THE CHALLENGE OF DEVELOPING THE CROSS-BORDER REGION'S TRADE INFRASTRUCTURE

Briefing Paper

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Executive Summary

This briefing paper continues the binational conversation initiated by San Diego Dialogue in the early 1990s concerning the trade infrastructure strategies, projects and institutional mechanisms best suited to improving San Diego/Baja California's global competitiveness. It addresses three questions regarding the future of trade infrastructure in San Diego and Baja California. First, why has trade infrastructure development historically been so difficult in the region? Second, given our historic reliance upon the Los Angeles airport, port and rail system, do we need substantial trade infrastructure development in the cross-border region? Third, if so, what can be done realistically both in the near term and long term to provide the infrastructure needed for global competitiveness?

Historical Challenges

There are several factors that have combined to retard the development of world-class trade infrastructure in our region:

- The major reason for our current infrastructure deficit is that, until recently, the San Diego/Tijuana region had an economy that was not oriented toward global trade.
- We have also organized trade infrastructure governance in the region in a fragmented, decentralized way. On the San Diego side, multiple single-purpose agencies govern various pieces of our trade infrastructure, rather than a centralized planning and decision-making process. In Baja California, there is no effective mechanism for partnering with the decentralized decisionmaking that currently governs trade infrastructure in San Diego.
- This situation has been exacerbated in recent years in Baja California by the twin forces of democratization and devolution. Despite the transfer of substantial authority over planning and development decisions to state and local agencies, Baja California continues to receive inadequate levels of funding from the national government and also lacks a capacity to independently generate financing at the local level. At the same time, substantial components of the state's infrastructure facilities, including Tijuana's airport and the management of the Port of Ensenada, have been placed in private hands.
- Both San Diego and Baja California rely primarily on Los Angeles to meet their trade infrastructure needs. One could argue that until recently the cross-border region's reliance upon the Los Angeles port, rail and airport system was efficient. However, our reliance upon L.A.'s trade infrastructure is both a blessing and curse. The concentration of world-class facilities in the Los Angeles area has been a genuine obstacle to building our own. Today critical components of the Los Angeles system, particularly Los Angeles International Airport, risk being overwhelmed by macro-regional demand. Absent new airport development, the entire Southern California region is facing an airport capacity crisis in the next 10 years.

Do We Need More Regional Trade Infrastructure?

There are modest indications of growing demands on our region's trade infrastructure. On balance, one can conclude that <u>if</u> appropriate local infrastructure is built and <u>if</u> trade-based business development occurs, forecasts for the cross-border region show a robust trade future. In particular, an international airport will be critical if our region wants to facilitate high-tech development.

A rationale for expanded and strengthened trade infrastructure stems from at least three sources:

- A high-technology-focused economic development strategy requires new airport capacity**.** Given the looming Southern California airport capacity crisis, and the political difficulties of expanding L.A.-area airports, serious cross-border efforts must be initiated to develop new airport capacity in San Diego and/or Baja California.
- Regional infrastructure investments, particularly in air cargo, appear to be a prerequisite for building a sustainable, high-value-added manufacturing sector that integrates the competitive advantages of both sides of the border.
- Developing globally competitive trade infrastructure can be an important part of a regional strategy to expand economic opportunity to all of our region's citizens. Strong multi-modal and inter-modal infrastructure facilities, particularly hub airports, can help to catalyze high-wage employment opportunities, both in high technology and in related sectors that revolve around the operation of transportation systems.

Policy Recommendations

Given these realities, the cross-border region should pursue the following steps to build the infrastructure necessary to realize our potential as a trading region.

1. Develop an effective governance system to balance competing interests and advance planning and development of trade infrastructure in San Diego County.
2. Create an effective and sustained regional voice in the planning and operation of the land ports of entry. This means an ongoing dialogue with federal agencies in both Mexico City and Washington. that is led by local civic and political leadership.
3. Establish an effective means of planning port, rail, airport and port-of-entry development for San Diego and Baja California. This effort must include an integrated trade and economic development strategy as well as a trade infrastructure strategy. To date, none of the efforts to build international trade infrastructure have been part of a consistent cross-border strategic vision for the region.
4. Invent new mechanisms to help the region leverage its combined development potential in order to finance and build essential elements of a trade infrastructure system in Baja California. The region should not rely solely on the federal-local dialogue between Mexico City and actors in Baja California to resolve the development challenges facing us as a cross-border region.

Introduction

This briefing paper continues the binational conversation regarding trade infrastructure strategies, projects and institutional mechanisms best suited to improving the cross-border region's global competitiveness. Initiated by San Diego Dialogue in the early 1990s, the conversation has been wide ranging. It has included discussions of a possible binational airport; a study of binational economic development and transportation infrastructure needs; a proposed binational planning process and border development corporation; and an analysis of the global logistics revolution and the importance of air cargo airports to regional competitiveness.[1]

Specifically, this effort builds upon and extends the February 1999 Dialogue-sponsored strategic analysis of the region's trade infrastructure challenges.[2] That study's major findings were as follows: While currently a trade laggard relative to the Bay Area, Seattle and Los Angeles, the cross-border region has significant unrealized trade potential. However, the San Diego/Tijuana area lags behind other West Coast trade centers in both infrastructure capacity and expansion plans. Lindbergh Field's lack of adequate international, long-haul and air cargo capacity results in significant opportunity costs--up to $4 billion to $5 billion annually--to the region's economy. Yet if appropriate local infrastructure is built and trade-based business development occurs, forecasts for the cross-border region show a robust trade future. In particular, international airports are critical for regions such as San Diego seeking to facilitate high-tech development. In the near term, highway development and efficient land ports of entry also are critical because the San Diego/Tijuana trade flow is predominantly "north/south." This is particularly true for the maquiladora industry, which relies upon truck transportation to ship its consumer electronics products to Western U.S. markets. Highly fragmented governance systems on both sides of the border impede binational cooperation in infrastructure planning and management.

This paper addresses three questions. First, why has trade infrastructure development historically been so difficult in the region? Obvious examples are finding a replacement for Lindbergh Field and rebuilding a direct rail connection to the east. Answering this question is a useful step on the path to better results. Second, given our historic reliance upon the Los Angeles airport, port and rail system, do we need much trade infrastructure development in the cross-border region? Third, if so, what can be done realistically both in the near term and the long term to provide the infrastructure needed for global competitiveness? The focus here is upon transportation systems--airports, highways, border crossings and railways--rather than telecommunications. While San Diego is on the cutting edge of the telecommunications revolution, it remains at serious disadvantage with its limited airport, rail and port facilities. Telecommunications' trade potential is a

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[1] See San Diego Dialogue, *San Diego's Airport Options* (1991); *Planning for Prosperity in the San Diego/Baja California Region* (1993); and *Improving Trade Infrastructure for a More Competitive Binational Region* (1998).
[2] See Steven P. Erie, *Toward a Trade Infrastructure Strategy for the San Diego/Tijuana Region* (San Diego Dialogue, February 1999).

topic worthy of an extended regional conversation. Also meriting separate discussion are other important regional infrastructure issues such as water and energy development, which vitally affect the cross-border economy.

Understanding Our Infrastructure Deficit

A major reason for our current infrastructure deficit is that, until recently, the San Diego/Tijuana region had an economy that was not oriented toward global trade. Thus, we had little need for an international airport, port and rail system. Instead, the region relied upon Los Angeles' trade infrastructure. Until the end of the Cold War, the San Diego economy was heavily based upon the defense industry. Our harbor facilities served the Navy and a once-vibrant fishing industry. As tourism grew, harbor development featured hotels, restaurants and retail shops. Visitors mostly came (and still do) from Southern California. High-tech development in the 1980s and early 1990s mostly featured research and development rather than manufacturing. Thus there was little need to develop our airport system to attract tourists or move products to market. In Baja California, the growth of the television-based maquiladora industry since the 1980s has required only good highways in the U.S. for outward-bound trucks. Similarly, most of the tourists coming to Tijuana arrive by automobile.

The decision-making of the San Diego Unified Port District reflects these economic realities. Created in 1962 to permit financing and development of the 24th Street terminal in National City and relieve San Diego's overcrowded 10th Avenue facility, the Port District took over Lindbergh Field because of its location on the tidelands. Until the mid-1990s, the Port District pursued a lease income rather than regional development strategy. It concentrated upon commercial development of the waterfront--serving the tourist industry--rather than airport and port expansion. As a consequence, San Diego entered the 1990s with 1950s-era airport and port facilities. However, since the mid-1990s, with defense downsizing and the growth of the new economy, the Port District has made airport and maritime master planning a high priority consistent with a regional development orientation, rather than focusing on revenue maximization.

A second reason for the deficit has to do with the way we have organized trade infrastructure governance in the cross-border region. In San Diego, this governance is highly fragmented and decentralized, exacerbating collective action problems. Airport, port and rail development decisions are made by limited purpose special authorities--the Port District and the Metropolitan Transportation Development Board--rather than by centralized city agencies as is the case in Los Angeles, Long Beach, San Francisco and Oakland. Institutional fragmentation appears greatest in regional airport planning. The San Diego Association of Governments (SANDAG) is responsible for regional airport planning and siting decisions. The Port District manages Lindbergh Field, while the City of San Diego has responsibility for Brown Field. While there now is growing cooperation between these agencies, past inaction has led to reform proposals such as State Sen. Steve Peace's regional infrastructure and transportation agency (RITA), which would consolidate six different state-created local government entities, including the Port

District, the Metropolitan Transit Development Board (MTDB) and SANDAG. Another proposal, the San Diego Regional Airport Authority, would consist of the major political subdivisions affected--the City of San Diego, San Diego County, the Port District, SANDAG and their Mexican counterparts in Baja California.

In northern Baja California, where the governance system is in transition, there is a different set of collective action problems. A once-unitary system, where key decisions were made in Mexico City, is slowly being transformed by the twin forces of democratization and devolution. Yet uncertainties and constraints surrounding decentralization make binational cooperation elusive at the grassroots. This is particularly true with respect to municipal financing. With inadequate levels of local funding provided by national and state authorities, and no capacity to independently generate financing at the local level, infrastructure development is constrained. The absence of adequate local financing in Baja California creates an unequal stage for exploring opportunities for binational cooperation around particular projects. Also missing is a regional transportation agency. SAHOPE, the transportation agency for northern Baja California, is a state agency with overall responsibility for planning and funding of roads and other public works, but not ports, railroads and airports. One of the challenges in developing coordinated transportation planning across the border is that Baja California does not have a metropolitan council of governments such as SANDAG. An additional development and coordination challenge is posed by the fact that Mexico's ports, rail and airport systems are being privatized. To date, the Port of Ensenada and Rodriguez Field have been placed in the hands of private operators. However, the auctioning of the Mexican portion of the San Diego and Arizona Eastern line has had to be delayed and reopened.

A third reason for the cross-border region's deficit is our close proximity to Los Angeles. Early on, Los Angeles pursued a regional growth strategy based upon extensive infrastructure investments. As a result, L.A. built a world-class international port, rail and airport system. This complex serves as the Pacific Rim transportation hub not only for the L.A. region but also for San Diego and Imperial Counties and northern Baja California. Owing to its physical constraints--limited acreage, a single 9,400-foot runway--Lindbergh Field is unable to meet one-quarter of the region's current air passenger demands and two-thirds of its air cargo demand. A significant share of San Diego's air transportation demand--particularly cargo--is met by Los Angeles International and Ontario Airports. Similarly, approximately 90 percent of the vessel cargo shipped to and from the cross-border region travels through the Ports of Los Angeles and Long Beach. For example, the maquiladora industry has traditionally shipped most of its component parts from East Asia through the San Pedro Bay ports, where they are transported by truck to border plants. Lacking a direct rail connection to the east, the cross-border region's rail shipments are routed through Los Angeles, which has three transcontinental lines linking its ports with the rest of North America.[3]

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[3] See Steven P. Erie and Edward Rodriguez, *Facing the Challenges of Expanding Southern California's Global Gateways* (Pacific Council on International Policy, 1999).

One could argue that until recently the cross-border region's reliance upon the Los Angeles port, rail and airport system was efficient. These are world-class facilities offering a breadth of service unavailable locally. Accessible to this region, these facilities have reduced the need for sizable local capital investments. The Ports of Los Angeles and Long Beach are the nation's two largest container ports; combined, they are the world's third busiest facility, handling one-quarter of the nation's international waterborne commerce. L.A.'s rail lines, with the best connections on the Pacific Coast, handle nearly 70 percent of total West Coast vessel cargo shipped by rail. LAX is the world's fourth busiest airport and second busiest air cargo facility.

Yet our reliance upon L.A.'s trade infrastructure is both a blessing and curse. The concentration of world-class facilities in the Los Angeles area has been a genuine obstacle to building our own. Trucking products to and from the San Pedro Bay ports is cheaper than putting them on a train. Consolidating air cargo containers in L.A. leads to cheaper shipping rates there than anything San Diego can offer until we reach volumes many times more than what we have now. Similarly, the sheer volume of international passenger traffic in and out of LAX allows for a frequency of flights and lower fares than San Diego could achieve in decades, even if we built a new international airport tomorrow. The region's businesses have every reason to continue to rely upon Los Angeles for their international connections.

Today, Los Angeles is in the midst of an ambitious trade infrastructure development program, affecting incentives for cross-border port, rail and airport development and collaboration. These projects include (a) the $4 billion program of Los Angeles and Long Beach port development; (b) the $2.3 billion Alameda Corridor separated-grade rail project linking the ports to the downtown railheads; (c) the newly proposed Alameda Corridor East rail projects from the downtown railyards through the San Gabriel Valley and northern Orange County to San Bernardino/Colton; (d) the $8-12 billion LAX Master Plan; and (e) Ontario Airport expansion and proposals to convert El Toro and other former military bases such as March Air Force Base into international and air cargo airports. These projects deserve careful scrutiny by this region's policymakers and stakeholders.

L.A. port and rail expansion is furthest along and generally remains on schedule. Given consolidation both in the shipping and port industries, the San Pedro Bay ports have emerged as the region's load center ports, limiting local ports such as San Diego and Ensenada to smaller niche markets. With construction under way on the Alameda Corridor rail project, the L.A. area ports are consolidating their dominant market share of Pacific Rim trade. The Alameda Corridor East rail projects will feature separated-grade out of Southern California, which could facilitate the movement of San Diego rail cargo heading east on the Burlington Northern/Santa Fe line. While it may be efficient for the cross-border region to continue to reply upon L.A. port and rail facilities, this strategy is not without its tradeoffs. By piggybacking upon L.A. facilities, San Diego and Tijuana forfeit a measure of control over their economies.

However, L.A. area airport development is fraught with delays and uncertainties. In particular, LAX expansion and competitiveness are highly uncertain. Already long delayed, the LAX Master Plan faces strong community and environmental opposition. At $8 billion to $12 billion, this is the nation's most expensive airport development program, and the airlines plan to pass the costs on in the form of higher fares. Ontario Airport faces state air-quality ceilings on flight operations, which quickly are being approached. While the Orange County Board of Supervisors has approved El Toro, a former Marine air base, as an international airport capped at 24 million annual passengers, a recent voter-approved initiative has placed its future in serious doubt. Measure F, passed overwhelmingly by Orange County voters in March 2000, would require a two-thirds voter majority for El Toro to become a commercial airport. With growing freeway congestion, ground access to L.A. area airports is a serious problem. Regional transportation planners estimate that travel times nearly will double by 2020 on already-crowded thoroughfares such as I-405, I-5, I-15, SR 91 and I-10 that link the cross-border region to LAX, Ontario and other Southern California airports.

Absent new airport development, the entire Southern California region is facing an airport capacity crisis in the next ten years. The seven commercial airports of Southern California (including Lindbergh Field) comprise only 8,400 acres. In contrast, Denver International Airport is 34,000 acres, Dallas/Fort Worth 18,000 acres, and Chicago/O'Hare 7,700 acres. Existing runway capacity for the SANDAG region is approximately 20 million annual passengers (MAP), and for SCAG region airports 118 MAP. With SANDAG air passenger projections exceeding 28 MAP by 2020 and SCAG passenger forecasts approaching 160 MAP, the existing regional airport system will reach its capacity around 2010.

Do We Need More Regional Trade Infrastructure?

The question for the cross-border region today is whether our economic activity has changed sufficiently, or is likely to change sufficiently, to make reliance upon Los Angeles' port, rail and airport system no longer adequate. There are modest indications of growing demands on the region's trade infrastructure. As a result of the North American Free Trade Agreement (NAFTA) and Mexico's free trade agreements with Central and South America, a few large maquilas (e.g., Sony, Sanyo) are beginning to ship their products south and are experimenting with the Port of Ensenada for that purpose. Yet, while San Diego high-tech and biotech companies are more involved in production and distribution worldwide, it appears that very little of this production currently takes place in the San Diego/Baja California region. International tourism also is growing modestly, and the convention center is drawing more people from afar.

As James Curry points out in his companion briefing paper, globalization is restructuring the economies of San Diego and Tijuana, although in different ways. In terms of the core electronics industry, "San Diego is increasingly a center for knowledge-economy activities such as product research and development standards management, while Tijuana is increasingly involved in the manufacture of the tangible goods [e.g., consumer electronics such as television sets] associated with knowledge economy functions"[4]] For the cross-border region to be a major personal electronics manufacturing center, much will depend upon whether manufacturing in Baja California can be adapted to the needs of San Diego's high-tech industries. As Curry notes, at present "Tijuana and San Diego lacks a broad base in such areas as advanced contract manufacturing and supply chain logistics management which characterize electronics manufacturing regions. The region also lacks sufficient cargo transport (particularly air cargo) infrastructure to support these kinds of functions."[5]

Given these trends, an argument could be made for the cross-border region's continued reliance upon Los Angeles' trade infrastructure. Considering that L.A. port and rail development is on schedule, there appears to be little need for comparable projects in San Diego. At the Port of San Diego, there is insufficient outbound maritime product to entice container ships and insufficient inbound train cargo to bring rail rates down to the point where they would be competitive with trucking. However, one promising regional port development is containerization at the Port of Ensenada and that port's experimental use by the maquilas to ship their products to South American markets.

Yet the looming Southern California airport capacity crisis may prove to be the Achilles heel of a successful global engagement not only for the cross-border region but for metropolitan Los Angeles as well. Given the political difficulties of expanding L.A.-area airports such as LAX and Ontario that our region currently depends upon, cross-border efforts need to be redoubled to develop new airport capacity and to create the governance arrangements encouraging airport planning and development.

As a recent study of a proposed El Toro airport shows, airports can be potent catalysts for high-wage, high-tech economic development. That study concluded that high-tech catalytic development represented nearly 20 percent of the total airport-related jobs likely to be created by year 2020; 60 percent of the catalytic jobs were higher wage, e.g., over $60,000 per year.[6] Airports, particularly international hub airports, act as attractors or magnets for development that occurs around them. The impetus here is the desire of businesses and travelers to take advantage of the convenience and cost savings afforded by close proximity to air transportation.

The availability of convenient, frequent and cost-effective air travel has become a primary criterion for many businesses in deciding where to locate or expand. This is especially true of high-tech businesses, knowledge-based service industries and headquarters of multinational corporations. It is no coincidence that these types of enterprises flourish in proximity to major international hub airports. The catalytic effects of new airports also extend to existing businesses, which are more inclined to expand due to greater access to air transportation. In Southern California, the benefits of catalytic

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[4] James Curry, "San Diego/Tijuana Manufacturing in the Information Age," (May 2000), p. 2.
[5] Curry, "San Diego/Tijuana Manufacturing….," p. 3.
[6] Steven P. Erie et al, *A New Orange County Airport at El Toro: Catalyst for High-Wage, High-Tech Development* (Irvine, CA: Orange County Business Council, September 1999).

development are expected to increase significantly over the next twenty years in the face of escalating airport ground-access travel times due to highway congestion.[7]

Research shows that there is a strong correlation between the presence of a hub airport and growth of high-tech centers (such as Silicon Valley, Austin TX, Raleigh NC, and Fairfax County VA). Examining 312 U.S. metropolitan areas, Kenneth Button and Roger Stough found that the existence of a hub airport increased an area's high-technology employment by an average of over 12,000. Furthermore, hub airports accounted for nearly two-thirds of the variation in high-tech employment across the metropolitan areas surveyed.[8] International hub airports also are critical for growing service exports and associated jobs -- e.g., in tourism, business and consulting services, which represent one-quarter to one-third of total export activity.

It should be noted that the cross-border region's unrealized trade potential depends upon more than building additional trade infrastructure such as airports. As shown by both the Curry briefing paper and Dialogue's current workshops on the future of personal electronics manufacturing in the region, realizing our trade potential also depends significantly upon (a) whether San Diego's high-tech and biotech companies find effective ways to manufacture their products within the region; and (b) whether Baja California can shift its consumer electronics manufacturing into new product areas that go beyond TVs and VCRs trucked into the United States. Neither of these manufacturing platforms, which are closely related, is likely to be established without considerable cross-border cooperation. However, as Curry notes, they appear to require regional infrastructure investments such as new air cargo capacity.

Policy Recommendations

In these debates about developing a greater integrated cross-border manufacturing sector and the role of airports as catalysts of high-tech, high-value added, export-based economic development, we should not forget the importance of maintaining and developing the trading economy we now have, which depends mightily upon moving people and goods efficiently back and forth across the border. While recent efforts such as accelerated federal and state funding for the widening of State Route 905 from I-805 to the Otay Mesa port of entry are to be applauded, much more needs to be done. As Curry notes, "initiatives which make the border less of a barrier are imperative. The regional case for an economically transparent border should be asserted to federal authorities in both the United States and Mexico."[9]

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[7] Erie, *A New Orange County Airport*, p. 2.
[8] Kenneth Button and Roger Stough, *The Benefits of Being a Hub Airport City: Convenient Travel and High-Tech Job Growth* (Fairfax, VA: Institute of Public Policy, George Mason University, November 1988).
[9] Curry, "San Diego/Tijuana Manufacturing…," p. 3.

The Ports of Entry

There is a pronounced need for an effective regional voice involved in the planning and operation of the land ports of entry (POEs). In terms of informal civic networks of influence, the situation today is worse than it was five years ago. Many of the institutional champions who consistently sought regional perspectives on governance decisions related to the POEs have left their positions. At the very least, we ought to put our minds and political will together to work toward solving this vexing trade infrastructure governance problem.

Making the ports of entry work is basic to any larger trade vision, and as a region we have not really put our heart and soul into it. It requires high-level political leadership working on the problem in Washington and Mexico City. This is not going to be easy, because currently INS funding is focused upon the Canadian border and the U.S.-Mexico border currently does not have the immigration problem that resulted in so many resources during the last presidential election. Perhaps the region needs to create a joint mayoral/congressional/private-sector task force on each side of the border that could work together on a federal strategy. The border is a chief asset of this region in terms of its global engagement, and we have to be willing to invest in that asset to make it work better for us. The federal government may be ready to share some control over the border if the region steps up on the planning and financing side.

The ports of entry are a small but exemplary piece of the larger governance problem. We need to create an effective means of planning port, rail, airport and POE development for San Diego and Baja California. This effort must include an integrated trade and economic development strategy as well as a trade infrastructure strategy. To date, none of the efforts to build international trade infrastructure have been part of a unified, strategic vision for the region. In fact, San Diego and Baja California never have sat down together to figure out how best to integrate the manufacturing and high-tech sectors in the region, and what transportation facilities any particular strategy of integration would require. Consequently, infrastructure planning and development has been fragmented, sporadic and difficult to explain to the public. One of the functions of San Diego Dialogue’s Global Engagement initiative should be to catalyze such a comprehensive cross-border strategic planning effort.

The Importance of a Gateway Airport

Regardless of manufacturing's future here, for regions such as San Diego/Baja California seeking to develop high-tech, knowledge-based economies, access to gateway airports appears to be critical. Research by David Birch shows that high-tech, knowledge-based economies rest on three pillars: (a) a world-class research university; (b) superior quality of life; and (c) proximity to an international airport.[10] San Diego possesses the first two pillars, but access to the third--e.g., LAX--is threatened. In terms of the air transportation needs of the new economy, research on the proposed El Toro

[10] David L. Birch, "The Q Factor," *National Civic Review* 76:4 (July/August 1987); and Cognetics, Inc., *Entrepreneurial Hot Spots: The Best Places in America to Start and Grow a Company* (1993).

airport in Orange County, where the knowledge industry is a major driver of the local economy, suggests that the relationship between information technologies and air travel is more one of synergy rather than of substitution. SANDAG's 1996 air transportation study comes to a similar conclusion for this region. While information technology streamlines order-taking, accounting, internal operations and production, air travel still is needed to make business contacts and close deals.[11]

Even in a knowledge-based economy using technologies such as teleconferencing, there are few substitutes for face-to-face meetings. A recent passenger survey at LAX indicated that a majority of business travelers who used teleconferencing began to fly more after being introduced to the technology. In Orange County, computer-based companies have among the highest air travel rates, airport travel time sensitivities and air cargo utilization rates of any industry. Orange County's high-tech workers have nearly four times the air travel rate compared with the average. They are 60 percent more sensitive to airport travel times. Orange County's high-tech businesses also have the highest requirements for overnight and express air cargo delivery--27 percent above the regional average.[12] Our region’s need for an effective gateway airport facility remains pronounced and growing.

Governing Trade Infrastructure Development

In terms of trade infrastructure governance, there now is a serious debate about how best to accomplish critical tasks such as airport development. Sen. Peace's RITA proposal has been a valuable catalyst. Its supporters argue that lacking an integrated regional transportation agency such as RITA, the political will to plan on the scale that is needed is likely to be lacking. The mayoral race has resurrected yet another reform proposal, which is to create a single-purpose regional airport authority to plan, site and operate a new international airport. Others argue that the answer to greater coordination involves informal cooperation rather than formal mechanisms. They believe that notwithstanding the Port District's past failings, there now appears to be serious, sustained and comprehensive maritime and airport master planning. There also seems to be active cooperation on airport planning between the Port District and SANDAG. Given the geopolitics of San Diego, the problem is to develop governance mechanisms that can recognize the legitimate interests of local jurisdictions without giving them veto power over infrastructure projects serving the entire region.

Regardless of the governance system chosen, the challenges facing the region are daunting. At present we are a binational trading region with limited capacity for long-term planning and development on the Baja side, highly fragmented local planning on the San Diego side, and no mechanisms for effective joint planning. In San Diego we also face major facility constraints. Growing traffic congestion, land use and environmental constraints increase the difficulty of siting and developing an accessible airport or port

[11] Steven P. Erie et al, *A New Orange County Airport at El Toro: An Economic Benefits Study* (Irvine, CA: Orange County Business Council, October 1998); SANDAG, *Market Demand and Opportunities Study for Air Transportation in the San Diego Region* (March 1996).
[12] Data from Erie et al, A New Orange County Airport at El Toro, Table 3-7.

facility. In this regard, Baja California facilities such as Rodriguez Field and the Port of Ensenada offer fewer development constraints, which reinforces the growing need for joint facility planning across the border.

Finally, it might to be useful to ask what happens to us as a trading region if we don't adequately solve the interrelated manufacturing and trade infrastructure problems over the next ten to fifteen years. At least one part of the answer seems certain: our regional income distribution will look more and more like an hourglass. Recent research on the stimulating effects of globally competitive infrastructure development suggests that such facilities can create a broad and diverse mix of high value-added employment opportunities that pay competitive wages. It may be that the most effective way to “advantage the disadvantaged” at a regional level is to make proactive investments in the development of a world-class trade infrastructure system.

About the Authors

Dr. Steven P. Erie is an Associate Professor of Political Science at UC San Diego and a Senior Fellow at USC's Southern California Studies Center. He previously has taught at USC and SUNY Albany. Dr. Erie's current research addresses the demographic, trade and infrastructure linkages between Southern California, Mexico and the Pacific Rim. He is the author of two California Policy Seminar studies on these subjects--Paths to Political Incorporation for Latinos and Asian Pacifics in California (1993), and International Trade and Job Creation in Southern California (1996). His work on Latino and Asian Pacific American political empowerment and its international dimensions has appeared in The California-Mexico Connection, The Bubbling Cauldron, and Racial and Ethnic Politics in California.

Dr. Erie is actively involved in public policy debates in Southern California on issues of trade, infrastructure, regional development, minority empowerment, governance and public finance. He has spoken before numerous state and regional agencies, local business groups and civic organizations. In terms of governance issues, he is a co-author of the 1998 RAND study on L.A charter reform and serves on a San Diego charter reform advisory committee. Dr. Erie delivered the 1993 Bollens/Ries Public Affairs Lecture at UCLA, the 1998 Haynes Foundation Lecture and received an outstanding teaching award from UCSD in 1996. His book Rainbow's End won best urban book awards from the American Political Science Association and the American Sociological Association. Dr. Erie is a member of San Diego Dialogue, the Pacific Council on International Policy, the Metropolitan Forum Project, Water and Power Associates, and serves as a contributing editor to the Metro Investment Report.

Dr. Charles E. Nathanson is the executive director of San Diego Dialogue and has overseen its growth since 1991 as the leading forum for policy and research on the San Diego/Baja California region. Based at the University of California, San Diego, the Dialogue has an invited membership of about 150 individuals from San Diego and Tijuana, including business leaders, high-tech entrepreneurs, media representatives, educators, scholars and cultural and civic leaders.

Before joining the Dialogue, Dr. Nathanson held a variety of academic positions and was also a member of the press. He received his B.A. from Harvard University and his Ph.D. from Brandeis University. He has taught sociology at Brandeis, the New England Conservatory of Music and the University of California, San Diego. His journalism career included work as I.F. Stone's assistant at I.F. Stone's Weekly in Washington, D.C., and as an assistant city editor at the Detroit Free Press.