Chapter 1

THE DIVERGENT DEVELOPMENT OF CITY-REGIONS

1.1 Introduction

We are at the beginning of another urban century. For the first time in human history, more than half of the world’s population lives in urban areas. 85 million people per year are moving to cities worldwide, most of them in the developing world. The biggest 600 urban areas, or metropolitan regions, concentrate about a fifth of the world’s population and about half of world economic output; these proportions will rise to a quarter of the population and more than sixty percent of output in just the next fifteen years (McKinsey, 2011). Indeed, the concentration of economic value in cities is even starker: just 23 mega city-regions (with ten million people or more) produce about a quarter of world economic output. This is led not just by the ongoing urbanization of the world’s developing economies. Fully 90 percent of U.S. economic growth since 1978 has come from 254 large cities and 50 percent from the 30 largest metropolitan regions. About half of the employment in the U.S. economy is located on 1.5 percent of its land area.

This process of urbanization has not eliminated inter-place differences in development. Levels of economic development – which we can gauge using per capita income – remain stubbornly uneven. The most obvious manifestation of this consists of differences between richer and poorer countries. Another division, less often thought of, is between large metropolitan regions and everywhere else. Within the United States, for example, large metropolitan regions with more than one million people have average per capita incomes that are 40 percent higher than the rest of the country. At a world scale, residents of larger cities earn incomes that are
about four times the global average; nonetheless, incomes in large urban areas range from about
$2,000 per year in Cairo to about $75,000 in cities like San Francisco, Oslo and Hartford (CT).
Finally, there remain significant differences in income levels among metropolitan regions within
single countries; in the U.S., they range from about $23,000 per year in Brownsville, Texas to
about $75,000 in the San Francisco Bay Area – or about a one to three ratio. This is the same
order of magnitude as income differences that are found among a majority of the world’s
countries, if we remove from the sample the very poorest countries that are not players in the
global economy. Such inter-regional differences in income levels are accompanied by
differences in most of the other indicators of human and social development, in education, health,
and life prospects.

Metropolitan regions are an essential scale of economic development for several
reasons.\(^1\) They are economically specialized, due to their specific factor endowments (labor,
capital, knowledge, networks). Their role in economic development also stems from what are
known as concentration or “agglomeration” effects that exist in key sectors. They are also the
scale at which labor markets – the matching of supply and demand – operate. The frequent and
low-cost face-to-face contact that is possible at the metropolitan scale enables rich forms of
human interaction, and permits the exchange of the most complex forms of information. Such
exchanges uniquely foster knowledge production and innovation that, many believe, power the
broader global economy.

This urban century will see a growing role for cities and their wealth, but it is also likely
to be marked by ongoing significant divergence of incomes among city-regions. Promoting and
sustaining urbanization will be a key basis for world prosperity. Yet sustaining prosperity in

\(^1\) And specifically, in the U.S., this corresponds to the CMSA, Combined Statistical Area, which is larger than the
MSA, Metropolitan Statistical Area.
particular city-regions will require more than just promoting urbanization in general. Just as there is no automatic route by which less-wealthy countries climb up the income ladder to join those at the top, there is no such pathway for metropolitan regions. Moreover, just as countries – in the long-run – can tumble down the ladder of development, so can city-regions. Economic historians have documented the Great Divergence: China was by far the richest nation in the world in 1492, and still had a higher per capita income than Spain or Britain in 1750, but spent the next three centuries falling behind, before beginning its climb back up the income ladder in recent years (Pomerantz; O’Rourke). In the United States, Detroit was the sixth richest metropolitan region in the U.S. in 1970; it is now 52nd on the list.

This book is a detailed examination of two California metropolitan regions who, from similar starting points, followed very different economic trajectories. San Francisco has remained at the top of the income hierarchy, while Los Angeles, its southern neighbor, has been falling down the rankings. These two important California metropolitan areas have diverged sharply in the way their economies have responded to the forces of globalization and technological change.

A comparison of two metropolitan regions has broader significance for theory and evidence in the field of economic development: it allows us to shed light on basic causes and theoretical perspectives; it offers potential novel insights into convergence and divergence; and it enables us to think about external forces such as trade and migration in relation to internal development dynamics and local interactions. Moreover, our analysis of divergence unfolds over a particularly interesting period of transition: from the post-war 20th century economy to the New Economy in which we currently operate. The post-war economy was driven by the maturation of mass production manufacturing and the early service economy; the New Economy of the past forty years has been driven by information technology, digital knowledge creation, finance and
professional services, and the extraordinary array of logistic possibilities afforded by these innovative sectors in an increasingly global economy. If we can understand the reasons behind the sharply divergent performance of two regions that were already high-income, advanced metropolitan areas at the beginning of this transition, we may also achieve some insight into how countries and regions generally fare in these times of major economic upheaval.

This tale of two cities is thus meant to shed light well beyond California, addressing a wide range of theories and debates in the analysis of contemporary economic development that are relevant to the field of development studies as a whole.

1.2 A case of divergence: Los Angeles and San Francisco since 1970

By any standard, the Los Angeles and San Francisco metropolitan regions are large, wealthy and dynamic. Los Angeles is one of the largest economies in the world. In 2009 its nominal gross metropolitan product was $876 billion, which would make it the world's 14th largest economy, ahead of Mexico (112 million inhabitants) and behind Australia (22 million inhabitants).² Los Angeles had 17.6 million residents in 2009, making it the second most populous metropolitan area in the United States. Meanwhile, the San Francisco Bay Area generated a gross metropolitan income of $576 million, with a population of 7.4 million people. Based on that income, it would rank 18th among national economies, just behind Turkey and ahead of Indonesia. Depending on the method of calculation employed, the overall size of the economy – its regional gross output – of the greater Los Angeles metropolitan region, by which we mean the adjacent counties of Los Angeles, Orange, Riverside, San Bernardino and Ventura,

²Urban Gross Domestic Product data in this paragraph taken from the Bureau of Economic Affairs Regional Economic Accounts. International data taken from the World Bank's World Development Indicators database.
is third or fourth among metropolitan regions in the world, while that of the San Francisco Bay Area is about 20th in the world. In terms of per capita income, inversely, San Francisco is consistently the richest metro area with more than 5 million people in the world, while Los Angeles ranks about 20th in that group of cities.

Los Angeles is perhaps best known for Hollywood, playing host to the entertainment industry, though as we will see, the region has a highly diversified economy. Its icons are the palm-lined streets of Beverly Hills and the mansions of Malibu, its hundred mile string of sandy beaches, as well as its car-and-freeway landscape, and a way of life shaped by its sunny, temperate climate. Los Angeles is frequently characterized as a vast suburban sprawl, but this is something of an optical illusion. Its settlements include everything from vast neighborhoods of single-family houses; opulent sprawls of mansions; rustic canyon settlements; beachside bungalows; high-rise corridors; and areas of conventional medium-density apartments. As a whole, the Los Angeles metropolitan region has higher average population density than the New York metropolitan area, and considerably higher than that of the San Francisco Bay Area. Though it has no dense central core, the Los Angeles area has several neighborhoods with double the average density of the city of San Francisco. As a result, LA and San Francisco vie for second place in the U.S. in their average “effective density,” which measures the number of people within 1.5 miles of each resident of the region.

Images: 5 county Los Angeles metro region
Los Angeles at dawn
Downtown Los Angeles
The San Francisco metropolitan area is best known for the city of San Francisco: an iconically beautiful, hilly settlement surrounded by water and known world-wide for the Golden Gate Bridge, its waterfront, and colorful bohemian neighborhoods. The broader urban region
comprises ten varied counties, from the Sonoma and Napa wine country in the north, to Silicon Valley and the Santa Cruz mountains and coast in the south, and from the wild Pacific coastline on the west, inland to the agricultural Central Valley of interior California. Outside of the city of San Francisco, the Bay Area has densely urbanized areas in the East Bay (Oakland) and an emerging urban core in Silicon Valley. Its settlements are as diverse as those of Los Angeles, from forested rustic neighborhoods, through typical California suburbs, to dense European-style urban living.

3 Throughout this book we examine this metropolitan scale because it is the appropriate unit of study for economic development processes: it is the level at which daily, relatively low-cost interactions occur, including journeys to work and social relationships that depend on face to face contact. This is also the level at which labor and housing markets operate for workers and consumers in the short run, during which they are relatively immobile. These metropolitan definitions conform to Combined Statistical Area (CSA) boundaries as defined in June 2003 by the U.S. Office of Management and Budget (OMB) with reference to the 2000 Decennial Census. The 2010 Census will produce new area definitions, however these are not typically released until several years later. CSAs combine government-defined Metropolitan Areas, each measuring a central core that contains a concentrated population as well as adjacent communities having a high degree of economic and social integration.
Since 1970, Los Angeles and San Francisco present a stark contrast in economic development. San Francisco is the most successful metropolitan region in America, and perhaps the world, in what is often called the “knowledge economy.” Since 1970, it has consistently ranked among the top three richest metropolitan areas in the U.S. in terms of per capita income.

For much of the 20th century, Los Angeles enjoyed sustained high wages while simultaneously absorbing very large inflows of migrants from around the country and around the world. Los Angeles managed this feat in part by focusing on knowledge-intensive industries of the day, such as aerospace and defense. But, between 1970 and 1980, Los Angeles' income level began to fall behind that of its northern neighbor, and since then the income gap that separates these two major urban areas in California has grown sharply.
Figure 1.1: San Francisco-Los Angeles Metropolitan Per Capita Personal Income, 1970-2008

Source: Authors' calculations using Bureau of Economic Affairs REIS data for selected Combined Statistical Areas. The Bureau of Labor Statistics (BLS) gathers annual data on per capita personal income since 1969. Personal income is defined as the sum of net earnings by place of residence, property income, and personal current transfer receipts.

Figure 1.1 shows that income growth in Los Angeles has been moderate sluggish since 1970, especially when compared with the Bay Area’s strongly increasing per capita personal income. Since the figure tracks inflation as well as income levels, it understates the interregional income differences that exist at the start of the period. To get a clear picture of the magnitude of these changes, consider that, in 1970, per capita personal income levels in Los Angeles were 92 percent of those found in San Francisco, while in 2008 they amounted to only 70 percent.

Los Angeles has not only failed to keep pace with the Bay Area economic marvel, but it has also been unable to match the performance of most major American metropolises. Table 1.1 ranks U.S. Combined Statistical Areas that had populations above two million people in 1970,
according their per capita personal income. Each of these cities was an important node in the American urban system in 1970. Between 1970 and 2009, San Francisco, New York and Washington DC maintain their perch at the top of the hierarchy. Chicago's relative fortunes decline to some extent. Los Angeles, on the other hand, which had an income level just below Chicago in 1970, tumbles down the ranks, to 25th among all large CSAs. Among these major cities in 1970, only Detroit and Cleveland suffer greater declines than Los Angeles – hardly an enviable comparison group. Meanwhile, Boston, Denver, and Houston are among the larger cities that join the ranks of the ten richest CSAs in 2009. Therefore it is not sufficient to observe that the Bay Area is an especially fortunate case among American cities; San Francisco has indeed continued to outperform most metropolitan areas, but Los Angeles has foundered by that same standard.

Table 1.1: U.S. Combined Statistical Areas with 1970 Population Above Two Million, Ranked According to Per Capita Personal Income Levels

<table>
<thead>
<tr>
<th>Area Name</th>
<th>Income Rank</th>
<th>Pop Growth 1970-2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>San Jose-San Francisco-Oakland, CA</td>
<td>1</td>
<td>55.3%</td>
</tr>
<tr>
<td>New York-Newark-Bridgeport, NY-NJ-CT-PA</td>
<td>2</td>
<td>13.0</td>
</tr>
<tr>
<td>Chicago-Naperville-Michigan City, IL-IN-WI</td>
<td>3</td>
<td>21.1</td>
</tr>
<tr>
<td>Los Angeles-Long Beach-Riverside, CA</td>
<td>4</td>
<td>78.2</td>
</tr>
<tr>
<td>Washington-Baltimore-Northern Virginia, DC-MD-VA-WV</td>
<td>5</td>
<td>57.2</td>
</tr>
<tr>
<td>Detroit-Warren-Flint, MI</td>
<td>6</td>
<td>1.7</td>
</tr>
<tr>
<td>Minneapolis-St. Paul-St. Cloud, MN-WI</td>
<td>7</td>
<td>60.0</td>
</tr>
<tr>
<td>Seattle-Tacoma-Olympia, WA</td>
<td>8</td>
<td>96.6</td>
</tr>
<tr>
<td>Cleveland-Akron-Elyria, OH</td>
<td>9</td>
<td>-6.6</td>
</tr>
<tr>
<td>Philadelphia-Camden-Vineland, PA-NJ-DE-MD</td>
<td>10</td>
<td>13.6</td>
</tr>
</tbody>
</table>

Note: Bureau of Economic Affairs REIS data.

In some ways, this sharply differentiated performance is surprising. Los Angeles and San Francisco were both among the strongest metropolitan economies throughout much of the 20th century. And while they differed in 1970 in certain ways, they shared much that makes them apt

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4 Two million people is an arbitrary cutoff, but results don't materially change when we use other figures.
subjects for comparison. Both multiplied their populations many times over in the last century, through domestic and foreign in-migration. Each also played host to unusually large Hispanic populations: in 1970, 12 percent of San Francisco's population, and 17 percent of Los Angeles' self-identified in the Decennial Census as Hispanic. Both boasted highly educated residents. In 1970, 13 percent of Angelenos and nearly 17 percent of Bay Area residents over the age of 25 had earned at least a Bachelor's degree, as compared with 12 percent of New Yorkers, and a U.S. average of 11 percent. At the same time, ten percent of workers in the Bay Area and seven percent of Southern California workers held advanced degrees. Both regions were developing rapidly in resource-rich California, benefiting from business and financial links to the state's hinterlands. Both nurtured dynamic and variegated manufacturing and service economies, so much so that the economic geography of the United States became dominated by a bi-coastal dual core: East Coast + California. Both attracted massive federal expenditures after World War II to their growing defense-related high technology industries. Both produce many iconic goods that serve global markets, notably airplanes, semiconductors, software and filmed entertainment. Both host major scientific research communities. Both have long enjoyed strong residential sectors, attracting wealthy in-migrants to their natural beauty, climate and quality of life, thus sustaining high real estate prices and a vigorous home market for non-tradable goods and services. Both share California's governmental structure, institutions, and fiscal policies.

Thus we arrive at the question that is at the center of this book: given a similar income and wage structure in 1970, and all of these common developmental characteristics, why did San Francisco surge forward and Los Angeles fall so far behind? As we shall see, in seeking the answer to this question, we plunge into a wide array of the fascinating issues that lie at the core of economic development. By investigating this instance of sharp divergence between two major city-regions’ success at managing change in the wider economy, we hope to learn lessons not just
about the economic development of these two California cities, but also lessons that can be applied broadly in a global economy that is increasingly structured by metropolitan regions.

1.3 Measuring Divergence

Before continuing, we need to settle whether or not we are adequately characterizing the economic well being of these two regions. Do the differences in per capita income paint a sufficiently accurate picture of relative levels of welfare in Los Angeles and San Francisco? Urban and development economics compare economic well being by correcting money incomes for different levels of local prices, as a way to identify “real” income. Internationally, this involves correcting for purchasing power parity; inter-regionally, it principally involves correcting for housing prices, the major reason why living costs differ from place to place.

Table 1.2 presents median housing prices in the Los Angeles and San Francisco regions, estimated from the Decennial Census of Population and Housing and the American Community Survey. Housing costs in Los Angeles are 91% of those in the Bay Area in 1970. The housing premium in the Bay Area reaches its peak during the dot-com boom: in 2000 median prices in Los Angeles were 58 percent of those in San Francisco; they were 79 percent by 2007. Nonetheless, the strong divergence in regional fortunes is evident even after we account for the Bay Area’s higher housing prices. If we compare these gaps to the differences in money income in 1970 and 2007-8, then it would seem that Los Angeles’ lower income in 1970 (91%) is exactly compensated by its difference in housing prices (91%) in that year, and mostly compensated in 2007-8 (income is 70% of SF and housing prices 79%). It would be tempting to conclude that “real” incomes are not really that different.
Table 1.2 Median Home Prices

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<tbody>
<tr>
<td>San Francisco</td>
<td>$26,409</td>
<td>$101,526</td>
<td>$260,698</td>
<td>$359,184</td>
<td>$710,547</td>
</tr>
<tr>
<td>Los Angeles</td>
<td>$23,944</td>
<td>$88,537</td>
<td>$215,114</td>
<td>$207,614</td>
<td>$560,790</td>
</tr>
</tbody>
</table>


Though this type of back-of-the-envelope comparison of wages and incomes to housing costs is a staple of consultant and journalist reports, it is a highly inaccurate way to capture housing costs. The basic reason for this is that current housing prices only capture housing costs for the new entrant to the region, not to the vast majority of residents, who do not change housing all the time, or who do so within the regional housing market as pre-existing owners. There are many technical issues involved in measuring real, effective housing costs for a heterogeneous population, including in-migrants and stayers, and with a heterogeneous set of housing types and preferences. To see them as simply as possible, imagine an individual who enters the San Francisco housing market in 1970. As we will show in detail in chapter 3, this person will tend to have higher money income growth in San Francisco than in Los Angeles over the following decades, even when compared to the Angeleno with identical educational, age and ethnic background. But in addition, the greater rise in housing prices in San Francisco will be capitalized into this individual’s personal wealth at a greater rate than her equivalent in Los Angeles, whether or not she moves into upgraded housing in the Bay Area housing market or stays put. Only a small percentage of residents of either of these regions is a new entrant to the regional labor and housing markets, facing the current median housing price in relation to the current median wage.
This is why a different method of calculating the effect of housing prices on real incomes is needed, one that drills down to the individual level of incomes and housing costs. Fortunately, we can use Decennial Census microdata in order to estimate such costs. In Figure 1.2 we present real median household income levels for selected Los Angeles and San Francisco, where real means incomes net of annual housing expenditures, and where housing expenditures encompass annualized rent or mortgage payments, utilities, insurance and other costs for a representative sample of households in each metropolitan region. Households are the smallest possible unit of observation for this exercise, because multiple residents of the same housing unit often contribute to its maintenance. From Decennial and American Community Survey samples, we construct an annual measure of total wage and salary income for each household. Next we build a measure of
annual housing expenditure. For renters, we simply annualize respondents' monthly gross rent, which include contract rent as well as utilities. For owners, we annualize monthly owner costs, which is the sum of mortgage payments, taxes, insurance, utilities, and condominium fees where applicable. To arrive at real household income levels in a given year, we subtract what a household spends on housing expenditure for the year from the wage and salary income its members earn. Since the housing cost data is only collected from 1980 forward, we cannot estimate real incomes for 1970 using this method. To facilitate comparison, we estimate median values of real income for each region for 1980, 1990, 2000 and 2010.

Comparison of the real incomes earned in San Francisco and Los Angeles confirms the general picture produced using nominal figures: from relatively comparable beginnings, San Francisco’s advantage grows strikingly, especially after 1990. In nominal terms, residents of the Bay Area in 1980 enjoyed a 12 percent per capita personal income premium over the median worker in Los Angeles, and this gap grows to 39 percent by 2010. After considering differences in housing costs, the median household real income premium in the Bay Area grows from 14 percent in 1980 to 50 percent by 2010. The fact that the real income premium in San Francisco is actually larger than the difference between nominal wages suggests that the median worker actually spends more on housing in Los Angeles than in the Bay Area. This is a curious finding, which reveals serious problems with using median housing costs of the kind shown in Table 1.2 to characterize the broad set of costs facing households in entire regional economies. It should be noted, however, that the gap between real and nominal income premia are fairly modest. In 1980, they constitute only two percent, while in 2010 they appear large but much of the gap simply reflects the shift from one unit of measurement (per capita personal income) to another (household wage and salary income). The difference between the nominal household wage and salary income gap and the real household wage and salary income gap is only three percent. The
bottom line is this: when we compare housing-cost adjusted incomes in our two case study regions, the Bay Area’s advantage is in no way diminished. The broad trajectory and magnitudes of real incomes in Los Angeles and San Francisco reinforce a story in which San Francisco has, from comparable beginnings, strongly outperformed its southern neighbor.

*Income Growth or Population Growth?*

There are many ways to measure economic performance; in development economics, the relationship between the quantity of growth – as measured through population or employment change, and the quality of that growth, as measured in terms of wages or income – defines the key dimensions of this issue. Many argue that income levels need to be understood in the context of changes in population. Changes in population and income have a complex interrelationship in the development process. If a region or country increases its income while maintaining a stable population – something like Denmark – we think very differently about it as compared with a place where incomes rise while many new people are accommodated, as in China today or many Sunbelt cities in recent decades.

We also think differently about the quality of population growth, contrasting a country or region that grows richer while only taking in skilled individuals versus one that accommodates a wider variety of immigrants and pulls them up the wealth ladder; a difference of “outcome versus opportunity.” Thus, a country or a region might increase its per capita income through stricter gate-keeping: by keeping poor people out, whether as a function of higher housing costs or by other means, a city's average income level will rise. Meanwhile, a more ‘welcoming’ urban region might receive an influx of migrants whose lower human capital reduces average income.

Between 1970 and 2009, the Southern California economy added almost 8 million people,
nearly doubling in size. This makes Los Angeles a distinctly different case from Cleveland or Detroit, which both fell down the income ranks as shown in Table 1.1, but which also had stable or declining populations. Over the same period, the Bay Area grew by about 55%, adding around 2.5 million people.

Figure 1.3 Population and Per Capita Income Compound Annual Growth Rates 1970-2009, 30 Most Populous Combined Statistical Areas in 2009.

Source: Authors' calculations based on BEA Regional Economic Accounts data. Solid horizontal and vertical rules represent average growth rates for population and income among all Combined Statistical Areas. Points are scaled according to population in 2009.

Figure 1.3 presents rates of compound annual population and income growth between 1970 and 2009 for the 30 most populous Combined Statistical Areas in 2009. Average values for all metropolitan regions are documented with solid horizontal and vertical rules. From the figure, we see that the populations of both Los Angeles and San Francisco grew much faster than cities in the Northeast and Midwest, and considerably slower than the very high population growth
rates found in the Sunbelt. We could say that Los Angeles has been somewhat more ‘welcoming’ in quantitative terms than the Bay Area, but the difference is not dramatic – more noteworthy is the fact that both regions hover around the national average.

If Los Angeles took in a higher percentage of newcomers, does this imply that it is a better “opportunity machine?” One of the most common claims about the divergent performance of these two economies hinges on the disproportionate impact of low-skill immigration on Los Angeles. But we will show in Chapter 3 that the quality of opportunities has been weaker in Los Angeles than in San Francisco, both overall, and for each and every ethnic, age, educational group and category of immigrants. Concretely, immigrants of all ethnic groups, including recent arrivals and long-term residents, do better in earnings in the Bay Area, even when their educational levels are identical. This means that although different immigration streams have contributed to the divergence of these two regions, immigration is not an independent cause of the difference: observably-similar immigrants perform differently in San Francisco and Los Angeles, reflecting a different quality of opportunities encountered in each.

Inequality represents one final point to consider in exploring primary indices of economic performance. Interregional differences in median and (especially) average wage levels could be partly a function of different income distributions. It is possible for the region with higher per capita income to have lower standards of living for many of its people if the per capita figure is strongly skewed toward its upper tail of the distribution; conversely, a region that is poorer on average could offer better living conditions for the many if its distribution is clustered around the median. Additionally, living in a highly unequal society might reduce the welfare of many, even those who are individually relatively well off. To capture potential differences in income

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5 Between 1970 and 2009, the average population growth rate among Consolidated Statistical Areas is 64%. Los Angeles grew by 77% while San Francisco grew by 55%.
inequality, we estimate the Gini coefficient, using the wage and salary income of Census respondents in each region. The Gini coefficient is an index that describes the inequality of a distribution, and is routinely used to describe the degree of income inequality found in regional and national economies. A Gini coefficient can range from 0 to 1, where 0 indicates that all members of a society earn the same income and 1 characterizes a distribution where one individual has all the money.

Table 1.3: Wage and Salary Income Gini Coefficients

<table>
<thead>
<tr>
<th>Year</th>
<th>Los Angeles</th>
<th>San Francisco</th>
<th>All California</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970</td>
<td>0.448</td>
<td>0.447</td>
<td>0.455</td>
</tr>
<tr>
<td>1980</td>
<td>0.463</td>
<td>0.448</td>
<td>0.459</td>
</tr>
<tr>
<td>1990</td>
<td>0.482</td>
<td>0.458</td>
<td>0.473</td>
</tr>
<tr>
<td>2000</td>
<td>0.508</td>
<td>0.496</td>
<td>0.504</td>
</tr>
<tr>
<td>2005-07</td>
<td>0.506</td>
<td>0.503</td>
<td>0.508</td>
</tr>
</tbody>
</table>

Note: Authors' calculations based on 1% Decennial IPUMS Samples and 2005-07 ACS

Table 1.3 shows results from the evolution of inequality over time in San Francisco and Los Angeles, as well as for all of California. San Francisco and Los Angeles have broadly similar income distributions, with levels of inequality that also closely correspond to the entire state of California. Southern California is somewhat more unequal, chiefly in 1980 and 1990, though the gap narrows and is nearly eliminated by 2007. Hence, the distribution of income in Los Angeles is somewhat more unequal than in the Bay Area; if anything, this makes the gap in per capita income more significant for the average person at certain times in our study period, although by the most recent period, the coefficients are very similar. Given this broad similarity, we can be confident that people at every point in the income hierarchy have higher absolute incomes in the

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6 In 1980, the mean Gini coefficient among 288 metropolitan areas was 0.477, with a standard deviation of 0.02. In 1990, Los Angeles is almost one standard deviation above San Francisco, and the gap may be larger in 1990.
Bay Area than in Los Angeles.

After accounting for living costs, income inequality, as well as the development patterns of other large U.S. metropolitan areas, we can more confidently assert our basic problem: Los Angeles and San Francisco began in 1970 as comparably rich major metropolitan areas, but today they stand rather far apart. If these two regions were national economies, much research effort would have been expended and ink spilled in the pursuit of an explanation of the causes of this divergence. And yet studies of this kind of questions at the urban scale are scarce.

We now turn to an examination of the conceptual challenge in analyzing divergent economic development.

1.4 Divergent development: the conceptual challenge

Economic development is the ultimate noisy social science problem. Innumerable forces influence the economic development of a given nation or region, and can distinguish its economic performance from that of another economy. At the center of all different development levels is the specialization or industrial composition of each economy. Comparing New York and Los Angeles, for instance, we might think of the role of the finance industry in the former, and entertainment and aerospace in the latter, just as if we were contrasting France and Germany, we would weigh Germany’s specialization in mechanical engineering against France’s focus on trains, nuclear power, luxury goods, and aircraft. In general, the more an economy specializes in sophisticated or high-quality goods and services, the higher will be the remuneration of labor, and – in some cases – the returns to capital. The different patterns of specialization of Los Angeles and San Francisco are laid out in detail in chapter 2 of this book.
Accounting for specialization and how it changes, in a comparative perspective, is equivalent to asking “what causes development?”, since development outcomes are reflected in the returns to labor and capital that are in turn structured by the activities in which they are employed. High on the list of possible causes of specialization are the skills and knowledge of the workforce of each region, including its scientists, entrepreneurs and managers. Thus, we might find that New York has a higher proportion of college graduates than Southern California, but also that it has proportionately more with finance degrees, whereas there are more engineers in Los Angeles, and these differences could influence incomes directly, and could affect specialization and thus affect incomes indirectly. The labor forces, skills and job structure of our two regions are explored in Chapter 3.

Another important influence on economic performance could come from the institutions of the economy, such as differences in legal, political, and tax systems, which shape the costs and ease of doing business, and provide manifold incentives for the mobilization and allocation of capital and labor (Acemoglu et al, 2004). These are easily compared between countries; even between New York and Los Angeles there are some possible differences in taxes or regulations that matter. Institutions could also include the informal ways that key actors in the public and private sectors shape the perceptions of problems and opportunities, and hence influence the public and private priorities for action in the region. Institutions, perceptions and politics are more difficult to measure than specialization and labor force composition, and as such we devote an entire section of this book, in chapters 5 through 8, to looking into the formal and informal institutional environments of the Northern and Southern California economies.

Our task in this book goes beyond describing the differences between two economies. We ask why two economies that were quite similar in overall economic performance at a moment in time (1970) subsequently grew apart. That is, we want to know why they diverged in their
capacity to generate income over a long period of time. Over much of the twentieth century, Los Angeles successfully played catch up to its richer northern neighbor. But as noted, sometime during the 1970s, this convergence stopped and reversed, with income gaps opening up again and becoming very significant. Thus, we want to know not only the broad structural aspects of the two economies – specialization, human capital, and institutions – but also the events or turning points in a development pathway, and how they set off complex sequences of adjustments that define the pathway as time unfolds. In Chapter 4, we show how certain prominent industries in the two economies declined, and how others took off; and how different growing industries were attracted into each local regional economy.

Let us now delve deeper into how the study of the San Francisco and Los Angeles regions sheds light on broader debates about economic development.

1.5 What can we learn from just two regions?

Research on economic development uses many different methods, ranging from large-scale statistically-driven studies and large samples of countries (Rodrik et al, 2002; Dollar and Kraay, 2004; Easterly, 2006; Kemeny, 2010;), as well as historical studies and in-depth comparisons of small numbers of cases (Earle, 1995; Mokyr, 1991; North, 2005: Rosenberg, 1982, Acemoglu and Johnson, 2012); Wade, 1990; Amsden, 1992, 2001; Saxenian, 1994). In the large-sample studies, some scholars isolate a particular aspect of development (education; investment rates; entrepreneurship; institutions, etc). or some combination of these major forces, and then the causal insights emerge from the controls that are applied in the econometric work (Acemoglu et al, 2004; Przeworski et. al, 2000; Rodrik et al 2004). The present comparison of just two regions draws on theories of economic development and on the large-scale empirical work referred to above, to frame an in-depth investigation of just two regions. By studying a
small number of cases in depth, we give ample attention to each possible cause, and we also consider interactions among these causes in particular time- and geography-specific ways (Tilly, 1982).

Ideally, case studies of economic development with small sample sizes, such as the present book, do not just tell unique stories. Rather, they use questions drawn from large-sample research and engage with them in detail. For example, when we consider the role of labor skills in the Bay Area and the Southland in chapter 3, we draw from broad insights about skills that have been learned from studying many regions over long time periods. At the same time, we tease out the time- and space-sensitive interactions between the demand for skills, the supply of skills, and their many possible causes. Intensive in-depth studies such as this one do not only draw on large scale quantitative research, then; by virtue of the close testing of issues that are central to the field, we generate new questions for subsequent large-scale research.

### 1.6 The regional scale in economic development

At the global scale, if we take nations as units, then per capita incomes range from a few hundred dollars per year in places such as Haiti and certain sub-Saharan nations in Africa, to about 80,000 dollars in small, very rich countries such as Norway or Luxembourg and even higher for small petro-states. Even shaving off these tails of the distribution, the global international multiple of real per capita incomes is in the range of 1,000 dollars to around 50,000 dollars, a 1:50 spread. If we further eliminate the very poor countries and concentrate on those above some minimal threshold of insertion into the world market economy, we get a ratio of 1:25. Between the lower middle-income countries (about 7,000 dollars) and the high, the spread
is 1:7. These are, then, what can be considered the ranges of the ‘national effect’ on per capita incomes. Interestingly, a strong national effect shows up in international comparisons of cities. For example, if we list incomes of the fifty largest metropolitan regions around the world, about forty are in the United States, reflecting the imprint of national productivity differences on metropolitan regions (Storper and Bocci, 2008). But, as noted previously, since metropolitan regions generally have higher productivity and per capita incomes than their respective national economies, the gap among similarly sized metro regions in the world is smaller than that of their respective nations.

At the other extreme, inter-neighborhood differences within metropolitan areas are very large, in every country and every important metropolitan area. Within Los Angeles or San Francisco metropolitan areas, there are very poor neighborhoods with average incomes below $20,000, and very rich areas with incomes ten times that. This is the “neighborhood effect.” The same is true of Paris, Istanbul, São Paulo, or Johannesburg.

In between these two extremes are the income gaps among metropolitan regions within countries. In the U.S., the range is about 3:1 (Brownsville Texas, around $26,000 and San Francisco/Oakland/San Jose, around $75,000), whereas in most other developed countries the maximum is around 2:1 (London – Birmingham). In developing countries, reflecting the greater unevenness of economic development as a whole, it is not uncommon to find inter-metropolitan differences in the 1:5 range (for Brazil, Belém and São Luis, Maranhão versus São Paulo). These “regional effects” are important, but variable; regional per capita incomes in turn overlay and hence mask neighborhood income differences, on one hand, and on the other they reflect national effects on all the regions of a given country. Thus, Houston might be about as rich, in real per capita terms, as Paris, which is the richest metropolitan region in France, but Houston is not the richest metropolitan area in the United States. Thus, given this national effect, we still want to
know why Houston is about 30% less wealthy than San Francisco, just as in the case of France, we want to know why Marseille is about 25% poorer than Paris.

1.7 Approaches: development studies, regional economics, economic geography

Economic development is not only a noisy, multifaceted problem; as an academic field it contains diverse theoretical elements that can be woven together in very different ways. The choice of theories in turn orients what gets measured and how it is measured. In this book, we draw on three theoretical streams: international and comparative development studies (IDS); regional science and urban economics (RSUE) and economic geography (EG).\textsuperscript{7}

Development Studies

In general, comparative economic history and comparative development analysis have been done at the scale of countries. In this book we draw inspiration from this body of work, but by studying two metropolitan regions within a single country, we detect causes of divergence that may be overlooked in inter-national comparisons. At the international scale, the differences that distinguish economies, whether they are found in labor markets, institutions or specialization patterns, are more obvious than between two regions within a single country.

International development studies identifies a number of forces that contribute to the national effect referred to above, but some of these could in turn also contribute to the sub-national regional effect. International Development Studies (henceforth, IDS) builds from a core in international and trade economics. Researchers in this area examine how the development of countries is influenced by openness (understood as the potential cross-border movement of goods and services, as well as productive factors like people, information and money), differences in

\textsuperscript{7}Each of which is internally heterogeneous. We will simplify here.
culture, policy and institutions, and “structural” differences (technology and factor endowment levels and types) (Helpman 2004, 2011).

In recent years, development economists have discovered a greater interest in cities and regions. Summarized in the 2009 World Bank *World Development Report*, these researchers now view national development as both cause and outcome of urban and regional development. Because dense cities and metropolitan regions are the essential form of settlement for any national economy that goes beyond agricultural subsistence, national processes of national economic development cause urbanization. But the mere fact of national economic development does not automatically bring forth the best kind of cities or city system for the country in question. There are specific urban and spatial processes that determine what kinds of cities and regions a national economy will get, and these processes have a feedback relationship to national economic development itself (positive or negative, according to the country in question).

There are three main dimensions to these urban contributions to economic development: the extent to which the national economy can bring capital and labor together to promote density; its ability to overcome spatial divisions between groups through political unification and mobility; and its ability to reduce the costs of distance. These “three Ds” thus shape the ability of each national economy to create the cities and regions that are in turn platforms for national development as a whole. Countries differ substantially in how they organize their urban and regional systems, and these have significant feedback effects to overall economic development.

Along these lines, we can consider how IDS in general, and its new urban and regional focus in particular, help us understand divergence between Los Angeles and San Francisco. At first glance, it might seem that there is little relationship. For example, a major theme in IDS is to identify the influence of trade and barriers to trade on two sovereign countries; but San Francisco and Los Angeles are part of a long-established free-trade zone (the United States), and
thus the effects of distance, division and density are likely to be very similar for the two regions. IDS also looks for how macroeconomic and fiscal factors influence development (savings, investment, etc); but San Francisco and Los Angeles share a common currency and a strong fiscal union. IDS examines the roles of capital and labor mobility in development; but as part of the U.S., San Francisco and Los Angeles benefit equally from extremely high levels of domestic and international capital and labor mobility. IDS also investigates institutional differences between countries as sources of development; but San Francisco and Los Angeles have a single overarching legal and constitutional framework (the U.S. and California constitutions and statutes). They also have many shared norms and cultural dimensions that shape social and economic action. Their regional and local governments have no sovereign powers to regulate the economy and society in ways that most sovereign national states do. IDS sometimes compares economies said to be in different “structural classes” of development, differentiating labor-abundant from capital- and knowledge-abundant economies, or those that have gone through the demographic transition from those still achieving it. In light of all these fundamental similarities, a comparison of San Francisco and Los Angeles is not going to shed light on the roles of structural forces that are central to the specifications used in much international development studies research.

But this is precisely why our comparison should be of interest to the field as a whole. Our choice of two regions with so many obvious structural similarities, but which nonetheless have gone through a powerful economic divergence in a short period of time, effectively controls for many of the explanatory variables used in international development studies (at least as they are specified in those studies). This does not mean that all those causes are ruled out; instead, the sharp divergence between Los Angeles and San Francisco requires that we use a more finely-focused microscope to see if these causes operate in ways that are less obvious, but also opens up
the possibility that we will discover causes of divergent regional economic development that are not on the radar of IDS.

This poses significant methodological challenges. For example, differences in specialization between two regions tend to be finer than those between countries; differences in the ways their labor markets operate are also more subtle. The greatest challenge is in detecting differences in the roles of technology, institutions, policies and politics at the inter-regional scale. These we have teased out using multiple techniques of investigation and measurement, ranging from quantitative analyses to historical research to semi-structured qualitative interviews, each interpreted with discernment. In facing these challenges, however, the present study also suggests ways that comparisons at international scales could be more finely-tuned in what they look for in explaining development outcomes, rather than relying on the – often rather obvious – international differences that dominate those studies.

**Regional Science and Urban Economics**

The analysis of economic development at the metropolitan scale has traditionally been the domain of a second theoretical field: regional science and urban economics (RSUE). In its standard account, firms sort themselves among regions based on regional factor endowments, thus reflecting comparative advantage. In turn this shapes the specialization of regions (for instance: finance firms to some places, automobile manufacturing firms to others). This sorting process resembles, in a more fluid manner, that which leads to a division of labor and hierarchy of activities and incomes at the global scale. Insofar as some industries have higher productivity, require higher skills, have better terms of trade, or faster innovation, than others, the regions or countries that host them will have higher incomes than others. But the similarity to IDS ends
there. Standard models in RSUE assume that the barriers that shape the comparative advantages of countries or limit their full expression, are irrelevant at the inter-regional scale within a country. As we noted above, inside countries, labor, capital, ideas, goods and services are all highly mobile, and relatively small differences in terms institutions, cultures, languages, and laws (except in a few “tribal” or poorly integrated countries, usually very poor ones). All of these conditions are what lead much economic research on international development to conclude that “if all these barriers didn’t exist, countries would have income convergence, but since they do exist, we will model and measure how they limit and condition potential convergence” (Helpman, 2011). RSUE models take out these conditions.

There are two specific ways they do this. One is that they make strong assumptions about how the firms operate across different regions. It is obvious that some industries have higher skilled jobs and hence tend to pay higher wages than others, as noted above. For some RSUE models, however, such differences in specialization do not lead to long-term income divergence between regions. Their alternative story, of convergence starts with firms sorting themselves to different regions according to the factor endowments of each region (mix of capital and labor). As they do this, they reach a point where some regions have excess supplies of factors and others have excess demand. Certain firms will then move to areas of excess supply (and hence low price), by adjusting their capital-labor mix to suit the factor endowments of these locations. In this view of things, the firm is like “putty” that can adapt to external circumstances, and it becomes “indifferent” to its location by being able to adapt to it. With enough of this kind of mutual adaptation of the firm to the cheapest locations, the returns to factors and their prices will tend strongly to equalize between regions: this is how convergence manifests itself. The problem is that the core assumption is highly unrealistic in the short- to medium-run; in most parts of the economy, the substitution of capital and labor is quite limited within an activity, since
technology of production (hence use of capital and labor) and quality of products are closely tied to one another. The quantity and quality required is more like “clay” than it is like “putty.” Most importantly for our purposes, the levels of wages and incomes of regions are determined by what each region specializes in doing (Glaeser, 2008).

Recognizing the artificiality of such thinking, most RSUE models turn to two other possible mechanisms that could generate income convergence: the movement of people, and the cost of living. This is where RSUE models really distinguish themselves from international development approaches, and make their most plausible claims. Assume that there really is a hierarchy of incomes related to comparative advantages (specialization), as noted above. The regions that host the more productive industries will tend to have higher per capita income, leading to income divergence between regions. Moreover, especially productive industries tend to highly spatially concentrated, or agglomerated. However, the regions that host such industries and workers will suffer the consequences: all those skilled people concentrated together will drive up the regional cost of living, especially through their pressure on the housing market. These differences, according to such models, are generally of an order of magnitude, such that the hierarchy of nominal (money) income among regions, driven by specialization, is entirely offset by the differences in cost of living. Concretely, the places with high money income will have their advantage offset by the high cost of living; in contrast, in places with lower money income, people will enjoy levels of well-being that converge with the high-income places because of the lower cost of achieving a given level of well-being (Glaeser, 2008).

The process by which all this is said to come about is migration. People vote with their feet, leaving expensive places or those with low levels of un-priced amenities (“free” quality of life factors), to go to cheaper places. When they do this, they increase labor supplies, which in turn initially exercises downward pressure on wages. This then attracts more firms (employment)
away from the high-priced areas, generating increases in unemployment there and in turn leading labor to have to tame its wages there. Since employment is moving to the cheaper areas, there is a then upward pressure on wages. According to the dominant models in RSUE, all of this leads to inter-regional convergence in economic well-being.

Regional development, in this way of thinking, involves a straightforward tradeoff: areas with growing populations will have lower money wages than those that do not grow, but real incomes will tend to equalize across regions due to differences in cost of living. However, the cases of San Francisco and Los Angeles are anomalous to this way of thinking. In Figure 1.2 above, we learned that there remained a considerable wage gap between Los Angeles and San Francisco after controlling for living costs. Additionally, in Figure 1.3 we saw that both regions are just above the U.S. average for population growth, while there are stark differences in how their average incomes have grown. In that figure there is little apparent general relationship between urban population and income growth. More generally, even when we rigorously control for housing costs, real incomes have not tended to converge among metropolitan areas in the U.S. in recent decades, even for workers with similar demographic and skill profiles (Kemeny and Storper, 2012). As noted earlier, there is a spread of about 1:3 in nominal income among American city-regions. When we account for differences in living costs, nominally rich cities remain about 15% richer than poorer ones; this gap shows no signs of declining. Rather than moving toward some kind of convergence, as we described above in Table 1.1, metropolitan areas have considerable turbulence in where they stand in the income hierarchy over time.

The divergent development of the two regions is not eliminated by migration or cost-of-living factors. Nor does it correspond to any simple distinctions of big-small, old-new, Frostbelt-Sunbelt dynamics. Therefore, the tale of two cities examined in this book challenges conventional ways of thinking about regional development. It cannot be easily accounted for
using the standard toolkit of regional and urban economics. Through our study we hope to refine
the agenda of that discipline.

**Regional development and economic geography**

A third field, economic geography (EG), provides tools to resolve some of the puzzles
described above. Economic geographers generally approach the problem of economic
development from the vantage point of the productive activities of the economy – industries and
firms. This may seem like an obvious point, but it begs one of the foundational questions of
economic geography: why are economies specialized? Why, for instance, are so many jobs in the
finance sector concentrated in Lower Manhattan, as opposed to having each city, town and
village host its own investment banking firms? In the context of the current case study, why is so
much employment and production in the entertainment industry concentrated in the Los Angeles
region, despite the fact that individuals living around the world consume the output of this sector.
And why does the Bay Area play host to so many businesses working in high technology? And if
the proximate cause of the Bay Area’s comparative wealth is its focus on high-wage, technology-
intensive industries, why has Los Angeles not been able to generate such favorable specialization
for itself since 1970?

Early theories of specialization referred to the uneven geographical distribution of
valuable and scarcely available natural resources. In 1817, David Ricardo observed that
Portugal’s pleasant climate and fruitful soil justified its specialization in the production of port

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8“Economic geography” as used here covers a wide variety of perspectives from the disciplines of geography and
spatial economics. In the latter, there is a specific body of theory known as the “New Economic Geography,” based
on a specific set of models that explain spatial concentration of firms. We will distinguish among different specific
models within economic geography as necessary in later chapters; for present purposes, they are considered together.
wine. With recourse to such accidents of geography we can explain that Odessa, Texas could no more become a transshipment hub than Duluth, Minnesota can anchor a local oil and gas industry. But natural resource endowments do not help us understand the evolution of the mix of industries contained within Los Angeles and San Francisco. Nothing in the natural world can convincingly explain why Los Angeles received and retained its entertainment industry, while losing much high-sophistication, engineering-intensive manufacturing.\(^9\) Natural endowments tell us little about why the Bay Area has managed to hold on to its place at the top of the knowledge economy, nor why Los Angeles might be failing to successfully imitate it.

Subsequent amendments to the theory of comparative advantage, in the context of the 19th century industrial revolution, came to emphasize the uneven distribution of technology and knowledge (Mokyr, 1991; Rosenberg, 1982). Technology or knowledge are, in turn, considered to be embodied in the human factor of production. Thus, one might argue that Los Angeles and San Francisco are differently specialized because their workers are differently endowed with abilities and knowledge - traits that researchers call “human capital.” This is certainly true in a descriptive sense: San Francisco can sustain a dynamic high technology sector because a sufficient number of appropriately skilled workers call the Bay Area home. But this answer is at best incomplete. We want to understand what gives rise to these differences. Moreover, a descriptive snapshot of differences that distinguish particular economies is not helpful in explaining why cities will differ in their endowments of human capital and other factors over the long run. The laws of supply and demand suggest that workers who live in a region where their human capital is abundant ought to have their wages bid down in that location, while workers

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\(^9\) Though Southern California’s abundant sunshine and varied scenery reportedly had considerable appeal in the early days of filmmaking, the shift from the east coast of the U.S. to Hollywood was premised as least as on filmmakers’ desire to avoid paying patent dues to Edison, the inventor of the first motion picture device, the Kinetoscope. Moreover, sunshine quite evidently has little to do with the resilience of the filmed entertainment sector, which has preferred indoor film shoots, offering a controlled environment.
will earn high wages when they embody capabilities that are locally scarce. When mobility is relatively cheap, as it is between cities inside a country (and cheaper still within state boundaries), workers earning low wages ought to be seeking out other regions where their skills are in high demand in order to improve their earning power. This sorting process should gradually eliminate such differences. Leamer (2012) points out, in this regard, that our core modern theory of comparative advantage and economic development (the Stolper-Samuelson model) suffers from an internal contradiction when it comes to explaining the sources of economic divergence. On the one hand, it holds that the underlying characteristics of places – notably their technologies and factor endowments – are fixed, but on the other, it holds that capital, labor and knowledge are mobile. But in reality, the mobility of such factors is gradual – it takes a long time and a lot of such mobility to even out development between economies, and even within a country, such mobility has its limits. On the other hand, technologies and factor endowments and tastes are not fixed in the long run; places change and learn and develop in the kinds of production they can carry out. These structural changes are a principal concern of a theory of the dynamic process of economic development.

However, and here we have another one of the core complexities of thinking about development, in the short- to medium-run, there are forces that make certain kinds of development “sticky” in places. The principal force that makes activities sticky in places is economies of scale, when the cost reductions to carrying out a lot of production in one place are greater than the costs of serving distant markets. There are many forms of such scale economies, ranging from the size of individual facilities (offices, factories, warehouses), to something much more subtle and important: agglomeration economies (Krugman, 1991a,b; Fujita and Thisse, 2002; Thisse, 2010).
Agglomeration economies are advantages gained as a result of the spatial concentration of collections of firms. A long line of research argues that there are at least three important reasons for firms in the same industry to cluster together in space: sharing, matching and learning. ‘Sharing’ refers to advantages gained by firms that are related through their supply chain when they locate together; such advantages include reduced transportation costs for parts and other intermediate goods. ‘Matching’ means the benefits for workers and firms when there is sufficient concentration of each in a particular location because then firms can easily find appropriately-skilled workers to hire as needed, and workers have many potential paid opportunities to practice their craft. ‘Learning’ refers to the notion that, even in the internet age, some new and complicated ideas can be shared much more easily over relatively short distances. The ease of interpersonal interaction in cities affords concrete economic benefits. These three advantages depend upon proximity, and firms co-locate in order to seize upon them. Viewed through the lens of agglomeration, both Hollywood and Silicon Valley persist, in no small way, because workers and firms in these industries reap such proximity-specific advantages mainly in Los Angeles and the Bay Area, and not in other cities and regions (Puga, 2010).

This observation leads us back to Leamer’s (2012) point that any theory of development has to have its time frameworks right. Agglomeration economies don’t change very fast, in contrast to the rate at which labor and capital can migrate from place to place. This means that, in the short- (and some cases, the medium-) run, regional specialization that is driven by agglomeration economies will strongly mark the performance of the regional economy, and have a strong effect on the sorting of factors – capital and labor – into and out of the place. As a result, certain locations will host dense, high-wage agglomerations, while others will contain lower-paying industries. Differences in specialization constrain the mobility of workers: if one is trained to work in a particular sector that is concentrated in only a few locations, the choice set of
potential migration destinations is limited, unless s/he is willing to retrain and change professions. Wage and income inequality between metropolitan regions – divergence in real and nominal terms – will thus be significant and persistent.

Table 1.4: Contrasting Three Theoretical Frameworks for the Study of Economic Development: IDS, RSUE & EG

<table>
<thead>
<tr>
<th>Development Studies (IDS)</th>
<th>Basic Causes of Development</th>
<th>Convergence/Divergence</th>
<th>Sorting (external causes) versus interaction (local causes)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Factors, institutions, Trade, factor mobility, policy, technology</td>
<td>Trade, factor mobility for convergence; but many institutional, cost, technology barriers</td>
<td>Both</td>
</tr>
<tr>
<td>Regional Science/Urban Economics (RSUE)</td>
<td>Sorting of people, housing markets, factor costs; congestion costs; amenities/environment</td>
<td>“real” wage/utility convergence: population versus income tradeoff</td>
<td>Sorting more than interaction; interaction of individuals more than firms</td>
</tr>
<tr>
<td>Economic Geography (EG)</td>
<td>Trade and transaction costs of industries; agglomeration forces; local (“home”) markets; specialization of production; institutions and history matter</td>
<td>Tension between convergence forces and divergence due to innovation, new industries</td>
<td>Interaction among firms, between firms and local environment as important as sorting</td>
</tr>
</tbody>
</table>

EG concentrates not just on the short-term stickiness of regional specialization, but also on longer-term, dynamic sources of divergence. First, and mirroring an issue which is central to IDS, countries and regions that specialize at the upper tail of the economy’s skill hierarchy are likely to have very high nominal and real incomes, in turn giving them superior long-term capacity to invest in innovation. Second, regions and countries that are lower down the income hierarchy have initial advantages of backwardness that help them to close some of the gap to more highly developed countries and regions. But as the advantages of low costs are progressively reduced by initial success, all economies face the challenge of how to keep moving up the hierarchy of functions and skills in a way that compensates their rising factor and living
costs, leading to a very common problem known as the “middle income trap,” where it becomes much more difficult and selective to get into the top tier of countries or regions (Amsden, 1992, 2001; Wade, 1990; Pomeranz, 2000).

The three approaches discussed above are summarized in Table 1.4. Each has important potential contributions to make to the study of comparative regional economic development. By analyzing divergence of two major economies in detail, our ambition is to shed light on how well they do as frameworks for explaining economic development.

**Institutions and Regional Development**

There is another important perspective on economic development that cuts across the three bodies of theory discussed above. Most economic approaches to development admit that “institutions” can shape the ways economies operate, in many different ways. They can shape the geographical sorting of different activities to different regions, that leads to specialization; they shape dimensions of the ways labor markets operate; institutions include the structure of governments and their formal policy-making functions, which in turn shape economies (Rodrik et al, 2004; Acemoglu et al, 2004; North, 2005). As we shall see, we believe that institutions play an important role in the analytical story of divergence that unfolds in this book. But since regions are highly open economies and societies, their institutions are porous to the institutions of the the country of which they are a part. Moreover, regions do not exist as separate scales of government, so their formal institutions are a kaleidoscope of many local, overlapping and conflicting authorities, overlain by the powers of states and the federal government. We shall

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10 In order to avoid any possibility of confusion, we do not claim that metropolitan Southern California is in the middle income trap. The region long-ago passed through this stage of development, to become one of the wealthiest metropolitan regions in the United States. The problem it is facing now is downward mobility in the income ranks of regions. The middle-income trap is a widespread problem for developing countries and currently faces a number of growing metropolitan regions in the American South and Intermountain West.
consider all these in due course. In addition, we shall see that another sense of “institutions” will be important to the analysis. It comes principally from economic sociology, and stresses the ways that deep, but not readily apparent forces, in the form of networks of various kinds of actors, from elite leadership down to local communities, and intertwined with a variety of perceptions, beliefs and practices that underlie what such networks do at critical moments in the process of economic change, influence the pathway of development (Granovetter, 2001, 2005; Padgett and Powell, 2012).

The book

The divergent economic trajectories of the San Francisco and Los Angeles metropolitan regions has had important implications for individuals, families, communities, firms, and governments. Had Southern California maintained its position as the fourth wealthiest metropolitan area in the United States, its economic output and per capita income would be almost a third-higher today than they are as of this writing. By extension, government receipts – at a constant level of taxation – would be much higher, allowing greater per capita investments in education and many other kinds of public goods and services. If the San Francisco Bay Area had not been economically resilient in maintaining its position at the top of the income hierarchy, and had instead fallen down the ranks of metro areas, it would have suffered reduced individual and public welfare effects and would today be in the position of needing to make the adjustments necessary to do better. Entrepreneurs in both these regions can draw on some of the world’s deepest reservoirs of talent when they launch into new areas of the economy; but as we shall show, the Bay Area has positioned itself much more strongly with respect to the organizational and relational resources that are key to the new economy than has Southern California; this is in part a collective problem, not merely one of individual entrepreneurial talent or imagination.
Social science correctly sees economic outcomes for individuals and families as shaped by the interaction of their individual strategies (education, health, migration), and the environments in which they find themselves. Over the medium-run time horizon of development that is analyzed in this book, the majority of people grow up, get educated, and work in the region in which they started out. Along many different lines, when all else is equal in terms of individual or family skills, effort and background, we will show that it is better to be in an economy that is collectively more successful than another, whether this be national or regional in scale.

The analysis will begin by analyzing in greater detail the basic components of divergence. In chapter 2, we consider the evolution of the industrial composition of the two economies – specialization. In chapter 3, we do the same for the workforce, its skills and the kinds of jobs carried out and their wages. In these two critical chapters, we show that much of the similarity among economies that is argued to exist in the literature, dissolves away when we disaggregate capital (industries and firms) and labor (skills, tasks, individuals). Economies are more heterogeneous than they often appear to be. This is a fundamental lesson about economic performance and the potential for convergence, even in an increasingly inter-related world. In chapter 4, we then bring in detailed cases of industries and how they were transformed, and how they responded to challenges and opportunities over the study period. We show that the two regions had significant differences in the structural evolution of their economies, workforce and wage structure from 1970 onward. This leads us to argue that the two regions have developed very different basic organizational ecologies in the period under examination.

In the next part of the book, we look inside the regions, at the institutional frameworks that structure their economies. As noted, all the major theories of economic development hold that there is an interaction between external forces – technology, trade, factor costs – and the
internal conditions of organizing capital, labor, information, entrepreneurial networks, infrastructure, and policies. In chapter 5, we consider the most obvious dimension of this, economic development policies, and the role of the structure of governments and jurisdictions in possibly affecting the ability to carry out policy. In chapter 6, we turn to how the major organized actors in the two regions perceived their problems and opportunities and hence how they defined their policy agendas in this period of transition. In chapter 7, we compare the structures of business and civic networks, or what we call the “relational infrastructure” of the two regions. We want to know what kinds of networks of actors exist in the two regions and hence how they might cohere or compete around key tasks of mobilizing resources for development.

The final section of the book is devoted to connecting the causes that are identified in previous chapters. In chapter 8, we argue that the overall regional contexts – the deep regional collective spirits or zeitgeists, are actually quite different. We consider this an important insight, because it suggests that regions (or countries) that appear structurally quite similar might, upon closer analysis, be more different than is often realized. In chapter 9, on the basis of our case study, we reflect on the academic field of economic development analysis. In addition to what we learn about substantive causes of divergence, there are many lessons about methodology and data that emerge from a detailed comparison such as ours. And finally, no study such as this one would be complete without some reflection on how regions can maintain or improve their performance, which we offer in the final chapter.

**Literature Cited**


