remains a matter of deep concern for both groups. Clearly, events in the two years following the 2002 surveys, including budget shortfalls, erratic test scores under the No Child Left Behind Act, dramatic gestures such as cutting school days in order to meet budgets, emergency surtaxes, and the like have done nothing to push the problem to the back burner for either group. “Oregon is in an education crisis right now...” one member of the public states flatly. “The way the state legislature is responding to the funding needs [of schools],” notes another respondent, “school boards don’t know how much money they have to work with until the legislators decide and it hasn’t been working out

because they decide too late.” One expresses concern about the teaching of values in the schools, calling for “freedom for the Christian community to express its values—to be taught in schools or, at least, private schools.” Another points to “class size and affordable and realistic wages for teachers” as major issues.

Several people among the opinion leaders take the opportunity to champion the development of a regional university of national distinction. Opinion leaders also put forward a sense that education is central to all issues. “If we don’t invest in education,” according to a respondent who captures this view, “then we can’t succeed in these other areas.”

The Leadership Challenge

For the public, **“visionary credible leadership at all levels that engages citizens in public decision making”** is #4. In previous polls, this issue consistently received a middling rank from both groups, but no matter where they rank it, survey respondents have always revealed dissatisfaction with the current crop of leaders and a longing for a new group with greater charisma. In the 2004 iteration, the members of the public who choose to comment seem more hostile toward the leadership than respondents in previous polls. One remarks that “the leadership is too intent on being politically correct and too beholden to private interest groups [and] not looking at the entire region.” Another demands getting “more reasonably thinking people in government that doesn’t tell people what they have to do.” Past surveys have yielded a great deal of discussion on leadership from the opinion leaders. Strikingly, they offered only a few terse comments in the 2004 survey. One asserts that visionary leadership is lacking and laments, “in this . . . partisan and political climate, I have no illusions [that new leaders coming to the fore] can occur any time soon.”

Perhaps summing up the predominant sentiment of opinion leaders, one wrote, “We are living in an Eden, yet one at great risk of blowing it due to a lack of courage, vision, and leadership.”

Safety and Security in a Time of War

In the 2004 edition of the surveys, the public placed **“police, fire, and other public safety concerns”** at #5, whereas the opinion leaders ranked it ninth. These rankings are consistent with the two groups’ attitude about the issue over time

(public safety concerns were at #4 for the public in 2002), although in 2000, prior to September 11, the public ranked this issue #3. The consistent disparity in rankings is perhaps explained by the prominence given to crime in local news coverage, which commands the attention of the public at large. Opinion leaders, on the other hand, tend to be more aware of the actual declining trend line of crime in the region over the last decade and more sanguine. They emphasize less direct strategies for combating crime. One comment reflects this approach: “Police, fire, and public safety would be less overwhelming in a society where jobs were available and crime wasn’t viewed as necessary for some segments of the population.” Or, as another puts the matter, “policing becomes easier where economic goals are met.” Perhaps intending a joke, one respondent comments cryptically that “there are too many killer cops and not enough cafes” in the neighborhood.

Still, the anxiety over crime among the public has not disappeared. One public respondent demands “make it safer! The police [should be] more accessible and doing what they’re supposed to be doing.” Another remarks that “the whole police department is corrupt [and practices] racial intimidation. Clackamas County is the worst regarding racism and racial intimidation.” In light of the history of the last three years, it seems curious that only one member of the public and none of the opinion leaders comment about the need for better security to combat terrorism.

Protecting and Planning the Environment

“**Protection, restoration and enhancement of the environment**” rates #6 with the public, the same weight given by the opinion leaders. For both groups, this concern has lessened since 2000, when it ranked #4 for the opinion leaders and #5 for the public (it was #6 for both groups in 2002). Over the period since the last survey, concern has deepened over a number of issues crucial to a healthy environment—wetland loss, air and water quality, the Willamette River Superfund site, for example. Now, however, neither group seems to regard the environment as one of the region’s more pressing concerns. A small segment of the public is tired of the emphasis on environmental quality and says so plainly: “[We] need to get rid of some of the tree huggers,” one respondent asserts. Some are concerned about the toll of development on the environment. A representative comment observes, “I see us having more development in a way that puts environment second. Development should be slowed. We should have more LIDS (low impact development).” Others worry about air and water quality.

In 2004, the general public sees “**supporting an expanded, diverse, affordable and integrated regional transportation system that reduces congestion and moves people and goods safely and efficiently**” as the seventh most critical issue, while the opinion leaders rank it at #4. This disparity represents the consistent views of the two groups on the importance of moving people and freight through the region. The strong profiles of light rail and the overall success of Tri-Met and CTran bus service seems to satisfy the public despite their unhappiness over increasing traffic congestion throughout the region. Many opinion leaders tend to see the stubborn dependence of citizens of the area on the car as an important obstacle to the highest level of livability and sustainability. Still, a number of people in the public complain about various aspects of the regional transportation system, often in somewhat vague terms. For example, one individual demands more public transportation; another says that “traffic is horrendous. It [traffic lights] needs to be coordinated.” Another objects to the loss of Greyhound service to the coast and the eastern reaches of Oregon, which poses a particular hardship for the elderly. Opinion leaders voice more specific concerns. One calls for “a critical review of what Metro’s transportation planners projected and what they delivered, in terms of transit ridership and capital costs, between 1980 and 2000.” Another criticizes the quality and availability of handicapped transportation and parking in downtown Portland, especially since “Metro and [the] state stress the importance of the central city for all.” Another calls for transportation planning that includes Clark County.

Diversity

This year the public positions “**Recognizing, valuing, and involving persons of diverse racial and ethnic backgrounds in our community and government decisions**” at #8, assigning it more importance by one spot than in the 2002 poll. Diversity ranked tenth for the opinion leaders in 2004, repeating its position in 2002 but dropping three places farther down the list than in 2000. Over the decade to date, diversity has become more important to the public (it was #9 in 2000) and less so to opinion leaders. For the public, this development is probably a function of the pressures of in-migration from a variety of ethnic and religious groups as revealed in the 2000 census and confirmed by simple empirical observation. For the opinion leaders, the relatively trouble-free transition to diversity over the period perhaps offers proof that the region’s citizens are capable of tolerance, and hence

they exhibit a low level of anxiety. There are some random negative comments about illegal immigration and homosexuals, but the public was, overall, remarkably sanguine about this issue at a time when the census shows diversity growing rapidly in the region.

Urban Spaces and Housing

One of the more interesting comparisons in the 2004 survey is the position of the public on the issue of **“containing growth within the Portland-Vancouver urban growth boundaries while maintaining quality of life both inside and outside the boundaries.”** The public ranks this problem #9, as compared with the opinion leaders, who see it as the seventh leading issue. In light of the November 2 vote and Oregon’s overwhelming passage of Measure #37, which won in the urban, suburban, and rural counties of the region, this result is not a major surprise. Perhaps most significantly, the measure is widely believed to negate the Urban Growth Boundary (UGB). Thus, the relative lack of concern among members of the public for the potential for sprawl is not unexpected. In any case, both groups offer a number of comments on growth. “Good urban design is very important to create an infrastructure for jobs and other things,” remarks one member of the public. Another calls for “maintaining the character of neighborhoods. The older neighborhoods (inner SE and NW) should not be made into cookie cutter developments.” “Residential and workplaces need to be [isolated] for a better quality of life,” asserts yet another. “It’s too congested.”

The opinion leaders are divided on this issue. Some see the UGB as too restrictive, resulting in an erosion of the quality of life in the area. One observes, “Zoning is going the wrong way. Stop the 3,500 foot lots. Portland needs trees and you don’t get them this way. Think of more space like Ladd’s Addition: That’s the small town look that Portland should be. Do not try to make this NYC.”

The public places **“diverse, affordable housing close to jobs throughout the region”** in the tenth position, while the opinion leaders rate it the ninth most important issue. A respondent from the public worries that land available for construction has to be freed up. Linking the housing issue to the UGB and family wage jobs, this person contends that “they are decreasing the affordability of homes, and there will be a society of young people who won’t be able to afford homes. People working at the low-income jobs are not going to be able to afford a home.”

One opinion leader speaks for many in calling for “balancing gentrification of inner city neighborhoods with housing costs that make those neighborhoods unaffordable.” Another prescribes an affordable housing policy embedded in the creation of a “bi-state metropolis” with a balance between growth and management of growth.

CONCLUSION

Finally, it is worth noting that in this year more than others in the recent past, the opinion leaders see the issues as equally important or as inextricably linked to each other. As one opinion leader aptly puts the matter, “All of these issues are important. As elected officials we have to integrate all of the above into state policy.” Moreover, in this year more than in the past, both the public and the opinion leaders, explicitly and implicitly, call for true bi-state cooperation. One prevailing impression emerges from their comments: More than ever before, the Portland region is moving toward a unified view of itself as it confronts the most pressing problems. This heightened self-consciousness bodes well for discovering solutions.

by Sheila Martin, Director, Institute of Portland Metropolitan Studies
with assistance from Amy S. Vander Vliet, Regional Economist, Oregon Employment Department¹

As the Portland-Vancouver economy emerges from recession, regional residents must come to terms with the realities of a restructured economy. The familiar sectors and industries upon which we based success in the past likely will no longer sustain us, at least to the degree they once did. We are simultaneously witnessing the rebuilding of an economy while suffering the symptoms of radical change.

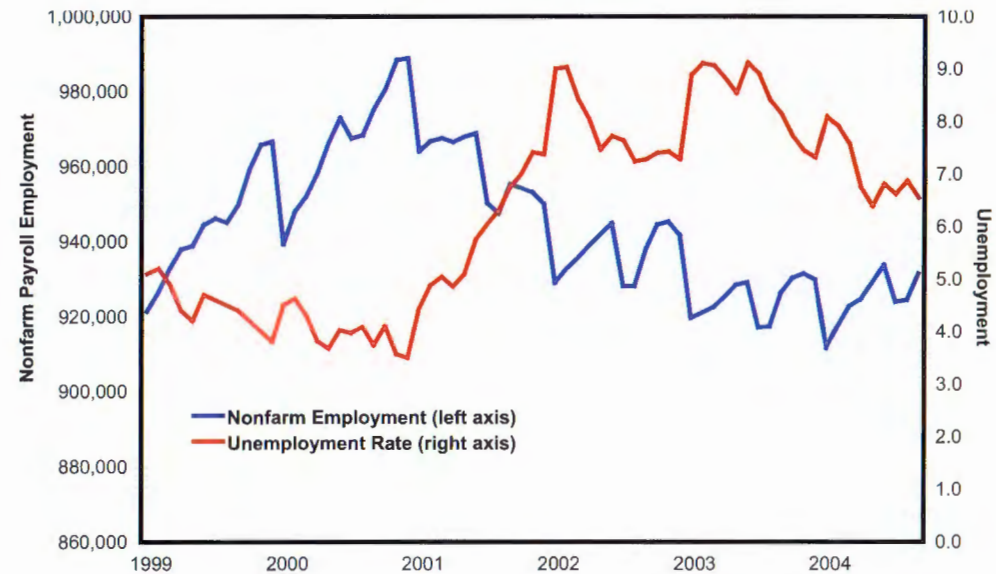
The slowdown that began in the Portland region in the summer of 2000 was caused, in part, by cyclical downturns in several of the region's key industries. As the region continues to recover, it will most likely undergo a structural change: tomorrow's economy will look different than it did when the recession began. This paper examines that change from three perspectives. First, we consider how the industrial mix in the Portland region has changed and how it relates to national trends in industrial restructuring. Second, we describe expected changes in the occupational mix of the Portland region's workforce. Finally, we take a closer look at several companies that have made significant changes in their business models within the last few years in order to adjust to market or technological changes. We conclude with several observations about the inevitability of change and the need for resiliency.

EVOLUTION THROUGH RECESSION AND RECOVERY:

The Portland Region's Industrial Landscape

After two years of job declines totaling over 50,000, the Portland area has followed the nation out of recession. Figure 1 tracks both total jobs and the unemployment rate from just before the peak of the last business cycle in the summer of 2000 through the recession and into the recovery. In the first half of 2004, the Portland Metropolitan Statistical Area (PMSA)—consisting of Columbia, Clackamas, Multnomah, Washington, and Yamhill counties in Oregon and Clark county in Washington—experienced strong job growth, and the unemployment rate fell quickly. However, growth slowed in the summer. As of October 2004, total employment stands at 41,500 fewer jobs than October of 2000². The unemployment rate stands at 6.4 percent compared to 5.1 percent for the nation.

Figure 1. Total Employment and Unemployment Rate, Portland Metropolitan Region, 1999 to 2004 (not seasonally adjusted)



Source: Oregon Employment Department.

National and Local Restructuring

As the Portland economy recovers, it appears that the recession may have been caused partly by rapid structural change. As the recovery takes hold, residents of the region may find that rather than returning to the economy in place before the recession, Portland's regional economy is undergoing structural changes that will determine which industries will provide new economic opportunities for Portlanders over the next decade. In this respect, the current recovery is similar to the changes taking place nationwide. The current restructuring is also similar in some

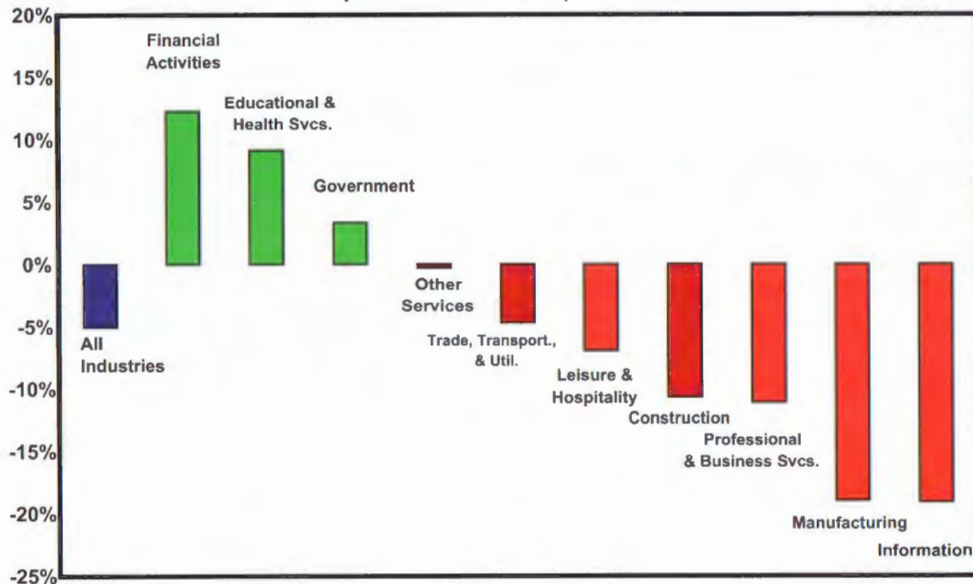
¹The authors are grateful to Scott Bailey at the Washington Department of Employment Security for assistance with data.
²Because regional data are not seasonally adjusted, we compare October employment data across years to factor out the seasonal variation in employment.

respects to those following the recessions in the 1980s and 1990s. Structural adjustments are inevitable when an economy faces fundamental changes in competitive and market factors.

The recession was broadly felt across most, but not all, of the Portland region's industries. Figure 2 shows the percentage change in employment for major industries in the Portland PMSA during the recession. Growth continued to occur in some major industries and in some minor industry segments. Growth occurred as expected in population-based industries such as educational and health services. Employment in the financial activities sector also grew, particularly in credit intermediation and related activities. These sectors added over 2000 jobs as mortgage refinancing took off due to low interest rates. Within the business service sector, call centers also added employment.

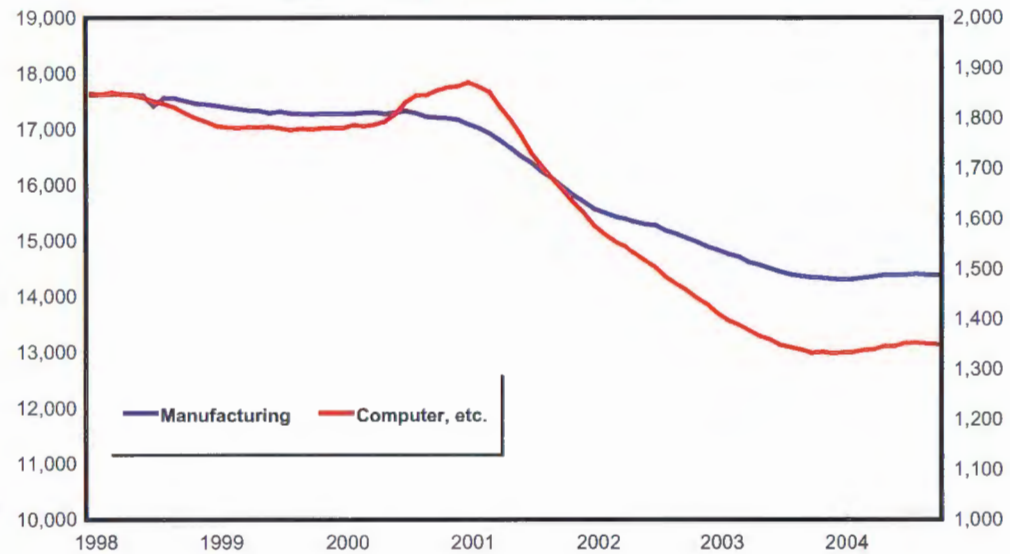
Nationwide, this recession has been particularly difficult for manufacturing industries. Manufacturing shed over three million jobs—almost 19 percent of

Figure 2. Employment Growth/Decline by Major Industry, Portland PMSA, September 2000 to September 2003



Source: Oregon Employment Department

Figure 3. Total U.S. Employment in Manufacturing and Computer and Electronic Products, 1998 to 2004



Source: U.S. Bureau of Labor Statistics

national employment—since its most recent peak in March 1998. Employment in the computer and electronic products subsector lost half a million jobs nationwide, or almost 30 percent. Figures 3 show that the fall in employment in this sub-sector was very sharp relative to other manufacturing industries: peak employment in this sub-sector occurred almost two years after the peak in overall manufacturing.

The decline of manufacturing jobs during the recession followed a decades-long reduction in U.S. manufacturing's share of total employment. Table 1 shows the total employment and share of employment for the United States and for the Portland region for key industries. From 1990 to 2003, manufacturing's share of national employment fell from 16.2 to 11.2 percent. Projections indicate that this trend will continue, with manufacturing employment falling by 1 percent by 2012, despite a projected increase of 14.8 percent in all sectors. Thus, manufacturing's share of total employment will fall again to only 9.2 percent of national employment by 2012.

Table 1. Employment and Share of Employment for the United States and Portland PMSA

	Employment						Share of Total Employment								
	United States (000's)				Portland PMSA			United States				Portland PMSA			
	1990	2000	2003		1990	2000	2003	1990	2000	2003		1990	2000	2003	
	109,487.0	131,785.0	129,931.0		725,000	967,100	924,800		100.0%	100.0%	100.0%		100.0%	100.0%	100.0%
Manufacturing	17,695.0	17,263.0	14,525.0		125,700	142,900	117,800		16.2%	13.1%	11.2%		17.3%	14.8%	12.7%
Wood product manufacturing	540.6	613.0	536.1		7,600	5,800	5,300		0.5%	0.5%	0.4%		1.0%	0.6%	0.6%
Fabricated metal product manufacturing	1,610.0	1,752.6	1,478.4		10,800	13,700	11,500		1.5%	1.3%	1.1%		1.5%	1.4%	1.2%
Machinery manufacturing	1,407.8	1,454.7	1,153.5		9,300	10,500	8,500		1.3%	1.1%	0.9%		1.3%	1.1%	0.9%
Computer and electronic product manufacturing	1,902.5	1,820.0	1,360.9		28,600	42,900	34,800		1.7%	1.4%	1.0%		3.9%	4.4%	3.8%
Transportation equipment manufacturing	2,133.3	2,055.8	1,775.4		9,600	11,200	7,500		1.9%	1.6%	1.4%		1.3%	1.2%	0.8%
Trade, transportation, and utilities	22,666.0	26,225.0	25,275.0		159,500	200,500	190,400		20.7%	19.9%	19.5%		22.0%	20.7%	20.6%
Transportation, warehousing, and utilities	3,475.6	4,410.3	4,176.7		31,400	38,000	36,400		3.2%	3.3%	3.2%		4.3%	3.9%	3.9%
Warehousing and storage	406.6	514.4	522.3		2,900	3,800	3,900		0.4%	0.4%	0.4%		0.4%	0.4%	0.4%
Information	2,688.0	3,631.0	3,198.0		16,100	27,800	23,400		2.5%	2.8%	2.5%		2.2%	2.9%	2.5%
Publishing industries, except internet	870.6	1,035.0	926.4		4,200	11,200	9,500		0.8%	0.8%	0.7%		0.6%	1.2%	1.0%
Software publishers	98.2	260.6	239.2		1,300	7,000	5,900		0.1%	0.2%	0.2%		0.2%	0.7%	0.6%
Financial activities	6,614.0	7,687.0	7,974.0		44,000	60,200	67,500		6.0%	5.8%	6.1%		6.1%	6.2%	7.3%
Finance and insurance	4,978.6	5,680.4	5,920.5		30,100	41,600	44,100		4.5%	4.3%	4.6%		4.2%	4.3%	4.8%
Credit intermediation and related activities	2,424.8	2,547.8	2,785.6		12,000	18,700	21,600		2.2%	1.9%	2.1%		1.7%	1.9%	2.3%
Professional and business services	10,848.0	16,666.0	15,997.0		77,000	128,500	116,300		9.9%	12.6%	12.3%		10.6%	13.3%	12.6%
Architectural and engineering services	941.5	1,237.9	1,228.0		6,200	10,400	9,600		0.9%	0.9%	0.9%		0.9%	1.1%	1.0%
Computer systems design and related services	409.7	1,254.3	1,108.9		5,900	9,200	7,000		0.4%	1.0%	0.9%		0.8%	1.0%	0.8%
Employment services	1,493.7	3,817.0	3,336.2		11,700	31,000	21,200		1.4%	2.9%	2.6%		1.6%	3.2%	2.3%
Leisure and hospitality	9,288.0	11,862.0	12,125.0		63,800	90,100	84,000		8.5%	9.0%	9.3%		8.8%	9.3%	9.1%
Natural Resources and Mining	765.0	599.0	571.0		1,900	1,800	1,600		0.7%	0.5%	0.4%		0.3%	0.2%	0.2%
Construction	5,263.0	6,787.0	6,722.0		37,000	53,300	48,800		4.8%	5.2%	5.2%		5.1%	5.5%	5.3%
Education and Health Services	10,984.0	15,109.0	16,577.0		73,800	103,200.0	113,200.0		10.0%	11.5%	12.8%		10.2%	10.7%	12.2%
Other Services	4,261.0	5,168.0	5,393.0		26,300	33,500	33,900		3.9%	3.9%	4.2%		3.6%	3.5%	3.7%
Government	18,415.0	20,790.0	21,575.0		99,800	125,400	128,000		16.8%	15.8%	16.6%		13.8%	13.0%	13.8%

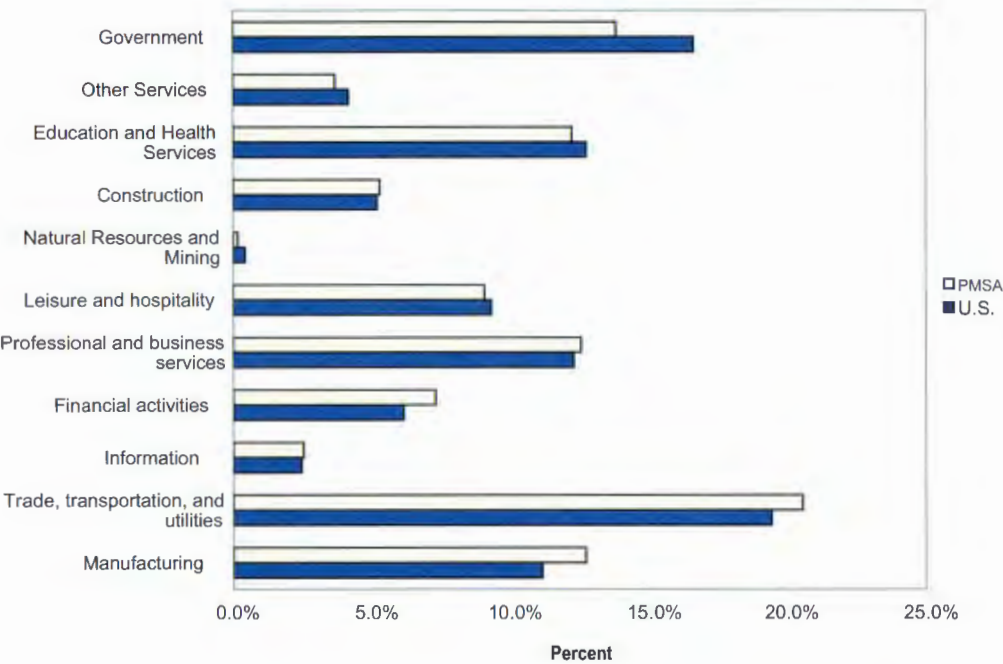
Source: Oregon Employment Department

Portland's Manufacturing Economy

The PMSA has recently enjoyed a strong position in the manufacturing economy. Figure 4 shows the percentage of employment by major industry for the PMSA and for the United States in 2003. The three industries in which the Portland region leads the nation are manufacturing; trade, transportation and utilities; and financial services.

Figure 5 further details employment shares in manufacturing. Not only has the region's employment been more dependent on manufacturing, but its share of employment in computer and electronic products has been almost four times that of the nation's. During much of the 1990s, Portland's strength in this segment of manufacturing was viewed as a sign of competitiveness and a regional asset that provided well-paying jobs in knowledge-based segments of the manufacturing economy.

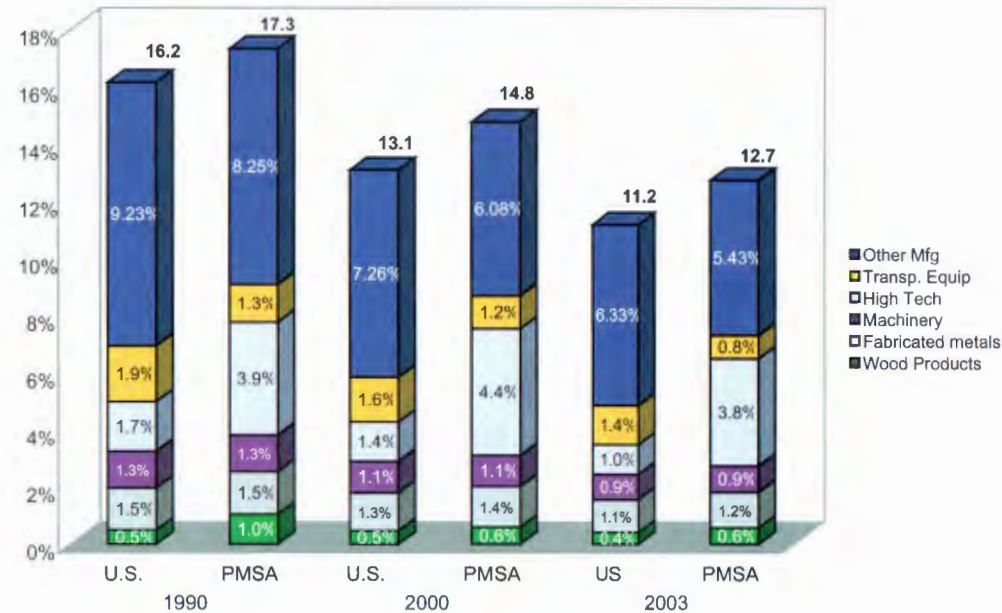
Figure 4. Share of Employment by Major Industry



Source: Oregon Employment Department

The Portland region's relative strength in manufacturing—especially in computer and electronic products—was a factor in the depth of the region's recession. The Portland region lost 26,900 manufacturing jobs during the recession—a staggering 18.5 percent of total manufacturing employment. Within manufacturing, the computer and electronic products sector has taken the greatest relative losses, with 11,800 jobs lost—over one quarter of the peak employment of 46,100 jobs in December of 2000.

Figure 5. Manufacturing Share by Sector



Source: U.S. Department of Labor Statistics and the Oregon Employment Department

Recovery and Restructuring

During the first half of 2004, Portland had one of the fastest growing manufacturing sectors among the nation's largest metropolitan areas. Jobs have been added in transportation equipment, computer and electronic products, and fabricated

metals. These industries together have created 4,400 new jobs over the past year. But to reach peak levels of employment, manufacturing would have to add an additional 20,000 jobs.

Can the region's manufacturing industries again become the engine of growth they were in the 1990s? The Oregon Employment Department projects that manufacturing will recover somewhat, although growth will be slow and employment will not reach pre-recession levels within the next decade. While the semiconductor industry still will be the source of many new jobs (adding at least 4,600 new jobs over the next ten years), it will not be the growth engine it was in the 1990s. The continuing migration of jobs overseas, the aging of this industry, technological advances, and energy cost and availability will limit the industry's growth.

These predictions are consistent with observations at the national level. Groshen and Potter (2003) study the history and structure of job losses and gains during recessions and recoveries. They find that compared to earlier recessions, particularly those in the 1970s and 1980s, a higher percentage of the job losses during the 2001 recession were permanent rather than temporary layoffs. They identify specific industries that historically gain jobs following a recession as the business cycle turns positive. When these industries lose jobs during a recovery—despite their historical pro-cyclical tendencies—they are called structural loss industries. By tracking these industries over time, they are able to examine the impact of structural changes on the economy.

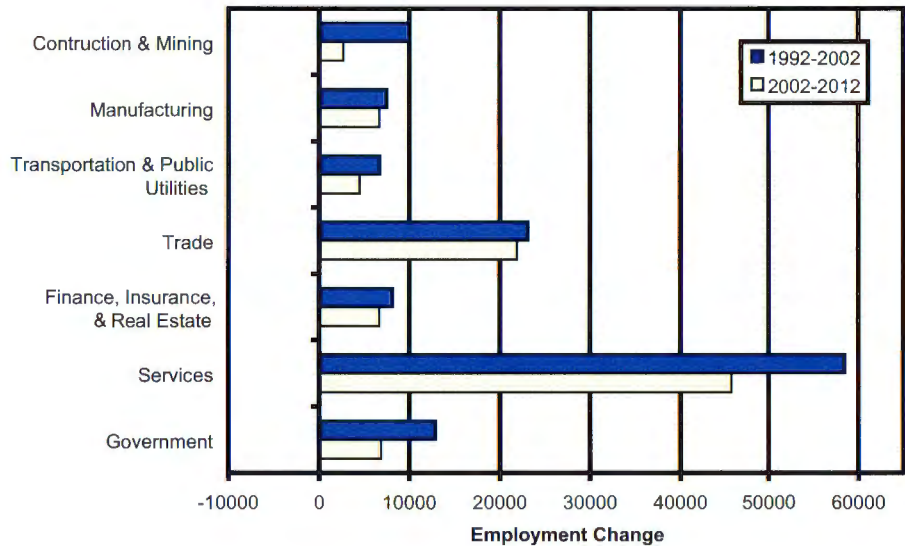
Structural changes were a much more significant part of the most recent national recession/recovery cycles than in the past. At the start of the 2001 recession, 79 percent of employees worked in one of these structural loss industries. This was a significant increase from the recessions of the 70s and 80s when structural change industries comprised only about 50 percent of employment. Even in the early 1990s, the employment share in industries undergoing structural changes was about 57 percent. This significant increase in structural job losses implies that recovery from recession requires that more employees train for and find work in different industries and occupations.

Structural changes are adding to the uncertainty surrounding the manufacturing industry in the Portland region. Groschen and Potter classified computer and electronic products as a structural change industry at the national level. Furthermore, some industry analysts speculate that the semiconductor industry is about to enter into another cyclical downturn. After a projected 30 percent growth in sales for 2004, they forecast flat or declining sales in 2005 (Sickinger, 2004).

Industries of the Future

How will the Portland Metropolitan economy look at the peak of the next business cycle? What industries are likely to fuel Portland's growth over the next five, ten, or twenty years? While it is difficult to make predictions with certainty, The Oregon Employment Department develops a ten-year forecast for each region of the state. Region 2, which includes Washington and Multnomah counties, provides a partial picture of what to expect from the region over the next decade. The projections are based on historical trends, industry and demographic relationships, state and national forecasting models, and population forecasts. They do not attempt to predict the timing of business cycles, nor the impact of external shocks such as oil price increases or unknown geopolitical factors. Figure 6 summarizes the historical and forecasted employment changes for Region 2 by major industry segment.

Figure 6. Historical and Forecasted Employment Change, Region 2



Source: Oregon Employment Department

While all major industries will add jobs over the next ten years, most will grow more slowly than they did in the past ten years. The service sector will expand most rapidly over the coming decade, accounting for almost half of the area's employment growth. Health services will grow by 25 percent as a growing and aging population increases demand for medical care.

Retail trade will also grow briskly, tracking closely with population trends. But construction will grow much more slowly than it did in the past decade. The finance, insurance, and real estate sector will grow along with the region's population, but factors such as interest rates, industry consolidation, technological changes (especially in the banking industry) and the health of the local housing market will have an impact on employment levels.

As discussed above, manufacturing will likely recover somewhat, although growth will probably be slow and employment will not reach pre-recession levels. The uncertainty about the future of the semiconductor industry blurs our view of the future for manufacturing in the region. Other components of manufacturing are expected to lose jobs. Lumber and wood products will continue its decades-long decline, primary metals is not expected to rebound with the area's economy, and the food processing and textile and apparel manufacturing sectors will continue to lose jobs to overseas production and improving technology.

OCCUPATIONAL STRENGTHS IN THE PORTLAND-VANCOUVER REGION

Another way to examine how Portland's economic structure will change is to consider what changes will occur in the way Portlanders work. How will the occupational profile of the region change? As new industries emerge and emerging technologies continue to affect production methods and service delivery, how will occupations and skill requirements change for these industries? This section considers how the region's residents make a living and the expected changes over the next ten years³.

Current Occupational Profiles

Table 2 summarizes the occupational profile of the residents of the Portland-Vancouver metropolitan region and projects how the region is expected to change over

the next decade⁴. Among these broad occupational categories, which are listed in order of 2002 employment, the employment patterns are expected to remain fairly stable. The largest share of workers in the Portland region work in office and administrative support professions followed by sales occupations, production occupations, and food preparation and serving. These ranks will change very little over the next ten years, although food preparation will outrank production operations by 2012. The greatest percentage growth in jobs will occur in healthcare and healthcare support occupations. Significant growth will also occur in computer and mathematical science occupations and in building and ground maintenance. However, because these occupations will grow from much smaller bases, a smaller number of total jobs will be added in each of these categories. We expect over 7,600 openings in computer and mathematical science occupations over the next ten years and over 13,000 in building and ground maintenance.

The expected number of openings in an occupational category depends on both the growth of that occupation and the need to replace existing workers due to turnover and retirement. Overall, almost two-thirds of total job openings over the next ten years will be from replacement openings rather than creation of new openings. But the ratio varies greatly by occupational group. At 30 percent, the lowest percentage of replacement openings occurs in computer and mathematical science occupations. The highest percentage of replacement openings is in food preparation and serving occupations, where low skill requirements and low wages contribute to a high turnover rate. Over 75 percent of the openings in this occupational category will be replacements.

Within these broad occupational categories, the distribution of occupations in the Portland region is somewhat similar to that of the rest of the United States. Table 3 shows the top 35 occupations in the Portland region, along with national employment and rank and expected growth. One of the most notable differences in ranking between the Portland region and the United States is Portland's much higher ranking for computer software engineers compared to the rest of the nation. This occupational category also is expected to grow by 23 percent over the next ten years, adding almost 1,400 new positions and creating more than 1,800 new openings. Another important difference between the Portland and U.S. rankings is the much higher rank for farm worker occupations in the Portland region. Over 4,700 openings will occur in this occupation over the next ten years, and that occupation continues to grow in this region.

³These occupational forecasts are based on industry employment forecasts, current staffing patterns, and expected changes in staffing patterns due to technological and other changes.

⁴Because occupational forecasts are developed for Workforce Development Areas, these data include the six counties in the Portland PMSA plus Cowlitz, Skamania, and Wahkiakum counties in Washington. The data are not entirely comparable because Washington occupational data include estimates of the self-employed while Oregon data do not.

Table 2. Employment by Major Occupational Categories Portland Metropolitan Area (including Southwest Washington)¹

	2002	2012	Percent	Growth	Replacement	Total
Occupation	Employment	Employment	Growth	Openings	Openings	Openings
Office and Administrative Support Occupations	169,165	190,869	12.8%	21,704	37,707	59,411
Sales and Related Occupations	111,219	129,205	16.2%	17,986	37,473	55,459
Production Occupations	80,405	87,150	8.4%	6,745	19,239	25,983
Food Preparation and Serving Related Occupations	78,141	90,054	15.2%	11,913	36,363	48,277
Transportation and Material Moving Occupations	73,015	81,942	12.2%	8,927	18,779	27,706
Education, Training, and Library Occupations	57,984	66,412	14.5%	8,428	13,164	21,592
Management Occupations	56,304	65,785	16.8%	9,482	10,512	19,994
Construction and Extraction Occupations	48,489	53,883	11.1%	5,394	9,614	15,008
Healthcare Practitioner and Technical Occupations	42,789	52,830	23.5%	10,041	10,389	20,430
Business and Financial Operations Occupations	41,735	48,330	15.8%	6,595	8,878	15,474
Installation, Maintenance, and Repair Occupations	39,811	45,292	13.8%	5,480	9,465	14,946
Building and Grounds Cleaning and Maintenance Workers	30,284	36,504	20.5%	6,220	6,869	13,089
Architecture and Engineering Occupations	29,747	34,935	17.4%	5,189	6,222	11,411
Computer and Mathematical Science Occupations	26,331	31,692	20.4%	5,361	2,263	7,624
Personal Care and Service Occupations	21,401	25,702	20.1%	4,301	6,820	11,121
Healthcare Support Occupations	19,657	24,481	24.5%	4,824	4,074	8,898
Community and Social Service Occupations	16,442	19,389	17.9%	2,947	3,035	5,982
Protective Service Occupations	16,306	19,028	16.7%	2,722	5,241	7,963
Arts, Design, Entertainment, Sports, and Media Occupations	14,057	16,693	18.8%	2,636	2,895	5,531
Farming, Fishing, and Forestry Occupations	13,209	14,976	13.4%	1,766	4,344	6,110
Life, Physical, and Social Science Occupations	10,720	12,319	14.9%	1,600	3,191	4,791
Nonclassifiable Occupations	9,408	11,717	24.5%	2,309	2,747	5,056
Legal Occupations	6,603	7,294	10.5%	691	567	1,258

Source: Oregon Employment Department; Washington Department of Employment Security

1. Includes the six counties in the Portland PMSA, plus Cowlitz, Wahkiakum and Skamania Counties

Table 3. Largest 35 occupations in the Portland Metropolitan Area (Including Southwest Washington)

Occupation					Portland Metro				
	2002 Employment		2002 Rank		2012 Employment	Percent Growth	Growth Openings	Replacement Openings	Total Openings
	Portland Metro	United States	Portland Metro	US					
Retail salespersons	30,260	3,894,760	1	1	35,320	16.7%	4,249	10,931	15,069
Office clerks, general	20,887	2,857,300	2	3	24,064	15.2%	2,667	3,772	6,387
Cashiers	19,599	3,375,510	3	2	22,795	16.3%	2,462	7,796	10,177
Registered nurses	17,039	2,239,530	4	4	21,202	24.4%	3,719	3,433	7,102
Waiters and waitresses	15,417	2,086,120	5	6	17,804	15.5%	1,940	7,934	9,824
Bookkeeping, accounting, and auditing clerks	14,934	1,728,730	6	12	16,533	10.7%	1,210	2,531	3,692
Janitors and cleaners, except maids and housekeeping cleaners	14,169	2,052,090	7	7	16,609	17.2%	1,931	2,321	4,195
Truck drivers, heavy and tractor-trailer	13,745	1,520,880	8	14	14,975	9.0%	1,290	1,537	2,877
Laborers and freight, stock, and material movers, hand	13,480	2,217,590	9	5	15,334	13.8%	1,626	4,249	5,853
General and operations managers	12,692	1,998,350	10	9	14,770	16.4%	1,833	2,097	3,902
Customer service representatives	12,326	1,854,750	11	10	14,364	16.5%	1,725	1,034	2,722
Sales representatives, wholesale and manufacturing, except technical and scientific products	12,270	1,375,380	12	18	13,975	13.9%	1,466	3,190	4,625
Stock clerks and order fillers	12,021	1,608,230	13	13	13,708	14.0%	1,491	3,901	5,374
Combined Food Preparation and Serving Workers, Including Fast Food	11,673	2,000,070	14	8	13,246	13.5%	1,158	5,390	6,519
First-line supervisors/managers of retail sales workers	10,446	1,197,190	15	22	12,110	15.9%	1,319	1,307	2,573
First-line supervisors/managers of office and administrative support workers	10,230	1,400,240	16	17	11,598	13.4%	1,157	1,865	3,000
Teacher Assistants	9,900	1,227,220	17	20	11,297	14.1%	799	1,728	2,460
Secretaries, except legal, medical, and executive	9,793	1,796,480	18	11	10,766	9.9%	665	1,492	2,126
Elementary School Teachers, Except Special Education	9,031	1,443,160	19	15	10,149	12.4%	632	1,749	2,326
Executive secretaries and administrative assistants	8,976	1,407,950	20	16	10,362	15.4%	1,191	1,499	2,669
Farmworkers and Laborers for Crops, Nurseries, and Greenhouses	8,801	218,020	21	121	10,335	17.4%	1,534	3,197	4,731
Business Operations Specialists, All Other	8,619	n/a	22	n/a	9,851	14.3%	1,121	2,130	3,242
Carpenters	8,412	856,750	23	32	9,263	10.1%	694	1,120	1,802
Receptionists and Information Clerks	8,032	1,063,020	24	24	9,641	20.0%	1,333	1,645	2,950
Postsecondary Teachers, Except Graduate Teaching Assistants	7,975	871,830	25	31	9,183	15.1%	1,208	2,342	3,550
Maids and Housekeeping cleaners	7,749	912,340	26	32	9,718	25.4%	1,145	1,487	2,506
Accountants and Auditors	7,696	888,690	27	30	8,954	16.3%	1,119	1,102	2,206
Leased Workers	7,579	n/a	28	n/a	9,656	27.4%	2,077	2,103	4,180
Maintenance and Repair Workers, General	7,453	1,212,620	29	21	8,641	15.9%	957	887	1,818
Cooks, Restaurant	7,290	715,520	30	36	8,399	15.2%	907	1,898	2,781
Food Preparation Workers	6,851	2,000,070	31	8	7,900	15.3%	872	2,431	3,284
Office and Administrative Support Workers, All Other	6,605	n/a	32	n/a	7,691	16.4%	933	1,108	2,025
Computer Software Engineers, Applications	6,539	356,760	33	81	8,036	22.9%	1,392	470	1,852
Shipping, Receiving, and Traffic Clerks	6,442	792,470	34	35	7,200	11.8%	618	1,204	1,806
Nursing Aides, Orderlies, and Attendants	6,379	1,329,310	35	19	7,953	24.7%	1,287	756	2,009

Source: Oregon Employment Department; Washington Department of Employment Security; n/a denotes data not available at the national level; Includes 6-county PMSA plus Cowlitz, Skamania, and Wahkiakum counties in Washington

Table 4. Thirty-five fastest growing occupations in the Portland Metropolitan Area (including Southwest Washington)

Occupation	2002 Employment	2012 Employment	Percent Growth	Growth Openings	Replacement Openings	Total Openings
Architects and engineering occupations						
Architects, Except Landscape and Naval	1,218	1,519	24.7%	301	78	379
Landscape Architects	366	466	27.2%	100	24	123
Electronics Engineers, Except Computer	1,937	2,419	24.9%	482	394	876
Life, physical, and social science occupations						
Economists	353	448	26.8%	95	88	183
Community and social services occupations						
Substance Abuse and Behavioral Disorder Counselors	805	1,011	25.6%	206	187	394
Marriage and Family Therapists	209	259	24.0%	50	49	99
Arts, design, entertainment, sports, and media occupations						
Art Directors	199	256	28.2%	56	47	103
Multi-Media Artists and Animators	341	433	26.9%	92	80	172
Choreographers	102	127	24.4%	25	22	47
Technical Writers	690	865	25.3%	175	233	408
Writers and Authors	407	562	37.9%	154	80	235
Interpreters and Translators	468	595	27.1%	127	99	226
Healthcare practitioner and technical occupations						
Pharmacists	1,803	2,255	25.1%	452	607	1,059
Registered Nurses	17,039	21,202	24.4%	4,163	3,857	8,020
Physical Therapists	1,165	1,447	24.2%	282	327	609
Veterinarians	468	608	30.1%	141	97	238
Nuclear Medicine Technologists	111	141	26.9%	30	28	58
Pharmacy Technicians	2,174	2,809	29.2%	635	644	1,279
Respiratory Therapy Technicians	362	455	25.7%	93	106	199
Veterinary Technologists and Technicians	621	824	32.8%	204	187	390
Healthcare support occupations						
Home Health Aides	3,561	4,535	27.3%	973	514	1,488
Nursing Aides, Orderlies, and Attendants	6,379	7,953	24.7%	1,575	915	2,489
Psychiatric Aides	183	233	27.0%	49	27	76
Physical Therapist Assistants	371	464	25.1%	93	123	216
Physical Therapist Aides	225	287	27.9%	63	75	138
Massage Therapists	232	290	24.9%	58	60	118
Medical Equipment Preparers	446	552	23.9%	107	132	239
Veterinary Assistants and Laboratory Animal Caretakers	541	706	30.3%	164	165	329
Building and grounds cleaning and maintenance occupations						
Supervisors and Managers of Landscaping and Groundskeeping Workers	579	718	24.0%	139	35	174
Mards and Housekeeping Cleaners	7,749	9,718	25.4%	1,970	1,906	3,876
Personal care and service occupations						
Child Care Workers	4,450	5,775	29.8%	1,324	1,751	3,075
Residential Advisors	456	571	25.2%	115	117	232
Sales and related occupations						
Demonstrators and Product Promoters	1,279	1,650	29.0%	371	478	849
Production occupations						
Dental Laboratory Technicians	685	850	24.2%	166	209	374
Unclassified occupations						
Leased Workers	7,579	9,656	27.4%	2,077	2,103	4,180

Includes only occupations with greater than 100 employees in 2002, and does not include "all other" categories. Includes 6-county PMSA plus Cowlitz, Skamania, and Wahkiakum counties in Washington.

Source: Oregon Employment Department; Washington Department of Employment Security.

Among the top 35 occupations, those with the slowest expected growth rates include bookkeepers and secretaries. This result probably reflects labor saving information technology. However, receptionists and information clerks will enjoy a relatively robust 20 percent growth rate, perhaps reflecting the continued need to provide human interactions and to manage the growing volume of information influencing the workplace.

Fast-Growing Occupations

Table 4 lists the fastest growing occupations in the region, sorted by occupational category. This list includes only occupations with employment of at least 100 in the region. It shows that many of the fast-growing occupations are not those that currently comprise a substantial share of employment. Thus, although they will experience high growth rates, the number of jobs they add will be relatively small. The exception is in the health care field, where substantial growth rates will occur on top of large employment numbers. Architects and several of the arts, design, entertainment, and media occupations will also grow quickly over the next ten years and add substantial numbers to the workforce.

Continuous Learning

In many occupations, employees must continually relearn their jobs to remain competitive in today's job market. A 2002 survey of employers in Multnomah, Tillamook, and Washington counties found that employers believe that workers will need to improve their skill levels in a broad range of occupations over the next several years. The skills most often cited include computer software application skills, Spanish language skills, and problem solving and critical thinking skills (Moller, 2002).

Furthermore, the increasing pace of technological change increases the need for lifelong learning among all workers. This requirement applies not only to the scientists and engineers who are making discoveries and applying them in industry, but also to the workers in all occupations who use technology once it has been embedded in the products and processes we use everyday.

Many employers are also reengineering jobs to deal with critical worker shortages. In the healthcare industry, many workers are performing jobs today that they

may not have been trained for ten or even five years ago. This adaptation allows healthcare providers to continue to provide services in the face of critical worker shortages. However, it also demands continuous education and clear lines of communication between employers and educators to ensure that the new expectations are reflected in training and education programs.

STORIES OF COMPANY SURVIVAL, RECOVERY, AND EVOLUTION

The evolution of the Portland-Vancouver regional economy is also apparent in the transformations taking place within the region's most successful companies. In the face of difficulties caused by changing markets, falling consumer and industrial demand, and competition from overseas, many of the region's companies have had to reinvent their businesses through innovation of products and processes, development of new markets, and increasing the value embedded in the products and services they offer. Increasingly, global markets have moved the production of commodity products overseas. The challenge for the region's companies is to identify competitive advantages that cannot be easily duplicated by low-cost competitors.

nLight Photonics

One such company is nLight. nLight was founded in July 2000 to develop high power semiconductor lasers for telecommunications networks. The company raised over \$60 million and opened a state-of-the-art 60,000 sq ft manufacturing plant in Vancouver in September of 2001. nLight had to rethink its strategy as the telecommunications industry collapsed in 2001 and 2002. As the market for high power semiconductor lasers collapsed from over \$1 billion/yr in 2000 to under \$50 million/yr in 2002, nLight faced a very difficult decision: either declare bankruptcy or refocus the company on new markets.

In the summer of 2002 with the support of the venture capitalists, nLight began the transition to higher power diodes in a broad range of wavelengths. This reorientation allowed them to target markets for industrial, medical, and defense applications. They were able to launch these products in time for the Photonics West show in San Jose in January of 2003. During 2003, nLight received a \$5 million award from the Defense Advanced Research Projects Agency (DARPA), and

additional research funds from the Air Force, which allowed nLight to improve the performance of its laser diodes, making them appropriate for a number of military applications. nLight raised \$13 million in its third round of financing in January of 2004. In August of 2004, they were awarded a \$25 million contract with the Air Force.

Today, nLight leads the world in high power semiconductor lasers and is one of the very few companies that has successfully made the transition out of the telecom downturn. Over 500 optical component companies were started in 1999 and 2000 to focus on telecommunications. Today fewer than 25 still exist.

Scott Keeney, CEO of nLight, attributes the successful transition of his company to an experienced staff with the market knowledge and the technical expertise to apply the technology to growing markets. "We have always focused on the team first. It is crucial to make sure you have the right people on the bus. With the right team in place it is much easier to make decisions on where the bus is headed."

After having doubled staff in the past year to over 70 people, nLight is poised to continue to grow as semiconductor lasers become crucial in applications ranging from industrial processes to defending aircraft from heat-seeking missiles. nLight's evolution has demonstrated the need for adaptability in the fast-changing economy and has ensured its continued contribution to the economic vitality of the Portland-Vancouver region.

Huggy Bear's Cupboards

Huggy Bear's Cupboards is a Portland cabinet maker located on Hayden Island. For most of its 25 years in business, Huggy Bear's targeted the upper end of the mid-range cabinet market and sold much of its product locally.

About six years ago, Huggy Bear's decided to re-focus its product on the highest end of the luxury custom kitchen cabinet market. This decision was based on increasing competition from the large home improvement retail outlets. Huggy Bear's needed to specialize in a market that these competitors would find difficult to penetrate, and the company saw an opportunity in the luxury cabinet market. While the mid-range cabinet market was becoming more and more competitive, no cabinetmakers west of the Mississippi were targeting the luxury market. Furthermore, Huggy Bear's felt that its highly skilled workforce and its long-standing emphasis on quality would ease the transition to this higher-end market.

To successfully implement this strategic change, Huggy Bear's had to modify its

marketing network. In the past, Huggy Bear's had marketed much of its product locally. However, with a more specialized market niche, Huggy Bear's had to sell more of its product throughout the west coast and nationwide. This redirection required recruiting and training new dealers for its products over a much broader geographic area.

Huggy Bear's also had to place an even greater emphasis on continuous training for its workers and retention of its most qualified staff. While Huggy Bear's had always tried to recruit and retain the most skilled craftsmen, its renewed emphasis on quality required implementing a continuous training program. Huggy Bear's solicits feedback from its dealer network, adapts its products and production techniques, and trains its craftsmen to implement the required changes. Huggy Bear's also has worked hard to retain its most skilled workers—those who are best able to assist with product and process improvement.

Huggy Bear's operates in a seasonal and cyclical business tied to the construction industry. Employment and/or hours per employee generally fall during the winter and during recessions. During this most recent recession, Huggy Bear's was forced to cut back on workers and on hours. But its aggressive marketing strategy focused on areas of the nation where the recession was relatively mild and high-end homebuilding was strong. That strategy has served them well. Huggy Bear's has returned to its pre-recession employment of 60 full-time workers.

OBSERVATIONS AND CONCLUSIONS

Over the last several years, the Portland region has experienced reorganization in its industrial and occupational makeup as it has struggled out of recession and toward recovery. The forecasts contained in this essay predict how our economy will grow and how our workforce will be organized within the next ten years. But a host of unforeseeable economic, technological, and social factors no doubt will affect the region's ability to organize its human, intellectual, and capital resources in response to profound changes that will shape our economy for years to come.

In 1942, the Austrian economist Joseph Schumpeter in his book *Capitalism, Socialism, and Democracy* coined the phrase "creative destruction" to describe the implications of discontinuous shocks on the economy: "The fundamental impulse that sets and keeps the capitalist engine in motion comes from the new consumers, goods, the new methods of production or transportation, the new markets, the new forms of industrial organization that capitalist enterprise creates." (Schum-

peter 1942, p. 82). “Creative destruction” implies that the innovation necessary to recover from a failing economic system requires the destruction of the infrastructures and methodologies necessary to maintain it. In a similar vein, Stan Williams of Hewlett Packard summarized the revolutionary nature of the technological changes taking place today in information, biological, and nanotechnologies:

We are actually watching the birth of three great new technologies, all simultaneously. “Bio” is the utilization of chemistry in life to not only understand organisms but to manufacture all types of things that we have in our environment. “Info” is the harvesting, storage, and transmission of information of all sorts that we want about our environment. And “nano” is the control of matter at the scale where basic material properties are determined.

Williams goes on to explain that science in each of these areas is undergoing revolutionary changes and that each is beginning its applications phase. Together, applications in these areas will influence our economy and our lives in ways we can only imagine. And as these innovative applications flourish, creative destruction inevitably occurs, marginalizing the technologies upon which they ultimately are founded.

The changes predicted for our near future by Williams suggest the need for resiliency in our economic, social, and civic institutions. Gardner (1990) suggests that this kind of resiliency is dependent upon a set of core purposes and values that are relatively durable so that a society can direct itself in times of change according to those core values.

In the years ahead, Portland’s economy will inevitably evolve as some sectors and professions decline and others emerge and strengthen. Recessions tend to accelerate these transformations, as weak companies go out of business, unemployed entrepreneurs test new ideas, and industries are forced to improve productivity and reduce costs. While we cannot predict the exact direction and speed of that evolution, we must examine our economic, social, and civil institutions and evaluate their ability to respond to change. At the same time, we must keep in mind that the process of creative destruction, by its very nature, will cause problems for those who

must struggle through the inevitable transformation. Keeping a firm grasp of our core values will allow us to continuously invent a new economy for the region while addressing the problems that change causes for many members of our society.

REFERENCES

- Gardner, J. 1990. *On Leadership*. New York: Free Press.
- Groshen, Erica L. and Simon Potter. 92003 “Has Structural Change Contributed to a Jobless Recovery?” *Current Issues in Economics and Finance* 9(8) August.
- Vander Vliet, Amy. 2003. “Portland’s Perfect Storm.” OLMIS, November 7, 2003. Accessed at www.olmis.org
- Moller, Dusty. 2002. *Portrait of the Workforce: An Oregon Employer Perspective*. Salem, OR: Oregon Employment Department
- Sickinger, Ted. 2004 “Chip Sector’s forecast Calls for More Gloom.” *The Oregonian*. November 11. Accessed at Oregonlive.com
- Schumpeter, J. 1942. *Capitalism, Socialism and Democracy*. New York: Harper, p. 82.
- Williams, S. 2000. “Stan Williams Presentation.” Speech given at the Next Twenty Years Series conference, San Francisco. Accessed at <http://www.tntny.com/press/transcripts/sftech-williams.html>.

by Barry Edmonston, Director, Population Research Center and Professor, School of Urban Studies and Planning
Masud Hasan, Graduate Research Assistant, Population Research Center

While many people both inside and outside Oregon retain the image of the state as a place of picturesque coastal bluffs, Mt. Hood and other mountain peaks, and large forests, the state's population is primarily urban and has been for many decades. In 2000, three-quarters of Oregon's 3.4 million residents lived in towns and cities. And almost one-half of Oregon's population lived in the metropolitan Portland area.

This paper offers an overview of population dynamics in the metropolitan Portland-Vancouver area—describing current trends for population growth in its counties; the effect of births, deaths, and migration on population growth; how the age, sex, and ethnic composition are changing; and where residents live within the metropolitan area. Finally, the paper discusses likely growth prospects and their implications.

The metropolitan Portland-Vancouver area includes five of Oregon's thirty-six counties—Clackamas, Columbia, Multnomah, Washington, and Yamhill—and Clark County in the state of Washington. Figure 1 shows a map of the metropolitan area, including its six constituent counties. This paper refers to the Portland-Vancouver metropolitan area as the total metropolitan area, including the Oregon and Washington portions. We refer to the metropolitan Portland area when limiting discussion to the five Oregon counties.

POPULATION GROWTH

Population growth in metropolitan Portland-Vancouver historically has exceeded growth for the United States, but the differential in growth rates has declined over time. Between 1990 and 2000, the United States grew by about 13 percent and metropolitan Portland-Vancouver increased by almost 27 percent. The ratio of population growth for metropolitan Portland-Vancouver compared to the United States from 1990 to 2000 exceeded 2.0, meaning that the metropolitan areas grew at more than twice the national average.

Recent Growth

Metropolitan Portland-Vancouver has steadily increased its population since 1990, growing from 1.5 million in 1990 to 1.9 million in 2000, an increase of 400,000

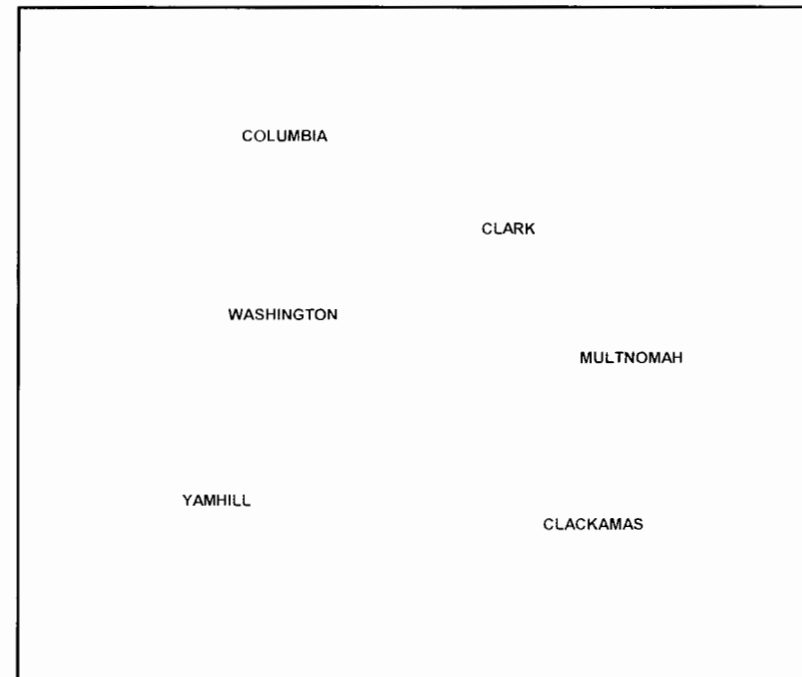


Figure 1. Portland-Vancouver Metropolitan Area

people or 27 percent (see Figure 2). About 1.6 million or 82 percent of the total metropolitan Portland-Vancouver population resided in Oregon in 2000. In 2003, the estimated population for the metropolitan area was 2.0 million, an increase of more than 90,000 since 2000.

The metropolitan Portland population – limiting attention to the five metropolitan counties in Oregon—grew from 1.3 million in 1990 to almost 1.6 million in 2000, an increase of 23 percent. Clark County, Washington experienced the most rapid population growth during the 1990 to 2000 period, considerably greater than the Washington state's population increase of 13 percent. The higher rate of growth in Clark County affected the total Portland-Vancouver growth rate. The total metropolitan growth rate of 27 percent reflects the growth rate of 23 percent for the five Oregon counties and 45 percent for Washington's Clark County.

Figure 2. Population growth in PVMA and Oregon, 1990 - 2003



Source: U.S. Census Bureau and Oregon Population Reports produced by the Population Research Center

During the same 1990-2000 period, Oregon's state population increased at a slightly lower rate of 20 percent. Because the metropolitan Portland population expanded more rapidly than did the Oregon population, an increasing proportion of the Oregon population was in the metropolitan Portland area (see Figure 2). At the beginning of the decade, in 1990, 45 percent of Oregon's population lived in the five counties of metropolitan Portland; by 2000, this percentage increased to 46 percent.

Population growth can be viewed in either absolute or relative terms. Washington County was Oregon's fastest growing county in metropolitan Portland—in both absolute and relative terms. Washington County added 134,000 new residents to the metropolitan area from 1990 to 2000, an increase of 43 percent. Yamhill County was the second fastest growing county in relative terms, increasing 30 percent and adding 19,000 residents. Multnomah County added 77,000 residents during the same period, although its 13 percent growth was the smallest change in relative terms of metropolitan Portland counties.

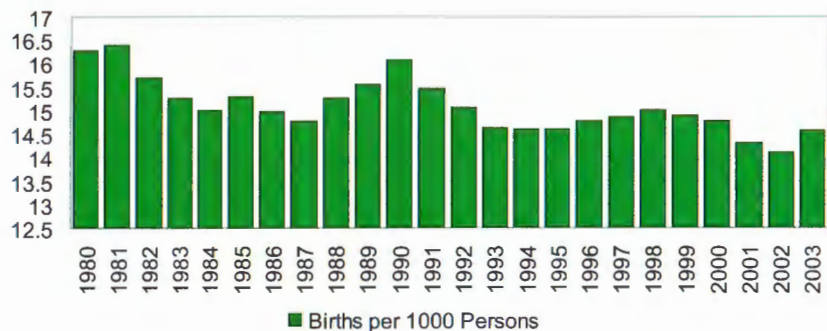
Natural Increase

Population growth depends on changes in three factors: birth, deaths, and migration. The difference between births and deaths is called natural increase. In most populations, there are more births than deaths, and the population grows from natural increase. If in-migration is insufficient to counter-balance negative natural increase, the population declines. In most cases, however, both natural increase and net in-migration contribute to a growing population.

Both mortality and fertility levels have remained fairly steady in the metropolitan Portland-Vancouver area for the past two decades. The crude death rate (the number of deaths per 1,000 residents) has remained at about 8 per 1,000 since 1980. In 2000, life expectancy at birth in Oregon was 74.6 years for men and 80.6 years for women, slightly higher than the U.S. national average for men and women. Life expectancy increased from 68.4 years for men and 76.2 years for women in 1970.

The crude birth rate (the number of births per 1,000 residents) has moved within a narrow range of 14 to 17 per 1,000 since 1980. The crude birth rate decreased from 1981 to 1987, fluctuated up and down from 1987 to 1993, and remained slightly over 14.5 since 1993 (see Figure 3).

Figure 3. Metropolitan Portland birth rate has fluctuated since 1980.



Source: Oregon Department of Human Services, Center for Health Statistics

At present fertility levels, the average couple in the metropolitan Portland-Vancouver area has about two children by the end of their childbearing years. In order to exactly replace the population, couples need to have 2.1 children. Present metropolitan fertility levels are slightly less than the replacement level. In the long run, the metropolitan population would decrease at a very slow rate if there were no net in-migration.

Natural increase contributed about 18 percent of the metropolitan Portland-Vancouver area's growth from 1990 to 2000. The area's overall population growth of 452,000 was comprised of a natural increase of 134,000 and an estimated net in-migration of 318,000.

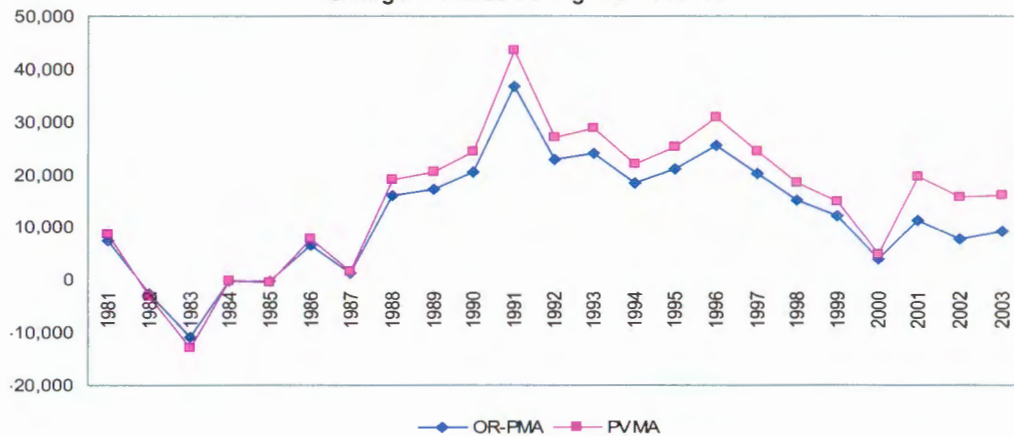
The metropolitan Portland-Vancouver area population is relatively young, with a sufficient number of people in the childbearing years to produce a sizeable number of births, offsetting fertility levels that are somewhat less than the long-term replacement level. Since 1990, there have been about 26,000 births and 13,000 deaths annually in the metropolitan area, adding about 13,000 people each year through natural increase.

Fertility and mortality levels do not vary greatly among the Oregon and Washington counties of the metropolitan area. However, the annual number of births and deaths are affected by modest differences in the age composition of the different counties. Overall, there are only slight differences in the rates of natural increase for the metropolitan counties.

Net Migration

Migration is the main factor affecting population growth in the metropolitan Portland-Vancouver area. Net migration into the metropolitan area has been positive since 1980, except for an estimated out-migration of about 10,000 people during the economic downturn in 1982-1983. Economic conditions and employment opportunities were especially strong from 1988 to 1998 as evidenced by net migration levels at 20,000 and above (see Figure 4, which shows net migration for the Oregon portion of the metropolitan area and for the total Portland-Vancouver area). There were particularly high levels of net in-migration to the metropolitan area from 1990 to 1992 with annual net migration exceeding 40,000. Net in-migration in 2000 decreased to a decade low of about 5,000 persons. In the past several years, net in-migration has been in the 15,000 to 20,000 range.

Figure 4. Net Migration into the Metropolitan Area experienced a large increase during the 1990's.



Source: U.S. Census Bureau and Oregon Department of Human Services, Center for Health Statistics

Migration accounted for more than two-thirds of the area's population increase from 1990 to 2000 and provided more than half of the increase for each of the area's counties. Clark County, Washington experienced a net gain of about 79,000 from migration during 1990 to 2000, with migration accounting for almost three-

fourths of its overall growth. Four other counties—Clackamas, Columbia, Washington, and Yamhill—derived more than two-thirds of their growth in the 1990s from migration. In the past three years, the metropolitan population has grown by more than 90,000, with about 55 percent of the population increase due to net in-migration (see Figure 5). Net in-migration has slackened somewhat in recent years. As a result, its proportionate contribution to overall population growth has decreased. Net migration, however, remains the dominant factor in the population growth of the metropolitan area.

Migration was important for all counties in the metropolitan region. Although Multnomah experienced the slowest overall growth rate, increasing 13 percent from 1990 to 2000, it received 42,000 net migrants, and migration accounted for more than one-half of its total population increase. Since 2000, the contribution of net migration has decreased for all counties. In Multnomah County, less than 5,000 net migrants arrived during 2000 to 2003, and net migration accounted for about one-fourth of the county's population growth. In Washington and Yamhill

counties, net migration provided more than 40 percent of population increases. And in Clackamas, Columbia, and Clark counties, net migration made up about two-thirds of population growth.

Immigration

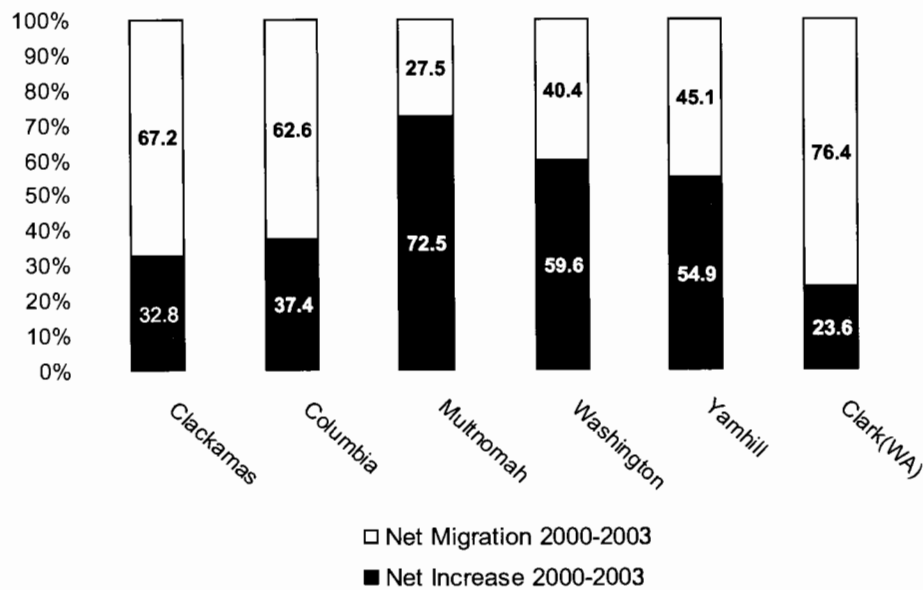
International migrants to the state of Oregon represented nearly 27 percent of the total population increase from 1990 to 2000. However, the immigrants to Oregon throughout the 1990's represented less than one percent of the total immigrants to the United States. Except for an increase in 1991 (1.3 percent) and, more recently in 2000 (1.0 percent), the annual number of immigrants to Oregon represented less than one percent of the total annual immigrants to the United States during the 1990's.

In the metropolitan Portland area about two-thirds of the immigrants reported by the Immigration and Naturalization Service in 2000 came from only seven areas: Russia and other countries of the former USSR (18 percent of all immigrants), Mexico (17 percent), China (7 percent), Vietnam (8 percent), India (5 percent), Korea (3 percent), and the Philippines (3 percent). The most unique aspect about the metropolitan area's immigration is the relatively high proportion of immigrants from the former USSR – primarily from Russia. The proportion of Russians among Portland's immigrants is more than twice the national average. Since immigrants to the metropolitan area are generally younger than residents, they contribute to a somewhat younger age composition, in addition to affecting the ethnic composition.

But immigration does more than change the age or ethnic mix of the population. The presence of migrants with different skills affects economic growth, adding new workers to the metropolitan labor force and, in some cases, providing needed skilled employees for local industries with job shortages.

Although foreign-born men are somewhat more likely to be in the high-education, high-paying jobs, they are also far more common in low-education, low-paying jobs. Compared with native-born men, immigrants are found in some occupations requiring high levels of education, such as college teachers and engineers, as well as some occupations requiring little schooling, such as tailors, waiters, and unskilled service occupations. The picture for immigrant women is similar. Foreign-born women in the metropolitan area are disproportionately employed in a few high-education occupations, such as foreign-language teachers and physicians, but they

Figure 5. Most of the growth during 2000-2003 was due to migration although there are differences between counties.



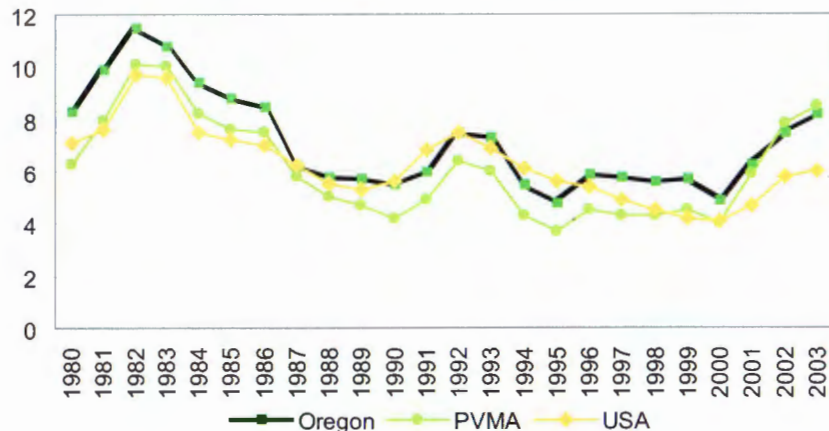
Source: U.S. Census Bureau and Oregon Department of Human Services, Center for Health Statistics

also make up a large share of employment in many occupations that require little formal schooling: dressmakers, graders and sorters of agricultural products, waitresses, and private household service workers.

Factors Affecting Metropolitan Population Growth

Unemployment rates decreased from their peak of over 10 percent in 1982 and, except for an upswing in 1992-1993, remained below 5 percent between 1988 and 2000 (see Figure 6). Improved employment opportunities have attracted in-migrants as well as retarding out-migrants who might have departed the metropolitan areas in search of jobs if attractive employment had not existed here. In recent years, the unemployment rates in Oregon and the metropolitan Portland-Vancouver area have increased, exceeding more than 8 percent in the state and metropolitan area in 2003.

Figure 6. PVMA unemployment rates started to increase over the Oregon rates in recent years.



Source: State of Oregon, Oregon Employment Department

Shifts have occurred in the major economic sectors for employment in the metropolitan area. The most noteworthy changes since 1980 have been (a) increases in the service sector, (b) substantial increases in high-tech, and (c) decreases in lumber-related employment. Overall, more than two-thirds of all current employment in the metropolitan area is in services, trade, and government.

Income in the metropolitan Portland area has been increasing since 1982. In 2000 constant dollars, taking inflation into account, average per capita income in the metropolitan Portland area increased from 21,705 dollars in 1980 to over 24,915 dollars in 1990. Since 1990, per capita increases have been noteworthy, reaching 31,620 dollars in 2000.

Factors Affecting Population Distribution

Population growth has been more rapid in the outlying areas of the metropolitan region than in the central areas. From a demographic perspective, family and individual residential location is influenced by income, age and life cycle status, ethnicity, housing choices, location of employment, and transportation options and preferences. Given the employment decentralization observed in the metropolitan area, population decentralization was certain to occur. The consequences of the other factors are more ambiguous.

Over the 1990 to 2000 period, per capita income increased more rapidly than median household income in the metropolitan area. The difference between the two is attributable to the composition of households. The mix of households in the metropolitan area has changed since 1990 as the number of single-parent, childless-couples, and single-adult households increased. By and large this change amounted to a shift toward household types that traditionally had lower incomes. This shift retarded growth in household median income at the same time that earnings growth, while not as strong as in the 1950s and 1960s, remained robust. As a result, increases in income may have contributed more to decentralization of population than the median income figures would suggest.

Decentralization tendencies created by income change and employment dispersion have been partially offset by an influx of migrants and changing household size. For the metropolitan area as a whole, over three-fourths of the population increase from 1990 to 2000 was attributable to net migration. Most of this migration is made up of people from elsewhere in the United States who are presumably attracted to the metropolitan Portland area by the growing economy and job op-

portunities, the attractive environment, or both. About one-fourth of metropolitan Portland's migration is attributable to migration from abroad.

AGE COMPOSITION

Fertility and mortality levels and the volume and composition of migration affect the age composition of the metropolitan population. If there were no migration, then the current population would become steadily older because fertility levels are relatively low. In the long run—again, assuming no migration—the median age of the metropolitan population would increase from its current level of about 35 years to about 41 years in 2050. Migration into the metropolitan area has the short-run effect of making the population slightly younger. In the long run, however, continued in-migration will increase the average age of the metropolitan population. This statement may seem counter-intuitive. But migrants eventually become older themselves. A steady stream of in-migrants, even if somewhat younger at the time of migration, will increase the number of people who become older and will, eventually, increase the number and proportion of elderly in the metropolitan area.

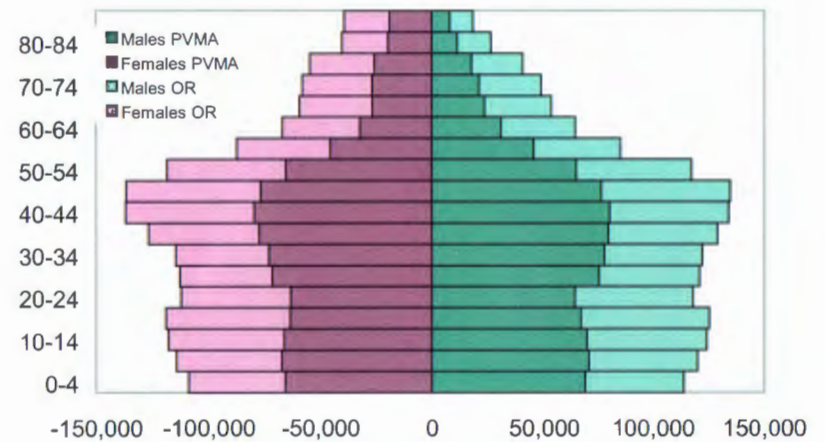
Figure 7 displays both metropolitan Portland's and Oregon's population pyramid. Compared to Oregon and the United States, metropolitan Portland is slightly younger, reflecting the larger number of young adults who have arrived recently in the area.

The age composition of the metropolitan population is important for a variety of reasons. The number and proportion of people by age affects schools, the labor force, health care, and the demand for recreation, entertainment, and stores. Figures 8 shows current trends in the metropolitan age structure.

Children under the age of 5, although not yet attending school, determine the future needs of schools. The proportion of the population represented by this age group decreased from 7.6 percent to 7.0 percent despite an increase of 20,000 persons from 1990 to 2000.

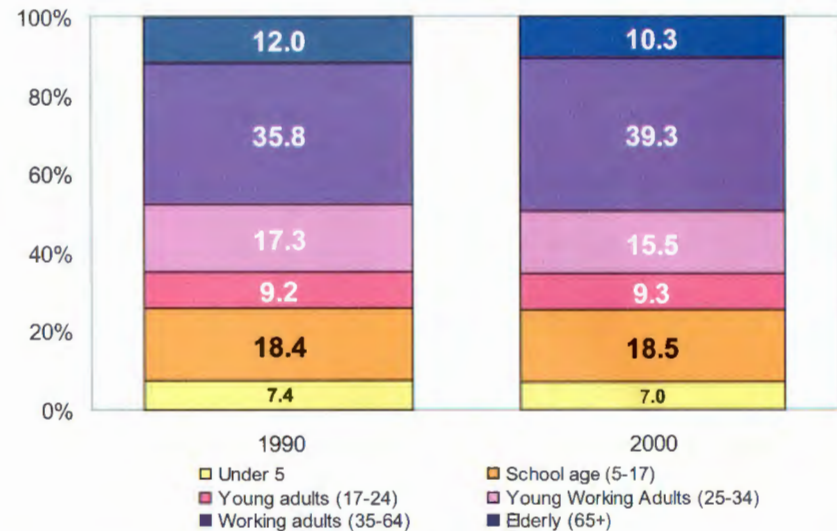
Slightly less than one-fifth of metropolitan residents, or 18 percent, are between the ages of 5 to 17 years. In 2000, there were 354,000 metropolitan residents in these school ages, an increase of 80,000 from 274,000 in 1990. This increase is reflected in the substantial growth of elementary, middle school, and high school students, particularly in school districts with rapid increases in younger couples.

Figure 7. The metropolitan area includes a relatively young population, while Oregon's population is just slightly older.



Source: U.S. Census Bureau

Figure 8. Working adults have slightly increased and the elderly have decreased.



Source: U.S. Census Bureau

Younger adults in the population, aged 18 to 24 years, are an important population group. They are the primary age group for the college population, for getting married, and for entering the labor force. The young adult population increased from 140,000 in 1990 to 178,000 in 2000, an increase of 38,000.

Despite an increase of 43,000 persons between the ages of 25 and 34, the age group's proportion decreased slightly, almost 2 percent, from 1990 to 2000. This group is very career mobile and is, therefore, affected by employment trends. However, once their young children become school age, they are less likely to migrate. The highest rates of net in-migration for the metropolitan area are for ages 20 to 34 years: more than one-half of younger in-migrants to Oregon settled in the metropolitan Portland area in the 1990s.

The working ages of 35 to 64 years are the main age group in the labor force. This age group also includes most parents in the metropolitan area. The population in the working ages grew from 530,000 to 754,000 during 1990 to 2000, and their representative proportion of the total population also grew nearly 4 percent.

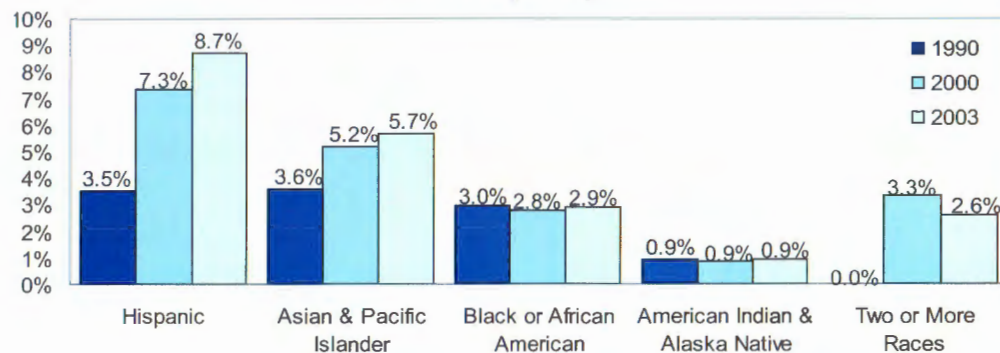
The elderly population includes people who have a lower proportion in the labor force and are important users of health services. Although the number of elderly increased by 15,000 from 1990 to 2000, growing from 183,000 to 198,000, their proportion of the total population decreased almost two percent.

ETHNIC COMPOSITION

The metropolitan Portland area population has a less diverse population than do other major population areas in the United States or on the West Coast. Metropolitan Portland's minority population constituted 20 percent of the metropolitan population in 2003. For metropolitan areas with population greater than one million, the U.S. average was 36 percent. Moreover, the metropolitan Portland population is considerably less diverse than other metropolitan areas such as Seattle, San Francisco, San Jose, Los Angeles, or San Diego.

However, the metropolitan area's ethnic composition has experienced a recent dramatic increase in the minority population. Every county in the metropolitan area has experienced gains in the minority population since 1990. The overall minority population—including Asian Americans, Hawaiians and Pacific Islanders, Hispanics, African Americans, American Indians, and persons reporting two or more races—increased from 140,000 in 1990 to 307,000 in 2000, an increase of 119 percent (more than four times the rate of increase for the overall metropolitan increase of 23 percent during the same period).

Figure 9. The proportion of minorities in the Portland metropolitan area has been growing.



Source: U.S. Census Bureau

Data for 2003 are based on U.S. Census Bureau estimates for the ethnic composition of counties. Because of the major changes in racial and ethnic reporting in the 2000 census, post-2000 census estimates are still in the process of development and need to be interpreted with caution. 2003 population estimates indicate that Hispanic and Asian and Pacific Islander population has continued to grow. Although the 2003 estimates show slight decreases for the multiracial population, this is a new and difficult group for population estimates. Given the increasing rates of racial intermarriage, it is more likely that the multiracial population in the metropolitan area has continued to increase.

The sources of the growth of the minority population vary. Almost all the African American and American Indian residents in metropolitan Portland are native-born. However, many Asian American and Hispanic residents are foreign-born, although native-born children often accompany them.

Fueled by internal and international migration, as well as fertility levels above the Oregon state average, Hispanics are the fastest growing minority population in the metropolitan area. The Hispanic population increased from 45,000 in 1990 to 115,000 in 2000, an increase of 155 percent during the period. Hispanics are currently the largest of the various minority groups in the Portland metropolitan area. U.S. Census Bureau estimates suggest that the Hispanic population numbers 176,000 in 2003, an increase of more than 60,000 since 2000.

Asian Americans, including Hawaiians and other Pacific Islanders, have the second fastest rate of growth of minority groups, increasing from 46,000 in 1990 to 81,000 in 2000, a growth of 76 percent. In 2003, an estimated 116,000 Asian Americans and Pacific Islanders were living in the metropolitan area, an increase of 25,000 since 2000. Asian Americans have fertility levels similar to the Oregon state average. Metropolitan Portland receives a large number of immigrants from Vietnam, Hong Kong, Taiwan, Korea, Philippines, and Japan as well as Asian Americans who move here from other states. Asian Americans are the second largest minority population in the metropolitan area.

African Americans are the third largest minority population in the metropolitan area, numbering 44,000 in 2000, and increasing 16 percent from 1990. There is a net migration of African Americans into the metropolitan area, but at a considerably lower level than for Hispanics or Asian Americans. U.S. Census Bureau estimates for 2003 indicate little overall change in the number of African Americans in the metropolitan area since 2000.

The metropolitan Portland area included 14,000 American Indians and Alaskan Natives in 2000. This is a slight increase from the 1990 population of 12,000. There is modest net migration of American Indians into the metropolitan area, from Oregon and nearby states, but the metropolitan American Indian population remains relatively small and does not appear to have changed significantly since 2000.

New Ethnic Categories

In 1998, the U.S. Office of Management and Budget directed the U.S. Census Bureau and other federal agencies to begin the transition to a revised federal classification scheme for racial and ethnic data. The new scheme affected 2000 census data and will gradually become common for other federal statistical data. The new scheme involves two major changes. First and foremost, the census, surveys, and federal data collection forms allow respondents to report two or more race or ethnic groups, if they wish. Second, native Hawaiians and other Pacific Islanders report themselves separately from Asian Americans.

Prior to the 2000 Census, we lacked accurate estimates for the number of Oregonians and metropolitan Oregonians who might report themselves as having multiple racial origins—that is, as identifying with two or more racial/ethnic groups. The majority of residents in Portland and Oregon reported themselves as white

(80 percent) in the 2000 census. However, 3.3 percent of the population (53,480 in the metropolitan Portland area) identified themselves as having two or more races in the 2000 census.

Pacific Islanders are a very small population group in Oregon in 2000, numbering only 8,000—of whom 4,500 lived in metropolitan Portland. Although we lack data on net movements from Pacific Island areas; especially Hawaii, American Samoa and Guam; migration of Pacific Islanders from Hawaii and other Pacific Island areas likely added to the metropolitan population in the 1990s. However, Pacific Islanders are likely to remain the smallest of Oregon's and metropolitan Portland's minority populations for the foreseeable future.

Influence of Immigration

The size of the international migration influx to the United States in the 1990s rivaled the great waves of immigration experienced at the beginning of the century. Taking illegal immigration into account, the best available estimate is that the total inflow amounted to about 1.1 million persons per year, or about 11 million during the 1990's decade. During 2000, California received about 26 percent of these newcomers, and another 40 percent went to the other five major immigrant-receiving states of New York, Texas, Florida, New Jersey, and Illinois.

Oregon's share of total U.S. immigration has been relatively modest. Oregon received about 1 percent, or 8,000 to 9,000 persons, annually of the total immigrant population arriving during 1990 to 2000. Over 80 percent of immigrants arriving annually in Oregon, or about 6,000 to 7,000, went to the metropolitan Portland area.

While the flow of immigrants into Oregon may not be large, other evidence suggests that many immigrants, especially those from Mexico, originally settled elsewhere before moving to Oregon. As a result, the growth of the foreign-born population includes an unknown number of foreign-born persons who moved to the metropolitan area from other states. At the current time, economic conditions in Mexico and nearby Central American countries continue to produce a steady stream of migrants intent on relocating in the United States. A plausible assumption is that some of the new immigrants to the United States from Latin America may eventually settle in Oregon, even if they initially live in some other state. The large and growing Mexican-origin population in California guarantees a source of future migrants who find Oregon attractive if job opportunities exist.

The social, political, and economic consequences of the inflow of migrants, both native and foreign-born, are substantial. The major social consequence is that an area that has been ethnically homogeneous is becoming less so. While active political participation for some ethnic groups will take time, general minority participation in city, state, and congressional campaigns increased in the past decade. Economically, the influx of new residents has increased the number of younger minority workers in the metropolitan labor force, adding low and semi-skilled workers as well as managerial and professional workers.

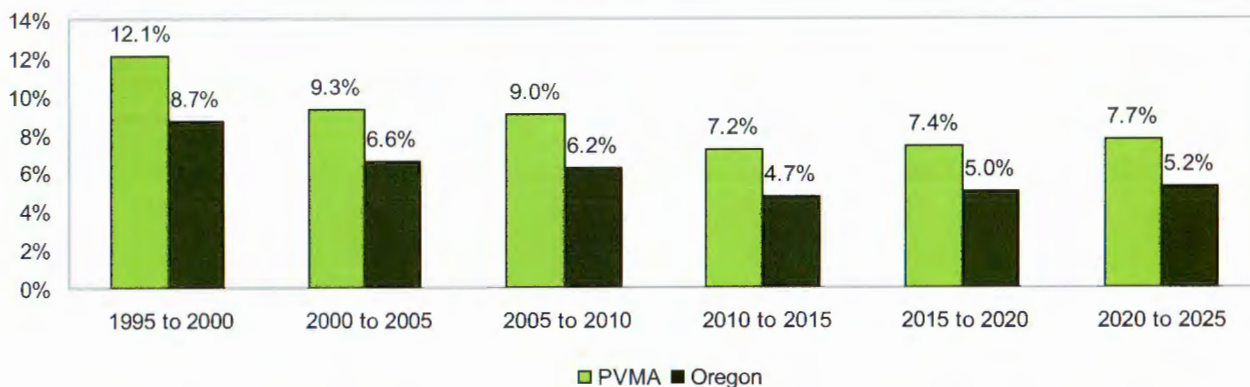
IMPLICATIONS FOR FUTURE GROWTH

Population in the metropolitan Portland-Vancouver area grew from 1.5 million in 1990 to 1.9 million in 2000 and, assuming a continuation of current state and local area conditions and policies, will grow to close to 2.1 million in 2005 and about 2.3 million in 2010. The Portland-Vancouver metropolitan area is expected to increase by 9.3 percent between 2000-2005 and 9.0 percent between 2005-2010, an annual population growth rate of 1.8 percent for the 2000-2010 period (see Figure 10). Long-term population forecasts suggest that the metropolitan population will increase to 2.4 million in 2015, 2.6 million in 2020, and 2.8 million in 2025.

The age composition of the metropolitan population will change as a result of low fertility, increasing life expectancy, and continued net in-migration (see Figure 11). Although all population age groups will increase between 2000 and 2025, the percentage distribution of the population by age will change.

- A slight increase is initially expected in the proportion of the population less than 18 years of age due to the high number of recent in-migrants in child bearing ages. As this in-migration pattern ceases, the proportion of children less than 18 years of age will decrease, reflecting a continuation of existing low fertility levels.
- The proportion of young adults, aged 18 to 24 years, will decrease slightly.
- The proportion of the population in the working ages, 25 to 64 years of age, will increase modestly during the next 10 years, reflecting continued in-migration of younger persons, will peak in about 2010, and then will decrease between 2010 and 2025.
- The population in Oregon who are currently between 55 and 64—and who will retire as they reach 65 years of age and older during the next decade—were born from 1935 to 1945, a period of very low fertility during the Great Depression and World War II. Oregon’s population, similar to the U.S. population, will not experience rapid increase in the older population until the larger birth cohorts of the Baby Boomers begin to retire. The first large group of Baby Boom births occurred in 1946 and will become 65 years of age in 2011. After 2010, therefore, there will be sharp increases in Oregon’s older population, steadily increasing the older population in relative and absolute numbers for the following twenty years, from about 2010 to 2030.

Figure 10. Metropolitan population growth will continue in the coming decades, with the PVMA growing faster than the rest of the state.



Source: Metro, Portland, Oregon

- The proportion of persons 65 years of age and older showed an unexpected increase from 1995 to 2000 but will decrease until about 2005 and then begin to increase as the Baby Boomers enter this age group.

The accuracy of these forecasts depends upon a series of assumptions concerning national, regional, and state trends, especially for the local metropolitan economy. Oregon's Office of Economic Analysis prepares population forecasts for Oregon and its counties. Metro prepares population and related forecasts for the Portland-Vancouver metropolitan area.

The pace of population growth in the metropolitan Portland area has slackened appreciably in the past several years, following strong economic and population growth throughout most of the 1990s. Although economic recession has decreased employment opportunities, prospects for future population increases are moderate.

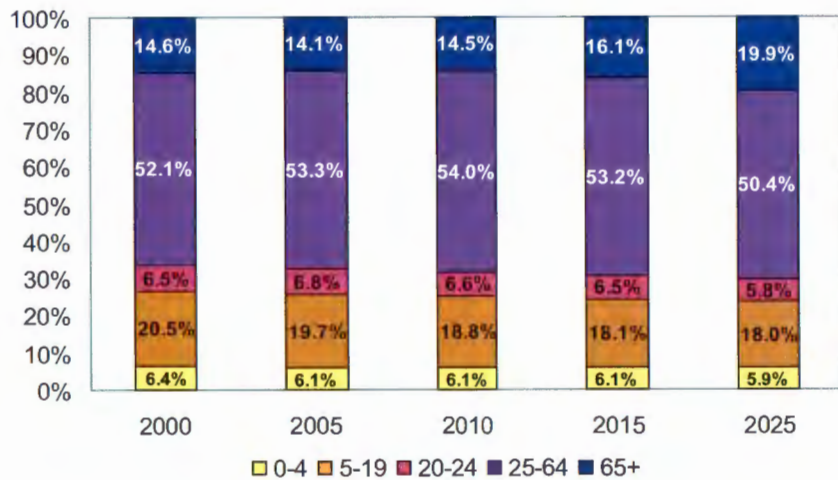
Compared with trends of the previous decade, our forecasts for population growth in the next ten years indicate that moderate growth will occur. In the past, metropolitan Portland-Vancouver has thrived in good times and, except for dra-

matic shifts in the regional economy in the 1980s, has survived fairly well in bad times. Despite currently higher unemployment rates, little evidence exists that the metropolitan area has lost its favored status among West Coast metropolitan areas for future continued moderate population growth.

NOTE

The Population Research Center provides a research and teaching focus for the investigation of the causes and consequences of demographic change, with a special focus on Oregon and its counties and cities. The Center houses the Oregon State Data Center, the lead agency in Oregon for contact and collaboration with the U.S. Census Bureau and for dissemination of census data and documents. The Center is also responsible for developing state and local population estimates and projections. Staff at the Population Research Center hold academic appointments in the College of Urban and Public Affairs at Portland State University, where a large portion of their activities are directed toward the production, analysis, and dissemination of population information, such as school enrollment forecasts, survey research on population issues, and social and economic factors affecting demographic change. For more information regarding the Center and the U.S. Census Bureau, please see www.upa.pdx.edu/CPRC/ and www.census.gov/.

Figure 11. Oregon's age composition will change in the coming decades.



Source: State of Oregon, Office of Economic Analysis and Metro, Portland, Oregon

Metro Portland's Changing Labor Market and Economic Outlook

by Joseph Cortright, Impresa

After three years of a sluggish national economy, it looks as if we may be poised to grow again. Although the Portland economy benefited mightily from the boom of the 1990s, it was harder hit than the nation as a whole during the 2001 recession and the “job-loss” recovery that followed. What is the outlook for growth in the region in the years ahead? In particular, how will our labor market influence growth opportunities? This article examines changes in national and local labor markets and the role of migration in shaping Portland's economic opportunities. It identifies some key challenges and discusses the relationship between labor markets, local industrial structure, and the region's quality of life.

THE NEW REALITY OF TALENT

The critical ingredient in metropolitan Portland's future economic success is its ability to develop, attract, and retain talented people.

We have focused too little attention on people as the critical ingredient in economic success. In a knowledge-based economy such as ours—one that will increasingly dominate our lives—the talent and creativity of the workforce will determine which regions flourish and which flounder. In this globalized, knowledge-based economy, prosperity depends less and less on access to physical resources such as coal, iron ore, oil, timber, and deep draft ports and more and more on the ability to create economically useful ideas. And ideas, unlike natural resources, are not simply discovered or inherited. They are created by people. In a global economy, physical inputs and outputs and financial capital can easily be moved to where they may be most productively used.

Talented people obey a different calculus. Talented people are workers and entrepreneurs, but they are also consumers and citizens, parents and partners. These people will base the choice of where to live not solely on productive considerations, but on amenities and consumption opportunities, community, and social and family considerations.

Almost overlooked, metropolitan Portland's chief advantage in the competition among metropolitan regions has been its ability to attract and retain a group we call “the young and the restless”—well-educated 25-to-34 year old adults. The region's principal assets for attracting this key group center on quality of life, and embrace

everything from our natural resource inheritance to the urban amenities of a walkable, bikeable city, great transit, and a culture open to newcomers and new ideas.

Americans are a mobile people, but there is a distinctive life cycle to individual mobility. We are most mobile in our late adolescence and early adulthood, as we leave the family nest, pursue higher education, explore the world of work and find ourselves as adults. But as we age, we move less frequently because we begin building attachments to place—friends, routines, a network of associates, a résumé, a mortgage and, typically, a family. All this place-specific capital progressively anchors U.S. in particular locations as we age. The likelihood of moving across state or metropolitan lines falls roughly by half between one's 25th and 35th birthdays and continues to decline right through retirement age.

Consequently, the best opportunity to attract talent and to root it in place occurs when people are “the young and the restless” in their twenties and early thirties. Our study of the young and the restless tells a tale that reflects many of the key economic trends of the past decade, and, we think, foreshadows the likely path of economic trends of the next two decades.

None of this focus on one segment of the labor force is meant to imply that they are the only creative workers in the American economy or that they are the only ones we should care about. They are, however, an important asset and a critical indicator.

A region's ability to attract and retain these talented young workers is a key indicator of its future economic prospects, in particular its ability to grow dynamic new knowledge-based industries that are the drivers of metropolitan economic success. Well-educated people in this age group are the key employees for fast growing businesses—and they are also the entrepreneurs who create the next generation of new businesses. Indirectly, workers throughout the region depend on the economic vitality imparted by these laborers.

Paradoxically, the region's attractiveness to young talent has actually magnified the local unemployment rate, at least in the short term. Even though Oregon has led the nation in unemployment levels over much of the past three years, net-immigration continues at levels only slightly lower than during the economic boom of the 1990s. In contrast, places with much lower unemployment rates such as Utah, Kansas, and North Dakota continue to experience a net out-migration of young

adults. (Between 2002 and 2003, all of these states lost population even though their unemployment rates were 4.5 percent or below, ranking in the 10 lowest in the nation.)

This paper describes the role of the young and the restless in shaping economic prosperity in the Portland metropolitan area. This analysis unfolds in five parts. First, we discuss the importance of talented young workers to metropolitan economic success and how this success is likely to be accentuated in the next two decades. Second, we review the broad demographic trends that are playing out in this age group. Third, we examine the changing racial and ethnic composition of young adults. Fourth, we focus on the critical role of the most talented young adults, those who have completed a four-year college degree. We conclude by recommending how economic development professionals can incorporate this information into their work.

THE ECONOMIC IMPORTANCE OF THE YOUNG AND THE RESTLESS

The young adult population, which we define for purposes of this analysis as persons between 25 and 34 years of age, plays a particularly important role in shaping regional economic growth and prosperity. The mid-twenties and early-thirties represent an age when most people have completed their formal education, have started pursuing careers (or developing a formative work history), and are finding partners and starting families. While people in their early twenties, particularly those with a four-year degree or higher level of education, are the most mobile age group in our society, the likelihood of moving to another state or metropolitan area declines sharply as people move into their early thirties. Consequently, the best opportunity to attract the population that will provide the human capital for a region's economic future occurs when they are young adults.

The importance of the young adult population to metropolitan economic health has been thrown into sharp relief by the major demographic change sweeping the nation: the aging of the baby boomers. Slightly more than a decade ago, when the 1990 census was conducted, the tail end of the baby boom generation (people born between 1956 and 1965) was between 25 and 34 years of age. In 2000, these boomers had moved into the 35-to-44 age group.

Those who followed people born between 1966 and 1975 were part of a much smaller birth cohort, the so-called baby bust. Even augmented by substantial inter-

national immigration, the number of people aged 25-to-34 in 2000 was far less nationally—nearly 4 million less than the number of 25-to-34 year olds a decade earlier. This means that the nation's metropolitan areas were competing for a smaller pool of young adults in 2000 than they were in 1990.

Over the past few years, people have become increasingly aware of the economic importance of talented workers, the people Richard Florida calls the creative class. These talented writers, designers, engineers, architects, researchers, and others play a key role in creating new ideas that drive business success and regional economic progress. The point of greatest opportunity to attract and retain these creative workers is when they are young and mobile. Our research shows a strong correlation between places with a significant fraction of the young and the restless and with various indices of the creative class.

For the nation's metropolitan areas, then, this shrinking group of young adults daily makes decisions that will have profound effects on economic growth for decades to come. The importance of this trend has been masked by three years of languishing economic growth (and in many places actual job declines). With job losses still fresh in mind, it is not obvious that availability of talent is a critical factor for economic success. But as the nation puts the lingering recession behind it, and as job growth accelerates (as now, finally, appears to be the case), an abundant supply of knowledge-based workers will be key.

This will happen just as the United States is moving from a thirty-year era of rapid labor force growth to a period of much slower growth and likely shortages. The three decisive trends that drove the growth of the U.S. labor force in the past three decades—the maturing of the baby boom generation, women's greatly increased economic role and the increase in college attainment—all reverse or flatten out in the next two decades. The baby boom generation, now in its peak earning years, will soon begin retiring, depriving the economy of some of its most seasoned workers. Women's labor force participation, which has doubled since the 1950s and has been a key part of growing the U.S. economy, cannot go much higher. Finally, the expansion of college education in the last two generations, which has raised college attainment rates from less than 10 percent of the population to more than 30 percent of young adults, has stopped growing. The combination of baby boom retirements, no net additions of women to the labor force, and a constant college attainment rate mean that labor is likely to be in short supply over the next two decades.

In this environment of labor shortage, metropolitan areas of the United States are in effect in competition for a limited supply of young workers. And those in

the 25-to-34 year old age group the most mobile in the population. Over the five-year period 1995 to 2000, more than 3 million persons in this group moved among metropolitan areas. At the same time, U.S. metropolitan areas attracted nearly 2 million people from abroad. Most metropolitan areas lost population in the 25-to-34 age group during the 1990s, largely because of the national demographic trends. But some metropolitan areas were big gainers because they attracted a larger share of this mobile group.

This analysis shows how the distribution of the young adult population changed between 1990 and 2000, and how different metropolitan areas fared in attracting this mobile and economically important group. As we shall see, the geographic distribution of this age group was influenced by an array of factors, including the changing race and ethnicity of young adults, variations in underlying regional and metropolitan growth trends, and the differential attractiveness of metropolitan areas to young adults.

OVERALL DEMOGRAPHIC TRENDS

The focus of our analysis is the metropolitan population of the United States, and in particular the changes in population in the nation's 50 largest metropolitan areas, including all metro areas with populations of one million or more in 2000.

Collectively the nation's metropolitan areas accounted for 80.3 percent of the U.S. population, and the 50 largest metro areas accounted for 57.7 percent. Young adults are disproportionately concentrated in metropolitan areas, particularly larger metropolitan areas. Some 83.0 percent of those aged 25-to-34 lived in metropolitan areas; 61.6 percent of all 25-to-34 year olds lived in the 50 most populous metropolitan areas. In 2000, 32.8 million 25-to-34 year olds lived in metro areas, and 24.4 million lived in the 50 largest metropolitan areas.

Overall the metropolitan population of the United States increased by nearly 14 percent from 1990 to 2000, growing from about 198 million to nearly 226 million in 2000. At the national level, the number of persons aged 25-to-34 in the U.S. actually declined during the decade of the 1990s primarily due to the movement of the baby boom generation into an older age group over the course of the decade. The number of 25-to-34 year olds in the nation's metropolitan areas declined by almost 3 million between 1990 and 2000: from 35.9 million in 1990 to 32.9 million in 2000. As a result, most metropolitan areas lost population in this age group. However, considerable variation occurred among metropolitan areas.

About a third of the 50 largest metropolitan areas saw increases in their 25-to-34 year old population between 1990. Several metropolitan areas saw declines in their 25-to-34 year old population of more than 20 percent.

Fast growing cities in the South and West consistently racked up the best performances. As shown in Table 1, Las Vegas (which roughly doubled its population in the decade) recorded the biggest percentage increase in 25-to-34 year olds. Other gainers included Phoenix, Atlanta, Charlotte, Austin, and Raleigh-Durham. The cities with the largest declines in this age group were located primarily in the Northeast—Buffalo, Hartford, Pittsburgh and Rochester all recorded declines of more than 20 percent in their young adult population. Of the nation's ten largest metropolitan areas, only one—Dallas—recorded an increase in its 25-to-34 year old population between 1990 and 2000. All of the largest cities in the Northeast and Midwest—New York, Chicago, Philadelphia, Boston and Detroit—experienced double-digit declines in their young adult population.

But the changing distribution of young adults was not driven exclusively by regional factors. In the South, Norfolk, Virginia recorded the fifth largest percentage decline in young adults. The number of 25-to-34 year olds also declined in Washington-Baltimore, Houston, Tampa, and New Orleans. In the West, Los Angeles, San Francisco, Seattle and San Diego all recorded declines in their young adult population.

Table 1. Change in Young Adult Population
Change in 25 to 34 Year Old Population, 1990-2000,
Portland and Selected Cities

Rank	Metropolitan Area	Percent
1	Las Vegas, NV-AZ MSA	55.70%
2	Austin-San Marcos, TX MSA	27.80%
3	Phoenix-Mesa, AZ MSA	23.70%
4	Atlanta, GA MSA	20.90%
5	Raleigh-Durham-Chapel Hill, NC MSA	20.00%
8	Portland-Salem, OR-WA CMSA	12.10%
9	Denver-Boulder-Greeley, CO CMSA	9.70%
17	Seattle-Tacoma-Bremerton, WA CMSA	-3.50%
38	San Diego, CA MSA	-13.50%

Source: Impresa, Inc., and Coletta & Company. 2004. "The Young and the Restless: How Portland Competes for Talent." Report for the Portland Development Commission, Westside Economic Alliance, City of Beaverton, City of Hillsboro, City of Tualatin, and Nike.

CHANGES IN RACE AND ETHNICITY

The racial and ethnic composition of U.S. metropolitan areas has shifted over the past decade. Some sub-groups of the 25-to-34 year old population (notably Hispanics and Asian-Americans) have increased significantly and are also considerably more dispersed among metropolitan areas. Other sub-groups (the white and African-American population) have decreased substantially in number. The growing diversity of this young adult population is more advanced than in the overall U.S. population and foreshadows racial and ethnic patterns that will increasingly characterize the United States in the decades ahead.

Over the past decade, important shifts have occurred in the racial and ethnic composition of the U.S. population, and they have been especially pronounced in the 25-to-34 year old age group. To fully understand the dynamics of the changing age structure of the young adult population, it is important to consider each of these racial and ethnic groups separately.

This task is complicated by fundamental changes made by the Census Bureau in the manner in which it asked citizens to identify their race between the 1990 and 2000 Censuses. In 1990, the Census required respondents to choose a single racial category. In 2000, the Census gave respondents the opportunity to identify themselves as belonging to two or more racial groups. Consequently, data for 1990 and 2000 are not directly comparable.

Our analysis focuses on the three largest broad racial groupings in the Census: whites, African-Americans and Asians. Our analysis excludes Native Americans and, for 2000, mixed race individuals. We also separately report data for persons of Hispanic origin, who can be of any race. For simplicity, we use a much abbreviated description of each racial and ethnic category: African-American includes persons describing themselves as Black and African-American; Asian includes Asians and Pacific Islanders; Hispanic includes Mexican, Puerto Rican, Cuban, or other Spanish. Significant differences are apparent across racial and ethnic lines in the change in the 25-to-34 year old population between 1990 and 2000.

The white young adult population declined between 1990 and 2000. Among the 50 most populous metropolitan areas, the fraction of the 25-to-34 year old population that was white, single-race in 2000 varied from about 50 percent in Los Angeles to 88 percent in Pittsburgh. Less than a fifth of the largest 50 metropolitan areas had a white single-race 25-to-34 year old population in 2000 than was more numerous than the white 25-to-34 year old population in 1990.

Over the decade of the 1990s, the Hispanic population increased rapidly, particularly in this age group. Between 1990 and 2000 the number of young adult Hispanics in metropolitan areas increased dramatically from 4 million to nearly 6.4 million. Hispanics accounted for about 11 percent of the metropolitan 25-to-34 year old population in 1990 and for nearly 20 percent of the metropolitan 25-to-34 year old population in 2000.

Despite the rapid increase in the Hispanic population, there is considerable variation in the share of the population that is Hispanic among U.S. metropolitan areas. A majority of the 25-to-34 year old population is Hispanic in San Antonio, and Hispanics are approaching a majority of this age group in Los Angeles and Miami. In most of the 50 largest U.S. metropolitan areas, less than 10 percent of the 25-to-34 year old population is Hispanic, with the smallest concentrations of Hispanic population found in Pittsburgh, St. Louis, Louisville, Columbus, and Cincinnati.

The Hispanic population aged 25-to-34 increased in 49 of the 50 largest metropolitan areas between 1990 and 2000. The sole exception was New Orleans, which registered a slight decline. Many metropolitan areas with previously small numbers of Hispanic residents registered the largest percentage increase. Five Southern metros ranked among the top five in the percentage increase in Hispanic population aged 25-to-34, with increases of several hundred percent (although from a very small base).

The number of young African-American adults declined slightly during the 1990s. In 2000, there were about 4.4 million African-American, single-race 25-to-34 year



olds in the metropolitan areas of the United States. This represented a number about 6 percent smaller than the number of African-American 25-to-34 year olds in 1990 in metropolitan areas (although the racial definitions were different in that year). African-Americans represented about 13.1 percent of the 25-to-34 year old metropolitan population in 1990; African-American, single-race 25-to-34 year olds represented about 13.5 percent of the U.S. metropolitan population in 2000.

The proportion of the population classifying themselves as black or African-American varies substantially among U.S. metropolitan areas. The proportion of the 25-to-34 year old population identified as black or African-American ranges from 30 percent or more in a number of Southern metropolitan areas, to less than four percent in several Western metropolitan areas.

Overall, the African-American population became more dispersed among U.S. metropolitan areas. The biggest indicative increases in the African-American population occurred in a diverse set of metropolitan areas: Minneapolis, Las Vegas, Atlanta, Phoenix, and Orlando. Most metropolitan areas experienced indicative declines, with the largest decreases in San Diego, Los Angeles, and San Francisco. (The apparent declines in California may reflect a greater fraction of persons who identified themselves as African-American in 1990 and as having two or more races in 2000 than was the case in other regions of the country.)

The number of young adult Asian Americans increased during the 1990s. There are about 1.9 million Asian, single-race 25-to-34 year olds in the nation's metropolitan areas in 2000. The number of 25-to-34 year olds identifying themselves as Asian in the metropolitan U.S. increased by more than half a million during the decade of the 1990s. Asians now account for almost 6 percent of the metropolitan 25-to-34 population, up from about 4 percent in 1990.

The Asian population in the United States has historically been most concentrated on the West Coast. Four of the five metropolitan areas with the largest proportions of Asian-Americans aged 25-to-34 are located in California, and the fifth is Seattle. The distribution of Asian Americans is still heavily skewed to a relatively few metropolitan areas. In five metropolitan areas, Asian Americans make up more than 10 percent of the 25-to-34 year old population; in forty metropolitan areas Asian Americans make up between 2 and 6 percent of the population. Metropolitan areas in the South generally have the lowest fraction of Asian American population.

The Asian population in the metropolitan United States became more dispersed over the decade of the 1990s. Percentage increases in the Asian young adult popu-

lation were greatest in those areas with traditionally small concentrations of Asians and lowest in the areas with traditionally large concentrations of Asians.

YOUNG TALENT: Educational Attainment of the 25-to-34 Year old Population, 1990 and 2000

From an economic perspective, the skills and talent of the workforce are an increasingly important factor in shaping metropolitan growth. For purposes of our analysis, we use educational attainment measured by the fraction of the population with a 4-year college degree or higher level of education as our benchmark indicator of skill.

In 2000, nearly 32 percent of the 25-to-34 year olds in the 50 most populous metropolitan areas in the United States had a four-year college degree. Between 1990 and 2000, even though the total population of 25-to-34 year olds in the top 50 metropolitan areas declined, the total number of persons with a four-year degree or higher level of education increased by 11 percent, from about 7 million to almost 7.8 million. Young adults, as a group, recorded a substantial increase in educational attainment over 1990: college attainment in the top 50 metropolitan areas rose from 26.6 percent in 1990 to 31.9 percent in 2000.

There is very substantial variation in the fraction of the young adult population with a college degree among the 50 largest U.S. metropolitan areas. As shown in Table 2, four of the five highest-ranking metropolitan areas have college attainment rates of more than 40 percent; all of the lowest metropolitan areas have college attainment rates of less than 25 percent. The college attainment rate of the highest rated metropolitan area (Raleigh-Durham) is nearly three times that of the lowest rated (Las Vegas).

Most metropolitan areas recorded an increase in the number of college-educated 25-to-34 year olds between 1990 and 2000. The number of college educated 25-to-34 year olds doubled in Las Vegas and increased by about half in four other metropolitan areas: Charlotte, Austin, Portland, and Atlanta. Several metropolitan areas mostly in the Northeast saw actual declines in their college educated 25-to-34 year old population.

Historically, there has been a marked division of educational attainment by gender, with men receiving more education than did women. In 1960, women were only about half as likely to have college degrees than were men. But while male college attainment rates basically peaked in the 1970s, women's college attainment

rates continued to increase. By the mid 1990s, no significant difference existed in the college attainment rates of 25-to-34 year old men and women. Since 1997, college attainment rates of women in this age group have clearly surpassed those of their male counterparts. For those aged 25-to-34 in 2002, the college attainment rate of women was 32.7 percent compared to 28.5 percent for men. Those now aged 25-to-34 represent the first generation where women are measurably better educated than men.

Table 2. Change in College Educated Population, 1990-2000 Increase in 25 to 34 Year Old Population with a 4-Year Degree or Higher, Portland and Selected Metropolitan Areas

Rank	Metropolitan Area	Percent
1	Las Vegas, NV-AZ MSA	104.60%
2	Charlotte-Gastonia-Rock Hill, NC-SC MSA	56.60%
3	Austin-San Marcos, TX MSA	56.20%
4	Portland-Salem, OR-WA CMSA	50.00%
5	Atlanta, GA MSA	46.20%
6	Denver-Boulder-Greeley, CO CMSA	40.10%
7	Phoenix-Mesa, AZ MSA	39.20%
9	Raleigh-Durham-Chapel Hill, NC MSA	37.10%

Source: Impreso, Inc., and Coletto & Company. 2004. "The Young and the Restless: How Portland Competes for Talent." Report for the Portland Development Commission, Westside Economic Alliance, City of Beaverton, City of Hillsboro, City of Tualatin, and Nike.

RECOMMENDATIONS: Competing for Talent

Economic development professionals need to adapt to a sea change in how economic development works. We are in the midst of a transition from a period of abundant labor markets and sustained labor force growth to a period of much slower growth. We will still experience economic cycles, but year-in and year-out, access to talented workers will increasingly be at a premium. Consequently, in the years ahead, Portland's economic strategy should focus on competing for talent.

Make People the Focus of Economic Development

Rather than a world in which places compete for business (and people follow), we will increasingly live in a world where places compete for people (and businesses follow). The scale of the migration is substantial. Over the five-year period from 1995 to 2000, more than 3 million persons in this group moved among metropolitan areas, and these areas also attracted nearly 2 million more persons from abroad. Most metropolitan areas lost population in the 25-to-34 age group during the 1990s, largely because of the national demographic trends. But some metropolitan areas were big gainers because they attracted more than their share of this mobile group.

Most economic development policies have essentially ignored this issue, focusing on business climate, tax incentives and regulatory reform. These issues will not disappear, but they will consistently decline in importance relative to the number one issue most businesses face: can I hire talented people here? Places that are attractive destinations for relocation and that already boast a substantial pool of talented young workers will do well. Other places will not.

Our research shows that Portland has been very competitive for the young and the restless over the past decade. Assuming that there is something inevitable about this migration would be wrong. The region's attractiveness to young adults is very much a competitive situation. Indeed, young people are constantly moving to and from Portland. It would actually take a small change in the relative magnitudes in- and out-migration to produce a large increase or decrease in net migration. Between 1995 and 2000, for example, 89,000 25-to-34 year olds moved into metropolitan Portland and 54,000 moved away. A 33 percent decrease in in-migration or a 50 percent increase in out-migration over that period would have all but erased the region's stellar performance migration over that five-year period.

Don't Assume Investing in Higher Education Will Solve This Problem

One cannot assume that a state or region can count on educating its way out of this bind. Twenty-something college-graduates are the most mobile segment of our society. Many places that produce graduates in abundance rank well below average in the number of 25-to-34 year olds with a college degree (e.g., Providence, Rhode

Island). Nearly all of the places with an over-abundance of college-educated 25-to-34 year olds have larger numbers than are graduated from local institutions of higher learning. Having a good higher education system is an asset for any community, but places that invest in higher education without protecting or improving those assets that attract and retain talented graduates may see the benefits of their investment simply leave town. While some of the benefits of higher education will be localized, there is no guarantee that many college graduates—including especially the best and the brightest—will not move away to another community if they perceive that livability or opportunity is less than in alternative locations.

Quality of Life and Openness Matter

The challenge to communities is to figure out how to attract people and root them into place. Many young adults will not stray far from home and family. Others, including many of the most ambitious and talented, will consider different possibilities. They are mobile and up for grabs. Though we are far from having all the answers, the focus groups my colleague Carol Coletta conducted with college-educated recent movers in the 25-to-34 year old age group identified a coherent set of themes regarding the kinds of things talented young workers are looking for. Quality of life tops this list while vibrant, diverse, and interesting urban communities represent a consistent draw for talented young adults. Walkable streets, workable transit, and distinctive neighborhoods all seem to matter. Our groups discounted claims that young adults are disaffected, uninvolved or attracted simply to “gritty” urban areas. They want places that they can be proud of, part of, and that are clean and green. Part of the equation seems to be social and cultural—is this is place that I can be a part of, that I can contribute to? Places with a sense of possibility and opportunity, where the circle is open, where new ideas are encouraged, are more likely to attract (and retain) young adults.

Pay Particular Attention to Women

Historically, the educational attainment of men has been higher than that of women; in 1960, men were twice as likely on average to have completed a four-year degree. Within the past decade, women have not only reached parity with men in educational attainment, but have exceeded them by a significant margin—today a

25-to-34 year old woman is about 10 percent more likely than her male counterpart to have completed a four-year college degree. Higher educational attainment, despite the fact that the 25-to-34 year old population has about 1 percent more men than women, means that there are absolutely more college-educated 25-to-34 year women than men, by about 650,000 nationally.

This phenomenon is accentuated by demographic trends, particularly the rising relative educational attainment of women and the rising average age of women at first marriage. In years past, when the median woman married in her early twenties, it was unlikely that she would have embarked (or at least traveled very far) on any particular career path. Anecdotally, we know that a large proportion of women would have found their mate before they graduated college. Today, the median age of marriage for all women 25, and for college-educated women, is even higher. Thus, most well educated women will have spent several years in the workforce before marrying, typically having established a home and a career apart from their college life.

In the past, the initial location decisions of well-educated adults may have reflected the preferences of married couples, and predominantly those of college-educated husbands. Today, numerically, the location preferences of well-educated adults reflect a growing proportion of single women. Places seeking to attract talent will increasingly want to look at how their city appeals to these mobile young women.



The Economic Importance of Being Different

Although we identified some common elements that were attractive to many well-educated young adults, no single ideal community exists. An important element of authenticity is distinctiveness. We live in a nation (and a world, thanks to globalization) where culture has become increasingly homogenized, where one suburban community, strip mall, or freeway exit looks almost exactly like every other. But a reaction is brewing, emerging from the ground up; many people want choices and a sense of place that moves past the bland of the national brand. The slogan “Keep Austin Weird” captures this emotion.

The essence of this notion is that every community will have to find its own unique identity. Just as quality of life means different things to different people, so, too, does sense of place. We know tastes differ regarding climate: many people will find the quality of life eroded by “bad” weather. Some will think Minnesota too cold, Portland too wet, or Phoenix too hot. Just as there are many dimensions of climate, there are many dimensions of community. No city can offer the best quality of life to everyone. The challenge is to find one’s niche. Portland, for example, can’t be cheaper than Mississippi, or sunnier than Phoenix, or more aggressively entrepreneurial than Silicon Valley, but it can offer a distinctive combination of attributes that a significant set of knowledge-based workers will find attractive. The challenge for every community is to decide what kind of place it wants to be.

Some of the factors that appear to be the most pivotal in attracting new residents to Portland seem to be the built environment, particularly of the central city and close-in neighborhoods. Additionally, the region’s cultural and institutional openness to newcomers and new ideas and the positive feedback from net migration are pluses. The diversity of neighborhoods, the number and variety of locally owned businesses, the commonplace of civic engagement are all relative strengths of metropolitan Portland.

As Michael Porter reminds U.S., strategy is about being different: What do you choose to be or to offer that is different than others? This notion stands in stark contrast to our traditional view of economic development, which asks simply whether one place is cheaper than another. In our work in the months ahead, my colleague Carol Coletta and I plan to assess in detail the important differences that define the unique niches that American metropolitan areas occupy, how these differences influence their economies. Our project will use an eclectic mix of public and private data on patterns of locally owned business, as well as variations in consumption and behavioral and attitudinal data, to identify community distinctiveness.



Can We Find a Language for Fairness in Regional Planning?

by John Provo, PhD. Candidate, School of Urban Studies and Planning, College of Urban and Public Affairs, Portland State University
Jill Fuglister, Executive Director, Coalition for a Livable Future

INTRODUCTION

Metropolitan Portland is often cited as a model for regional planning and growth management. In the 1990s, both academics and the popular press “discovered” the Portland region, connecting our quality of life—vibrant urban places, natural beauty, and healthy economy—with our unique forms of regional cooperation and land use planning. Metropolitan Portland became the avatar of an emerging New Regionalism, a movement characterized not only by its spatial nature, but also by an interest in holistic solutions integrating a variety of issue areas.

One central tenant of this movement is the ability of regional policies to address growing inequities and inefficiencies associated with gaps in regional governance and metropolitan authority in an era of ever increasing inter and intra metropolitan competition. Home to Metro, the nation’s only elected regional government, the Portland region is lauded for protecting the environment through preservation of farmland and open space and for promoting the economy through facilitating the development of vibrant urban centers. However, how does the region define and act on issues of social and economic equity?

Most readers will almost certainly raise a larger question: “What is equity?” We have for more than 25 years talked about the environment as a region, developing a technical language and understanding of things like watersheds that transcend jurisdictional boundaries. For the last ten years we have also paid increasing attention to the regional nature of the economy—for example, developing an understanding of industrial clusters and how they function on a metropolitan scale. While we vigorously debate the details of our environmental and economic policies, such technical language and understandings give those debates form and meaning. Do we even know what we’re asking for with respect to equity in regional planning? Policies should be fair for what or whom? Fairness should be achieved by what means? And fair according to what evaluative standards?

A second, larger question is, “Does this really matter?” A great temptation lingers to respond like the late Supreme Court Justice Potter Stewart, who declared, “I know it when I see it.” However, to dismiss equity or fairness as beyond definition is shortsighted, as it is a current and recurring theme in our politics. Most recently,

proponents of Measure 37, the property compensation initiative approved by voters, won the day by framing a vote for the measure as a vote for fairness to individuals evaluated strictly through market criteria. Measure 37 leaves communities with a complex choice in deciding between immediate monetary costs in paying compensation to maintain regulations or suffering long-run costs and the degradation of quality of life if regulations are waived.

In answering our questions about equity and in this region, we ask readers to draw back from the immediacy of the Measure 37 contest and to focus on a historical policy debate from Metro’s recent past. The Regional Affordable Housing Strategy (RAHS), adopted by Metro in 2000, offers illustrations of conflicting concepts about equity or fairness in the region. While housing affordability is an area of policy where the region’s growth management policies are sometimes criticized, with some distance from immediate policy debates, we hope the RAHS example will allow readers to separate their baseline principles from immediate interests and reflect with some objectivity on concepts of equity and fairness.

We pair this retrospective exercise with a look at related policy outcomes through an advanced selection of maps from the Coalition for a Livable Future’s forthcoming Regional Equity Atlas. (More information on the Atlas is available on-line at <http://www.cfuture.org/EquityAtlas.htm>.) We will ask you to ponder the outcomes presented in these maps from the conflicting perspectives on equity. Where are the conflicts and common ground among the interests of individual households, localities, and the region? Are we creative enough to envision in the future policy solutions to housing affordability problems that identify mutual benefits to all these stakeholders?

We won’t be so bold as to suggest that we can offer a definitive answer to any of the questions. However, in the limited space available, our hope is to engage readers in thinking about the basis for conflicting notions of equity and in considering whether a common language for fairness, one where we still debate the details but at least agree on what it is we’re debating over, is achievable.

EQUITY AND ITS COMPONENTS

If you ask academics to explain their concepts of equity, you'll get very different approaches based on specific disciplines. A legal scholar might discuss the notion of equity law, foundational principles of fairness in our jurisprudence, while anthropologists or sociologists might approach the question as a matter of trust and reciprocity, searching for the elements required to construct a socially sustainable society. Academic planners and public policy analysts, whose work intersects our discussion, are likely to have a different starting point, and that is with the late political philosopher John Rawls.

Perhaps most famously Rawls described a hypothetical veil of ignorance that asks us to judge fairness in society by the production of results we would choose without knowledge of our initial advantages in life. In *Difference Principle* (1971), he argues for a compensatory notion that inequitable distribution should only be permitted to the extent that it improves the lot of the least advantaged individuals (Rawls, 1999). In this section we discuss Rawls and his critics in order to break down the broad and perhaps on its face unknowable notion of equity into several elements important to our discussion. Further, we identify three approaches to equity that we expect to see in action in the discussion surrounding RAHS.

Rawls' ideas, both redistributive and individualistic, have inspired volumes of comment and criticism. This conversation raises several important questions that have been given only limited consideration in terms of their implications for New Regionalism. Is equity for people, places, or something else? In other words, if you set out to devise an equitable planning or policy approach to an issue, where should you target the primary benefits? Further, what are the steps to implementing such policies? How do economic or political implementation strategies influence the focus of benefits intended by what or whom you choose to target? Last, what sort of criteria do we use to evaluate these policies? And as this is not a discrete sequence, how do the values statements implied by the policies feed back into the targeting and implementation questions?

Policy Targets

Debates over Rawls turn in part on the wisdom of policies targeting people or place. For example, some argue that you can have equitable distribution as described by Rawls only at a cost to economic efficiency. This had long been the basis

for questions for example about place-based programs that have typically served as the vehicles in anti-poverty efforts. However, if such policies are to be attempted, some might argue for focusing on individuals, as the imprecise tailoring of benefits to place might diminish the aid flowing to those in need (Winnick, 1966).

Others argue that place is imperative to policy as existing inequities are shaped by political power imbalances that are spatial in nature. This assumption leads Harvey (1973), for one, to question the underlying economic basis for those inequities, arguing that rather than separating questions of productive efficiency and distributional equity, as Rawls and many other critics do, in the long run it is most efficient to explore them together.

Susan Fainstein and Ann Markusen (1993) articulate another approach to this people/place debate, targeting people "in place." They identify economic benefits accruing in urban agglomerations and note the presence of socially and economically isolated populations in both urban and rural locales. They argue that aiding these people "in place" would promote democratic access to the economy, enhancing its vitality over the long run.

Planning efforts have focused on Rawls' principles, such as the 1975 Cleveland Policy Planning Report, co-authored by the late Portland Planning Director Ernie Bonner. In this landmark report, Bonner and his Cleveland colleagues, citing Rawls, coin the phrase "equity planning," and move beyond purely physical and technocratic approaches to planning. They specifically charged themselves with "advocating for those with limited choices" and worked within the system to expand opportunities for those in need—for example, redirecting regional transportation funding towards transit-dependent central city populations (Krumholz and Forester, 1990; *Planning in Portland*, 2004). Davidoff (1982) finds a shortcoming in the Cleveland/Rawlsian approach to equity in the absence of full-scale, place-based, political mobilization that would give politically weak populations their own voice to contest inequities. Others have pointed to the vague and abstract nature of Rawls' principles, and question the relevance of his work to the spatially-defined responsibilities of jurisdictions (Marlin, 1995; Mier and McGary, 1993).

Implementation Strategies

The New Regionalism movement often focuses on equity and fairness of policy outcomes. In contrast with the often dominant public choice rationale, where individual jurisdictions are positioned as competitors in order to improve efficiency in the provision of government services, New Regionalism characteristically addresses concerns arising from the current context of intra-metropolitan competition. The examples below share that characteristic, implementing legislative and legal strategies to increase equity in outcomes for individual jurisdictions and households.

Myron Orfield (1997, 2002) captures the imagination of planners inspired by the New Regionalism. His influential texts document a correlation between declining central city property values and concentrations of negative socioeconomic indicators. He presents this as the rationale for regional tax base sharing between central cities and suburbs, supported by legislative coalitions, pitting central cities and inner suburbs against outer suburbs—essentially the experience surrounding the Minneapolis-St. Paul regional revenue sharing plan in place since the 1970s. However, with limited replication of the Minneapolis-St. Paul model elsewhere, others suggest focusing on regional equity through issue-based coalitions that cut across jurisdictions instead of placing them in conflict (Rusk, 1999; Pastor et al 2000).

Fair share housing has also captured attention in planning and policy circles, applied perhaps most comprehensively in the New Jersey Supreme Court's Mt. Laurel decisions. The court found that all jurisdictions in a region bear some responsibility for providing the opportunity for construction of housing options that are affordable at a range of income levels. The debates that followed were often heavy with not just racial but economic class overtones, as the opportunity for improved mobility of individual households was pitted against the fiscal responsibilities of individual jurisdictions. In three major decisions from 1975-1986, the state courts invalidated zoning that excluded low income housing. Court-imposed builders' remedies frequently allowed developers direct access to the courts when localities turned down affordable housing proposals. The judicial branch eventually endorsed a legislative solution creating bureaucratic and quasi-market mechanisms allowing affluent communities to buy out of their legal obligation with payments to low income communities (Kirp et al, 1997).

Evaluation Criteria

Talen (1998) neatly summarizes definitions of equity discussed in many contexts and applies them to planning. First, individual equality would distribute benefits to everyone equally regardless of need or position in society. A second category of compensatory equity would factor indicators of need into the distribution of benefits. Third, distribution by demand for services could provide an economic rationale based on use or political rationale driven by advocacy. Fourth, market-based criteria could provide cost of services or taxes paid as a rationale for distribution.

Elements of this typology raise concerns. Talen (1998) points out that demand for services by privileged individuals may lead to highly inequitable results. Further, with compensatory equity as a goal, someone must identify and weigh variables of deprivation and consider the scale at which they should be addressed. Lastly, this typology is largely silent on time. For example, market-based criteria may lead to very different judgments of policies over the short or long run depending on the economic perspective employed. Over how long a period may we make such judgments? Advocates of reparations for slavery have raised a significant claim for redress of past grievances, while the sustainable development literature argues that current resource policies must acknowledge a responsibility to future generations. These concerns suggest two additional dimensions to a typology drawn from a reading of Lucy and Talen: process equity and temporal equity.

Three Approaches to Equity

Our reading of this material suggests at least three general positions towards regional equity:

- ❑ Targeting places, focused on the responsibilities of individual jurisdictions, evaluating fairness largely on market performance of those jurisdictions;
- ❑ Targeting people, focused on outcomes for individual households, evaluating fairness largely through compensatory notions and market participation for those households;

- Targeting people in place, focused on outcomes for individual households with respect to geography, evaluating fairness largely through compensatory notions and market and political participation for those households.

These interpretations are not meant to be definitive but merely suggestive of the sort of interpretative lenses that readers may wish to construct for themselves as they proceed to reflect on the meaning of equity.

METRO'S REGIONAL AFFORDABLE HOUSING STRATEGY

Metro's Regional Affordable Housing Strategy (RAHS), adopted by the Metro Council in 2000, is interesting as a unique attempt first to legislate and then to negotiate over equity issues among stakeholders and institutions of governance involved in Portland's regional planning system. This effort recognized housing affordability as a challenge that was regional in scale. Some also saw an opportunity for the region to connect concerns with the environment and economy to equity. The fairness of the distribution of affordable housing and concentrated poverty among the region's localities was central to the discussion for others.

The Regional Framework Plan (RFP) was adopted in 1997 to implement the 2040 Growth Concept, a vision of a compact region growing up through increased density in designated centers, rather than growing out through expansions of the urban growth boundary. The RFP was a legislative document, legally binding Metro and its constituent local governments to implementation of the vision they endorsed in the 2040 Growth Concept.

As initially adopted by the Metro Council, the RFP included a housing policy establishing affordable housing goals for localities. These goals were devised on fair share principles that would distribute target numbers of moderately priced units around the region. In the forefront of this effort was the Coalition for a Livable Future (CLF), a group of environmental, land use, and community development organizations. CLF drew much of its inspiration from Myron Orfield's *Metropolitics* (1997) as well as from Oregon's land use planning program goals.

Oregon's Goal 10 lends support to such an approach. It provides that housing in all jurisdictions should be available at a range of prices and rent levels. However, historically that has meant supplying a range of housing forms rather than ensuring functional affordability for a range of households. Goal 10 was interpreted to ban exclusionary large lot zoning, leading eventually to the state Metropolitan Housing

Rule that opened Portland suburbs to a wave of multi-family housing construction. However, despite a substantial increase in the suburban share of multi-family housing construction in the 1980s and 1990s, housing affordable to low income households remained concentrated in the central city of Portland.

Under an RFP affordable housing policy, proposed by then-Metro Councilor Ed Washington with inspiration from the Coalition for a Livable Future, all local governments would have shared responsibility for meeting housing production goals for units affordable to a range of income levels. Jurisdictions failing to meet the goals were to require that new development projects include a share of units affordable to moderate and low income households. With opposition from some members of the Metro Council at the time, including homebuilder Don Morissette, a parliamentary maneuver was required to get the matter out of a Metro committee and before the Council, which approved the measure with a narrow one-vote majority.

Suburban governments, led by then Gresham Mayor Gussie McRoberts, were joined by development groups in litigating the proposed RFP affordable housing policy. They raised a host of objections, which essentially turned on interpretation of whether a procedural requirement mandated in Metro's home rule charter was met in this instance. The Metropolitan Policy Advisory Committee, primarily consisting of local government stakeholders, is required to advise and consult with the Metro Council on legislative matters. Instead of litigating, the parties settled the dispute through mediation, which resulted in the creation of an Affordable Housing Technical Advisory Committee (HTAC), appointed by the council and charged with developing a consensus on some policy recommendations that eventually became the RAHS.

The HTAC, chaired by current Multnomah County Commission Chair Dianne Linn, included local elected officials, staff from local governments and local public housing authorities, representatives of community development corporations, and bankers and the development industry, including both non-profit and for-profit housing providers. Some of the parties to the suburban lawsuit, including real estate and home builder trade associations, were not given seats on the committee but followed its work closely.

The RAHS document, developed by HTAC over almost two years of work, detailed the shortage of affordable housing in the region. The authors identified a 20-year shortfall of more than 90,000 units affordable to households at or below 50 percent of the regional household median income. The massive need and asso-

ciated costs—estimated to total \$6 billion, less than a third of which could be met through state and federal funds—cast a long shadow over the discussion.

In an effort to fill the gap, the committee documented a range of regulatory, land use, and funding approaches. However, two options that had long been seen as key potential sources were put out of reach, at least for the time being, when the realtor and homebuilder trade associations successfully pursued a “legislative bypass” to the HTAC process. They won from the state legislature in Salem prohibitions on adoption of inclusionary zoning, which mandates that developers include moderately priced units in new projects and pay a tax on real estate property transfers.

These private sector groups argued that they would simply have to pass the costs of these provisions on to the public. Some local government representatives echoed the position in response to other options considered in RAHS. Small jurisdictions in particular were disturbed by the potential fiscal impact of proposals that they waive various fees or systems development charges to increase affordable housing production. Further, the application of a voluntary fair share methodology distributing projected new affordable units, while successfully documenting the outsized burden borne by the City of Portland, led to results that were challenging for smaller places to envision implementing.

In the end, RHAS offered a rich documentation of the need for more affordable housing in the region and provided a policy toolbox that localities were free to peruse. Beyond that, however, it also started a new dialogue between Metro and the localities. Although it has waxed and waned in the intervening years, that discussion continues to this day.

DOCUMENTING HOUSING POLICY OUTCOMES

Continuing dialogue can only be enriched by a more informed discussion of a key contextual element that was only implicit in the RAHS—equity. Building in part upon the foundation contained in the RAHS as well as the process to develop it, the Coalition for a Livable Future has launched the Regional Equity Atlas Project. The project seeks to advance equity as a key component of the greater Portland area’s smart growth agenda. Using maps, the project will analyze regional development patterns by illustrating changes in access to opportunities including housing, transportation, jobs, education, food, and parks and greenspaces. The information generated by this project will provide a framework for understanding the notion of equity as it relates to long-range planning, and, ultimately, for shaping future planning decisions.

The first and second maps identify the change between 1990 and 2000 in the number of cost burdened renters and home owner households respectively. Results may be influenced by a number of factors, including “new home” construction. “New home” households spend more than a third of their income on housing. The third map indicates rates of poverty and changes from 1990 to 2000. Trends may be influenced by factors like the number of non-poor households moving into an area (i.e., gentrification).

Large numbers of cost burdened renter households remain concentrated in Portland—in fact within the city’s downtown. Some concentration of high increase from 1990-2000 in cost burdened renter households per acre is also apparent on the city’s eastside. However, it is also largely a suburban phenomenon, with high concentrations around the region’s Westside, stretching from Hillsboro to Wilsonville, in east Multnomah County communities including Gresham, areas near Happy Valley in Clackamas, and in parts of Clark County, Washington as well.

The highest concentrations in the change in cost burdened homeowners per acre from 1990-2000 are found in the city’s eastside, Westside suburban areas around Hillsboro, Tigard and Sherwood, Canby in Clackamas, and in parts of Clark County Washington.

While the City of Portland’s eastside largely contains areas of above average poverty, 1990-2000 poverty rates decreased. At the same time, while eastern Multnomah County contains large swaths of areas of above average poverty, major areas in Gresham, Wood Village, and Fairview saw increased rates. Western suburbs have smaller pockets of above average poverty rate areas where rates were on the rise, including parts of Cornelius, Forest Grove, Hillsboro and Beaverton. Much of the Westside, which has below average rates, also experienced an increase in poverty over the decade. Across the Columbia River, Clark County, Washington experienced a similar pattern with areas of above average and increasing rates juxtaposed with areas of below average but also increasing rates.

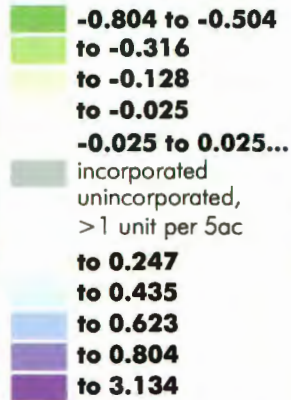
CONCLUSIONS

The RAHS and the Equity Atlas provide a good accounting of the scale of the region’s affordable housing problem and raise associated issues like the concentration of and movement patterns of poverty.

Recall the three approaches to equity identified earlier, targeting people, places, and people in place. In these, terms we anticipate conflicts over the RAHS

**Change 1990-00:
Cost-burdened
Renter
Households***
**Portland-Vancouver
PMSA**

Households per acre:



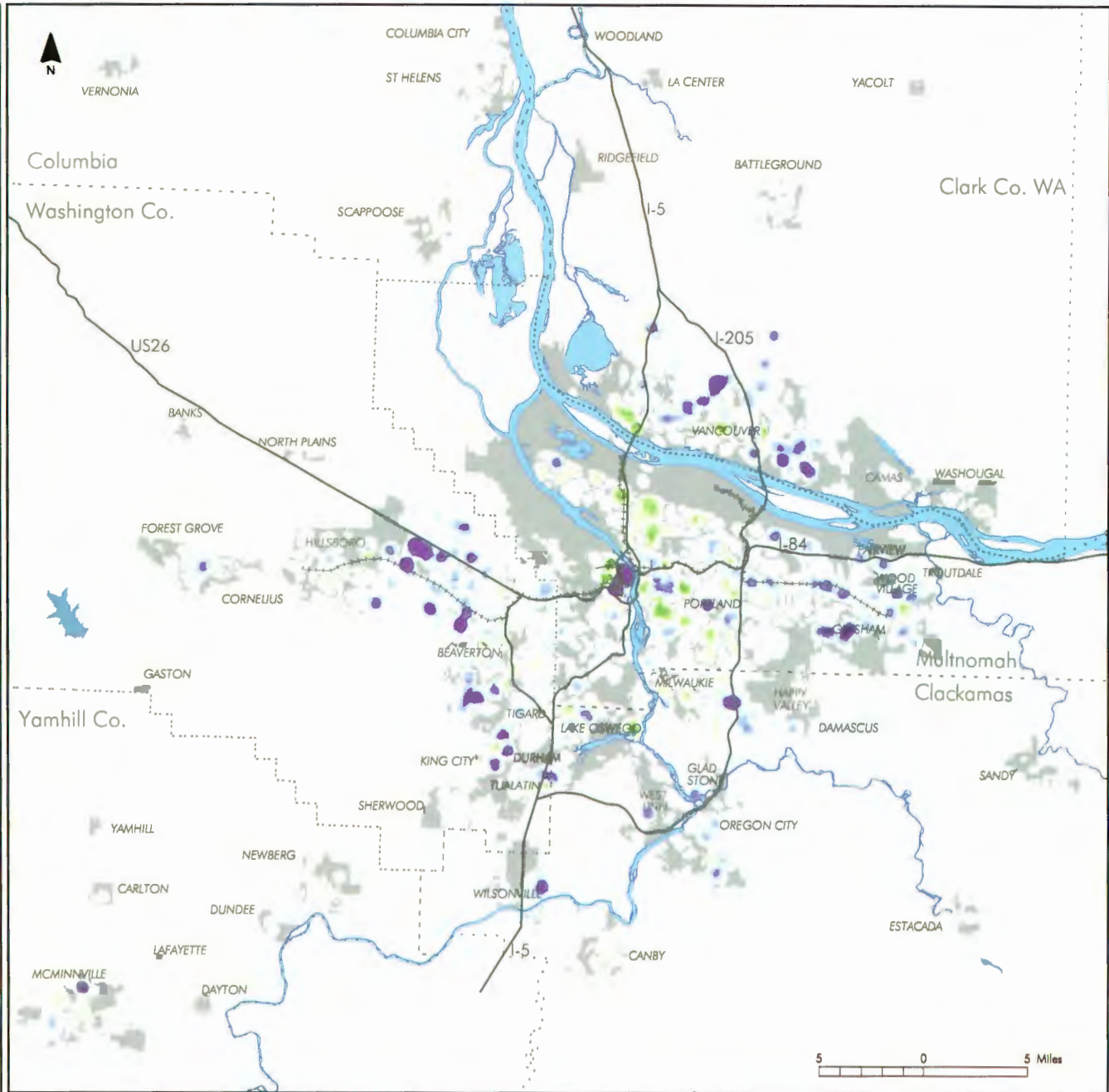
mean=0.059, SD=0.188

**Unincorporated,
<1 unit per 5ac...
Change total (%):**

- Clackamas=175 (29%)
- Columbia=120 (82%)
- Clark=40 (10%)
- Multnomah=60 (76%)
- Washington=20 (6%)
- Yamhill= -20 (-10%)

*Renters spending 30% or more of household income on rent & utilities. Variable based on U.S. Census Bureau STF3 1990, H51, SF3 2000, H71. Density is avg. of 8 1-acre cell search radius on rosterized blockgroup data reapportioned by block-level renter-hh. Other: Oregon Geospatial, ESRI 2002, Metro DRC 2003.

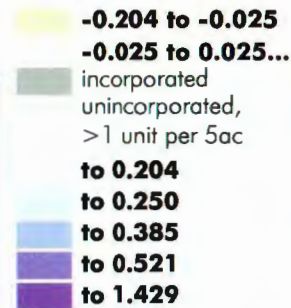
Population Research Center
Portland State University, 2004



Change 1990-00: Cost-burdened Mortgaged Households*

Portland-Vancouver PMSA

Households per acre:



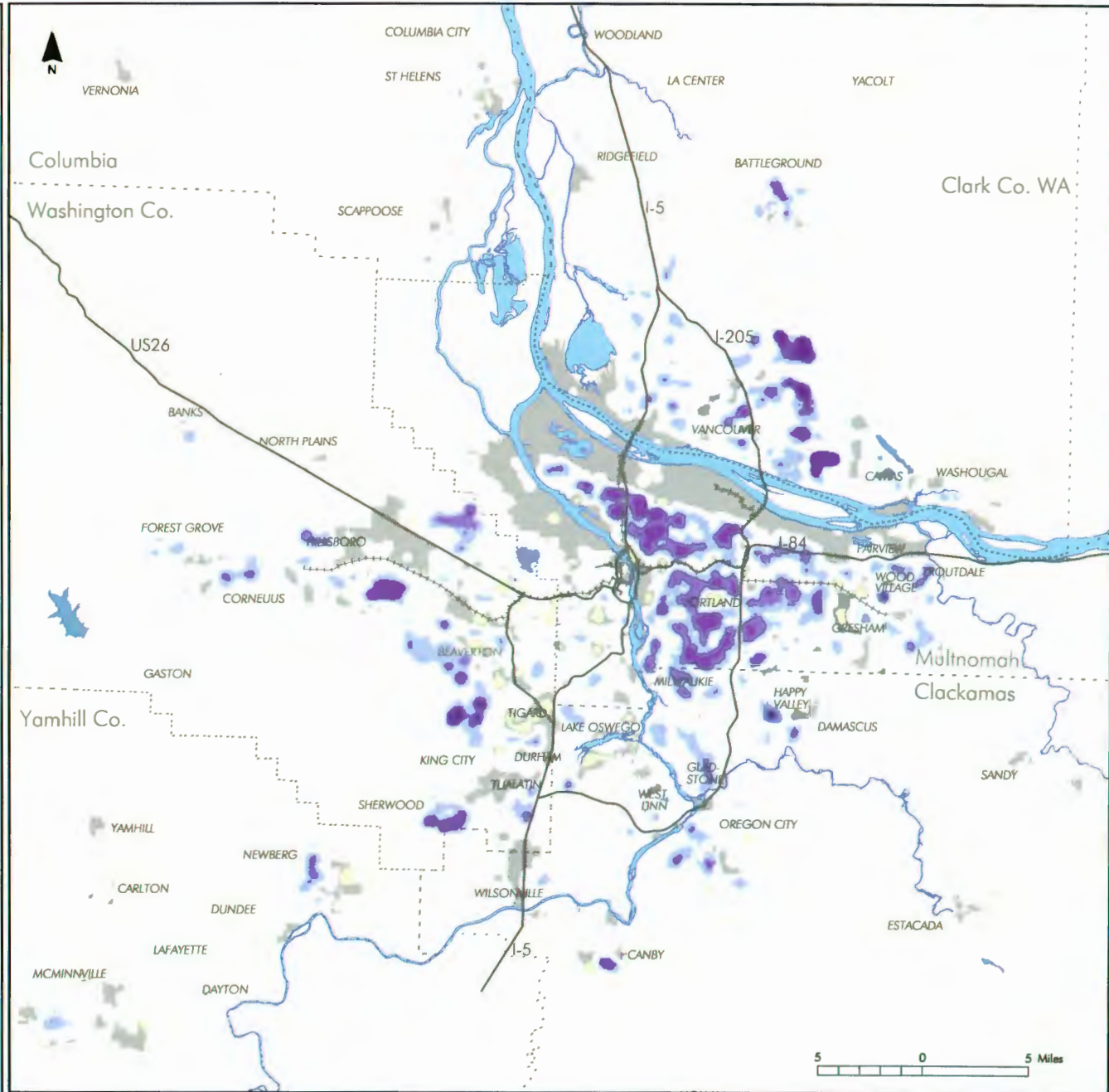
mean=0.114, SD=0.136

Unincorporated, <1 unit per 5ac... Total households (%):

Clackamas=	1160 (81%)
Columbia=	370 (181%)
Clark=	1940 (258%)
Multnomah=	170 (65%)
Washington=	530 (95%)
Yamhill=	350 (116%)

*Owners spending 30% or more of household income on mortgage & related costs. Variable based on U.S. Census Bureau STF3 1990 H58 & SF3 2000 H94. Density is avg. of 8 1-acre cell search radius on rasterized blockgroup data reapportioned by block-level owner-hh. Other: ESRI 2002, Metro DRC RLIS 2003, Oregon Geospatial.

Population Research Center
Portland State University, 2004



**1990-2000:
Poverty &
Change**
**Portland-Vancouver
PMSA**

**By selection criteria*
(totals 1990, 2000):**

- below avg. & decrease
(9600, 6100)
- below avg. & increase
(21600, 51900)
- above avg. & decrease
(58600, 40400)
- above avg. & increase
(44800, 69000)
- not applicable

1990 avg.=8.4%,
2000 avg.=8.2%

Darkness indicates density
distribution of poverty in 2000

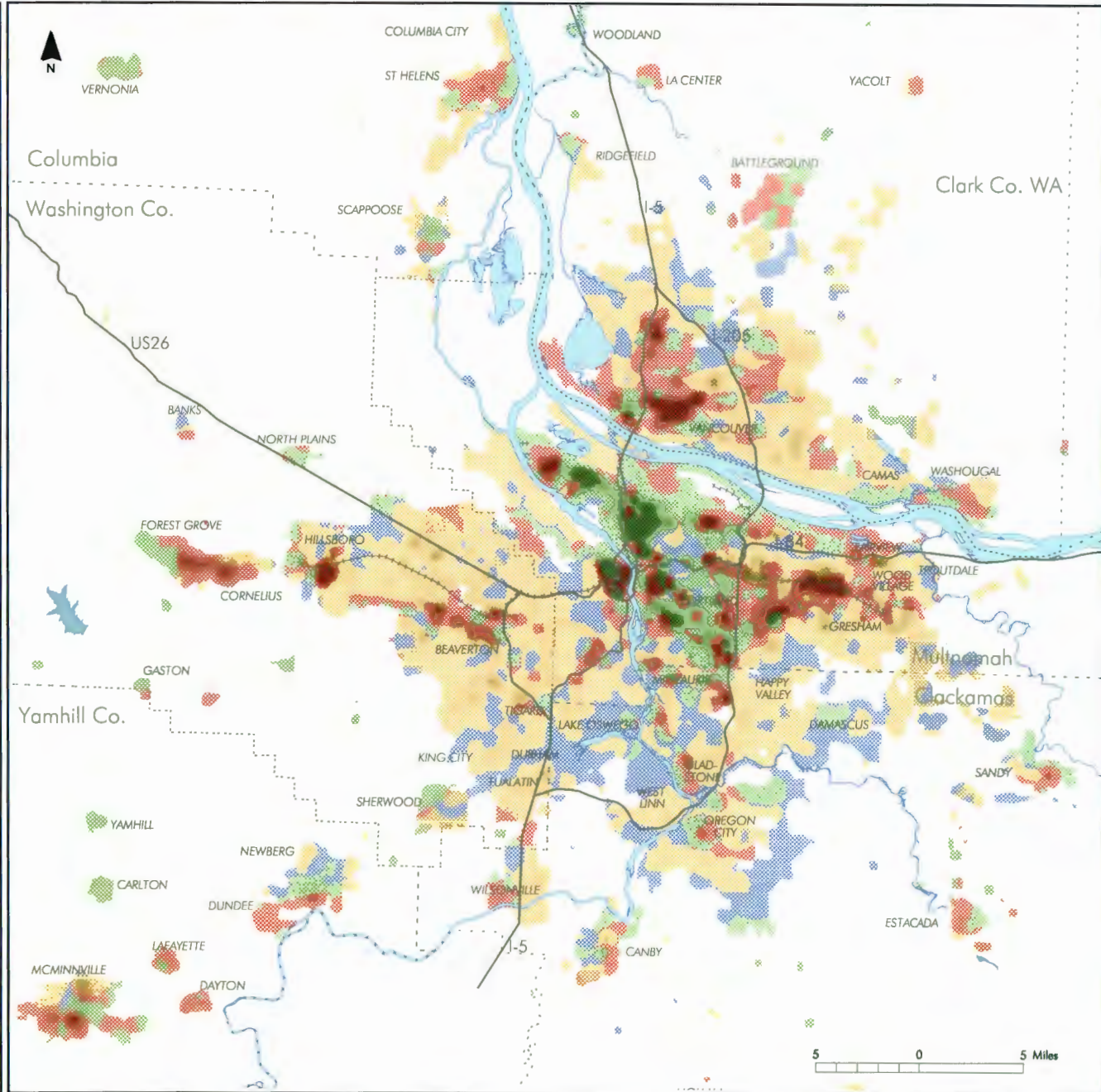
**Unincorporated,
<1 unit per 5ac...**

Change, total (%):

- Clackamas= -230 (-5.3%)
- Columbia=80 (6.5%)
- Clark= -90 (-3.5%)
- Multnomah=70 (14.8%)
- Washington= -870 (-37.1%)
- Yamhill= -510 (-27.6%)

*Percent poverty 1990 above or below avg., increase or decrease 1990-00 persons in poverty per acre. Variable based on U.S. Census Bureau STF3 1990 P117 & SF3 2000 P87. Density is average of 8 1-acre cell search radius on rasterized blockgroup data reapportioned by block-level population. Other: ESRI 2002, Metro DRC RIJS 2003, Oregon Geospatial.

Population Research Center
Portland State University, 2004



between those targeting equity or fairness for people across the region and those targeting equity for places within the region. Further, the HTAC was unable to identify implementation strategies that could meet the scale of the need identified in RAHS. This problem was exacerbated by the legislative bypass that limited some policy options that were viewed by many as having great potential. Advocates for places evaluate the fairness of policy proposals essentially on market criteria or the bottom-line performance of their municipalities. They argued that, absent new resources, they could not proceed. Advocates for people evaluate policy fairness in compensatory terms focused on individual households. They had no answer absent new resources or mandates from higher levels of governments that jurisdictions readjust their fiscal priorities to address the problem.

The RAHS discussion excludes advocacy targeting equity for people in place. The region's taste for consensus-style politics and relatively small and dispersed minority populations perhaps provided less of a basis for such an approach. However, it is interesting to note that since the release of the RAHS groups like Affordable Housing Now!, The Community Alliance for Tenants, the Washington County Affordable Housing Advocates and Vision Action Network, advocates have won dedicated funding commitments for affordable housing from the City of Portland and Washington County governments. While these moves fall well short of addressing the problem identified in RAHS, this community-based advocacy involving targeting equity for people in specific communities may play a larger role as the region's population continues to diversify, as was the case with the rapid growth in the Latino population of the region's suburbs through the 1990s.

So if there is no one definition of equity at play in the region, how can we build common understanding across these fundamentally different concepts of what is fair? As promised, we offer no easy answers or quick fixes but invite readers to speculate. What then does equity mean to you? This question is important in the area of housing in particular, as Metro anticipates reconvening a stakeholder group, like HTAC, sometime in 2005. To that end, we pose two ideas that Metro and others may wish to consider.

The RAHS documented costs of producing affordable housing. However, we don't have good information on benefits that might accrue to the region or individual jurisdictions from equitably distributed affordable housing; for example, in terms of lower transportation costs, in stimulating development of urban centers, and in lower rates of negative socioeconomic outcomes associated with concentrated poverty.

Additionally, while it runs against the conceptual grain of regional government, exploring approaches that focus on outcomes for individual households with respect to geography should be considered. Targeting people in place, evaluating fairness through compensatory notions as well as market and political participation for those households, may actually strengthen rather than undermine our regional planning by providing an additional basis of political support for regional policies.

So how has Metropolitan Portland defined and acted on issues of social and economic equity? While our objective was not to offer a definitive answer to that or any question, we hope to have engaged your thinking about the basis for what we see, at least from the example of the RAHS discussion, as the region's conflicted notions of equity. We clearly lack a common language for fairness, one where we may disagree on details, but at least agree on what we are.

In initiating the Regional Equity Atlas, the Coalition for a Livable Future has engaged in a long-term process that challenged its own members to define equity. When the Atlas is released later this year, we hope that it can be the catalyst for a similar discussion, advancing an understanding that we see as an important to the future prospects of the Portland region.

REFERENCES

- Davidoff, Paul (1982). Comment on Krumholz's "A Retrospective View of Equity Planning Cleveland 1969-1979." *Journal of the American Planning Association*. v48:2, 178(2).
- Fainstein, Susan and Ann Markusen (1993). *The Urban Social Policy Challenge: Integrating Across Social and Economic Policy*. North Carolina Law Review. 7:1463-1484.
- Harvey, David (1973). *Social Justice and the City*. Baltimore: Johns Hopkins Press.
- Kirp, David, John Dwyer and Larry Rosenthal (1997). *Our Town: Race, Housing and the Soul of Suburbia*. New Brunswick: Rutgers University Press.
- Krumholz, Norman and John Forester (1990). *Making Equity Planning Work: Leadership in the Public Sector*. Philadelphia: Temple University Press.

Marlin, Randal (1995). "Rawlsian Justice and Community Planning." In *A Reader in Planning Theory, Practice, Ethics and Education*. P141-153. Sue Hendler (Ed.) New Brunswick: CUPR.

Mier, Robert and Howard McGary (1993). "Social Justice in Public Policy." In *Social Justice and Local Development Policy*. p20-31. Robert Mier (Ed.) Newbury Park: Sage Publications.

Orfield, Myron (1997). *Metropolitics*. Washington: Brookings.

Orfield, Myron (2002). *American Metropolitics*. Washington: Brookings.

Pastor, Manuel, Peter Dreier, J Eugene Grigsby III and Marta Lopez-Garza (2000). *Regions That Work: How Cities and Suburbs Grow Together*. Minneapolis: University of Minnesota Press.

Planning in Portland (2004). <http://www.pdxplan.org/ClevelandPolicyPlanWeb.HTML> (accessed December 9, 2004).

Rawls, John (1999). *A Theory of Justice*. Revised Edition. Cambridge: Harvard University Press.

Rusk, David (1999). *Inside Game Outside Game: Winning Strategies for Saving Urban America*. Washington: Brookings.

Talen, Emily (1998). "Visualizing Fairness: Equity Maps for Planners." *Journal of The American Planning Association*. 64:1,22(17).

Winnick, Louis (1966). "Place Prosperity vs. People Prosperity: Welfare Considerations in the Geographical Distribution of Economic Activity." In *Essays in Urban Land Economics in Honor of the Sixty-fifth Birthday of Leo Grebler*. p273-286. Center for Real Estate Research (Ed.) Los Angeles: University of California.

Invest Now or Pay Later?

Eric Jessup, Assistant Professor, School of Economic Sciences, Washington State University
Project Director, Strategic Freight Transportation Analysis

AN INTERNATIONAL TRADE GATEWAY

The economic health and growth potential of the Portland metropolitan area is dependent upon the efficient operation and utilization of the multi-modal transportation system serving the region. The relationship between transportation access/efficiency and economic prosperity to the region is well known as an essential avenue for trade in regional and global markets.

The early settlers and business entrepreneurs of the region understood this concept well shortly after Meriwether Lewis and William Clark explored the river region in the early 1800s. The Hudson Bay Company, one of the earliest exporters



of the region, developed its regional headquarters at Fort Vancouver in 1825 to export furs and hides collected in the area to markets in Europe and beyond (Lang). The company chose to locate at Fort Vancouver, some 100 river miles from the Pacific Ocean, because the Columbia River provided quick and efficient access to international markets, serving a collection/assembly function for downriver exports and a distribution function for upriver import movements. The region grew and prospered as a result of abundant natural resources and the efficient access to the Pacific Ocean and world markets, as the Oregon Steam Navigation Company (1860-1883) provided steamboat transport for regional products throughout the lower and middle river region (Lang).

The importance of the river to the economic development of the region is unparalleled. Even after Union Pacific brought rail service to Portland and connected the region to the eastern United States in the early 1900s, the river continued to be the primary trade corridor. In fact, early city founders designed the city such that streets ran perpendicular and parallel to the river, regardless of north/south bearings, underlying the importance of access to river transport (City of Portland).

Today the Portland metro population exceeds 1.95 million people and is projected to reach 2.2 million by the year 2010 (Portland Development Commission, 2002). It is one of the top ocean freight ports on the west coast for both container and bulk cargo shipments and serves as an important freight distribution center for import/export trade. For bulk cargo, grain and forest products are principle exports, largely assembled from upriver supply points along the Snake/Columbia River system or shipped via rail from upper mid-western grain producing states and destined for markets in Asia and the Middle East. Containerized export shipments moving through this trade corridor include a variety of other agricultural and natural resource products (see Table 1) but are heavily concentrated in Hay/Animal Feed (43,709 containers), Frozen French Fries (6,304 containers) and Vegetables (2,298 containers) (Burnham, 2004).

To a large extent, the local and regional economy reflects this concentration, with total regional employment predominately concentrated in Trade (25%), Manufacturing (14%), and Transportation, Communication and Utilities (6%). Collectively,

Table 1. Agricultural Exports, Port of Portland, 2003

Product	TEUs
Hay/Animal Feed	43,709
Frozen Potatoes (French Fries)	6,304
Vegetables	2,298
Hides and Skins	2,011
Chilled or Frozen Meat	1,791
Grass Seed	1,730
Dried Peas, Beans, Lentils	1,347
Onions and Shallots	1,138
Hazelnuts	995
Sweet Corn	978
Potato Flakes	528
Other Potatoes	521

Source: Western Farmer-Stockman, September 2004

these account for 45% of the total regional employment (Oregon Labor Marketing Information System, 2002).

The employment and economic base of the region has historically benefited from the transportation infrastructure serving the region, especially the Columbia/Willamette River serving as the international trade corridor for many products that are produced, manufactured, and/or assembled throughout the Pacific Northwest. Complementing this river transportation system has been two Class I rail companies providing both north-south (Burlington Northern Sante Fe) and east-west (Union Pacific) service, in addition to several short line rail companies providing targeted, regional rail service. Combined with a growing air freight capacity and an extensive road and highway network consisting of interstates I-5 and I-84) and state and local highways supporting truck freight movements, the Portland/Metro region comprises a complete multi-modal transportation network.

Benefits of the Transportation/Distribution System

This multi-modal transportation system has brought about many economic benefits by increasing competition among transportation modes. While many interactions between truck-barge, truck-ocean vessel, and truck-rail are complementary in nature, for those regions and markets where they compete, shippers and area businesses benefit from competitive forces. Benefits of having competition in a marketplace are many, including lower shipping rates that begin to reflect the cost of operation, multiple shipping options, and enhanced service to shipping customers and incentives for innovation and technological change (for example, larger ocean vessels, more energy efficient power units for trucks/trains, increased cargo capacity for truck/rail). As a result of these service and efficiency gains, new and more distant markets may be reached, thereby increasing the demand for transportation services. In the absence of multi-modal competition, transportation service declines, shipping rates increase, and efficiency is diminished.

The local and regional economy has also benefited from the emergence and proliferation of warehousing/distribution centers providing transportation, logistics, and inventory services, largely resulting from the importance of Portland as a major international import/export gateway. The significance of this sector on the regional economy is substantial, as detailed in a recent report prepared by Martin Associates for the Port of Portland entitled, "The Economic Impacts of the Value Added Regional Distribution Industry In the Portland Area." This report quantifies the economic value that this particular industry contributes to the local economy in term of jobs, personal income, business revenue, local purchases, and state/local taxes collected. Martin Associates surveyed a total of 67 warehouse/distribution center operations in the Portland/Metropolitan area, incorporating a variety of commodity and product types (for example, apparel distribution centers, national grocery chains, local food/seafood distributors, paper products, beverage products, steel distributors, lumber/forest products, general commodities, and miscellaneous dry bulk distribution centers). Collectively, this industry generates 17,242 jobs in the region, 46 percent of which are directly related to distribution center employment activity and the remaining 54 percent being induced or created indirectly from businesses supporting this industry or purchases from directly employed labor. Total wages from these 17,242 jobs is estimated at \$810 million in personal earnings. The total revenue generated from this industry in the region is

estimated at \$2.8 billion, with over \$88 million in state and local tax receipts. These findings represent a sizeable component of the local and regional economy and further illuminate the importance of this international trade gateway to area businesses, both directly and indirectly (Martin Associates, 2003).

Improvement in freight mobility often leads to accelerated economic development/expansion opportunities during positive growth periods and strengthens economic productivity and performance during stagnate or recessionary periods. Targeting transportation infrastructure investments and policy improvements that help reduce freight travel time, congestion, frequency of accidents and that help improve reliability, accessibility, logistical efficiency, and total capacity lowers total freight transportation costs and improves service. By lowering costs while improving service, new markets evolve, stimulating economic activity. But improvements to total freight mobility cannot occur unitarily, one transportation mode at a time. In order to maximize the synergistic competitive/complementary relationships among modes, all modes must be strategically considered, especially inter-modal movements. This synergy will also increase regional economic productivity and competitiveness, especially related to port activities as they increasingly compete in the global marketplace. An efficient multi-modal transportation system that out-performs other international gateway cities will provide a regional competitive advantage. Achieving this goal requires a strategic plan and a concerted effort based upon access to accurate, timely, relevant data and investment prioritization that maximizes efficient utilization of limited resources. Once a plan is developed, the public must buy-in, a process that involves an educational and information exchange function where public-private benefits are enumerated, understood, and presented to voters, legislative bodies, lobbyist, and state policymakers in a clear, convincing manner. This process applies any time in history but is especially important given the current spate of challenging transportation issues confronting the region and state.

EMERGING FREIGHT MOBILITY ISSUES

Traffic Congestion

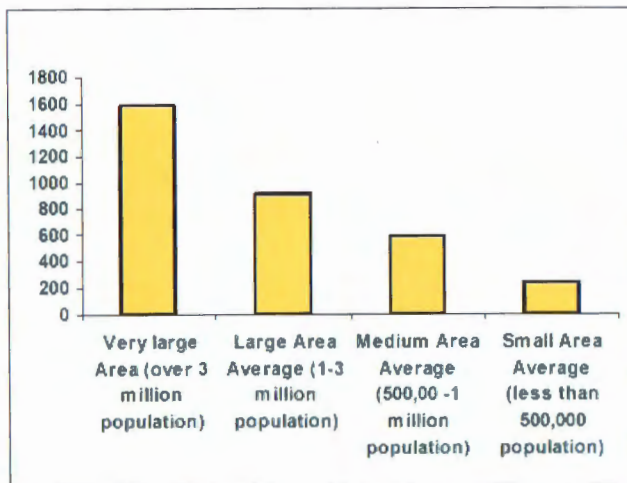
Among the certainties of death and higher taxes, one may need to add congestion! There is little doubt that the Portland/Metro region will continue to experience positive population growth, as it has over most of the city's existence (the city

population did decline slightly between 1970 and 1980) (Portland Development Commission, 2002). The estimated rate of growth varies from year to year but is generally expected to increase between 1.5 and 2.5 percent per year on average over the next twenty years. The average annual population growth between 1986 and 1999 for the region was 2.2 percent (Portland Development Commission, 2002). As population grows, so do the demands placed upon the already strained transportation infrastructure as it seeks to accommodate the increased volume of traffic from passenger and freight transportation. In addition to projected increases in passenger travel competing for highway capacity in the region, projected economic growth in the region is expected to drive the demand for freight transportation double over the next twenty years. It is interesting to note that population growth and overall economic activity generally are directly linked to the demand for freight traffic. In reality, this relationship doesn't always apply. Between 1990 and 2000, the national population grew by only 9 percent while employment in manufacturing declined and total employment (driven mostly by the service sector) increased. During this period, freight ton miles increased by 19% and the value of manufacturing shipments increased by 38 percent, suggesting much stronger demand for freight transportation than would have been expected from evaluating population growth and overall economic activity (Martland, Reebie Associates, 2004).

The additional costs associated with increased traffic congestion are numerous for freight transportation. Travel times increase, as do labor cost and operating cost in the form of lower fuel efficiency, greater fuel consumption, and greater wear and tear on equipment. Increased congestion also leads to greater frequency of accidents, leading to higher insurance premiums for motor carriers and transportation shipping firms. A recent study by the Texas Transportation Institute estimated the average cost of congestion per driver to be between \$200 dollars per driver for small cities (below 500,000) and \$1,590 per driver for cities with a population over 3 million (Figure 1) (Martland, Reebie Associates, 2004). Given current population growth rates, the Portland/Metro region will exceed 3 million people by 2025.

Added traffic congestion also pose implications from the state, including increased pavement rehabilitation at earlier intervals, bridge and overpass replacement and improvements, and greater frequency of automobile accidents. And most pavement decay functions do not decline linearly with additional weight and use, but rather decline at an increasing rate as usage increases, leading to rehabilitation cost functions that increase at an increasing rate.

Figure 1. Average Cost of Congestion per Driver



Source: Texas Transportation Institute

It is not feasible to assume that truck freight and the regional road and highway networks will be able to accommodate the projected increase in demand for freight transportation without substantial infrastructure investment. More than 50 million tons of annual truck cargo currently moves out of Oregon on I-5 and I-84 to destinations throughout the country (Figure 2) (United States Department of Transportation). A large component of this freight truck traffic arrives at the Port of Portland from international markets, is moved to warehouse/distribution centers throughout the region, and is then shipped to every corner of the United States, further illustrating the city's importance as an international trade gateway.

Motor Carrier Changes

Complicating this matter on a national level are the recent changes to the federal guidelines controlling truck drivers' hours of service. Under the new rules, truck drivers and operators may drive 11 hours after 10 hours of being off-duty but cannot exceed 14 hours of driving after the same 10 hour break. The net effect is roughly a reduction of one hour of productive time per driver. The change also stipulates that the drivers must be off-duty for 10 consecutive hours, not counting breaks for meals, waiting for loads, or fuel stops (Schulz, 2003). The change is expected to reduce the number of fatigue related accidents by a hefty margin

which may help reduce insurance premiums for trucking firms. Overall, the change is expected to increase their cost of operation. To compensate for lower hours of operation and productivity per driver, trucking firms will need additional drivers and equipment.

Truck Driver Shortages

The shortage of truck drivers is growing, exacerbating the problems of increasing traffic congestion and federal guidelines limiting hours of service for motor carriers. In recent years, truck driver shortages have been less pronounced, occurring primarily during seasonal peak demand periods for freight movement during the holidays or concentrated in specific regional markets. However, driver shortages are increasingly becoming a dominant national issue that is difficult during non-seasonal peaks and fierce during seasonal peaks (Hogan, 2004). This situation has led to a difficult combination of sustained demand for freight shipments due to a recovering domestic economy and declining value of the dollar making U.S. products more affordable to international markets, with a declining supply of truck drivers who are willing to deal with the difficult working conditions and relative low pay.

Oddly enough, in a period of growing demand for freight transportation services, trucking and transportation logistics firms have taken a major financial hit, resulting in a flurry of trucking firms going out of business in the past year. This phenomenon is occurring both nationally and regionally, chiefly due to the increasing cost of doing business for trucking companies. These costs include extremely high insurance premiums, labor shortages and increasing labor cost to attract and retain drivers, extremely high fuel prices, increasing fuel taxes, increased highway user fees (tolls), and high cost of replacing equipment. Added to these are increasing highway congestion and reduced hours of service for truck drivers.

State Rail System Approaching Capacity Constraint

The projected doubling of total freight traffic over the next twenty years likewise has serious implications for the regional freight rail system, given the assumption that the region's highway system cannot adequately absorb this growth alone. This regional rail system, consistent with national trends, has experienced significant

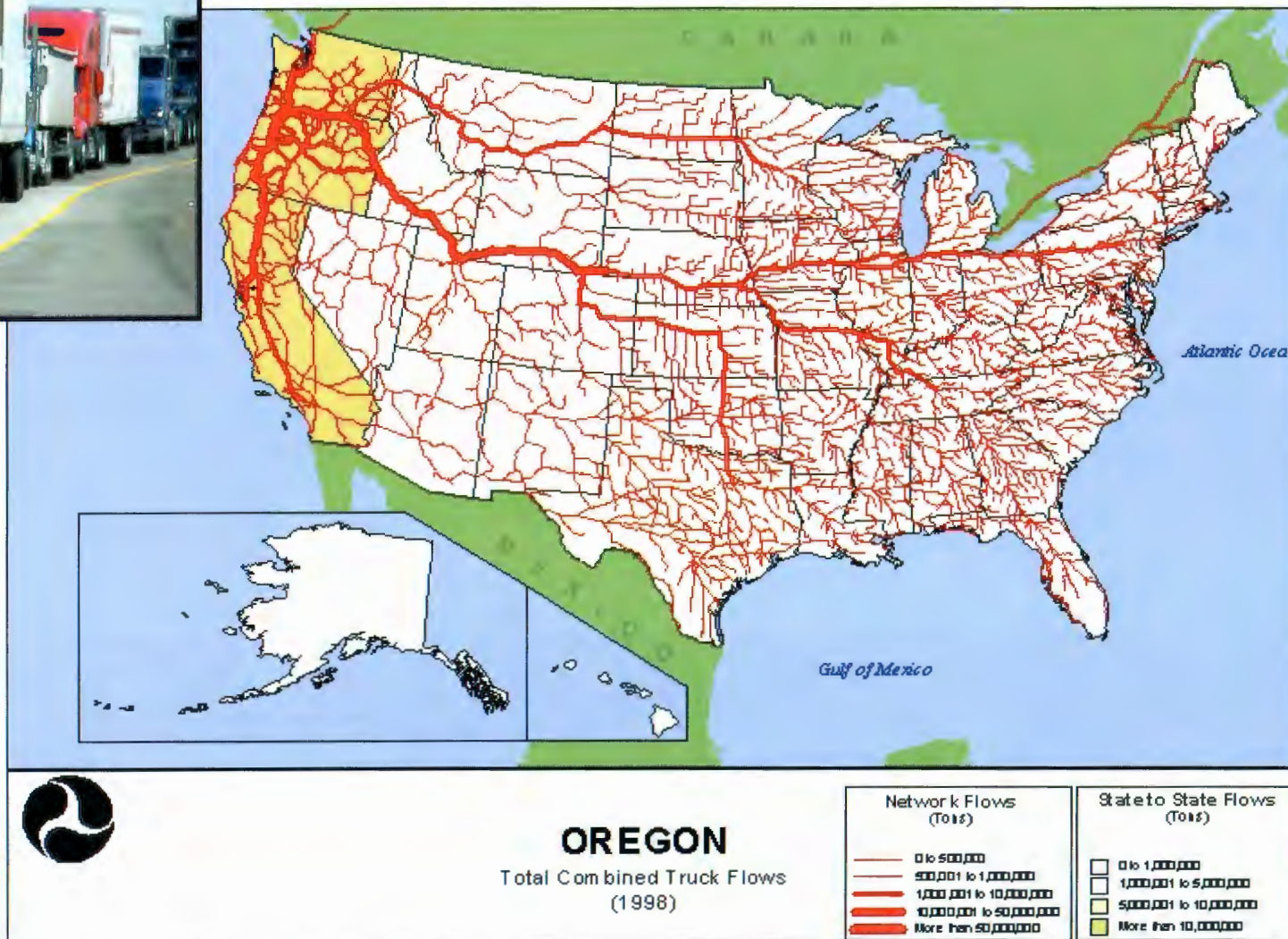


Figure 2: Total Truck Flows From Oregon, Domestic and International, 1998

Source: U.S. Department of Transportation, Federal Highway Administration, Office of Freight Management and Operations, Operations Core Business Unit

changes over the last twenty years following deregulation of the rail industry in 1980. While many of these changes have streamlined rail operations for Class I carriers, leading to improved service, lower rates, and improved productivity, overall rail capacity has diminished. In order to achieve these efficiency gains on targeted, high-volume rail corridors, many miles of low volume rail lines have been abandoned or sold off to short-line operators who have greater operational flexibility. Additionally, given the capital intensive nature of this industry, many low volume rail lines fail to generate enough revenue to adequately recoup the fixed cost of rail infrastructure replacement, leading to a "cost-minimization" approach to operations management and declining rail line conditions over time (Cambridge Systematics, 2004). However, a recent study by Cambridge Systematics, Inc. for the Port of Portland entitled "Freight Rail and the Oregon Economy" revealed that while the state's rail system is productive, stable, and competitive, needed infrastructure improvements may limit future volume growth and rail capacity. This study provides an in-depth evaluation of the state's freight rail system, including freight rail use by industry and rail capacity/constraint issues by specific rail corridor.

Of the five freight rail corridors that currently experience or that likely will experience capacity constraints in the near future, the Portland Triangle, consisting of the interchange between the north-south and east-west corridors in the center of Portland, represents the most pressing congestion and capacity problem. Those industries that rely most heavily on freight rail service in Oregon are lumber, the wood and paper products industry, the transportation equipment industry, the wholesale trade industry, and the Port of Portland's marine terminal business (Cambridge Systematics, 2004). The reliance of these key components of the economy on an overburdened transportation infrastructure does not bode well for the region's competitiveness as freight traffic doubles.

Columbia River Channel Depth/ Deferred Snake River Dredging Constrain Vessel Size

The river system, including both barge and ocean vessels, also moves a significant volume of freight traffic. When compared to truck as a proportion of total freight tonnage shipped in the Portland/Vancouver area, barge and ocean shipments are considerably less, accounting for 5.4 and 9.7 percent respectively (Table 2). Rail accounts for 12.7 percent of inbound shipments but for a very low percentage of outbound shipments, illustrating that most inbound rail volume is being exported abroad. It is interesting to observe that ocean freight in the Portland/Vancouver region is heavily weight toward outbound movements (18.2 percent) relative to inbound shipments (7 percent). This pattern is due to the smaller import market relative to outbound export movements through the Port of Portland. These estimates were part of the recent Commodity Flow Forecast and Lower Columbian River Cargo Forecast, which also projects a doubling of freight traffic over the next twenty years. This study additionally forecasts how that additional freight volume would be shipped and the proportion allocated to each mode (Table 2). The values in red represent the percentage of additional or new freight volume growth shipped by each mode. Clearly, truck volume is expected to accommodate the majority of increased freight traffic, accounting for 81 percent of additional freight tonnage in the Portland area (DRI-WEFA, 2002).

Many factors may affect down river barge movements and ocean exports, including river dredging to maintain adequate channel depth for barge loading at upriver Snake/Columbia port terminals and possible river draw-downs aimed at improving native salmon survival rates. Given the large volume of grain (wheat and barley), hay (Timothy and Alfalfa) and forest products that utilize barge service for outbound transport along the Snake/Columbia River, major modal shifts would occur in the event that the river or parts of the river became non-navigable. If the river became non-navigable, the movement patterns of tonnage of freight through the Port of Portland also would change.

Loss of Container Service at the Port of Portland

Perhaps the most significant issue impacting regional trade and those businesses that rely upon trade (warehousing/distribution centers, transportation/logistics

Table 2: Percentage of Total Tons Shipped By Mode in the Portland/Vancouver Area, 1997

Mode	Percent of Movements				
	Internal	Outbound	Inbound	Total	Forecasted 2030%
Truck	61.2	57.3	48	63.9	81
Rail	0.2	1.7	12.7	5.6	8
Intermodal	0	5.6	6.1	4.5	5
Barge	1.6	4.7	7.8	5.4	1
Ocean	0	18.2	7	9.7	4
Air	0	0.2	0.2	0.1	0
Pipeline	0.1	0	28.1	10.8	1
Total	63.1	87.7	110	100	100

Source: Commodity Flow Forecast Update and Lower Columbia River Cargo Forecast, June 2002

firms) is the recent loss of two shipping lines providing service at the Port of Portland. “K” Line and Hyundai Merchant Marine no longer call at the Port of Portland, representing a significant loss in containerized cargo service for area agriculture shippers that relied upon accessing markets in Japan. In addition to lost revenue for the Port of Portland, area agriculture producers are seeking alternative shipping routes in order to get their products to market. For most, finding new routes means increased transportation costs as cargo previously passing through the Port of Portland now is shipped via truck or rail to the Ports of Tacoma or Seattle. This loss of ocean container service represents about one third of the total cargo tonnage leaving the Port of Portland. The Port of Portland is confident that replacement service will be found, but the difficulty of attracting other shipping lines increases with the passing of time as shippers develop alternative shipping options and secure contracts. The Port of Portland has recently reported that the one remaining shipping line, “Hanjin Shipping,” will increase service at the port, helping alleviate some export capacity concerns (Hedaa, 2004).

Challenges that have hindered the Port of Portland’s competitiveness in the past include the time and cost of negotiating the 100 river miles to reach the port and the 40 ft. Lower Columbia River channel limitation that prevents larger vessels from accessing the port. Plans have been underway for some time to deepen the channel to 43 ft., which should increase ship capacity by roughly 800 TEU per ship and contribute to lower cost per unit for shippers. But several hurdles remain on the river deepening project, including available funding allocated from the Corps of Engineers 2005 budget. In light of the severe congestion and bottlenecks occurring at other west coast ports, primarily those in Southern California, the Port of Portland may appear a smart alternative. However, the Ports at Long Beach and Los Angeles are so congested because of the size of the import market there: 23 million people live in the L.A. region as compared to barely 2 million in the Portland area.

OPPORTUNITIES FOR IMPROVED FREIGHT MOBILITY

If future economic growth and prosperity are expected to follow from historical precedent, and if success depends largely on how effective the area serves as an international trade gateway for export/import markets, assembling an efficient multi-modal transportation system will provide a reality check for the region. As previously mentioned, several forces collectively point to difficult decisions ahead related to essential transportation investment improvements. The region’s highway and road network is currently experiencing traffic congestion at certain periods throughout the day that impedes freight mobility and system efficiency and that contributes to bottlenecks/chokepoints on key truck freight corridors. Thus, the current highway system network is operating at or near capacity, certainly for specific time intervals, and along specific highway segments. The ability of truck transportation to accommodate future freight growth will therefore require physical capacity expansion through additional infrastructure or improvements in system performance, possibility from the FHWA’s concept of operations approach. Likewise, the regional rail industry, while currently providing stable and reliable freight service, is increasingly burdened and vulnerable to capacity constraints given the historically low public investment in rail infrastructure and the difficulty of many rail lines to generate adequate revenue for infrastructure maintenance and replacement. Finally, waterborne freight movements (both ocean and river vessels) are facing physical capacity constraints due to the river channel depth restrictions

that limit vessel size or load capacity. Addressing any one of these investment needs will be difficult, especially given projected growth in freight traffic and limited resources and state budgets.

Several different agencies and private organizations throughout the region have been heavily involved in data and information collection and analysis, especially as it relates to freight movements. This positive move to improve freight mobility aims at increasing the overall understanding and awareness of the regional freight transportation system while addressing current operational or capacity limitations and targeting strategic transportation investments to address overall system needs. Multi-modal transportation investment projects may also be more effectively prioritized and completed.

The Oregon Department of Transportation funded a recent, successful multi-agency data collection effort that was supported by both the Port of Portland and METRO Regional Planning. This Truck Trip Data Collection Methods Study conducted by Eric Jessup, Ken Casavant, and Catherine Lawson addresses the growing need for necessary data on urban or inter-city freight movements and focuses on testing different data collection/capture methodologies and the extent to which those freight data attributes necessary for both modeling and statewide planning efforts are achieved. Understanding transportation details such as origin-destination, route identification, land-use at stops, commodity, weight, vehicle configuration, time of day, volume of shipments, and location of trip generators is necessary for statewide and metropolitan freight modeling and planning needs. This pilot study was designed and implemented in the Portland-Vancouver metropolitan area, testing roadside intercept surveys at three different locations including one weigh station along I-84, a private freight warehouse/distribution center, and at the Port of Portland's marine terminal six. The results and findings of this study have helped shape the larger regional freight data collection study that the Port and ODOT are currently supporting.

The Columbia River Channel Deepening project also represents a collective effort by different agencies, states, and private organizations. This transportation investment project is one of the larger in the region, estimated at \$150.5 million. Both Washington and Oregon have allocated \$27.7 million in matching funds, with a large portion of the project cost dependent on federal appropriations including the U.S. Army Corps of Engineers' 2005 budget allocation. Several agencies and organizations are supporting the project due to the importance of this freight corridor to international trade and regional economic performance. The Ports of

Portland, St. Helens, Vancouver, and Woodland, along with many business stakeholders, have formed a coalition to support the river channel deepening project. The Ports of Portland and Vancouver have further formalized their commitment to working together to address these types of emerging freight transportation issues by forming an Inter-Governmental Agreement (IGA).

The State of Oregon through its legislature has also recently supported addressing freight mobility concerns by designating \$100 million in new funding for freight related transportation improvement projects. This funding is primarily targeted to improve access to existing industrial areas and to improve job growth by attracting new businesses. These freight mobility improvement projects, as recommended by the Oregon Freight Advisory Committee, are evaluated based upon how well they improve safe and efficient movement of goods, foster public and private partnerships and investments, and support multi-modal transportation movements. These efforts, along with the creation of the Governor's Industrial Lands Task Force, help focus attention and resources on improving regional freight mobility.

Finally, we cannot understate the importance of education and information exchange to area business owners, local residents, and policymakers regarding the important connections among local business and regional economic performance, trade, state revenues, and transportation infrastructure investments. Made today, these investments will reap rewards and positive multiplier effects throughout the economy for years to come and will also foster, facilitate, and accommodate future freight transportation and economic growth throughout the region. Sustaining these investments in difficult economic times requires understanding their private/public benefits and suggests the need for future partnerships among private entities and public agencies.

REFERENCES

- Burnham, T.J. "Port Sprints to Fill Hyundai Gap" Cover Story Article, *Western Farmer-Stockman*, September 2004. Pages 10-11.
- Cambridge Systematics, Inc. "Freight Rail and the Oregon Economy: A Background Paper". Final Report to the Port of Portland. March 2004.
- City of Portland, Office of Transportation, Transportation History, <http://www.trans.ci.portland.or.us/about/History/default.htm>

DRI-WEFA, A Global Insight Company. "Commodity Flow Forecast Update and Lower Columbia River Cargo Forecast." Final Report for Port of Portland, METRO, ODOT, Port of Vancouver and Regional Transportation Council. ODOT PCMS NO. 21778. June 2002.

Hedaa, Eric. "Hanjin Shipping, Port of Portland Announce New Service to Keep Exports to Japan Flowing." Port of Portland News Release. October 21, 2004.

Hogan, John. "The Trucker Blues." Article appearing in the Grand Rapids Press. November 7, 2004.

Lang, Bill. Columbia River Article, <http://www.ccrh.org/river/history.htm>, Center for Columbia River History

Martin Associates. "The Economic Impacts of the Value Added Regional Distribution Industry in the Portland Area." Final Report for the Port of Portland. October 2003.

Martland, Carl, and Reebie Associates. "Rail Freight Solutions to Roadway Congestion." NCHRP Project 8-42. Interim Report on Transportation Trends, Road-to-Rail Diversion and Model Elements for Decision-Making Task 3-4-5-6 Report. April 2004.

Oregon Labor Market Information System, September 2002 Data.
<http://www.olmis.org/pubs/llt/htm/09-02/pdx/0902-pdx.html>

Portland Development Commission 2002 Factbook.
http://www.portlanddev.org/pdf/pubs/ecdev/ec_fact_book_pop.pdf

Schulz, John D. "Timing is Everthing." Cover Story Article, *Traffic World*, November 2003.

United States Department of Transportation, Federal Highway Administration, Freight Management and Operations, Oregon Freight Flow Maps. http://www.ops.fhwa.dot.gov/freight/freight_analysis/state_info/oregon/truckflow_or.htm

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- Identifying the most pressing issues facing this metropolitan area and its communities, and developing the data and other information needed to fully communicate their scope and significance;
- Building capacity in the region to address critical metropolitan issues by:
 - brokering partnerships among faculty, students, and area communities to foster new understanding of and/or new strategies for addressing those issues; and
 - acting as a catalyst to bring elected officials, civic and business leaders together in a neutral and independent forum to discuss critical metropolitan issues and options for addressing them; and
- Developing new resources to support research and service activities needed to meet those objectives.

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- University to help advance the economic, environmental, and social goals held by the communities of the region; and
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