AN INTERIM REPORT ON GROWTH IN SAN JOSE

Gerald Payne

May 1972

P-4840

AN INTERIM REPORT ON GROWTH IN SAN JOSE

Gerald Payne*
The Rand Corporation, Santa Monica, California

Our work in the San Jose Metropolitan area has been focused on evaluating the effects of existing policies on growth, and developing and evaluating policy instruments for the rationalization of growth. One of the approaches which we took was to ask whether prosperity in the San Jose area depended on growth. That question was, for us, a way of summarizing the impacts of growth, and various rates of growth. Changes create gains and losses. Sometimes the losers and winners are easily identifiable; sometimes each of us is both. If, as an outcome of local policy, or of non-policy processes in the national economy, the pace of growth in the San Jose area were to slacken, there would be winners and losers. Our question was about the relative sizes of the gains and losses; if the losses are big enough, the policy isn't worthwhile, or isn't politically practical.

Before going into the question of growth-dependent prosperity, we should clarify what we mean by growth. San Jose has experienced three kinds: economic growth, population growth, and spatial growth. Economic growth has meant more, and more diverse, activity in the area; population growth has meant more people; spatial growth, with the exception of annexation, has consisted of the replacement of some activities, like agriculture, with others -- manufacturing, housing, transportation. Each has costs, and benefits, some of which are more obvious than others. Economic growth appears to have brought prosperity, if you look at total of per capita incomes, though those whose jobs were displaced might disagree. Population growth obviously benefits those who move in, and some

---

*Any views expressed in this paper are those of the author. They should not be interpreted as reflecting the views of The Rand Corporation or the official opinion or policy of any of its governmental or private research sponsors. Papers are reproduced by The Rand Corporation as a courtesy to members of its staff.

This paper was prepared for the Retreat for San Jose City Officials held in San Jose on May 19, 1972. The author wishes to express his gratitude to John Koehler, Henry Rowen and Bob Levine for an instructive critique of an earlier version. The research and preparation were performed under NSF Grant 5818.

who are already residents. Less obviously, it makes possible the provision of some private and public services at a lower cost, and adds to the number of places you can go, people you can see, and things you can do. The economies of scale aren't always obvious, until you try finding the right store, or the right pair of shoes, or enough of the right people in a smaller town. Also, and more obviously, more people means more crowding on existing streets and congestion at existing levels of some public services. Spatial growth is the most easily and frequently objected to; you have to look at the results every day. In San Jose, there is some objection to further horizontal growth; in San Francisco there is objection to vertical growth, or at least to vertical growth in the wrong places.

We looked first at the effects of slower growth, for it seems intuitively clear that however you rationalize growth, it will probably be easier to adapt to the more slowly it takes place. There is an obvious impact of slower growth. Many people are employed directly in growth -- some in construction, finance, various parts of manufacturing, wholesaling, retailing, and related services. We don't know yet how many there are; we have used estimates ranging from fifteen to sixty thousand. Counting dependents, that means there are at least thirty, and probably at most one hundred and twenty thousand people whose personal fortunes depend on economic and population growth.

Those very rough estimates bring to mind the usual complaint of researchers that the data aren't very good. In this case, even the theory isn't very good; there is no consistent and comprehensive theory of urban growth. We have, for this analysis, used a modified version of export-base theory, which divides the economy into two sectors, export employment, and local or service employment. For example, most jobs in aerospace and

food canning in this region would be classified as export employment, and most personal services would be classified as local. To determine income in the area in the short run, you determine employment and income in the export sector, add in transfer payments and dividends, and soon, determine how much of that income will be spent in the local economy, and you have determined the area's income. There are many flaws in the theory, but it can be useful. We added a sector, the growth sector -- those who work at building or financing new homes, and other growth activities. If you look at the economy that way, slower growth, which eliminates jobs in the growth sector, is the same as eliminating jobs in the export sector -- so that, for San Jose, slower but still positive growth can mean the same thing that fewer automobiles being sold would mean to Detroit.

Of course, if you go to slower but still positive growth, you have offsetting effects -- more people are coming -- there are new people, jobs, and income, which offset to some extent the decline in the growth sector. The actual impact on the service sector depends on (a) the size of the impact on the growth sector, and how much of it is communicated to the service sector, and how rapidly, (b) the number of jobs still being created relative to the decline in the growth sector, and (c) most importantly, just what is going on in the service sector -- is it reacting to this year's growth, accommodating last year's, or anticipating next year's?

If you grow long enough at approximately the same speed, the problem almost solves itself -- many of the jobs in construction are easily shifted into repair and maintenance -- it's a lot easier to absorb those building a thousand houses a year into remodeling a housing stock of one hundred thousand units than it is one of ten thousand units.

There is an added question. Population growth involves migration. How well would population movements be coordinated with economic changes in a period of slower growth? Would fewer new jobs mean fewer new job-seekers, or would there be disappointed, job-seeking migrants?

We began with an analysis of growth slowdown which would not be a product of policy at the local level, but was instead a product of changes in the national economy. Whatever problems are encountered would also be met if local policy produced slower growth.

Our first cuts at the problem consisted of econometric analyses of one set of data, essentially the economic history of Santa Clara County. The results were reported in our Working Note of October 1971.* Some of them are duplicated for you in Figure 1. Alternative specifications of population movement were plausible, so several were used. The projections are not to be taken literally, but are used only to indicate directions. The historical growth rate of value added has been, on the average, ten percent. You can see that at rates of growth less than that unemployment becomes, except in one case, what can only be considered severe, and population movements are either uncoordinated (positive, with high rates of unemployment), or are required to absorb a lot of pressure -- for example, outmigration at the rate of 11,000 a year, with unemployment at 9 percent and positive economic growth.

The conclusion drawn from this is that adjustment to slower growth would be painful, depending on:

(a) large impacts on the growth sector,

(b) large effects rippling out to the service sector, and

(c) population movements that adjusted slowly relative to economic changes.

The best way to check these results was to break them down and use different methods of analysis and different data. To get a clearer picture of the impact on the growth sector, we are beginning to examine the relevant industries on an individual level, to determine what size they are, and what kinds of adjustments they can and will make.

---

*_Alternative Growth Strategies for San Jose: Initial Report of the Rand Urban Policy Analysis Project_, WN-7657-NSF, October, 1971.

Table 1

ALTERNATIVE PROJECTIONS FOR SANTA CLARA COUNTY IN 1980

Assumed Rate of Growth of Value Added	Unemployment Rate (percent) Migration Equation			Net Annual In-Migration (1000's) Migration Equation		
	1.1	1.2	1.3	1.1	1.2	1.3
+ 5% per year	10	10	7	9.5	11.1	-.7
Declining and leveling off at + 3% per year	12	14	9	2.9	8.5	-11.4
Declining and leveling off at + 2% per year	13	15	9	.8	7.3	-15.6
Declining at -1% per year	19	23	13	-10.2	5.1	-28.5

Characteristics of the migration equations:

1.1 A strong trend, and reaction to changes in technological employment.

1.2 A strong trend, and reaction to changes in the rate of change of technological employment.

1.3 Stronger reactions to overall changes in employment, and to unemployment.

To check the kind of impact tht a decline in one sector has on the rest of the economy, we looked at another city.

Parallel work that we are doing in Seattle suggested that the impact on the rest of the economy from a decline in one sector probably wasn't as large as we first estimated. In Seattle, there was a drastic reduction in one sector of the economy -- in one year Boeing laid off as many as 60,000 workers -- and yet personal incomes and retail sales continued to grow in real, not inflated, dollars that year, and didn't decline the next year. It would appear that countercyclical stabilizers work as well at the local level as they do at the national level, or perhaps even better. While government transfer payments and personal asset liquidations are not a basis for long-run stability or prosperity at either the national or local level, the Seattle results suggested that immediate secondary effects are far less severe than usual analyses suggest, and the time allowed for adjustment is longer than one would think.

To specify the coordination of population movements and economic change, we are exploring other existing data, and created some. Work that Peter Morrison at Rand is doing with the Social Security work sample should give us estimates of the amount and kind of outmigration from the San Jose area during the last decade. Barbara Williams designed a survey instrument which would examine the motives and methods of inmigrants to the San Jose area. The instrument was administered by the Diridon Research Corporation in December 1971 during one of its quarterly surveys.

As you can see from Table 2, the sample consisted of fourteen hunderd and fifty-nine households. We classified almost thirty percent as non-migrants, defining non-migrants as those who had lived here before 1951. The migrants' reasons for moving ranged across employment, school, family reasons and environmental reasons. Those whose reasons we classified as "Environmental" gave open-end responses, such as liking the area's low density, or its available housing. Aggregating them into the categories Employment,

Retirement and Other Environment, Family or School reasons, and those whose reasons were indeterminate, you can see that a slight majority moved for employment reasons.

Further examination of the results argues against the likelihood that there will be large numbers of migrants whose moves are not well founded. Table 3 summarizes the way "Employment" migrants found jobs. Those who had jobs before moving are unlikely to be disappointed, by definition. More than half were transferred or directly recruited, the rest using advertisements, friends and relatives as job sources. Those who came to find jobs raise a different question.

Their expectation that the job market in the San Jose area was a good one was based on information from friends, relatives, work associates or media sources that were usually located in the area and so were close to the situation. As you can see from Table 4, the information probably was fresh, and usually was good. The quality of it is indicated by the usually short duration of job search -- eighty-seven percent finding jobs within three months. It is possible that this information system is in fact not very good -- that it appears to be good only because it has operated in prosperous times. In the absence of hard information to the contrary, let's assume for now that it would work as well in less prosperous times.

Table 5 is included for the benefit of statisticians. It is our basis for adding the environmental migrants to those who are unlikely to move and be disappointed. Comparing the Employment and Environmental migrants, we found that except for place of origin and place of work, they were statistically indistinguishable. More of the environmental migrants were from the Bay Area, and more of them worked outside Santa Clara County. But with respect to income, family size, education and other variables, they are the same. So we don't think it is overly optimistic

Table 2

Households Sampled:	1459	
Migrants	1027	70.4%
Non-migrants	432	29.6
Migrants' Reasons for Moving:		
Accepted a job		44.3%
Searching for a job		11.2
Wanted to retire here		3.7
Other environmental reasons		15.4
Family moved here		9.3
Change in family status		4.7
To attend school		7.4
Unspecified		4.0
Aggregating:		
Employment		55.5%
Retirement and other environment		19.1
Family,school		21.4
Unspecified		4.0

Table 3

Those who had jobs before moving obtained them by:	
Being transferred	45%
Being recruited	21
Applying to an advertisement	11
Friends	10
Relatives	6
Other	7
Those who came seeking jobs thought they could find them because of:	
What friends said	33%
What relatives said	33
What work associates said	17
Information from communications media	17
Personal sources of information resided:	
Within Santa Clara County	86%
Outside Santa Clara County	14
Impersonal sources were located:	
Within Santa Clara County	86%
Outside Santa Clara County	14

to assert that their movements will be as well coordinated as the employment migrants'. But that says that about 75% of the migration flow will not be out of phase with economic developments -- an encouraging note.

And so at this point we can say:

(1) we are still uncertain about the immediate impacts on those who would suffer most from slower growth -- those who work in it;

(2) whatever that initial impact, we would revise downward our estimate of the secondary impact on the rest of the local economy;

(3) there is unlikely to be a significant amount of dysfunctional population movement into the area.

One question that has been asked is whether or not you should even be worried about future growth. Recent population growth, both for the San Jose area and for California as a whole, appears to have tapered off. But population movements are harder to predict than overall population growth. For example, the best estimate I've seen of Santa Clara's 1970 population was made in 1964 by Ira Lowry at Rand.* It was remarkably accurate -- within twenty thousand. But that accuracy was gained, it turns out, by under-projecting migration and overestimating the future birth rate. If you wanted to predict population movement into Santa Clara County at any time for the last twenty years, you would do pretty well by just using the last year's figure -- you would never be off by more than 20-30%. Unfortunately, the errors would accumulate -- so that what happened in one year would be worthless as an indicator of what would happen in two years -- you'd usually be off by 40-70 percent of the actual migration. In other words, what is happening right now is no key to what will happen in two years, never mind five or ten.

Even if the trend of movement to California is over, it doesn't necessarily mean that movement to the San Jose area is. The survey results agree with previous analyses of migration to California. The

---

*Ira S. Lowry, *Metropolitan Populations to 1985: Trial Projections*, RM-4125-RC, The Rand Corporation, September 1964.

Table 4

Time lag between first thinking about moving and moving:	
Less than one year	81%
One to two years	15
Two to three years	4
Duration of job search:	
Less than one month	64%
One to two months	16
Two to three months	7
Three to six months	7
More than six months	6

Table 5

Variable	χ^2	d.f.	Significant at .05	.01
Household income	8.8	5	No	
Household size	9.1	6	No	
Age of head	4.7	3	No	
Education of head	8.2	4	No	
Labor force participation	3.2	7	No	
Tenure	1.11	2	No	
Length of residence in area	8.2	5	No	
Likelihood of moving	5.6	4	No	
Place of origin	53.2	7	Yes	Yes
Place of work	61.6	4	Yes	Yes

San Jose area has functioned as both a primary and secondary reception center -- attracting people from both within and outside the state, as you can see from Table 6. A common pattern of movement into California is to move into one of the primary areas, usually San Francisco, Oakland, Los Angeles or San Diego, and then a few years later move to some other place in the state. 54.7 percent of the migrants are from within California, 37.3 percent from Northern California, especially the Bay Area. Even if the trend to California is over, there is still a large pool of potential migrants in the primary reception centers.

Table 6 also summarizes responses on the likelihood of moving. 4.5 percent are certain that they will move in the next two years, and 73.1 percent are sure that they will not. 22.4% expressed varying degrees of probability. Past work by others (particularly Lansing and Mueller at the Survey Research Center) has not found, in other areas, so many people who are unlikely to stay. That is due in part to our using a longer time horizon (two years as opposed to one), and also to the selection of an inherently more mobile population -- the majority of people in this area are migrants, and people who have moved once are more likely to move again. The reasons for possibly moving out are as varied as those for moving in. Those classified as "Other" were in many ways the counterparts of those whom we classified as environmental immigrants. Their reasons ranged across increasing congestion and lack of open space to dissatisfaction with municipal government, and the increasing price of housing. We look forward to comparing potential outmigration with past outmigration.

We plan to project varying trends in employment for the San Jose area, estimating the impacts on population size and location of different trends. But we do not at this point feel comfortable about predicting any particular trend. The County has a reputation as an aerospace community, and we ourselves have stressed the importance of

Table 6

Origin	
Northern California	37.3%
Southern California	17.4
Other West	7.0
Mountain States	2.2
Midwest	11.4
Northeast	10.3
South	6.5
Outside 48 states	8.0

Probability of moving:	
Certain	4.5%
Probable, but not certain	22.4
Probably not	73.1

Are you likely to move and if so, why?	
Better job	4.4%
Job transfer	3.8
Family reasons	1.3
Retire elsewhere	2.1
Go to school elsewhere	.7
Bad job opportunities here	2.1
Other	12.5
Probably not	73.1

aerospace expansion in recent periods of rapid growth. Our work in Seattle will involve making forecasts of the likely future of aerospace. But that could very well be irrelevant to your future. Aerospace employment in 1970 constituted about 17 percent of the labor force. Agriculture in 1950 was 15 percent. Exceptionally good or bad times in agriculture in the 1950's and 1960's would probably not have greatly altered the present pattern of San Jose. Obviously the impact of the higher paying jobs in aerospace is greater in terms of the local economy, and a drastic, rapid decline there would be more damaging than a drastic decline in agriculture would have been in 1950. We use the comparison only to point out that the regional economy is at least as diverse as it was in 1950, and probably even more flexible -- the pool of talent and firms and potential new activities is enormously greater.

In summary, then, I would say:

1. We have revised downward our estimates of the unfortunate side effects of slower growth,
2. We would not change our conclusion that the less drastic the slowdown, the less painful would be the adjustments required. And so we would disagree with the "Focus on Growth" study group, with whom I have met several times, who seem likely to recommend, if not insist upon, immediate movement to a zero growth rate.
3. Present levels of growth are not explosive, but do not indicate a trend. What has happened in the recent past could all happen again.