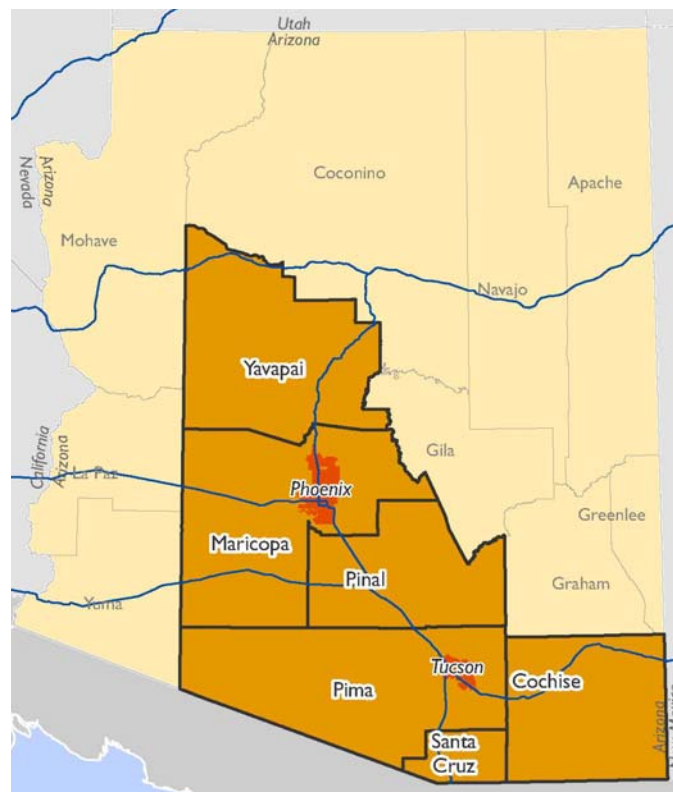




Mountain *Megas*

America's Newest Metropolitan Places and a Federal Partnership to Help Them Prosper

A Profile of Arizona's **Sun Corridor**



Arizona's Sun Corridor overtook Colorado's Front Range in the 1980s as the Intermountain West's largest urban space, and continues to experience remarkable growth as its economy matures and its population diversifies. This profile—a snapshot associated with the Brookings Institution report, "Mountain Megas: America's Newest Metropolitan Places and a Federal Partnership to Help Them Prosper"—describes some of the key trends facing **Arizona's Sun Corridor** as well as the critical challenges it must surmount in order to attain sustainable, robust, and inclusive growth. It also highlights a few areas of particular need for a more supportive, constructive partnership with the federal government.

Trends in America's Fastest Growing, Most Urban Region

The Sun Corridor is the largest megapolitan area in the Mountain West, with nearly 5.5 million residents in 2007. Its population is concentrated in Maricopa County, home to over 70 percent of the mega's residents. The Sun Corridor contains 87 percent of Arizona's population and generates over 90 percent of its gross state product. In short, what happens in the Sun Corridor determines what happens in Arizona. And much is happening there:

The Sun Corridor added nearly 2.4 million people between 1990 and 2007, the largest absolute population gain among the mountain megas. The Sun Corridor is also home to the Intermountain West's largest collection of "boomburbs" (Chandler, Gilbert, Glendale, Mesa, Peoria, Scottsdale, and Tempe). All of these boomburbs ranked among the 100 fastest-growing cities in the country between 2005 and 2006, with Gilbert and Peoria both in the top 10.

The Sun Corridor is growing with surprising efficiency, in part because it is one of the most growth-constrained megas in the five-state region. Federal and tribal lands make up more than 71 percent of its total land area, and more still are owned by the state. Consequently, the mega has grown densely, converting to urban use no more than 0.148 acres of rural land for every new housing unit constructed between 1980 and 2000 (vs. more than two rural acres for every new unit built in the lower 48 states as a whole).

The Sun Corridor's economy is not as productive as it could be, given its size. In 2005, average labor productivity

was almost six percent lower in the Sun Corridor than the national average, and lagged behind the Front Range and Greater Las Vegas. Productivity growth in the Sun Corridor also lagged the national average by more than 3 percentage points between 2001 and 2005, despite rapid growth in metro Prescott over this time. The mega's lower productivity was associated with lower than average wages in the high-value traded clusters of metro Phoenix and metro Tucson.

The Sun Corridor nearly matched the nation in the share of its jobs located in key export-oriented industry clusters. With 28 percent of its employment in traded clusters in 2005, the Sun Corridor trails just behind the national average of 29 percent. And with 15.5 percent of its employment in knowledge industries, the region also lags just behind the U.S. average of 16.0 percent.

The Sun Corridor is attracting immigrants as well as citizens from all over the country. Over 16 percent of domestic arrivals to the Sun Corridor in 2005 moved from California. This was followed by Texas, Colorado, Florida, New York, and Illinois. Fully 19 percent came from within the Intermountain West. The region's share of foreign-born residents increased by over 230 percent between 1990 and 2005, bring the total to 750,000. Metropolitan Phoenix is emerging as one of 20 "21st-century gateways" for immigrant arrivals, joining such areas as metropolitan Atlanta, Dallas, and Orlando.

Emerging challenges and opportunities

Looking forward, Arizona's Sun Corridor is projected to more than *double* in size to reach a population of 10.5 million residents by 2040. In accomplishing that, the area will need to produce upwards of 2.9 million new or replaced housing units to accommodate this change, meaning that *two-thirds* of the region's housing units in 2040 will have been added or replaced since 2005. The area may also add 3.2 million new jobs, requiring 3.8 billion square feet of new or replaced commercial space.

Such projections point to a huge opportunity for the Sun Corridor to improve on its current level of prosperity. However, in order to seize that opportunity the region needs to surmount a number of challenges.

These challenges revolve around securing the region's standing on four sorts of assets that play crucial roles in driving true prosperity.

INFRASTRUCTURE

The Sun Corridor is struggling to build out its transportation network fast enough to keep up with past growth and to accommodate new growth. No direct interstate connection links Phoenix and Las Vegas, and the existing two-lane highway (U.S. 93) is inadequate to carry the nationally-significant passenger and freight traffic between the two megas. The primary transportation artery between Phoenix and Tucson is overtaxed, and no adequate parallel transportation choices exist, such as regional rail. Similar

problems exist on the primary artery connecting Phoenix to Southern California. Transit service is underdeveloped in the Sun Corridor and the region's main airport (Sky Harbor) may soon reach capacity.

Global climate change poses threats to the Sun Corridor's water supply. With federal help, agricultural interests in the Sun Corridor built the Central Arizona Project (CAP) canals to bring Colorado River water to Phoenix. To get Congressional authorization for CAP, Arizona had to subordinate its claim to Colorado River water. In the event of a shortage in the Lower Basin, Arizona takes the first cut. This situation is particularly troubling given the massive projected increase in population over the next 30 years.

Energy transmission lines may also be inadequate to handle coming growth. In 2007, the Department of Energy identified nationally-significant weak spots in the transmission corridor connecting Phoenix and Southern California. Transmission will be especially important as the region transitions to large-scale renewable energy development and takes advantage of the huge solar potential in the Sun Corridor.

INNOVATION

The Sun Corridor's primary economic challenge is to improve on its middling productivity, which should bring gains in average wages and income. Strong recent immigration may help explain the Sun Corridor's lagging economic performance, as many immigrants have less education and skills preparation than native-born residents.

The Sun Corridor has relatively strong research capacity, which is critical for technological and economic growth. Its two major public universities—the University of Arizona and Arizona State University—spent \$738 million in R&D in 2006, and increased their expenditures by 87 percent since 1998 (vs. an 80 percent increase of spending at academic institutions nationally). Arizona State University has seen a strong return on its R&D investment in terms of invention disclosures, like patents, spending less than \$1 million per disclosure in 2004–06 (vs. U.S. average of \$2 million). The University of Arizona's return on R&D investment was more modest at \$5.4 million per disclosure in 2004–06, comparable to Colorado State University. Venture capital spending in the Sun Corridor was also lower than average in the Front Range and Wasatch Front, at almost \$5 per person in 2006 (vs. \$9 per person nationally). These assets suggest that continued focus on translating innovations into high-value jobs by patiently cultivating the region's array of export clusters offers a smart route toward enhanced prosperity.

HUMAN CAPITAL

In part because of heavy recent immigration, the Sun Corridor's educational gap between foreign-born and native-born residents is large. Educational attainment for the entire population in the Sun Corridor matches the national average (at 27.1 percent with a bachelor's degree vs. 27.0 percent nationally in 2005). Yet, 40 percent of the foreign-born residents in the Sun Corridor did not have a high school diploma and only 16.4 percent had a bachelor's degree in 2005 (vs. 32.4 and 26.7 percent nationally). In addition, 7.5 percent of Sun Corridor residents did not speak English well (vs. 4.8 percent nationally).

The number of Sun Corridor residents living in poverty has grown recently and income inequality has deepened. In 2005, more than 600,000 residents of the Sun Corridor lived in poverty and contributed to a 12.7 percent poverty rate (vs. 13.3 percent nationally). This rate increased 43.0 percent over 1990 levels, compared to just 21.1 percent nationally. The share of middle-income Sun Corridor families declined 8.2 percent between 1970 and 2005, while the share of lower-income families increased 2.6 percent and the share of upper-income families increased 6.6 percent.

QUALITY PLACES

Growth constraints in the Sun Corridor have led to compact, high density development. Still, the region struggles with urban design choices that make it auto-dependent, single use, and not linked up well to accommodate future public transportation. Fortunately, metro Phoenix is investing in developing a regional light-rail system that in its first phase will run 20 miles through downtown Phoenix, Tempe, to Mesa, and include stops at Sky Harbor Airport and Arizona State University. Another 30 miles has been funded as part of a larger package to support regional bus, light rail, and bike and walking improvements throughout the region.

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While megapolitan leaders may want to promote mega-scale responses to mega-scale problems, they are frequently hobbled because they lack the super-scaled governance institutions and networks needed to shape their futures. This is particularly noticeable around transportation infrastructure, which falls under multiple jurisdictions and planning organizations. In addition, an over-reliance on sales tax revenue in Arizona causes local jurisdictions and counties to compete amongst themselves for growth-related revenue. The Sun Corridor needs to move beyond

the dialogue about growth paying for itself to a dialogue about how to distribute the costs and benefits of growth

more equitably, and to the appropriate role for local, state, and federal government.

Toward a New Federal-Mega Agenda for the Intermountain West

As 2009 approaches, the moment is ripe for Sun Corridor and other Intermountain West leaders to forge a partnership with the federal government that will ensure this mold-breaking New American Heartland is better understood in federal policy discussions and can grow in ways that enhance its sustainability, economic productivity, and social inclusiveness.

To help shape that partnership, Brookings is working with Sun Corridor and other mountain mega leaders to explore a suite of federal policy options that will allow the megas to overcome their common challenges and assert their leadership in the nation and world. Ideally, this partnership will see Washington lead on the things only it can attend to, while otherwise empowering and supporting regional leaders and their decisionmaking. Limited but substantive and strategic federal engagement will be particularly important in helping the Sun Corridor secure its standing on the key drivers of prosperity: infrastructure, innovation, human capital, and quality places.

INFRASTRUCTURE

Bring the transportation network to scale, smartly. The Sun Corridor will need assistance creating better highway and rail links to Los Angeles and Las Vegas, adding multi-modal connections, and building out its public transportation system. The Sun Corridor is also considering creating a parallel highway corridor between Phoenix and Tucson with a rail component, which would significantly improve travel options and mobility within the mega while accommodating the massive, projected coming growth.

Enhance global connectivity. With appropriate support from its federal partner, the region must invest in expanding runway capacity or strategically developing a secondary airport (i.e., Phoenix-Mesa Gateway) to alleviate bottlenecks, both in passenger and freight travel. In addition, the federal government must invest in upgrading the antiquated air-traffic-control system. Washington can also play a critical role in facilitating relationships with international destinations, especially in Asia and Europe. Finally, the region also needs high-quality surface transportation links between airports and regional job and distribution centers, and should not have to invest in them alone.

Proactively address enormous resource needs, especially on water and energy. The Sun Corridor will need water and energy for an additional 5.3 million residents by 2040, while preserving its air quality and reducing its carbon footprint. At the same time, Arizona is projected to become warmer and drier and face growing energy transmission challenges. Washington will have to help by facilitating creative, collaborative regional water agreements and by investing in better data and models for climate, water, and energy. The federal government also needs to facilitate and support the expansion of the national energy transmission grid and extend federal tax credits and loan guarantees for alternative energy generation and adoption.

INNOVATION

Leverage sci-tech research capacities for economic development. The Intermountain West is well situated to pursue cutting-edge research and development work and then spin off innovative new businesses and good jobs, whether in biotech and IT or new renewable energy technologies.

Stimulate the growth and innovation of strong industry clusters. On this front, the federal government should not be in the business of “picking winners.” However, the federal government must support local efforts to boost and expand competitive industry clusters—a crucial seedbed of innovation, productivity, and quality jobs.

HUMAN CAPITAL

Deliver balanced, workable immigration reform. In the absence of federal immigration reform, border-states like Arizona have developed their own responses to the immediate pressures placed on their public systems by the massive influx of both legal and illegal immigrants. The federal government needs to aid Arizona and the region by passing comprehensive immigration reform. States and localities need to be reimbursed for some of the costs of failed federal policy. Efforts are also needed at the community level to improve integration for legal immigrants.

Support the creation of a capable, productive, and diverse middle-class workforce. The federal government should take on research and development on immigrant education as a core function of its education policies. The federal government should also do more to secure the pipeline to

post-secondary education. Finally, the federal government should boost the wages of lower income workers and their families by expanding and modernizing the earned income tax credit (EITC).

QUALITY PLACES

Invest in and encourage supportive public transportation.

The Sun Corridor is moving ahead with funding its transit needs largely without federal support. To ensure that the Sun Corridor's transit systems serve the needs of 10 million people by 2040, federal transportation policy must remove the policy and funding bias in favor of highways and loosen the purse strings for transit. The federal government should refine existing performance standards to ensure pedestrian-oriented design and multi-modal connectivity.

Incentivize energy- and resource-efficient land use and building design.

Federal transportation funding should be conditioned on appropriate state and local building codes, zoning, groundwater, and wildlife protection plans. Arizona's Groundwater Management Act is a good model and should be rewarded. Federal standards for resource sustainability should also be applied to federal land transfers.

Issue a sustainability challenge. This challenge, delivered in a competitive grant offer would challenge all regions to figure out—in exchange for added reward money and/or increased rule flexibility—the boldest, most creative, and

effective new ways to better link up disparate housing, transportation, environmental, energy, and land use policies to achieve sustainability goals, such as a reduced carbon footprint.

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Finally, to help megapolitan governance innovation in the Sun Corridor keep pace with on-the-ground realities, the federal government should provide a tactful mix of information and encouragement to help catalyze the emergence of more cross-boundary and mega-scaled problem-solving within and across U.S. megas. It could also lay down—in partnership with state government—a “governance challenge” analogous to the sustainability challenge aimed at inspiring megapolitan-area leaders to attempt deep-going experiments in organizing themselves to provide the most effective possible super-regional governance networks.

In sum, the time has come to make America's emerging new Heartland in the West the test-bed for the nation's next generation of supportive, far-sighted metropolitan policies.

Washington should work with Sun Corridor leaders to make the Sun Corridor one of the best connected, most prosperous model megas.

About the Metropolitan Policy Program at Brookings

Created in 1996, the Metropolitan Policy Program provides decisionmakers with cutting edge research and policy ideas for improving the health and prosperity of metropolitan areas including their component cities, suburbs, and rural areas. To learn more visit www.brookings.edu/metro

The Blueprint for American Prosperity

The *Blueprint for American Prosperity* is a multi-year initiative to promote an economic agenda for the nation that builds on the assets and centrality of America's metropolitan areas. Grounded in empirical research and analysis, the Blueprint offers an integrated policy agenda and specific federal reforms designed to give metropolitan areas the tools they need to generate economically productive growth, to build a strong and diverse middle class, and to grow in environmentally sustainable ways. Learn more at www.blueprintprosperity.org

About *Mountain Megas: America's Newest Metropolitan Places and A Federal Partnership to Help Them Prosper*

Prepared as part of the Brookings Institution's *Blueprint for American Prosperity* initiative, “Mountain Megas” describes and assess the new super-sized reality of the Intermountain West and proposes a more helpful role for the federal government in empowering leaders' efforts to build a uniquely Western brand of prosperity that is at once more sustainable, productive, and inclusive than past eras of boom and bust.

“Mountain Megas” studies five emerging megapolitan areas in the Intermountain West: the Sun Corridor (metropolitan Phoenix, Tucson, and Prescott), the Front Range (metropolitan Boulder, Colorado Springs, Denver, Fort Collins, and Greeley), the Wasatch Front (metropolitan Logan, Ogden, Provo, and Salt Lake City), Greater Las Vegas (metropolitan Las Vegas, plus Nye County, NV and Mohave County, AZ), and Northern New Mexico (metropolitan Albuquerque and Santa Fe, plus Los Alamos and Rio Arriba counties).

Learn more at www.brookings.edu/metro/intermountain_west.aspx

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