



Deconstructing Jobs-Housing Balance

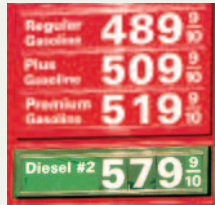
CALIFORNIA PLANNING ROUNDTABLE
cproundtable.org
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Since this paper was prepared,

the skyrocketing price of oil has encouraged—or forced—changes

in Americans' travel behavior. Daily transit ridership and bicycle usage have increased, while households that are in the process of relocating report that they are giving greater weight to commute distance in considering their housing choices.

The substantial rise in the cost of gas, by prompting people to reduce their driving, should have an immediate influence in reducing auto congestion and a long-term influence on both urban development patterns and future transit options. While an increase in the price of oil is not discussed explicitly in the paper, the oil price changes of just the first half of this year demonstrate the sensitivity of travel behavior to the cost of auto fuel and to households' decision-making about where to live and work. In this paper, we advocate multiple strategies to help reduce congestion and vehicle miles traveled. The new economic reality—oil cost at \$100+ per barrel and rising—complements those strategies by providing an independent economic stimulus to change travel behavior. Planners and public agencies face the challenge of rethinking the historic relationship between job location and housing location and retooling the urban system in response. We on the California Planning Roundtable feel that the current oil price crisis, on top of the long-term congestion problem, offers real opportunities for significant change.



Dear Reader,

The California Planning Roundtable (CPR) is pleased to present this report on balancing jobs and housing in California communities. The report is intended for a general readership, including urban and environmental planners, policymakers, the public, and the press. The report should be particularly useful for communities and regions in which new residential or employment-generating development is proposed.

Deconstructing Jobs-Housing Balance first looks at common practice in the planning profession in using “jobs-housing balance” as a planning concept. The paper then discusses the effectiveness of jobs-housing balance as a planning objective: whether targeting “balance” is a realistic measure to reduce commute trips and overall vehicle miles traveled (VMT), and whether attainment of balance would mean that communities would be less auto dependent and more livable.

Rising fuel costs and global climate change have heightened concerns about VMT in general and the length of commute trips in particular. In this context, the appropriateness of jobs-housing balance as a planning objective to reduce VMT and work trips takes on increased importance. The report argues that a jobs-housing ratio is better used as an indicator than as a specific quantitative objective. The report then proposes a broader strategy: a set of mutually-supportive options that can be more effective in achieving reductions in VMT and work trips than attempting to balance jobs and housing on a community-by-community basis.

The report was prepared by a CPR Task Force composed of Stan Hoffman, Roberta Mundie, Wayne Goldberg, Marvin Roos, David Early, and Susan DeSantis. CPR greatly appreciates peer reviews of drafts that were provided by CPR members and Professors Donald Shoup and Randall Crane, UCLA Department of Urban Planning. However, CPR is solely responsible for the final contents of the report.

If you find this report valuable, I encourage you to learn more about other CPR activities. CPR is an organization of experienced planning professionals who are members of the American Planning Association (APA). CPR provides a forum for prominent planners to exercise creativity and leadership in promoting understanding of California's critical public policy issues and recommending action.

CPR periodically chooses timely and significant California planning issues for study (such as jobs-housing balance) and publishes the results in widely distributed papers or articles. CPR also organizes and presents panels for California Chapter APA annual conferences and provides policy input to the Chapter's legislative review program.

Please visit www.cprroundtable.org for more information about CPR and its activities as well as an electronic version of this report. For further information about the report, please contact team leader Stan Hoffman, Stanley R. Hoffman Associates, Los Angeles, CA, at 310-820-2680 or stan@stanleyrhoffman.com.

Al Herson, President, California Planning Roundtable



“Three hundred dollars’ of regular.”

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Defining what constitutes a balance between jobs and housing is not an easy task. Assuming a simple ratio of one job to one household is inappropriate to modern economies that have many households with more than one person in the workforce...

California Planning Roundtable, 1988

ABSTRACT

The published material on jobs-housing balance to date has focused on scholarly analysis. What has been missing, in our opinion, is a summary for the practitioner that outlines both the objectives to be achieved and the strengths and shortcomings of the various methods that have been analyzed. Practitioners need to be able to advise their public officials and the public as to what a “balance” can be expected to achieve and whether it would be worth the pursuit. Most planning departments have neither the level of data required to apply many of the analytical techniques nor the expertise on staff to apply the models if the data exist. A tool for local planners that is not suitable for hands-on understanding, application, and communication is unlikely to be useful, and if the output is not readily translatable into programs that have a high likelihood of success, then it will not justify the use of discretionary local planning budgets. In this paper, we have tried to simplify the explanations of the various approaches and show the pitfalls of the methodologies. We also highlight the fallacy of assuming that a hypothetical match of the number of jobs and housing or employed residents will, by itself, meet the desired objectives. The conclusion of this paper is that working toward jobs-housing balance may be a desirable element of a strategy to reduce peak period congestion, but it is only one of a number of transportation and land use policies and strategies that must be pursued.



Enabling Congestion: Can We Break the Habit?

In his 1992 study, *Stuck in Traffic*, Anthony Downs looked at the causes of worsening traffic congestion and considered the possible remedies, analyzing the specific advantages and disadvantages of every major strategy that had been proposed to reduce congestion. To alleviate the congestion problem, both government officials and citizens must be prepared to make fundamental changes, in both travel behavior and public policies. At that time, Downs concluded that neither group seemed willing to make those changes. This California Planning Roundtable paper asks, “Is now the time that fundamental change can happen?”

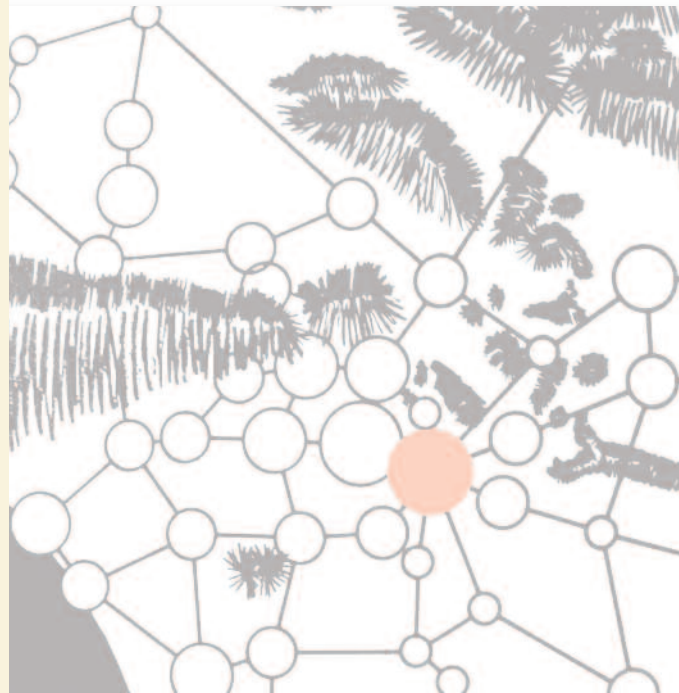


Evolution of the CPR Jobs/Housing/Transportation Project

CPR began this project in 2003 with the intent of making a unique contribution on an emerging issue. At the time the project started to take shape, CPR's membership included *for the first time* state and regional agency staff and consultants who were currently engaged with addressing jobs-housing balance issues. It was thought that CPR could capitalize on the efforts of its members in the field to prepare a paper that crystallized the issues and offered insights to government officials at the state, regional and local levels involved with policy making, grant funding, and program implementation.

As work proceeded on the CPR Project, it became apparent that real world events in the public policy arena would eclipse and take precedence over CPR's project as initially envisioned. Government at all levels, interest groups, individuals, and funding programs have all grappled with one or more of the factors that contribute to the complexity of home/work (and home/other) travel patterns. "Jobs-housing balance" has been the subject of a range of analyses and policy prescriptions in response to the knot of issues implicit in the term, and some of these inquiries and approaches have contributed to a better understanding of why our current situation is as it is and what an improvement might require. The paper argues for keeping the broader picture in mind while seeking incremental – but tangible – results through targeted, locally relevant integrated planning and transportation programs at the local, regional and state levels.

Like a perennial best-seller, jobs-housing balance has held a place on the collective agendas of planners and decisionmakers for the past three decades. Members of the California Planning Roundtable, like planners in general and many other people in local government, have been engaged in the evaluation of how our cities' transportation and land use systems interact. Our observations, as well as academic research and the in-progress experience of demonstration programs, put planners in a better position today than we were in 1980 or 1990 or even 2000 to provide understanding and guidance on jobs-housing strategies to decisionmakers and citizens.



Concept: Los Angeles, Department of City Planning, Los Angeles, CA 1970

This paper is not a technical analysis, but a commentary on thinking about jobs-housing balance that recognizes the work of sophisticated analysts on the one hand and the practicing planner's data and resource limits on the other. Part of its purpose is to "deconstruct" the jobs-housing balance concept: to decode and define it to allow a better understanding of what it measures and whether it can be applied as a useful policy tool for land use decisionmaking. The paper:

- Describes the benefits often attributed to jobs-housing balance.
- Presents an overview of how typical jobs-housing ratios are constructed.
- Discusses sources of "friction" that prevent attainment of jobs-housing parity at the jurisdictional level.
- Recommends a combination of more sharply focused strategies to attain the goals put forward by jobs-housing balance advocates.

The paper also draws upon both research and observation to review the experience of the concept and its application to date, considering why the attainment of balance has proven elusive and what that implies for our understanding of urban systems. We argue that a jobs-housing ratio is better used as indicator than as an objective—particularly as a specific quantitative objective—and our recommendations have taken shape as a broadly based set of strategies that collectively move us in the direction of better land use-transportation integration.

Jobs-Housing Balance: The Case and The Question

Jobs-housing parity can sound like a commuter's nirvana: traffic congestion and the burden it imposes on individuals, families, and businesses vanish. That burden is real and heavy, particularly in California. Researchers from the Texas Transportation Institute¹ recently ranked four California metropolitan areas among the nation's 10 most congested areas in terms of time lost per year: Los Angeles/Long Beach/ Santa Ana (1), San Francisco/Oakland (2), San Diego (6), and San Jose (tied for 8th), with sizable percentage increases since 1982, according to the Institute's study. The same report observes that about two weeks of time per year per worker is lost to congestion in southern California—a figure that the Southern California Association of Governments (SCAG) considers a sizable underestimate.²

For southern California, average commute time in 2006 was 28.4 minutes, compared with 26.8 minutes for the state and 25 minutes for the nation. Travel during peak periods takes more time than during free flow conditions, a difference that is expressed by a travel time index. SCAG reports a peak hour travel time index of 1.5 in the Los Angeles/Orange County area: the nation's highest.³ (The San Francisco Bay Area ranks second with a peak hour travel time index of 1.4.) SCAG estimates that for the southern California region about \$10.5 billion in additional costs are incurred by commuters due to the time delays created by congestion.⁴

Nationwide, as the commute burden persists, the task often falls to planners to find the remedy for congestion. The remedy proposed by jobs-housing balance

advocates is attaining parity between the number of jobs and the number of resident workers: an achievement they contend would not only reduce congestion but also provide numerous other benefits.⁵

Benefits Typically Attributed to Jobs-Housing Balance

- Reduced driving and congestion
- Fewer air pollution emissions
- Lower costs to businesses and commuters
- Lower public expenditures on facilities and services
- Greater family stability
- Higher quality of life

SCAG, *The New Economy and Jobs-Housing Balance in Southern California*, April 2001, pp. 19-20.



It is traffic congestion, more than any other single factor, that fuels interest in jobs-housing balance. Some of the jobs-housing analysis suggests that improvements in the “match” between housing and jobs in local areas could reduce auto usage. According to Robert Cervero and Michael Duncan, “Notwithstanding the many obstacles to jobs-housing balance, there is little ambiguity in our findings: Linking jobs and housing holds significant potential to reduce VMT (vehicle miles traveled) and VHT (vehicle hours traveled).”⁶ All other things being equal, Cervero and Duncan found that every 10% increase in the number of jobs in the same occupational category within four miles of one's residence is associated with a 3.29% decrease in daily work-hour VMT.

Cervero's and Duncan's work is complemented by that of Stone, *et al.*,⁷ which concludes, based on analysis of simulated future growth patterns in metropolitan areas across the United States, that increased compactness of development results in a reduction in vehicle travel of a larger magnitude than has been estimated in previous studies. They found that a 10% increase in population density is associated with a 3.5% reduction in household vehicle travel and emissions.⁸ Additionally, they found that density increases in urban areas were more than twice as effective in reducing vehicle miles traveled as density increases within suburban zones. The future compact growth scenarios analyzed in their study were based on information from the Portland region on the shares of regional population growth captured by census tracts between 1980 and 2000.



The U.S. Environmental Protection Agency has conducted parallel work on jobs-housing balance for the construction of a smart growth evaluation tool, the *Smart Growth Index 2.0*. This tool creates a ratio of employment to population, called “diversity,” that translates the potential impact of changing the jobs-housing balance in a jurisdiction or region into reductions of both total vehicle trips and VMT. The EPA study found that a doubling of the diversity indicator would result in a five percent reduction in VMT and a six percent reduction in vehicle trips for people living and working in the neighborhood measured. However, their report cautions: “As a sketch tool, *Smart Growth Index 2.0* simulates land use/transportation scenarios in a simplified manner, and should not be solely relied upon for evaluating major investments or documenting regulatory compliance.”

These complementary analyses suggest that, given certain assumptions, success in jobs-housing “matching” would yield the following benefits:

■ **Reduced car travel**

People who live and work in the same jurisdiction would be more likely to take transit, walk, or bicycle to work than residents of less balanced communities and their vehicle trips would be shorter. Benefits would include potential reductions in both vehicle miles traveled and vehicle hours traveled.

■ **Expanded housing choice**

Some researchers agree that a balance of jobs and housing, within a reasonably defined area, is necessary to give people the choice to live close to their workplaces.

■ **Enhanced economic and social vitality**

One outcome of adjustments to land use mix and location patterns that locate residents closer to uses to which they regularly travel would be greater land use heterogeneity within smaller spatial areas. Advocates of “smart growth” strategies argue that concentrating a mix of land uses in a comparatively small area—accommodating increased walking, bicycling, and transit usage—contributes to cities’ economic and social vitality.

These are worthy objectives, but how realistic? Model-based studies can overstate the prospects for improvement if they project the future based on simulation of land use patterns and travel behavior that omit much of the complexity of today’s actual conditions; the support they provide to planners may, therefore, be more visionary than practical.

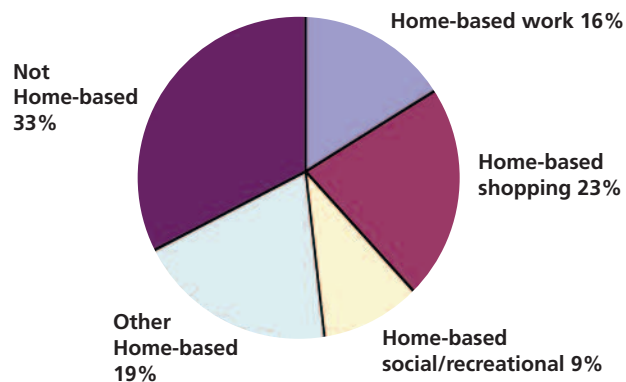
This paper recognizes the objectives sought by jobs-housing balance advocates, but focuses on practice. We argue in this paper that the benefits ascribed to balance can be addressed more directly through a broad strategy of land use and transportation policy choices than through prioritizing the attainment of a particular jobs-housing ratio.

The Role of the Home-Based Work Trip in Jobs-Housing Balance

When observers point to peak hour congestion as the critical dysfunction of today's land use and transportation patterns, the finger is pointed at home-based work trips. The work trip represents a relatively small proportion of the total trips and VMT: the 2001 National Household Travel Survey reported that home-based work trips constitute only about 16 percent of the total trips (Exhibit 1) and, when measured in vehicle miles traveled (VMT), home-based work trips represent just slightly more at 20 percent of total VMT (Exhibit 2). Nevertheless, it is the work trip—producing more traffic than the system can handle at key transportation nodes during peak hours—that is the main cause of the congestion problem.

Exhibit One

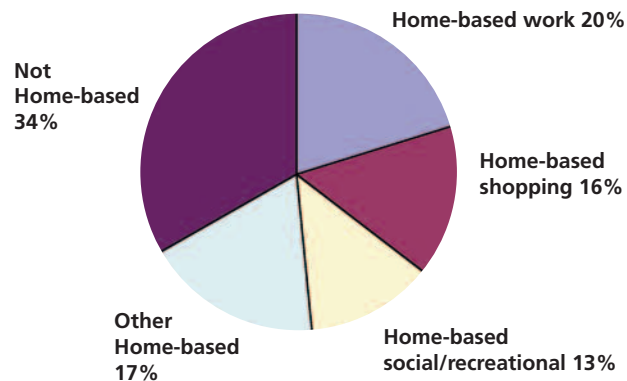
Annual Trips by Trip Purpose, 2001



Source: National Household Travel Survey, 2001

Exhibit Two

Annual VMT by Trip Purpose, 2001



Source: National Household Travel Survey, 2001

Moderating congestion during commute hours has proven difficult, in spite of the fact that, as noted by SCAG in their *State of the Region 2007* report, transportation investment decisions are heavily influenced by work trip patterns. The work trip is peak hour based and not easily spread across the non-commute hours.

Defining Jobs-Housing Balance

Jobs-housing balance, then, is often credited with the potential to correct the tangible problem of congestion on the one hand, and promote general planning and land use objectives on the other. Whether or not those are realistic expectations, it is a realistic expectation that practicing planners will be asked to assess the jobs-housing balance in their communities and consider policies to modify it. What indicator(s) will they use, and what is being measured? Can this puzzle of differently-sized and -shaped pieces be assembled into a coherent whole? This section identifies several jobs-housing indicators that are in current use, describes their data requirements, considers some of their shortcomings, and discusses sources of friction between their application and the attainment of hoped-for results.

Constructing quantitative measures of jobs-housing balance

Jobs-housing ratios express quantitatively the relationship between where people work (the “jobs” side) and where they live (the “housing” side). Whatever community is being analyzed, the same kinds of inputs are required to construct a jobs-housing ratio, and several kinds of ratios can be constructed. The typical measures of the ratio of jobs to housing include jobs-households, jobs-housing units, and jobs-employed residents:

■ **Jobs-households ratio**

The most common numerical measure of jobs-housing balance is a ratio between the total job count in a jurisdiction and the total household count, i.e., occupied housing, in the same area.

■ **Jobs-housing units ratio**

Because most local communities have counts of their local housing stock, a different measure from jobs-households is often used: jobs-housing units. But this measure, which uses housing units as the proxy for the labor force side of the ratio, does not take into account the fact that, at any one point in time, some housing units are vacant.

■ **Jobs-employed residents ratio**

This measure uses the count of employed residents (i.e., those in the labor force who are currently working) as a substitute for households or housing units in the denominator of the ratio. It is generally superior to the other two ratios described, and is easier to understand and compare because parity can be expressed as a one-to-one ratio, i.e., one local job to one local worker, notwithstanding that there will be a small proportion of multiple job holders.

The “housing” side of the ratio is most often derived from population and household counts at the census tract level conducted by the U.S. Census at 10 year intervals, with interim updates based on estimates at the jurisdictional level (in California, annual jurisdictional estimates are published by the Department of Finance or by the Census Bureau’s American Community Sur-

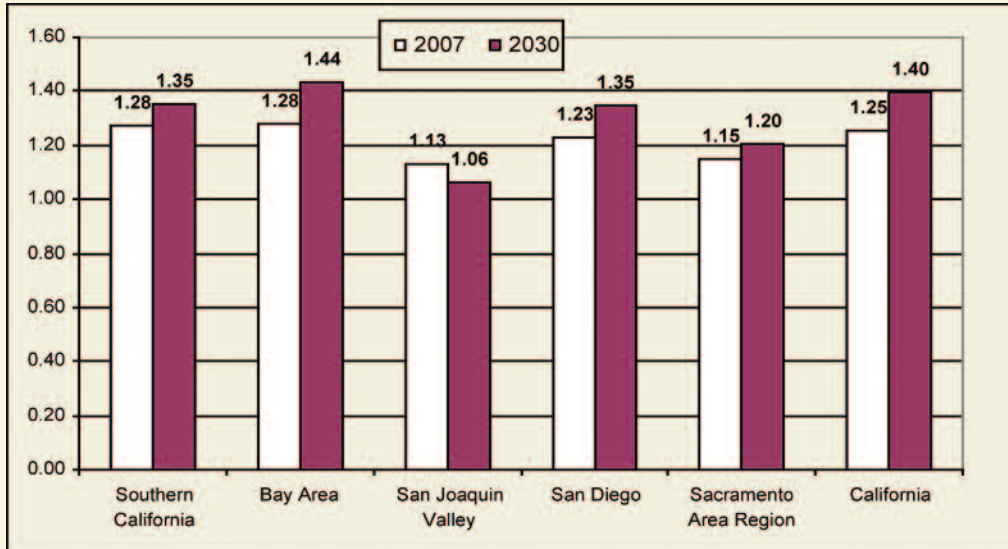
vey). The housing side of a jobs-housing ratio counts people where they live. It is often taken to be the total number of households (persons, related or unrelated, living in the same housing unit). In the absence of a current enumeration, the number of households is estimated as the number of occupied housing units.

The “jobs” side of the ratio counts people where they work; therefore, it does not usually come from the U. S. Census but from state agencies, based on required reporting by employers. In California, employment estimates are available from the State Employment Development Department (EDD) for zip codes, counties, and for municipal jurisdictions, not at the Census-based tract, block or block-group level. Other potential sources of incongruence with Census-based population counts include: (1) employment may be reported from an administrative office in a different community from the actual job site; (2) some workers, such as the self-employed, are not included in the programs for which reporting to the state is required; (3) workers with more than one job are counted multiple times; (4) part-and full-time workers are both included in the count even if the part-time work does not represent a primary occupation (say, for the occasional work done by students or retired persons); and (5) many households have multiple job holders.¹⁰

For all these reasons, it can be difficult to develop an estimate of local-area employment that is parallel to the census-based housing estimate for purposes of constructing a jobs-housing ratio. Jobs-housing ratios therefore involve a higher level of estimation and approximation on the jobs side than on the housing side.

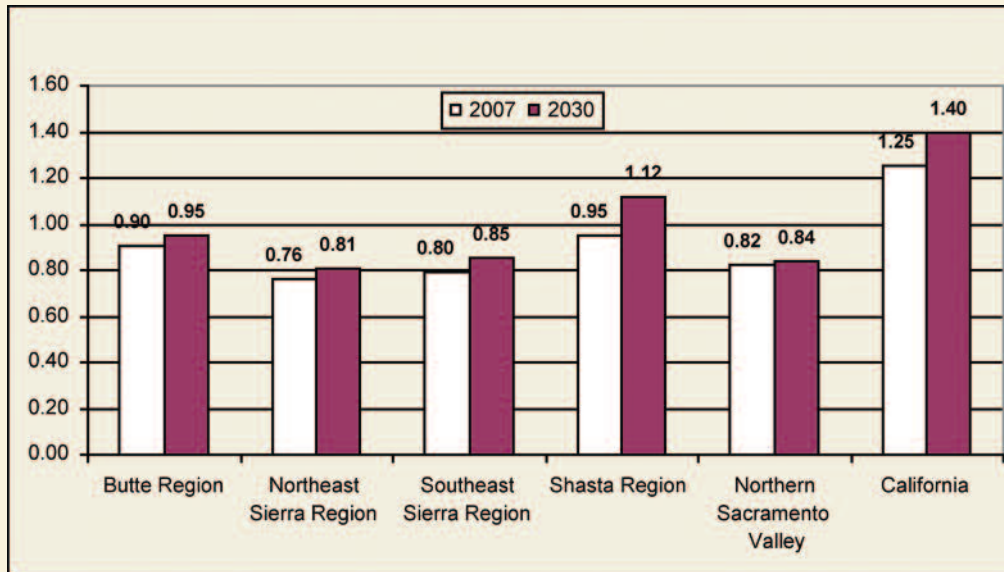
Jobs-Household Ratios for California's Five Most Populous and Five Least Populous Regions: 2007 to 2030

Exhibit 3



Current and projected variations in jobs-household ratios are presented in Exhibit 3 for the five most populous regions in California, shown in Figure 1, for the period 2007 to 2030 (see page 10). Based on the report, the jobs-household ratios vary among the regions and range from 1.13 to 1.28 in 2007. By 2030, the forecasts show a range of 1.06 to 1.44. This illustrates both the different economic and demographic conditions among the regions and the forecasted changes in the ratios over time.

Exhibit 4



Conversely, in Exhibit 4, current and projected variations in jobs-household ratios are shown for the five least populous regions in California, shown in Figure 1, for the same period and illustrate far different patterns (see page 10). Based on 2007 data, the jobs-household ratios range from 0.76 to 0.95. For the 2030 forecast year, the ratios range from 0.81 to 1.12. These ratios are relatively lower in terms of jobs and economic development than the more urbanized regions and illustrate the difference in very rural regions that in many cases supply workers who commute into the neighboring and more economically developed regions.

Source: Exhibits 3 and 4 prepared by Stanley R. Hoffman Associates based on data presented in the California County Economic Forecasts: 2007-2030, Mark Schniepp.

Analyzing jobs-housing balance: the spatial dimension

The principle behind jobs-housing matching strategies is that the provision of a set of local employment oppor-



Source: Stanley R. Hoffman Associates, Inc.

tunities that parallels the labor force characteristics of residents will increase the likelihood that community members in the labor force will choose local employment. The apparent need for a better “match” is evidenced by the fact that communities in which the number of jobs and the number of workers is close to parity may still have substantial in- and out-commuting. Livermore in northern California and Santa Clarita in southern California have relatively equal numbers of employed residents and jobs, yet they see large numbers of workers driving into town to work each day, while large numbers of residents get in their cars to commute to jobs in other cities. Why? There are numerous reasons.

A simple equivalency between jobs and households or jobs and housing units does not take into account the relationship between jobs by various occupations and detailed housing characteristics including, importantly, price. To “match” housing to jobs and vice versa requires more complex ratios and a more detailed analysis of the suitability of the housing stock (particularly economically) for those who hold local jobs. On the jobs side, variables may include the industry group of an employer, skill requirements of positions to be filled, and prevailing wages. On the worker (employed residents) side, variables may include education levels, earnings potential (affecting ability to pay local housing costs), and preferences for occupation or industry, or both.

A recent article by Robert Cervero and Michael Duncan¹¹ looks at an array of factors

that contribute to a pattern in which a high proportion of employed persons work outside of their local communities. Among these factors is the possibility of a limited range of employment choices in the resident community: for some workers, the most attractive jobs are elsewhere than where they prefer to live.

Data for southern California suggest some recent reconsideration of the “attractiveness” of the non-local job. Survey research for the Inland Empire has found that, increasingly, workers may be willing to trade off longer trips and higher trip costs for jobs closer to their place of residence, even if it means some sacrifice in wages.¹² The 2006 San Bernardino County Annual Survey found that, among respondents working full time, a substantial percentage (36%) are willing to take at least a 5% pay cut to work closer to home. A lesser, but still substantial, percentage (29%) is willing to take a 10% pay cut to work closer to home. As economic conditions change in the future, travel costs may play a larger role in the home-to-work location decision.

At the jurisdictional level, then—which is the level most relevant to local community planners—the jobs-housing relationship is a challenge to analyze. Data on both sides—detailed job characteristics and detailed worker characteristics—are hard to come by. At the same time, steps to better align a community’s employment profile with its labor force profile may be difficult to implement and negligible in effect, given cyclical employment trends, changing technologies that influence future labor force education and skill requirements, and the various influences on employers’ site selection decisions (including availability and cost of space and location in relation to suppliers and markets, as well as labor force).

Finally, whatever a jurisdiction might do to provide a match between jobs and residents’ skills, employers in any metro region are aware that many workers commute out-

side their communities of residence; employers know that they cannot rely solely on local workers to fill their jobs. For the smallest metro area jurisdictions, in any event, expecting (or advocating) a match between jobs and workers is unrealistic. Even in larger jurisdictions, local economies may be “specialized” as the cumulative result of individual decisions of employment uses (industry group, type and scale of operation) and housing developers (type and price of housing and amount of housing).

These factors have prompted jobs-housing balance analysts to look more broadly at the spatial units within which a jobs-housing balance goal makes sense, such as a region or a “commute-shed.” A commute-shed is defined as a labor market around a major concentration or center of employment in which the great majority of workers will be able to find suitable housing, and the great majority of residents will be able to find employment within the employment center. Of course, once the spatial unit for analysis is regional or sub-regional, and a jobs-employed resident ratio close to parity is sought, actions to address local levels of traffic and congestion may no longer be part of the local policy picture: land use is largely a local decision, while transportation is strongly influenced by regional actions and funding.



Adjusting jobs-housing balance: other sources of friction

Developing effective planning strategies is important because, as noted by Professor Chris Nelson, “More than half of the built environment of the United States we will see in 2025 did not exist in 2000, giving planners an unprecedented opportunity to reshape the landscape.”¹³ This is an observation that stimulates action, notwithstanding the fact that today’s entrenched patterns of travel behavior are the product of decades of land use and transportation decisions, and change will not yield quick results. Some additional factors in the equation to note:

■ Mode choice

Mode choice has clear impacts on overall travel patterns. For example, in the SCAG region, mode choice has consistently been above 70 percent for drive-alone automobile trips, although it has declined slightly from 76.7 percent in 2005 to 74.1 percent in 2006. This recent pattern is similar at both the state and national levels and the decline has been largely attributed to the significant increase in the price of gasoline over the past few years. Nationwide, the 2000 Census’ Journey to Work survey reported that 4.7 percent used public transit for work trips. However, while transit boardings have been increasing, transit usage is still less than 2 percent of all types of trips in the SCAG region.¹⁴

■ Gender and family considerations

Men and women are observed to have different commute behavior. Crane¹⁵ notes a persistent “gender gap” in commuting that “... stubbornly endure[s], with men’s and women’s commuting distances converging only slowly and commuting times diverging.”



For families with children, observers have noted the potent effect of the quality of schools as a factor for working parents in choosing a place of residence. Where private schools are not within the family budget, some parents will move as far from their jobs as necessary to locations where they believe the education available to their children will be better. Where commute trips include school or childcare drop-offs, as well as housing and job location, modeling commute behavior becomes complex indeed.

In summary, then, the picture of an individual jurisdiction in which most workers live close to jobs, and most places of employment can attract local workers, with the result that journey-to-work is less of a journey and there are fewer cars on the road, is a picture that not only doesn’t describe our present reality, but is unlikely to reflect the metropolitan future if its attainment depends solely on the actions of local government. Our cities and counties simply do not have the spatial reach, the political power, or the fiscal resources to accomplish on their own all of the changes needed to reshape metro areas into spatial arrangements of housing and jobs that offer us both less work-related travel and greater community satisfaction.

What Can Be Done?

We have focused on “deconstructing jobs-housing balance” to better understand this planning indicator and to begin “reconstructing” a philosophy or approach that gives planners a practical way of looking at jobs-housing balance and a set of complementary strategies to move toward the objectives of a better match between communities’ land use resources and available transportation services. If we are to truly reduce congestion, we have to adjust both commuter behavior (by moderating the “demand” side) and circulation capacity (by reducing bottlenecks on the “supply” side). The measures themselves are not the answer, but rather useful guidelines if applied correctly and in conjunction with a range of policy options that are suggested below:

Be judicious in applying jobs-housing balance ratios

Ratios, in and of themselves, do not capture the decision-making process that leads to better planning strategies, and jurisdictions within a complex urban area have a variety of jobs-housing ratios depending on their central or outlying location. A single, standardized ratio is not feasible given the spatial dynamics of historic job growth and the wide demographic range among local communities, let alone the marked differences among regions in employment patterns, housing patterns, and access to transportation. Cervero suggests that his research in the San Francisco Bay Area argues “...against any universal standard for jobs-housing balance.”¹⁶

Emphasize tradeoffs between housing affordability and travel costs

Since urban theory suggests that the jobs-housing relationship is primarily a tradeoff between the housing location decision and the travel cost decision, there are a number of strategies that researchers have suggested. Notwithstanding that the average Californian probably

does not employ a cost optimization analysis when deciding where to live and work, the cost of travel reflected in fuel costs and vehicle miles per gallon are certainly becoming more important considerations. While broad regional approaches, such as creating more housing in jobs-rich areas and conversely, creating more jobs in housing-rich areas, have a certain logic, conforming to a policy-specified ratio of jobs-housing balance may be less effective in reducing household or community-wide commuting than creating affordable housing or better accessibility between housing locations and job centers.

Facilitate mixed use, infill, and contiguous development

Mixing uses in individual developments is also considered an effective way to reduce vehicle trips, if the uses provided are located and arranged to be walkable or bikable and/or served by transit, and include amenities that draw people onto sidewalks and paths rather than into their individual vehicles. However, this may have minimal impact on the jobs-housing commuting relationship and more on the non-work trips. As reported by Crane (1999), the relationship between local urban form and regional commute behavior is weak. Furthermore, nationally only about 16 percent of total trips and 20 percent of total VMT are home-based work trips.¹⁷

Design growth patterns that optimize use of transportation systems

The location of development within a region is an important factor in the ability of people to access jobs and housing. It also has a significant impact on vehicle travel and air pollution. If we are to minimize commuting, air and water pollution, and the loss of open space, we need to develop planning programs that consider development locations not only with an emphasis on infill and contiguous development, but also on optimizing the use of our trans-



portation systems and encouraging appropriate densities to support transit. Multi-nodal economic development patterns may not lend themselves well to “balance” if the home-to-work trip cannot be efficiently served by transit.

Consider congestion pricing and parking strategies to optimize use of transportation systems

The relatively low cost of auto travel and parking over the past half century has encouraged an outward migration of development that has widened jobs-housing disparity. Congestion pricing of major highways and freeways, while not always a politically popular option, has been advanced by economists as an effective way to utilize finite transportation resources and reduce vehicle miles and time traveled as well as encourage a broader range of mode choice.¹⁸

Parking can also be rationed efficiently by price. As Shoup (2007) suggests, “Abundant free parking also contributes to our high demand for cars because it greatly reduces the cost of car ownership.”¹⁹ If we were to pay the true market cost of parking, he argues, it could lead not only to better utilization of land for parking, but potentially more economic development and affordable housing on land that is currently used inefficiently for parking.

Congestion pricing programs have been put in place in a number of cities around the world. London, Stockholm, and Singapore have developed programs that combine congestion pricing with improvements in transit systems.²⁰ In California, San Diego has developed a successful toll system on the I-15 Freeway that is planned for expansion to other roadways in that region, and the San Francisco Bay Area and SCAG regions have recently received federal funding to begin to developing pilot congestion pricing approaches. Congestion pricing has the potential to both improve the flow of traffic and generate revenues that can be used for transit, high-speed rail, and other transportation infrastructure investments.

Confront the challenges of public financing

A critical piece of the puzzle is the shortage of public funds to finance either the development of infrastructure (to reduce transportation bottlenecks) or the expansion of housing choices (to put more affordable housing in closer proximity to major employment centers).

Since its approval in 1978, the effects of the landmark Proposition 13 measure and its restrictive limitations on property taxes have profoundly shaped land use policy and public finance. In many communities housing became viewed as the fiscally undesirable use and commercial centers and auto malls as the fiscally desired land uses because of their generation of taxable sales. Other economic development that has a strong influence on commute patterns, such as industrial, research and development, and professional/technical jobs, typically became an afterthought because they were not viewed as fiscally significant.

While changes in fiscal policies to better balance the distribution of public resources have been advocated for many years, Proposition 13 remains very much a constraint on our ability to balance jobs and housing within local communities and it has proven very resistant to voter change. In a few isolated cases, some communities have independently started to collaborate and share revenues where it makes sense to plan adjacent land uses in their jurisdictions cooperatively. A regionwide tax sharing plan was attempted several years ago in the SACOG region (the counties of El Dorado, Placer, Sacramento, Sutter, Yolo and Yuba), but ultimately, it was not successful. However, the need for comprehensive change still exists. Maybe it's time to take a serious look at ways to adequately fund both public services and infrastructure that voters will accept.

Benefit from the value of regional and local cooperation

In order to create more livable jobs-housing patterns, city and county governments will need to cooperate at the regional and sub-regional levels. Decisionmakers from different regions and counties must join in partnerships capable of addressing regional market forces that cross jurisdictional boundaries. Potential collaborative efforts include:

- Creating parcel level databases to track development trends to help identify proximate housing sites near existing or developing job centers. Where parcel-level data has been collected, as in the Sacramento region (SACOG), it is proving very valuable for regional planning efforts.
- Pursuing staff and funding resources to allow on-going data collection and information-sharing of key data points such as infill sites, transit oriented development locations, and regional transportation corridors.
- Analyzing the scale at which data are collected through the California Employment Development Department and determining whether it is feasible or desirable to collect employment data in a standardized manner for pre-defined, sub-regional geographical areas or commute-sheds.
- Using GIS-based, scenario-planning software to help communities and regions visualize the long-term impacts of various growth and transportation patterns.
- Creating information sharing networks between jurisdictions to facilitate regional cooperation and planning.
- Explicitly including a regional/state cooperation strategy in local General Plans.

Capitalize on the State of California's important role

California has already taken important steps through the Regional California Blueprint Planning Program toward facilitating the kinds of integrated planning that can assist in establishing more workable jobs-housing relationships. (See sidebar.) Also needed at the state level is support for policies that reduce the burden on jurisdictions with a surplus of housing and provide incentives for jobs-surplus communities to bring in new housing, both of which are critical to this effort. With the recent passage of Assembly Bill 32, the Global Warming Solutions Act of 2006, California has clearly placed itself in the vanguard of the effort to reduce greenhouse gas emissions, of which about 41 percent are attributed to transportation, according to the California Energy Commission.²¹

Apply a range of creative options

In conclusion, this paper does not propose that assessment of jobs-housing balance be discontinued, but it argues that such ratios are best used as generalized indicators. Productive policy responses depend on delving deeper into the causes of the imbalance and developing specific policies to address the localized conditions that cause the perceived imbalance. Because the urban-suburban development process is complex and not easily predictable, responsive local policies will likely cover a wide range of options from creating affordable housing to economic development to transit-oriented transportation solutions to congestion pricing and parking supply management strategies.

State of California Supports Integrated Planning

In July 2000, AB 2864 (Torlakson) established the state-funded Inter-Regional Partnership program to improve the balance of jobs and housing in urbanized areas throughout California. In establishing the demonstration program, the State Legislature identified policy goals for the Interregional Partnerships (IRP) ranging from mitigating the negative impacts of jobs-housing imbalances to encouraging integrated planning, incorporating housing, transportation, and the environment, encouraging transit-oriented development, and promoting regional planning and collaboration among cities and counties.

Today, the State's Regional Blueprint Planning Program is designed to support related statutory requirements, programs and guidelines that address the need for integrated planning. Regional agencies and local governments are encouraged to reach consensus on a preferred growth scenario—or "blueprint"—to achieve the objectives specified for a 20-year (or longer) planning horizon.

Real Planning for the Next 7 to 11 Million Californians

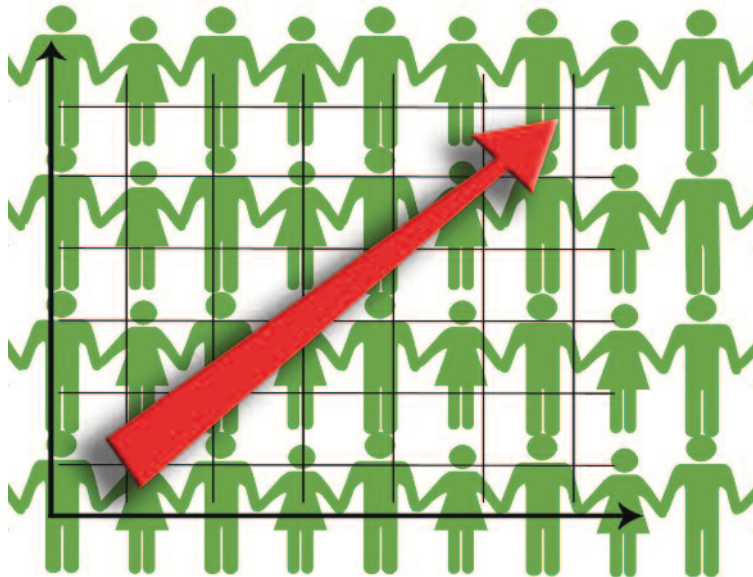
The questions we face about the distribution of jobs and housing are real. Unless we find solutions and put them in place, we can look forward to sharing even more problematical conditions with some 7 to 11 million additional Californians by 2025.²² Postponing effective action is not our best choice.

The issue of new jobs and new housing can seem daunting unless we develop a long-term strategy to meet the challenge. Gail Goldberg, Round-

table Member and Director of Planning, City of Los Angeles, challenges her staff, her city, and all of us to “Do Real Planning.”²³

In this paper, we have suggested that ratios are useful indicators, but that we must be prepared to understand and grapple with the major forces that have shaped our state in the past and will shape it in the future. Painting-by-the-numbers does not result in great art, and planning by ratios will not create great com-

munities. We need a systemwide perspective and an approach that applies a range of techniques involving jurisdictions at all levels of government and in constructive partnerships with the development industry. (See sidebar). Rather than focusing on a single measure, we must build upon evolving research and lessons learned to date to improve the jobs-housing relationship by putting in place a more efficient overall land use-transportation system.



What Can Be Done?

- Be judicious in applying jobs-housing balance ratios
- Emphasize tradeoffs between housing affordability and travel costs
- Facilitate mixed use, infill and contiguous development
- Design growth patterns that optimize use of transportation systems
- Consider congestion pricing and parking strategies
- Confront the challenges of public financing
- Benefit from the value of regional and local cooperation
- Capitalize on the State of California's important role
- Apply a range of creative options

California Planning Roundtable, 2008.

FOOTNOTES

- ¹ David Schrank and Tim Lomax, *The 2007 Urban Mobility Report*, Texas Transportation Institute, The Texas A&M University System, September, 2007, pp.32-33.
- ² SCAG estimates that traffic averages 20 miles per hour (mph)—with some segments averaging 10 mph during peak hours—rather than the 35 mph average used in the study.
- ³ Southern California Association of Governments, *The State of the Region 2007*, p. 68.
- ⁴ Ibid. p. 72.
- ⁵ Southern California Association of Governments, *The New Economy and Jobs-Housing Balance in Southern California*, April 2001, pp. 19-20.
- ⁶ Robert Cervero and Michael Duncan, “Which Reduces Vehicle Travel More: Jobs-Housing Balance or Retail-Housing Mixing?”, *The Journal of American Planning Association*, Autumn 2006, pp. 475-490.
- ⁷ Brian Stone, Jr., et al., “Is Compact Growth Good for Air Quality?”, *The Journal of the American Planning Association*, 73 (4), Autumn 2007, pp. 404-418.
- ⁸ Ibid.
- ⁹ *Smart Growth Index 2.0*, U.S. Environmental Protection Agency.
- ¹⁰ The U.S. Census Bureau’s *Journey to Work: 2000* report provides statistics in the Journey to Work data that are drawn from the economic information provided in the population questionnaires. While this source of travel data is very helpful regarding the flow of commuters between home and work locations, it does not represent the full array of wage and industry detail usually provided with employment data tabulated by the state from information provided by employers.
- ¹¹ Cervero and Duncan, 2006, pp. 475-490.
- ¹² Shel Bockman, et al., *The 2006 San Bernardino County Annual Survey*, Institute of Applied Research and Policy Analysis, April 4, 2007, p.8.
- ¹³ A.C. Nelson, “Longer View: Leadership in a new era,” *Journal of the American Planning Association*, (JAPA), 72 (4), Fall 2006, page 393.
- ¹⁴ Southern California Association of Governments, *The State of the Region 2007*, p. 70.
- ¹⁵ Randall Crane, “Is There a Quiet Revolution in Women’s Travel? Revisiting the Gender Gap in Commuting,” *Journal of the American Planning Association*, Summer 2007, pp. 298-316.
- ¹⁶ Robert Cervero, “Jobs-Housing Balance Revisited,” *Journal of American Planning Association*, Autumn 1996, p. 508.
- ¹⁷ *National Household Travel Survey, 2001*, <http://nhts.ornl.gov/>
- ¹⁸ Cervero, 1996, p.507.
- ¹⁹ Donald C. Shoup, *The High Cost of Free Parking*, 2005, p.4.
- ²⁰ Michael Replogle, “Is Congestion Pricing Ready for Prime Time?”, *Planning*, May 2008, pp. 6-11.
- ²¹ Niko Letunic and Michael Hendrix, “Analyzing Impacts Related to Global Climate Change Under CEQA,” *CalPlanner*, September – October 2007, p. 1.
- ²² *The 2007-2008 Legislative Platform of the California Chapter of the American Planning Association*.
- ²³ A 14-point policy paper adopted in 2007 by the Los Angeles City Planning Commission. Available on the Internet (July 2008), at: http://cityplanning.lacity.org/forms_Procedures/do-real-planning-final_1.pdf

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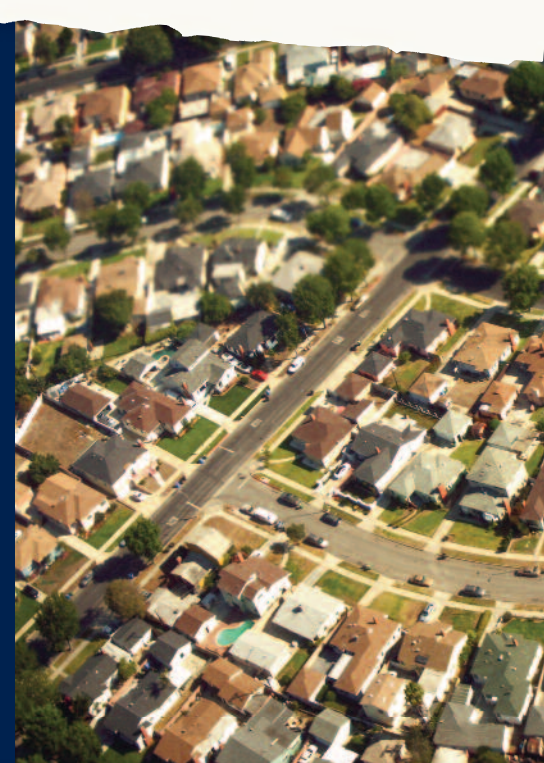
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State of Commuting: *Stalled and Getting Worse*



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The Commuting Conundrum

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