

# Economic Development in Pima County *Alternatives to the World View Enterprises Subsidy*

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## Executive Summary

In January 2016, the Pima County Board of Supervisors announced it would issue \$15 million in public debt to fund the design and construction of a balloon manufacturing facility and corporate headquarters for World View Enterprises, Inc., and a launch pad for high-altitude balloons, called Spaceport Tucson, to be operated by World View. In February 2017, just a few days before World View's publicly subsidized home was completed, a Pima County Superior Court judge voided the lease, saying the county violated Arizona law that requires counties to appraise government-owned land and lease it at close to the market rate.

As county officials prepared to appeal that ruling, they portrayed the legal challenge to the World View project as obstructionism. Government subsidies, they claimed, are necessary to improve the local business environment. Like many politicians, these officials argued that they will miss important opportunities for economic development if their community does not compete to attract firms with subsidies of one type or another.

As one official put it, "In the real world, economic development requires public-private partnerships to create job growth and community prosperity. The private sector will not be, and has not been, solely responsible for a community's economic health."

This paper identifies serious problems with giving public subsidies to individual firms, addresses and debunks misconceptions about economic development and discusses alternatives to World View-like deals that have the potential to encourage business location and expansion.

Economic development policies often are driven by political considerations rather than sound economic practices. The World View deal is a case in point. It is very difficult to pick a firm that is likely to succeed. Officials may mistakenly believe that their communities will be at a competitive disadvantage in attracting firms if they don't offer subsidies and other firm-specific benefits. Despite the lack of empirical evidence to support public subsidies to individual firms or efforts to cluster firms, projects move forward based on economic impact studies which assume without much evidence that the various aspects of the proposed business plans will be met.

There are limited, specific situations where local government can improve on private-sector outcomes. A political decision to redirect tax dollars so that benefits accrue to individual firms is not one of those situations. Pima County officials gave World View an exceptional deal. The company bears none of the costs if it fails in its effort or chooses to move elsewhere. That burden falls on taxpayers.

Policies that reduce a firm's costs of production and make the region attractive to potential employees should be the focus of development efforts in Pima County and Tucson. To spur economic activity, local governments have several alternatives to risky, World View-like deals. They include:

- Limiting unnecessary regulations that raise firms' costs and reduce their competitive position
- Revising zoning laws to facilitate location decisions and to reduce the costs of the permitting process
- Limiting Pima County influence over land use decisions
- Lowering business and individual tax rates
- Prioritizing the provision of core services and producing them efficiently. Amenities such as road maintenance, public safety, and the maintenance of open spaces for recreation are attractive to firms and to the employees they hope to hire.
- Reducing the cost of local government services through privatization or vouchers. Both may create competition that encourages efficiency and improves service quality.
- Privatizing incremental highway infrastructure to reduce construction costs and speed up progress
- Reducing traffic congestion and pollution through the use of variable rate highway tolls

Some efforts require state action. These include liberalization of the state's relatively constraining occupational licensing laws and eliminating regulations that make health care more expensive than it need be. The recent approval by voters of minimum wage and mandated benefits is not a business magnet and, as economists routinely point out, minimum wage and mandated benefits can hurt the least skilled workers. At the state level, it may be possible to take steps to deal with business complaints about a poorly trained workforce. Lifelong-learning education savings accounts paired with flexible education opportunities would promote the acquisition of human capital, especially for individuals for whom the traditional learning environment falls short.

Pima County, and other local governments inclined to approve risky business deals backed by taxpayer dollars should instead focus on creating an economic environment that maximizes individual potential and regional prosperity.

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## 1. Introduction

In January 2016, the Pima County Board of Supervisors announced it would issue \$15 million in public debt to fund the design and construction of a balloon manufacturing facility and corporate headquarters for World View Enterprises, Inc., and a launch pad for high-altitude balloons, called Spaceport Tucson, to be operated by World View. In February 2017, just a few days before World View's publicly subsidized home was completed, a Pima County Superior Court judge voided the lease, saying the county violated Arizona law that requires counties to appraise government-owned land and lease it at close to the market rate.

As county officials prepared to appeal that ruling, they portrayed the legal challenge to the World View project as obstructionism. Government subsidies, they claimed, are necessary to improve the local business environment. Like many politicians, these officials argued that they will miss important opportunities for economic development if their community does not compete to attract firms with subsidies of one type or another.

As one official put it, "In the real world, economic development requires public-private partnerships to create job growth and community prosperity. The private sector will not be, and has not been, solely responsible for a community's economic health."<sup>1</sup>

It is true that there is a role for the public sector, but it is in creating an environment attractive to private businesses and their workers. As is discussed below, the appropriate role for regional government does not include direct subsidies to individual firms. Other misconceptions about economic development are also identified and debunked. This paper identifies problems with the World View deal and deals like it that use taxpayer dollars to subsidize individual firms. Difficulties in identifying potentially successful business opportunities and the related drain on resources for local services make public subsidies to individual firms a poor tool to encourage economic activity.

To promote prosperity, local officials' best bet is to focus on providing core services in a cost-effective manner. Officials should work to adopt policies that lower business costs or make a region attractive to potential employees. Several of these policies are discussed as options for Pima County.

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## 2. The World View Deal

World View plans to use Spaceport Tucson as a base to launch balloons that will give tourists an opportunity to view Earth from 100,000 feet from a specially-designed,

pressurized capsule.<sup>2</sup> World View also plans to use the balloon-based system for other purposes, including launching communications, surveillance, and scientific equipment.<sup>3</sup>

After a test flight of a scaled-down version in October 2015, World View announced that it intended to move to full-scale testing. There have been no media reports of full-scale testing, however, making the company's own projection of a manned mission in 2017 seem unlikely.

In a July 2015 article in *Air & Space Magazine*, journalist Mark Betancourt described the serious technical, regulatory, and business obstacles to the balloon flights.<sup>4</sup> World View's methods for properly insulating the capsule to protect the passengers at high altitudes, and protecting the balloon from tearing at launch had not been tested. Taber MacCallum, the chief technology officer at World View, admitted that it might be impossible to keep a giant parafoil inflated. And, Betancourt reported concerns that it may be "prohibitively expensive" to assure a comfortable descent with the 8,000 pound, full-scale capsule.

Betancourt also noted that it is not clear whether Spaceport Tucson is actually necessary to World View's operations, because balloons "require next to no infrastructure to launch and retrieve." World View competitor Zero2infinity is reportedly considering using a mobile launch device, to bring the balloon and capsule to locations attractive to tourists.<sup>5</sup> To compete, World View would have to be similarly mobile, or offer a lower price or better amenities to attract tourists to Spaceport Tucson. It is not clear how many tourists will be willing to travel to Tucson for the experience at the \$75,000 per ride price tag that World View currently projects. Another concern is that space tourists are typically adventurous personalities who relish the idea of being pioneers. That means demand for such rides may decrease sharply over time.<sup>6</sup>

According to Betancourt's sources, the companies offering space flights would have to fly weekly to cover their costs. This would require an increase in balloon manufacturing, something the new World View manufacturing facility may allow. Yet World View is working on ways to reuse the balloons.<sup>7</sup> This would reduce its costs, but wouldn't help justify investment in the balloon manufacturing facility in Tucson.

The World View project faces challenges on the regulatory front, as well. World View has not acquired a Federal Aviation Administration (FAA) spaceport license to operate a launch site and commercial manned vehicles.<sup>8</sup> Because the FAA has categorized World View's balloon as a spacecraft, the company must meet substantial safety requirements, and the approval process may move slowly.<sup>9</sup>

The balloon launch pad, manufacturing facility, and corporate headquarters are located on 28 acres of Pima County-owned land, part of the County's Aerospace, Defense and Technology Research and Business Park, just south of the Tucson International Airport (TIA) and an existing Raytheon Missile Systems facility. TIA officials have expressed concerns that remotely-piloted spaceport flights from a launch pad close to the south end of the runway might affect other air operations, including commercial flights, general aviation, and the daily flights of F-16 fighter jets from the Arizona Air National Guard wing based at TIA.<sup>10</sup>

Pima County gave World View an exceptional deal.<sup>11</sup> The company bears none of the costs if it fails in its effort or if it chooses to move elsewhere. The County mortgaged several of its buildings to secure the \$15 million in public debt to support the project. If World View were to leave, Pima County would have to raise taxes or cut services to generate the funds necessary to pay off the remaining debt.<sup>12</sup>

The support among members of the County Board of Supervisors for Spaceport Tucson was based on World View's presumed role as a driver of economic activity.<sup>13</sup> A study by Applied Economics estimated that World View's operations would have a \$3.5 billion impact on the regional economy over a twenty-year period.<sup>14</sup> However, there is no guarantee that World View will find it lucrative to remain and grow in Tucson. In New Mexico, where a similar project is failing, \$220 million in taxpayer funding has not been enough to bring the promised manufacturing jobs or space tourism to Albuquerque's Spaceport America.<sup>15</sup> Although Virgin Galactic was to be the anchor tenant at Spaceport America, the company chose to test its cutting-edge SpaceShipTwo at the Mojave Air and Space Port in Mojave, California, instead. It has also announced an interest in building a spaceport in Abu Dhabi (which owns a 35 percent stake in Virgin Galactic).<sup>16</sup>

Pima County officials were excited to get a tenant to anchor the Aerospace, Defense & Technology Research and Business Park.<sup>17</sup> But this may be more wishful thinking than a good economic plan.

### 3. Public Funding of Private Development

Economic analysis points to specific situations where local government actions can improve upon private sector outcomes. The underlying question in the World View deal is whether the County's actions can be justified as appropriate in this framework.

First, economic models conclude that the private sector will fall short when it comes to producing services that are *non-rival in consumption*—meaning that they benefit many people at the same time and that it is difficult to charge residents directly for them.

Examples of non-rivalrous services include anti-gang activities, graffiti removal, or fighting fires that endanger an entire neighborhood. This economic justification for government intervention, however, does not apply to the World View deal.

The private sector also arguably comes up short in situations where the production or consumption of a good affects others—that is, in cases involving *externalities*. This offers a theoretical justification for the Pima County/World View deal if World View's location in the Aerospace, Defense & Technology Business and Research Park will have positive spillover effects for the community as a whole.

The purpose of identifying the situations where economic theory points to a role for government is to identify areas where government actions *have the potential* to improve decisions about the uses to which resources are put. But, as described below, efforts to subsidize individual firms with taxpayer dollars as part of local economic development efforts are fraught with problems. There is no evidence to support the idea that such efforts are generally successful. On the contrary, taxpayer resources could be put to better use to increase the attractiveness of a community to all businesses and their employees. At their core, the World View deal and others like it direct resources away from productive uses.

### **Predicting Success**

When it comes to picking firms to subsidize, it is unlikely that political decision-makers will be able to identify firms that will survive in a competitive environment. Because so many firms fail in the initial stages, it is difficult for even the most sophisticated investors to predict which firms will do well. Private banks, venture capitalists, and angel investors, acting in their own interest, specialize in identifying individuals and projects most likely to succeed. Even so, venture capitalists, who put their own wealth at risk, fail more often than they succeed.<sup>18</sup>

Business success is only belatedly revealed after a firm has passed what economists refer to as the market test: a firm's ability to survive over time. It is difficult to identify business owners whose decisions will lead to success even if they have a record of effectively steering a firm or firms in the right direction in the past.

### **Winner's Curse**

When governments compete to attract companies like World View, they never know if competing bids would actually have been forthcoming in the absence of subsidies. Writing in the *New York Times*, Louise Story reports that:

Moraine, Ohio, was already home to a G.M. plant in 1997 when the company pushed hard for additional incentives. G.M. said it was looking for a place to accommodate more manufacturing. Wayne Barfels, the city manager at the time, said a G.M. representative had told officials that Moraine was competing with Shreveport, La., and Linden, N.J. After the local school board approved property tax breaks, *The Dayton Daily News* reported that the other towns had not been in discussions with G.M. The school board considered rescinding the deal, but allowed G.M. to keep it after a company official apologized. In 2008, G.M. shut the Moraine facility.<sup>19</sup>

Furthermore, winning this type of competition is much like having the winning bid in a competition for an oil lease: what some have called the “winner’s curse.” Several governments may bid to host a firm that promises jobs and economic activity, but the government that bids the most wins.<sup>20</sup> That means the government’s assessment of the value is greater than that of every other government that participated in the bidding process, which is itself an indication that the government may have overestimated the likely benefits. It was to avoid this “winner’s curse” that Getty Oil Company routinely bid significantly below the value its engineers suggested for potential oil reserves in the early 1980s—to avoid winning on what might turn out to be an inflated bid.<sup>21</sup>

### **Leverage**

Once a government has agreed to a major subsidy and announced it publicly, the business on the receiving end has leverage over the government entity. The business may request changes to the deal—changes that are not good for the community as a whole. For example, at New Mexico’s Spaceport America, the anchor tenant, Virgin Galactic, pushed the New Mexico legislature to pass a bill to protect the company and its suppliers from liability in the case of an accident. Even though the Spaceport had already been built (the total commitment by the state to the Spaceport is about \$200 million), Virgin threatened to leave if the indemnification was not offered.<sup>22</sup>

The New Mexico legislation protects spaceport-related companies from suits from space tourists, their families, and others who suffer harm, including harm on the ground to people and damage to property, if a launch encounters problems.<sup>23</sup> The only exception is when gross negligence can be established, which is exceptionally rare. According to Virgin Galactic’s supporters, this additional demand “costs taxpayers nothing.”<sup>24</sup> But giving up the right to sue in the case of an accident is not cost-free. Relieving liability is a serious step, as it mutes a company’s incentives to reduce injury and death. It also penalizes those who suffer a serious loss, and are denied a remedy. Limiting liability in this way is an indirect form of government subsidy which was added on top of the direct support the government

was already pledged to give Virgin Galactic. It is doubtful the New Mexico legislature would have passed this law, at the third attempt, if not for the company's efforts to increase its already generous support from taxpayers.

Similarly, approximately one year before World View approached Pima County, the company had already signed a contract to stay in Arizona, locate its headquarters there, and build its manufacturing facility there in exchange for \$250,000 from the Arizona Commerce Authority.<sup>25</sup> But World View threatened to renege on the deal and leave for New Mexico or Florida if the County did not provide further subsidies.

### **Political Pressures**

Political influence, often in the form of campaign contributions, may sway politicians to make choices that are not in the community's best interest.<sup>26</sup> Another influence that may distort political decisions is that politicians often move from industry or industry-specific lobbying to the public sector and back.<sup>27</sup> Securing benefits for a specific industry has the potential to improve politicians' post-public-sector employment options.

Politicians will favor economic development projects where the benefits accrue to one or more large firms or campaign contributors. Rather than offer an across-the-board tax cut, legislators can garner more political support—whether in the form of votes or campaign contributions—if they target subsidies to large firms or organized industries. Incentives matter when making investment decisions, and, in this case, it is the incentives facing the politicians that are relevant. Given these incentives, it is not surprising to find that politicians often fund costly projects that offer few benefits to the community as a whole.

That favorable treatment costs taxpayers, not only in the form of higher income, property, and sales taxes, but also in the form of reduced government services. But various factors can hide these tax burdens from view. For instance, paying the same amount in taxes for fewer government services is essentially a tax increase. Even where taxes are overtly increased, each individual citizen pays a relatively small share of that increase—each citizen in the community will pay a few extra dollars—meaning that each taxpayer has a small incentive to organize an effort to oppose any one subsidy. Taxpayers gradually pay more over time, but it is not worth any one taxpayer's time to organize an effort to complain.

Meanwhile, politicians often have implicit deals with one another to vote for each other's proposals. Thus subsidies increase over time, and without voter oversight, special interest influence can easily prevail. And, given their tenure in office, politicians may ignore or fail to consider the future consequences of their actions.<sup>28</sup> In the World View deal and

others like it, politicians are not investing their own money. Problems with such projects will arise years down the road—by which time a politician is likely to be out of office.

These factors all result in weak incentives to address the long-term consequences for public debt and the future drain on tax revenues, and weak incentives to protect taxpayers. If projections of the Pima County/World View Enterprises deal fail to materialize, it will be a problem for future politicians and taxpayers.

### **Waste**

Subsidies to individual firms, such as World View, can be wasteful if they direct labor and capital away from more efficient uses. If a project costs \$10 million and is expected to result in an \$8 million return, a private investor would not move forward with the project, because it would run a \$2 million loss. But add a local government subsidy of \$2 million or more, and the investor will go ahead—even though the project is, by definition, wasteful. The subsidy results in \$10 million in total resources—land, labor, capital, and other materials—being put to a lower-valued use (\$8 million). One can only make an economic case for a subsidy in such a situation if there are associated positive externalities or spillovers. Yet developers and businesses clamoring for financial assistance often overestimate the positive spillover effects of financial assistance. In such cases, the real beneficiaries are usually a firm or group of firms, not the community.

In fact, the overall consequences may be negative. Local firms are put at a disadvantage, as they must pay taxes to support the subsidies. Workers will also face higher taxes and, where labor markets are competitive, local firms will have to pay higher wages to attract employees to the region, putting even more of the cost burden on local firms. This raises the costs of those local firms and makes them less competitive. The result is that businesses that are already in a community hire fewer workers that they would have, and, ultimately, contribute less to the local tax base, all to shoulder the costs of the new firm that has obtained a government favor.

### **Business Mobility**

While government subsidies to businesses might seem to work at first, they are often short-term solutions, producing only fleeting gains. That is because businesses that do not have a substantial economic reason *other* than subsidies to locate in a community often leave once the subsidies end. For years, General Motors courted local officials in communities nationwide, promising that government incentives (cash rewards, free buildings, worker training, and tax breaks) would stand them in good stead with GM. None of this mattered, years later, when GM decided which properties to liquidate. Communities

that gave the company substantial benefits had more than fifty properties on GM's 2009 liquidation list.<sup>29</sup>

Similarly, Michigan offered tax credits to the film industry and issued municipal bond debt to fund construction of a film studio on an old auto plant in Pontiac. When a new governor reined in the tax credits to focus on across-the-board tax cuts, filmmakers pulled out, leaving the state with \$18 million dollars in municipal bond debt backed by the state workers' pension funds.<sup>30</sup>

Even where there is a specific local asset such as a manufacturing facility that would be costly to replicate elsewhere, firms have found it in their interest to move, as the General Motors example illustrates. The film industry is notorious for leaving once subsidies end.<sup>31</sup> When state favors are all paid out, film crews go elsewhere and the jobs go with them.<sup>32</sup>

### **Empirical Evidence**

Researchers are unable to show that business location incentives and subsidies routinely or even generally increase employment or encourage economic activity. Studies find that state incentives and subsidies to the film industry, stadiums, and convention centers do not pay off.<sup>33</sup>

One 2010 study focused specifically on positive spillover effects in counties that bid to attract large manufacturing plants, making it especially relevant to the Pima County/World View deal.<sup>34</sup> To measure spillover effects, the researchers focused on changes in manufacturing productivity in preexisting similar manufacturing firms, changes that could not be explained by increases in labor or capital.

In the case of manufacturing, productivity may increase as new firms enter if, as a result, workers move to jobs where their skills are a better match for a specific job. Productivity may also increase as workers share their knowledge and skills.<sup>35</sup> The study found that five years after winning counties saw new manufacturing plants open, the results were mixed. In only 13 of the 45 counties studied did pre-existing manufacturing firms show a statistically significant increase in productivity.<sup>36</sup> No significant change was found in 23 counties and a statistically significant *negative* impact was found in nine.<sup>37</sup> The authors conclude that "risk-averse local governments may be unwilling to provide tax incentives with this distribution of outcomes or only willing to bid less than the average spillover."<sup>38</sup>

The researchers found another effect that works against such subsidies. They found increases in the prices of local inputs, most likely the result of increased demand resulting

from a large firm entering the community.<sup>39</sup> Offsetting price increases such as these can dull the impact of a subsidy.

### **Clusters, anchors, and incubators**

The Pima County/World View deal is part of a larger effort to add jobs to the Pima County area by establishing an Aerospace, Defense and Technology Business and Research Park. As the Park anchor, World View's location in the Park has been justified by County officials on the basis that it would have positive effects on the overall economic activity in the Park and in the regional economy as a whole. Despite claims for cluster policies such as this one, there is no evidence that science parks deliver the promised economic contribution to a regional economy.<sup>40</sup> There are, of course, notable successes (oft-cited examples include Research Triangle Park and Stanford Research Park), but the evidence does not support the premise that, in general, businesses in research parks or high-tech incubators do better than other similar businesses. Expectations of collaborative arrangements and innovation that would not occur without the adjacent location in a research park lack empirical support.

### **Economic Impact Studies**

One economic development tool, the economic impact study, is given too much credit for assessing the impact of projects such as World View. As noted above, Applied Economics estimated that World View's operations would have a \$3.5 billion impact on the regional economy over a twenty-year period. The underlying assumption is that World View's business plan will be met, but that is far from a sure thing. Despite lack of empirical evidence to justify public subsidies to individual firms or efforts to cluster firms, projects move forward based on economic impact studies that assume the various aspects of the proposed business plans will be successful.

Individuals who run business incubators or local-government-funded economic development agencies rely on economic impact studies to secure funding. It is prudent to remember that their employment depends on perpetuating industry subsidies. Few local governments hold economic development agencies accountable or even audit their claims. When it comes to economic development initiatives, one should be skeptical of claims, especially those made by groups who stand to benefit.<sup>41</sup>

### **Jobs**

Of the jobs at World View itself, it is not clear how many would be filled by Pima County residents whose tax dollars are funding the project. The evidence suggests that, as firms enter a region, many of the new jobs are filled by individuals who move to the area

for employment rather than by original residents.<sup>42</sup> It depends on the nature of the jobs and the level of unemployment in a community. Companies with high-skilled jobs are not likely to find many local workers with the specific skills they need.

### **Land Use**

The World View deal is part of a broader focus on land use planning in Pima County.<sup>43</sup> The County owns a great deal of land. In cases where it doesn't own land for which it has a plan it purchases the land or acquires it in an exchange. The County dictates which types of businesses may use its land; it attempts to lease or sell property to companies that will develop primary employment (export-based jobs that produce goods and services for customers outside the County). In the sale or lease of County land, the County offers support and incentives for employers who say they will bring in export-based jobs that pay more than the regional average. Instead of letting land go to its highest-valued use, the County has focused on clustering similar firms.

Extensive land use planning of this sort precludes market forces from determining the purpose to which land will be put. As a result, it reduces the contribution of the land to the local economy.

The County supports its land use decisions with infrastructure investments, flood control improvements, wastewater capacity, and utility connections. However, new commercial (and residential) developments should be responsible for these associated costs. If the market value of the expansion is not sufficient to cover all of the costs it should not be subsidized by existing taxpayers.<sup>44</sup>

### **Local Services**

A serious problem is that in directing spending to deals like that with World View cities pull money away from the provision of important local services.<sup>45</sup> This is an issue for economic development because amenities draw households to a community. Individuals looking to relocate are interested in the life-style attributes of a community. A safe, clean, and well-maintained community is attractive to mobile workers and their families. In turn, firms making location or expansion decisions will put a positive weight on the resulting access to labor.<sup>46</sup>

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## **4. Other Considerations**

Local businesses have a number of complaints about the Pima County business environment. Businesses surveyed by the Tucson Metro Chamber complained about problems common to local governments including crumbling roads, underperforming

schools, a poorly-trained workforce, cumbersome regulations, high business taxes, and allowing neighborhood groups to get in the way of changes in zoning that would allow development.<sup>47</sup> The fact that Arizona's network of One-Stop offices (now Arizona@Work) offers services for businesses to help with permits, zoning, and regulatory compliance implies that the system is not easy to access.<sup>48</sup> Any progress in dealing with these issues would be of value in attracting new businesses to the area. Cuts in state funding have reduced allocations that Pima County would have used to maintain streets and highways. However, to attract business, these important public services must be a spending priority. On the positive side, survey respondents ranked police and fire services highly.

Recent improvements to the Port of Tucson will allow the port to handle 500 containers a day. As a result, companies may consider a location in Pima County to minimize transport costs.<sup>49</sup> If the Trump Administration does not take measures that would reduce trade with Mexico<sup>50</sup> (restricting trade would cause serious economic harm on both sides of the border) the port has the potential to serve as a major point of interchange for goods moving across the United States. The port, with its local customs service, is already an attractive location for firms shipping to the U.S. from Mexico and Asia.<sup>51</sup> Two privately-owned companies, the Port of Tucson and Union Pacific Railroad, have made major investments in improving the rail infrastructure.<sup>52</sup> Several major distribution centers have located near the port.<sup>53</sup>

At this time, as transportation-oriented companies consider a move to Pima County, policies that further enhance the attractiveness of the region could influence business managers' evaluations of the potential benefits of a move. Pairing access to transportation with efficient local government provision of community amenities would make Pima County more competitive as firms make location decisions.

Pima County would be best off redirecting its resources away from high-risk investments, such as the one involving World View Enterprises, and toward efforts to improve local services, including public safety, road repair, and the transportation infrastructure. These are the fundamental services that local governments provide to support residents and business activity. As noted above, positive amenities are attractive to firms as they know that positive community amenities will lower the cost of attracting labor.<sup>54</sup>

"Everyone is doing it" is a popular justification for public subsidies to private firms. Everyone is doing it because it benefits the individuals involved, both the politicians and the business interests. But it is not in the interest of the community as a whole.

Pima County administrators may fear that if they don't offer subsidies to attract business, such as the World View deal, they will lose jobs to Maricopa County or other areas competing for firms. The underlying premise is that they can target the right firms. As discussed in detail above, this is unlikely. Taking a high-risk approach is not fiscally prudent nor is it likely to improve economic activity in the region. In other words, given the incentives facing politicians and the difficulty in picking a firm likely to succeed, when it comes to promoting the regional economy, the competition is directed at likely failure, not success.

To increase the focus on the high costs of economic development efforts, critics stress the high cost-per-job created.<sup>55</sup> An important point is that after-the-fact estimates of costs per job are much lower than the expected cost per job. If a \$15 million expenditure were to result in an increase in 400 local jobs, as expected in the World View deal, observers would say that the cost per job is \$37,500. But World View may not succeed and, even if it does, it may not stay in Tucson. It may choose to move its operations closer to the companies it serves or closer to potential space tourists. If there is a 75% chance of failure or departure, the *mathematical expectation* of job creation is 100 jobs,<sup>56</sup> and the expected cost per job is \$150,000.

In the World View case, the costs are actually higher than \$15 million as land was acquired by Pima County and other infrastructure investments made in advance of the deal. Also, other levels of government offer subsidies from which World View will benefit. It may be more costly than it is worth to "buy" these jobs.

## 5. Misconceptions

There are many misconceptions when it comes to economic development. Let's set these aside before addressing policy initiatives that might work.

### **Labor Market Misconceptions**

#### *a. The Average Wage*

One misconception is that it is possible to judge a local economy by comparing its average wage to that of other communities.<sup>57</sup> However, using the average wage as a metric is not useful in assessing whether a community is generating the best outcome for individuals who live there. The average wage is determined by the composition of the labor force (the number of high- and low-skilled workers) and the cost of living in a community. Growth in high-wage jobs in a community may increase the average wage but fail to improve the well-being of low-wage workers.

Economic development advocates often emphasize the importance of attracting high-quality jobs.<sup>58</sup> But it is important to remember that unskilled workers develop skills in entry-level jobs.

High- and low-skilled workers are complements in an economy. In California, immigration raised wages by three to seven percent for native workers with at least a high school diploma.<sup>59</sup> It is common for high- and low-wage workers to live near one another as low-skilled workers take on tasks such as gardening, cleaning, and other service jobs. This frees high-skilled workers to focus on higher (market) valued uses of their time.

#### ***b. Retail and Service Sector Jobs***

It is incorrect to dismiss retail and service sector jobs as “typically low wage and subject to boom-or-bust economic cycles.”<sup>60</sup> Pima County, for example, appears to be well situated for retail sales as “shopping is the primary reason visitors from Sonora and Sinaloa travel to Pima County.”<sup>61</sup> Cyclical industries (industries subject to boom-or-bust economic cycles) are not to be written off. In fact, manufacturing earnings are highly cyclical, as the demand for durable goods falls during recessions.<sup>62</sup> In competitive markets the free movement of labor and infrastructure will limit growth in these industries in any one area to a level that is profitable over time, if not in any given economic downturn.

#### ***c. Vacant Positions***

In 2009, TRIO surveyed Tucson region employers and found 2,200 vacant positions. A more recent survey identified 2,500 vacant positions. Authors of the 2014 Economic Blueprint Update found this disturbing, concluding that the regional economy was stuck and that an improved talent system was needed.<sup>63</sup> However, with a civilian labor force of nearly half-a-million workers, the meaning of 2,500 job vacancies is not obvious.<sup>64</sup> Often jobs are not filled immediately. There are what economists call friction costs, the costly process of workers finding the right job and firms finding the right workers. It may take a firm time to assess the appropriate market wage. Workers may initially reject a good job match because they expect an even better match as they continue to search. The good news is that sufficient time is put to the job search process to result in higher productivity matches.

Interestingly, the evidence suggests that robust economies tend to have *higher* job vacancy rates. During a recession, the logic goes, workers are reluctant to quit jobs as they know it will be hard to find a new one; the result is high unemployment but few job vacancies. In contrast, vacant positions suggest workers are not afraid to leave jobs as they would be in a recession, so a relatively high vacancy rate may signal a healthy economy.<sup>65</sup>

#### *d. Workforce Training*

It is common to hear economic development groups argue for job training and education programs to improve economic outcomes in a community. A “poorly trained workforce” was one complaint when local businesses were surveyed by the Tucson Metro Chamber in 2014.<sup>66</sup>

When it comes to workforce training, there is no simple fix. Researchers have found that programs differ in effectiveness depending on the focus population. There is a paucity of evidence on existing programs, making it difficult to assess the outcomes.<sup>67</sup>

Pima County’s Economic Development Plan stresses the role of the Pima Community College and the One-Stop programs in connecting training with business needs.<sup>68</sup> To assure that these efforts are well directed, accountability and program review are critical. This is easy to say but hard to do. Once programs are put in place, it is very difficult to eliminate them. Pima County already appears to have a number of programs. As noted above, there is not much evidence on the impact of job training programs; most are not evaluated. Furthermore, without randomized assignment of individuals into programs it is impossible to know whether it is the program or the individuals who select it that lead to the labor market outcomes that result.<sup>69</sup>

A major difficulty is in dealing with the subset of individuals who lack labor market skills. As economist James Heckman points out, once someone lacks labor market skills it is hard to make the leap later on.<sup>70</sup> Heckman writes,

“One dangerous myth that motivates welfare reform and training policy is that it is relatively easy to adapt adult unskilled workers to the modern economy. According to this view, most low-skilled labor can be easily retrained to become skilled labor. In fact, the costs of doing so are high.”

#### *e. Hire Local*

A common requirement for public subsidies is that firms hire local workers. This is a mistake. Requiring firms to hire local when they can get a better job match hiring employees from other places raises the costs of doing business in a community. Hire local policies are not a component of an effective business attraction program.

### **Other Misconceptions**

#### *Infrastructure Investment*

Concerns about the deterioration of the nation’s highway infrastructure have led Pima County officials to call for more spending at the state level.<sup>71</sup> There are two misconceptions here. The first is that Arizona’s interstates and highways are in bad shape.

In Arizona, in 2014, 1.3% of the state's urban interstates and highways were rated of poor quality compared to about 8% nationwide.<sup>72</sup>

A second misconception is that highway maintenance and construction costs are best addressed on a statewide basis. The expressed concern is that efforts by local governments to raise funds for infrastructure maintenance and construction would lead to regional competition “counterproductive to statewide job growth and economic expansion.”<sup>73</sup> This is not true. The problem with statewide (or federal) funding is that communities don't bear the total the cost of an investment. With outside funding, communities move forward with projects that are not economic—projects for which the total costs actually outweigh the benefits. In contrast, local funding pushes politicians to take the total benefits and costs of a project into account.<sup>74</sup>

State funding of highway infrastructure in one region only makes sense if there are substantial spillover effects (positive externalities) that benefit other regions in the state. Small to moderate spillovers are probably not sufficient to justify spending at a more aggregate level given the distortions in decisions caused by such programs.

## 6. Moving Forward

Moving forward, one issue is whether Pima County should focus its efforts on accommodating the aerospace and defense industry. Pima County is home to several major employers that rely on government expenditures. They include Raytheon Missile Systems (9,600 employees), the Davis-Monthan Air Force Base (8,406 employees), and the Arizona Air National Guard 162nd Wing at Tucson International Airport. The County has prioritized the protection of employment at Raytheon Missile Systems and the Air Force Base.<sup>75</sup>

To protect against residential encroachment and to allow for possible future expansion, the County purchased land (\$6 million) just south of Raytheon and established the Aerospace, Defense, and Technology Research and Business Park where World View is located. The County also relocated a road to meet U.S. Air Force standards (\$13 million) to allow Raytheon to continue its operations.<sup>76</sup>

A major concern is that Davis-Monthan Air Force Base supports the Air Force's A-10, a low-altitude military support aircraft, which has been threatened with retirement from service.<sup>77</sup> “The Pima County Economic Development Plan suggests offering the Air Force land at no cost, providing land for National Guard functions, and shifting traffic to facilitate

operations of the Guard. The Plan also advocates for strong lobbying efforts to keep the A-10 in service and to secure future missions for the Air National Guard.

Mission Strong, an effort to advocate for the Davis-Monthan Air Force Base and Fort Huachuca, only makes sense if Pima County has an advantage in production, based on its location or other local resources. If subsidies are required to keep production in place, it means the rest of the local economy is paying to protect jobs and production, raising the costs of efficient firms to subsidize inefficient production. This is not a good long-run strategy for economic development.

George Hammond, of the University of Arizona's Eller College of Management, notes that past growth in Tucson has been affected by federal spending. He referred to the effect of reduced federal spending as a "drag that's been weighing down the Tucson economy."<sup>78</sup> But the reliance on government funding may have allowed the economy to weather the 2008 recession better than other parts of Arizona.<sup>79</sup> This lack of diversity suggests serious problems as government deficit spending and unfunded liabilities eventually must result in cuts in state and federal discretionary spending.<sup>80</sup> Efforts to support declining industries will not benefit Pima County over time.

Instead, a focus on local amenities—essential services—produced in a cost-effective way so as to minimize the tax burden on local residents and businesses can make Pima County an attractive place to live and work. Business owners are enticed by manageable regulations and zoning processes and put off by complex and expensive business licensing laws. Businesses and residents benefit from low tax rates and reduced congestion and pollution. To spur economic activity, local governments have several alternatives to risky, World View-like deals.

### **Regulatory Reform**

Limiting unnecessary regulations can encourage economic activity. For example, Uber decided to move a fleet of self-driving cars to Arizona after California regulations held up the development process.<sup>81</sup> In general, limiting regulatory burdens lowers firms' costs. Anything that affects firms' costs of production improves their competitive position and increases their demand for labor. A recent Institute for Justice report offered suggestions for improving business opportunities at the local level. The suggestions include facilitating business licensing, allowing street vending and food trucks, facilitating advertising with minimally intrusive regulation of business signs, zoning laws that allow multiple uses, and legalization of home-based businesses (except those that create problems for neighbors).<sup>82</sup>

Tucson permits home-based businesses, but bans automotive service and repair, hair salons, and medical services.<sup>83</sup> Mobile food establishments are licensed by Pima

County<sup>84</sup> and there appears to be a robust food truck business.<sup>85</sup> Pima County does not require business licenses in unincorporated County areas but Tucson does require businesses to secure a license.<sup>86</sup> Information on Tucson's business sign permit process and codes is available online.<sup>87</sup> All of these should be reviewed to be sure that any costly deterrents to business formation and advertising make sense.

## **Zoning**

To attract businesses, Pima County should consider revising its zoning laws to facilitate location decisions and to reduce the costs of the permitting process. As noted above, this issue was raised by respondents to the 2012-2013 Tucson Metro Chamber business survey. Most people think that zoning laws are designed to reduce negative externalities (for example, industrial production next to homes). Yet Houston, Texas, has no zoning regulations.<sup>88</sup> In Houston, other mechanisms have been designed to allow communities to influence the character of their neighborhoods. The city has ordinances that limit certain types of uses, but does not specify a geographic area where those ordinances should apply. Developers create master-planned communities that meet residents' preferences for ambiance and amenities.

The advantage is flexibility; developers can respond to market forces in a timely manner. Developers can move projects through the city planning commission without the need to secure multiple variances or other approvals. The process is predictable, saving developers money.

Zoning regulations generate large political contributions by developers, an attractive attribute to some local politicians. However, because zoning laws raise the cost of construction, they can have a negative effect on business formation and expansion.

A common problem in large cities is that neighbors oppose new construction, limiting economic activity and growth.<sup>89</sup> This opposition to construction, reflected in a difficult and costly permitting process, can discourage firms and their employees from locating in an urban area. The solution is to adopt a Houston-like policy where the rules are relatively straightforward and developers are not subject to costly protracted negotiations over zoning variances.

## **Taxes**

Lowering income taxes and business taxes and fees is one option for policy makers seeking to spur economic activity. Lower taxes are one of many considerations that may influence a firm's location decision. It is important, however, to consider how the tax dollars would be spent. Cities that spend tax dollars on road maintenance, public safety, and

the maintenance of open spaces for recreation may generate sufficient positive effects to offset a tax, attracting firms.<sup>90</sup> Of course, a community that eliminates unnecessary or wasteful spending and lowers its tax rate as a result would clearly be in a better position to promote business activity.

### **Reducing Costs**

To improve the cost-efficiency of local government services, offering the potential to lower taxes or provide attractive core services, one option is to privatize the provision of public services. When private firms bid to secure local contracts, competition can encourage efficiency and improve service quality. When the Reason Foundation's experts on privatization reviewed the situation in Cleveland, their suggestions for privatization included the airport, parking facilities, solid waste collection, building maintenance, transit operations, parks operations and maintenance, libraries, public works and community development services, vehicle fleet maintenance/management and the operation and management of the city zoo.<sup>91</sup> Competitive bidding, with renewable contracts, improves incentives for efficiency if political pressures can be held at bay when it comes to the choice of providers.

Privatizing roads, using tolls to provide a return on investment, would reduce the costs of construction and speed up progress on the construction of highway infrastructure. This could include the proposed Sonoran Corridor linking highways 10 and 19 just south of Tucson International Airport. It has been estimated that the Corridor would cut drivers' daily commute by 12 miles.<sup>92</sup> Other transportation priorities that might benefit from private investment include the improvement of Arizona State Route 189 near the Mariposa Point of entry,<sup>93</sup> and the expansion of State Route 201 (The Aviation Parkway) to the I-10 to relieve traffic on the I-10 heading to downtown Tucson.<sup>94</sup>

Privatization is not the only option to lower costs. Under a voucher system, individuals are given public funds to pick a private (or public) service provider. An advantage is that consumers have the proper incentive to search for efficient providers that meet their needs. Vouchers can be used to promote competition, which generally lowers costs and improves products. This can be advantageous for consumers who have special needs that would be ignored by a government or public service provider.

### **Pollution and Congestion**

Pollution is an issue for Tucson as it is running up against federal standards for ground-level ozone. It would be prudent to switch from emissions control policies that rely on persuasion to market-based policies for emissions reductions.<sup>95</sup> For this purpose, highway tolls are a viable option.

As an added benefit, a system of variable tolls (higher tolls during peak congestion hours) would reduce congestion, making Tucson attractive to both potential residents and to businesses that use the highways to transport goods.<sup>96</sup>

The benefits of variable tolls to Tucson, rated 21<sup>st</sup> worst in congestion of U.S. cities, could be considerable.<sup>97</sup> Delays are costly, both in terms of drivers' time and pollution. Toll would shift some drivers to off-peak hours and create incentives for carpooling.<sup>98</sup>

To reduce concerns about an increase in government taxation, a toll may be offset by a reduction in another tax, the gas tax for example. A highway toll is no more regressive (hard on individuals with low incomes) than a gas tax or a sales tax.<sup>99</sup>

A toll is the rare tax that has a positive impact on economic activity. It reduces congestion and time spent in travel. By making workers more mobile, it improves job matches, increasing productivity. It allows firms to move goods around more cheaply. There is some evidence that initial opposition to toll roads declines once tolls are put in place, as drivers can see the benefits.<sup>100</sup>

## 7. Arizona State Policies

When it comes to attracting business, some things require state action. In Arizona, this includes liberalizing occupational licensing laws, reducing barriers to innovations that could reduce health care costs, avoiding labor market regulations that raise the cost of doing business in the state, and maintaining attractive K-12 education options.

### **Occupational licensing laws**

Arizona's occupational licensing laws are some of the most constraining in the United States.<sup>101</sup> This makes services more expensive and reduces access to jobs in the state. One study estimates that occupational licensing raises the cost of goods and services for the average U.S. household by more than \$1,000 a year.<sup>102</sup> With Arizona's heavy regulation of occupations, the cost per household must be even higher. Liberalization of licensing laws would encourage business formation and create job opportunities. The savings to the average household would reduce the cost of living in the state, an attractive amenity for potential firms and their workers. Eliminating licensing requirements would be of particular value to Pima County if federal subsidies to the Air Force Base taper off. The ease of transitioning to other types of employment may influence how many of the laid-off workers decide to stay in Pima County. It would also enhance Pima County efforts to help incarcerated individuals find employment when they are released from jail.<sup>103</sup>

## Healthcare costs

Arizona policies make health insurance and healthcare more expensive than it need be. Arizona is ranked low when it comes to allowing flexibility in “ownership, business structure, and employment” in healthcare facilities.<sup>104</sup> In addition, Arizona ranks below the U.S. mean when it comes to giving medical professionals access to licensing and in allowing professionals to practice up to the limit of their training (scope of practice).

Like all other states, Arizona does not allow out-of-state physicians to practice via telemedicine in Arizona on the basis of their out-of-state (home state) license. Allowing out-of-state physicians to practice via telemedicine would result in a substantial windfall for consumers and improve the competitiveness of healthcare markets in the state.<sup>105</sup>

Lower medical costs would make Pima County more competitive in the growing field of medical tourism. The Pima County Medical Society is already working on medical tourism programs that include local spending on transportation, housing, and other amenities.<sup>106</sup>

Lower health care costs would encourage small firms to offer health insurance, potentially reducing costly, unreimbursed emergency room care. A study by WalletHub found that only a quarter of small businesses in Tucson provide health insurance to their workers. This put Tucson at the bottom of 100 cities evaluated by WalletHub.<sup>107</sup> Clearly, Pima County’s representatives in the state legislature should be encouraged to lobby to eliminate regulations that preclude innovations.

## Minimum wage and mandated benefits

Arizona’s adoption (November 2015) of a minimum wage is not a business magnet. Yet about 62% of Pima County voters voted to hike the minimum wage.<sup>108</sup> If the goal is to attract business, regulations of this sort should be evaluated in the context of alternatives that would not burden firms and would not discourage firms from hiring low-skilled workers. As economists routinely point out, the minimum wage reduces employment of low-skilled workers and is poorly targeted, as most people who earn the minimum wage do not live in low-income households.<sup>109</sup>

A minimum wage encourages firms to substitute away from employing the least skilled workers. The idea that eliminating low-paying jobs will help low-skilled workers is pervasive. Take, for example, a statement by Jackie Goldberg, a champion of the interests of city employees when she served on the Los Angeles City Council. At a Milken Institute Conference in Santa Monica in 1997, she said, “I won’t vote to lower a tax to create a \$5.75/ hour job.” It is unlikely that she only cared about creating jobs for skilled workers, but

perhaps she mistakenly presumed that low-skilled workers would be hired to fill higher paying job openings.

In addition to raising the minimum wage, Arizona's new law mandates that workers receive one hour of paid sick leave for every 30 hours they work. The leave may be used for an employee to seek medical care, but also to care for a family member.<sup>110</sup>

That will not be the only cost, as the absence of a worker who is part of a team can have repercussions for the productivity of others. The availability of paid leave encourages workers to take leave in situations where they would otherwise arrange to manage a situation in a different way. The fact that the workers don't bear all of the costs (those associated with reduced productivity of team members) encourages workers to take time off even when there may be low-cost alternatives. This makes the whole process more inefficient than it should be, raising the cost of labor to firms.

Any legislation that raises the costs of labor, either through a payroll tax or mandated leave benefit will not be borne by firms over time; in competitive labor markets, wages will fall.<sup>111</sup> In the parlance of economists, workers bear the *incidence* of the benefits. This means that workers who would choose higher wages over paid leave are not given a choice.

Where there is a minimum wage that limits the downward movement of wages<sup>112</sup> in response to mandated benefits, wages can't fall, but firms may substitute capital for labor over time as they build new facilities or remodel existing facilities. Or firms may reduce spending on other employee amenities that are not regulated by the state. It is not uncommon for firms to engage in illegal behaviors, getting around the minimum wage by requiring workers to work unrecorded hours.<sup>113</sup> Pima County residents interested in economic prosperity might want to rethink their support for these measures.

## **Education**

Last but not least, one way to make a community more attractive to families and, therefore, to businesses making location decisions is to offer attractive options for K-12 education. Arizona appears to be doing well in this regard. It ranks high among the states in its approach to school choice. Arizona's policies have been described as the "most favorable to charter schools in the United States."<sup>114</sup> Parents have the option to enroll their children in any school or school district where space is available. Twenty-six percent of Pima County public schools are charter schools.<sup>115</sup> This is a very high number. There is evidence that public school student performance in Arizona increased with the growth in charter schools. This increase in performance is attributed to actions by non-charter schools to compete with the new charter schools for enrollment.<sup>116</sup> In this regard, Pima

County may already have a relative advantage as it offers a variety of education options for its families.

But still businesses complain about a poorly trained workforce. This leads to calls for a more educated workforce and efforts to funnel more students through college. But college, with its focus on academic performance, should not be the default for job training efforts. Many individuals do not learn well in a college environment and many college graduates do not find success. To make individuals better prepared for jobs, education options need to be more heterogeneous.

At the state level, it may be possible to take steps that would increase the productivity of education. Because not all students are alike, education may be more productive if there are a variety of education and training options. The focus of public education spending has been on a standardized curriculum taught before students enter the labor force. Many students drop out and many others do not benefit substantially from the process. It is not because they are not talented, but because education is academic, rather than applied, and the structure does not serve all learners well. There is little room for innovation, in part a result of pressure from interest groups who benefit from the traditional structure of post-high-school education.

Lifelong learning education savings accounts, as proposed by the Goldwater Institute, teamed with flexibility in the types of educational opportunities for which the funds can be used, would allow innovation in education for the substantial group of individuals whose acquisition of human capital is stifled by the traditional learning environment. Lifelong learning education savings accounts would enable individuals to continue learning throughout their lives to better compete in the dynamic job market."<sup>17</sup>

## 8. Conclusion

This paper identifies problems with the World View deal and deals like it that direct taxpayer dollars to subsidize individual firms. Instead of subsidizing individual firms, policy makers have a number of options to choose from to encourage economic activity and growth. To attract workers and, therefore, influence business location decisions, local public spending should prioritize the basic services that make a city attractive to residents.

Limiting unnecessary regulations can encourage economic activity. Pima County and the City of Tucson should review their business regulations to be sure that any costly deterrents to business formation and advertising make sense. To retain businesses that want to expand or to attract new businesses that want access to develop desirable

properties, Pima County should look to Houston which has no zoning laws but manages to both protect communities and facilitate development. Pima County should allow as much flexibility as possible in its land use and zoning policies. Then, if there is a big external change that has significant implications for Pima County—a reduction in federal defense spending or tariffs on imports from Mexico—the adjustment can move along as smoothly as possible.

For local officials seeking to influence business location decisions, low tax rates are prudent. However, cities that spend tax dollars on road maintenance, public safety, and the maintenance of open spaces for recreation may generate sufficient positive effects to offset a tax, attracting firms. Of course, a community that reduces spending on projects that do not generate benefits for residents and, as a consequence, can lower its tax rates, would certainly improve its chances of attracting firms or encouraging local firms to expand.

To reduce taxes, policy options include privatizing some public services to reduce costs. Competitive bidding, with renewable contracts, improves incentives for efficiency if political pressures can be held at bay when it comes to the choice of providers. A better option, where feasible, is the use of vouchers, as individual consumers have the proper incentive to search for efficient providers that meet their needs. Vouchers can be used to promote competition and reduce the cost of production of publicly subsidized services.

To support transportation construction, policy makers should investigate the legal requirements for privatizing major projects. Although not immune from political pressures to favor politically connected developers, private development may keep costs down and facilitate prompt action to build highways. Congestion can be managed by using variable tolls (higher during peak congestion hours). This would make Tucson attractive to both commuters and to firms that need to move products on the Pima County highways. In addition, as congestion and pollution go hand in hand, a reduction in congestion would help Tucson comply with federal standards for ground-level ozone.

When it comes to attracting business, some policy initiatives must be pursued at the state level. Arizona's occupational licensing laws are some of the most constraining in the entire United States. Liberalization of licensing laws would encourage business formation. Prices for services would fall statewide, reducing the cost of living in the state, an attractive amenity for potential firms and their workers.

Similarly, state laws limit flexibility in the provision of healthcare. Eliminating such laws would improve access and reduce costs. Lower medical costs would likely reduce

the cost of health insurance in the state and make Pima County more competitive in the growing field of medical tourism.

Although there is no quick fix, business complaints about workforce training could be addressed with state level legislation to allow lifelong learning education savings accounts. Not only would this facilitate learning over one's life, but the most attractive attribute is that it would increase education prospects for the majority of the population poorly served by traditional academic institutions.

Of all the options to attract businesses to Pima County, the Pima County/World View deal and the associated level of land-use planning on the part of the County stand out as risky and costly to local taxpayers. Not only must tax revenues be redirected from other key functions of local government to subsidize land-use planning and business attraction efforts, but County administrators have no way of knowing if their decisions will benefit the community. Markets are dynamic. What seemed like a great investment in one year may not be so great later on.

Rather than putting taxpayer resources toward trying to shape the region of the future, Pima County should be working toward a lean local government that provides cost-effective services and an unobtrusive regulatory framework. Local governments inclined to approve risky business deals should instead focus on creating an environment that maximizes individual potential and regional prosperity.

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I would like to thank Robert Krol (California State University, Northridge) and Christina Sandefur (Goldwater Institute) for helpful comments

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<sup>2</sup> Mike Wall, "Spaceport Tucson: World View's New Home for Balloon Tourist Flights," *Space.com*, January 20, 2016, <http://www.space.com/31659-spaceport-tucson-world-view-balloon-tourism.html>

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<sup>4,7</sup> Mark Betancourt, "See the World From 100,000 Feet," *Air & Space Magazine*, July 2015, <http://www.airspacemag.com/space/see-world-100000-feet-180955329/>

<sup>8</sup> Jeff Foust, "Arizona county to build new headquarters for World View," *Spacenews*, January 19, 2016, <http://spacenews.com/arizona-county-to-build-new-headquarters-for-world-view/>

<sup>9</sup> Mark Betancourt, "See the World From 100,000 Feet," *Air & Space Magazine*, July 2015, <http://www.airspacemag.com/space/see-world-100000-feet-180955329/>

<sup>10</sup> David Wichner, "Airport board mulls plans for Spaceport Tucson," *Arizona Daily Star*, July 9, 2016, [http://tucson.com/business/tucson/airport-mulls-plans-for-spaceport-tucson/article\\_88b32f6b-c62e-5c44-b3ea-0123dadfd6a2.html](http://tucson.com/business/tucson/airport-mulls-plans-for-spaceport-tucson/article_88b32f6b-c62e-5c44-b3ea-0123dadfd6a2.html)

<sup>11</sup> *Rogers v Pima County*, Plaintiff's Response to Defendants' Motion to Dismiss, Case No. C20161761, [https://goldwater-media.s3.amazonaws.com/cms\\_page\\_media/2016/10/11/Rodgers%27%20Re.pdf](https://goldwater-media.s3.amazonaws.com/cms_page_media/2016/10/11/Rodgers%27%20Re.pdf)

<sup>12</sup> County services include maintenance of the County's sewerage and sanitation infrastructures, its transportation infrastructure and parks, and funding community centers, recreational facilities, libraries, and clinics. See Pima County Arizona Adopted Budget, Fiscal Year 2016/17, [http://webcms.pima.gov/UserFiles/Servers/Server\\_6/File/Government/Finance%20and%20Risk%20Management/Reports/budget%20reports/2016-2017/2016-2017%20Adopted%20Budet.pdf](http://webcms.pima.gov/UserFiles/Servers/Server_6/File/Government/Finance%20and%20Risk%20Management/Reports/budget%20reports/2016-2017/2016-2017%20Adopted%20Budet.pdf)

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<sup>16</sup> Frank Kane, "Branson vows to build Abu Dhabi spaceport in two years," *The National*, February 10, 2014, <http://www.thenational.ae/business/industry-insights/aviation/branson-vows-to-build-abu-dhabi-spaceport-in-two-years>; Alan Boyle, "Virgin Galactic Helps Build the New Space Age in the Mojave Desert," *NBC News*, February 10, 2014, <http://www.nbcnews.com/storyline/virgin-voyage/virgin-galactic-helps-build-new-space-age-mojave-desert-n13036>

<sup>17</sup> Eric Swedlund, "Spaceport Tucson for World View's Near-Space Balloon Flights," *BizTucson*, March 30, 2016, <http://www.biztucson.com/bizarchives/aerospace-defense/spaceport-tucson-for-world-views-near-space-balloon-flights/>. Since that time, Vector Space Systems announced that it will locate its small rocket manufacturing facility in the Aerospace, Defense & Technology Business and Research Park. These rockets carry satellites into low-earth orbit. Murphy Woodhouse, "Vector Space to open Tucson manufacturing plant, bringing 200 jobs." *Arizona Daily Star*, October 12, 2016, [http://tucson.com/business/tucson/vector-space-to-open-tucson-manufacturing-plant-bring-jobs/article\\_3d1bde72-b236-5e38-9c9e-24036233d55e.html](http://tucson.com/business/tucson/vector-space-to-open-tucson-manufacturing-plant-bring-jobs/article_3d1bde72-b236-5e38-9c9e-24036233d55e.html). Of interest is the fact that the article compares the Vector arrangement with the World View contract. Vector has private investors, the County has not promised to build its facilities, and, unlike World View, Vector proposes to pay market rates to lease the land.

<sup>18</sup> Deborah Gage, "The Venture Capital Secret: 3 Out of 4 Start-Ups Fail," *Wall Street Journal*, September 20, 2012, <http://www.wsj.com/articles/SB10000872396390443720204578004980476429190>; Seth Levine, "Venture Capital Outcomes are Even More Skewed Than You Think," *VCAventure*, August 12, 2014, <http://www.sethlevine.com/archives/2014/08/venture-outcomes-are-even-more-skewed-than-you-think.html>

<sup>19</sup> Louise Story, "'As Companies Seek Tax Deals, Governments Pay High Price,'" *New York Times*, December 1, 2012, <http://www.nytimes.com/2012/12/02/us/how-local-taxpayers-bankroll-corporations.html?pagewanted=all&r=0#h1>

<sup>20</sup> In the case of World View, a national search for a location led to final negotiations with areas in Florida, New Mexico, and Arizona. See Eric Swedlund, "Spaceport Tucson for World View's Near-Space Balloon Flights," *BizTucson*, March 30, 2016, <http://www.biztucson.com/bizarchives/aerospace-defense/spaceport-tucson-for-world-views-near-space-balloon-flights/>

<sup>21</sup> The author's observation while working at Getty Oil Company.

<sup>22</sup> Spaceport America, "Governor Susana Martinez Signs Bill to Keep New Mexico at the Forefront of Commercial Spaceflight Industry," April 3, 2013, <http://spaceportamerica.com/press-release/governor-susana-martinez-signs-bill-to-keep-new-mexico-at-the-forefront-of-commercial-spaceflight-industry/>

<sup>23</sup> Matteo Emanuelli, "New Mexico's Legislation Expands Liability Protection for Spaceflight Companies," *Space Safety Magazine*, April 4, 2013, <http://www.spacesafetymagazine.com/news/mexicos-legislation-expands-liability-protection-spaceflight-companies/>. Governor Martinez explained the legislation as "reaffirming the major commitment New Mexicans have made to Spaceport America."

<sup>24</sup> Spaceport America, "Governor Susana Martinez Signs Bill to Keep New Mexico at the Forefront of Commercial Spaceflight Industry," April 3, 2013, <http://spaceportamerica.com/press-release/governor-susana-martinez-signs-bill-to-keep-new-mexico-at-the-forefront-of-commercial-spaceflight-industry/>

<sup>25</sup> Agreement between Arizona Commerce Authority and World View Enterprises, Inc., effective August 20, 2014, [https://www.dropbox.com/s/9q6y0b4hsqpxzj/AIC-14-12\\_Agreement\\_WorldViewEnterprises\\_executed.pdf?dl=0](https://www.dropbox.com/s/9q6y0b4hsqpxzj/AIC-14-12_Agreement_WorldViewEnterprises_executed.pdf?dl=0)

<sup>26</sup> The field of public choice applies the principles of economics to the behavior of

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politicians. For more information, see William F. Shughart II, "Public Choice," *The Concise Encyclopedia of Economics*, 2008, <http://www.econlib.org/library/Enc/PublicChoice.html>; Los Angeles offers an example of the use of campaign contributions to influence political decision making. See David Zahniser, "Political donations flow as Rick Caruso seeks approval for a 20-story tower near the Beverly Center," *Los Angeles Times*, December 28, 2016, <http://www.latimes.com/local/lanow/la-me-ln-carusodeveloper-donations-20161115-story.html>

<sup>27</sup> [Opensecrets.org](http://www.opensecrets.org), "Revolving Door," <http://www.opensecrets.org/revolving..index.php> and <http://www.opensecrets.org/revolving..top.php?display=Z>; David Lucca, Amit Seru, and Francesco Trebbi, "The Revolving Door and Worker Flows in Banking Regulation," Federal Reserve Bank of New York Staff Reports, June 2014, [https://www.newyorkfed.org/medialibrary/media/research/staff\\_reports/sr678.pdf](https://www.newyorkfed.org/medialibrary/media/research/staff_reports/sr678.pdf). See also Edward J. Kane's comment on that paper, "Comment on: the revolving door and worker flows in banking regulation by D. Luca, A. Seru, and F. Trebbi," *Journal of Monetary Economics*, Vol. 65, pp. 33-35, 2013, [http://www.academia.edu/20552812/Comment\\_on\\_the\\_revolving\\_door\\_and\\_worker\\_flows\\_in\\_banking\\_regulation\\_by\\_D.\\_LUCA\\_A.\\_SERU\\_and\\_F.\\_TREBBI](http://www.academia.edu/20552812/Comment_on_the_revolving_door_and_worker_flows_in_banking_regulation_by_D._LUCA_A._SERU_and_F._TREBBI)

<sup>28</sup> Jack Dolan, "The Pension Gap," *Los Angeles Times*, September 18, 2016, <http://www.latimes.com/projects/la-me-pension-crisis-davis-deal/>. In 1999, when California's pension benefits for state employees were made more generous, CalPERS' chief actuary warned of the dire consequences should stock prices fall, which they did. No one followed up on his concern.

<sup>29</sup> Louise Story, "As Companies Seek Tax Deals, Governments Pay High Price," *New York Times*, December 1, 2012, <http://www.nytimes.com/2012/12/02/us/how-local-taxpayers-bankroll-corporations.html?pagewanted=all&r=0#h>

<sup>30</sup> Louise Story, "Michigan Town Woos Hollywood, But Ends Up With a Bit Part," *New*

*York Times*, December 3, 2012, <http://www.nytimes.com/2012/12/04/us/when-hollywoodcomes-to-town.html?pagewanted=print>

<sup>31</sup> National Conference of State Legislatures, "State Film Production Incentives and Programs," June 13, 2016, <http://www.ncsl.org/research/fiscal-policy/state-film-productionincentives-and-programs.aspx>

<sup>32</sup> Two academic papers on the subject, the first by Michael Thom and the second by Thom and Brian An, are outlined in "Lights, camera and no action: How state film subsidies fail," Press Room, University of Southern California, August 18, 2016, <https://pressroom.usc.edu/lightscamera-and-no-action-how-state-film-subsidiesfail/>

<sup>33</sup> Robert Tannenwald, "State Film Subsidies: Not Much Bang For Too Many Bucks," Center on Budget and Policy Priorities, December 9, 2010, <http://www.cbpp.org/sites/default/files/atoms/files/11-17-10sfp.pdf>; John Lester, "Tax Credits for Foreign Location Shooting of Films: No Net Benefits for Canada," *Canadian Public Policy*, Vol. 39, No. 3, pp. 451-472, September 2013; Roger Noll and Andrew Zimbalist, *Sports, Jobs and Taxes: The Economic Impact of Sports Teams and Stadiums*, Brookings Institution Press, October 1, 1997; Dennis Coates and Brad Humphreys, "Do Economists Reach a Conclusion on Subsidies for Sports Franchises, Stadiums, and Mega-Events?" *Econ Journal Watch*, Vol. 5, Issue 3, pp. 294-315, September 2008, <https://econjwatch.org/articles/do-economists-reach-aconclusion-on-subsidies-for-sports-franchisesstadiums-and-mega-events>

<sup>34</sup> Michael Greenstone, Richard Hornbeck, and Enrico Moretti, "Identifying Agglomeration Spillovers: Evidence from Winners and Losers of Large Plant Openings," *Journal of Political Economy*, Vol. 118, No. 3, pp. 536-598, June 2010, <http://www.jstor.org/stable/10.1086/653714>

<sup>35</sup> Greenstone, Hornbeck, and Moretti, pp. 542-544.

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<sup>36</sup> Total factor productivity, specifically.

<sup>37</sup> Greenstone, Hornbeck, and Moretti, Abstract, p. 536.

<sup>38</sup> Greenstone, Hornbeck, and Moretti, p.

592. Reading the abstract of the Greenstone, Hornbeck, and Moretti article would lead one to support efforts like that of Pima County to attract World View Enterprises. But the abstract is misleading. It fails to mention the variability in outcomes and other factors that put counties at risk.

<sup>39</sup> Greenstone, Hornbeck, and Moretti, p. 590.

<sup>40</sup> Edward Feser, Henry Renski, and Harvey Goldstein, "Clusters and Economic Development Outcomes," *Economic Development Quarterly*, Vol. 22, No. 4, pp. 324-344, November 2008; Gilles Duranton, "California Dreamin': The Feeble Case for Cluster Policies," *Review of Economic Analysis*, Vol. 3, pp. 3-45, 2011, <http://m2proeadl.univ-paris1.fr/ExposesLocal13-14/California%20dreamin%20Duranton%20REA11.pdf>; Massimo G. Colombo and Marco Delmastro, "How effective are technology incubators? Evidence from Italy," *Research Policy*, Vol. 31, pp. 1103-1122, 2002; Brown, Alan S., "Building a Place for Innovation," *Mechanical Engineering*, November 2009; Hans Finn Hansson, Kenneth Husted, and Jakob Vertergaard, "Second Generation Science Parks: From Structural Holes Jockeys to Social Capital Catalysts of the Knowledge Society," *Technovation*, Vol. 25, pp. 1039-49, 2005, [http://www.academia.edu/30375202/Second\\_generation\\_science\\_parks\\_from\\_structural\\_holes\\_jockeys\\_to\\_social\\_capital\\_catalysts\\_of\\_the\\_knowledge\\_society](http://www.academia.edu/30375202/Second_generation_science_parks_from_structural_holes_jockeys_to_social_capital_catalysts_of_the_knowledge_society); Alan Davies, "Do technology parks work?" *The Urbanist* (blog), April 30, 2012, <https://blogs.crikey.com.au/theurbanist/2012/04/30/do-technology-parkwork/>

<sup>41</sup> Here are several examples of self-serving study results: According to the National Business Incubator Associations, "Research has shown that for every \$1 of estimated public operating subsidy provided the incubator, clients and graduates of NBIA member incubators generate approximately \$30 in local tax revenue alone." National Business Incubator Association, Business Incubation

FAQ, [http://www2.nbia.org/resource\\_library/faq/index.php#9](http://www2.nbia.org/resource_library/faq/index.php#9). Authors of a Motion Picture Association of American-funded study concluded that a dollar in state film tax credits generates \$17.75 in economic activity, which leads to \$1.88 in new tax revenue for the state. As Jared Meyer writes, "These claims are less realistic than the science-fiction films the credits support." Jared Meyer, "No Matter Who Wins at the Oscars, Taxpayers Lose on Film Subsidies," [reason.com](http://reason.com/archives/2016/02/26/no-matter-who-wins-at-the-oscars-taxpaye/print), February 26, 2016, <http://reason.com/archives/2016/02/26/no-matter-who-wins-at-the-oscars-taxpaye/print>. As a final example, the American Independent Business Alliance works to protect local independent stores from competition by chain businesses. According to the AIBA, independent booksellers return "more than three times as much money to the local economy" as a proposed chain store would. The AIBA fails to mention that residents would pay more for books and other goods and services if local independent stores were protected from competition from large chain stores, reducing the overall standard of living in a community. Also, residents could take their business out of the community or purchase books online, reducing total local consumption. American Independent Business Alliance, "The Multiplier Effect of Local Independent Businesses," <http://www.amiba.net/resources/multiplier-effect/>

<sup>42</sup> Timothy Bartik, *Who Benefits from State and Local Economic Development Policy?* W.E. Upjohn Institute for Employment Research, 1991 and "Who Benefits From Local Job Growth—Immigrants or the Original Residents?" *Regional Studies*, Vol. 27, No. 4, pp. 297-311, 1993.

<sup>43</sup> County land-use plans are outlined in Chapters 1-4 in the Pima County Economic Development Plan, Update Through 2018, Adopted November 22, 2016, [http://webcms.pima.gov/UserFiles/Servers/Server\\_6/File/Government/Economic%20Development/Econ%20Dev%20Plan%20Update%202018/3418%20-%20EDP%202016%20ALL%20loRes.pdf](http://webcms.pima.gov/UserFiles/Servers/Server_6/File/Government/Economic%20Development/Econ%20Dev%20Plan%20Update%202018/3418%20-%20EDP%202016%20ALL%20loRes.pdf)

<sup>44</sup> Tucson has an Development Impact Fee, City of Tucson, "Development Impact Fees," <https://www.tucsonaz.gov/finance/budget/development-impact-fees>

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<sup>45</sup> Louise Story, "As Companies Seek Tax Deals, Governments Pay High Price," *New York Times*, December 1, 2012, <http://www.nytimes.com/2012/12/02/us/how-local-taxpayersbankroll-corporations.html?pagewanted=all>; To get a handle on how much money is actually diverted, the Government Accounting Standards Board now requires state and local governments to disclose information about tax abatements. See Governmental Accounting Standards Board, "GASB Statement Requires Governments to Disclose Information on Tax Abatements," August 14, 2015, <http://www.gasb.org/cs/>

<sup>46</sup> Daimler tries to avoid incentives that come out of school budgets out of concern that their employees will be sending their children to those schools. See Louise Story, "Lines Blur as Texas Gives Industries a Bonanza," *New York Times*, December 2, 2012, <http://www.nytimes.com/2012/12/03/us/winners-and-losers-intexas.html?pagewanted=all&r=0>

<sup>47</sup> Darren DaRonco, "Business climate infuriates Tucson-area employers, survey finds," *Arizona Daily Star*, March 16, 2014, [http://tucson.com/business/local/business-climate-infuriatestucson-area-employers-survey-finds/article\\_e80a3bb8-44bf-55f8-bddc-5ab2463f12cb.html](http://tucson.com/business/local/business-climate-infuriatestucson-area-employers-survey-finds/article_e80a3bb8-44bf-55f8-bddc-5ab2463f12cb.html)

<sup>48</sup> Pima County Economic Development Plan, Update Through 2018, Chapter 12, p. 5, Adopted November 22, 2016, [https://webcms.pima.gov/UserFiles/Servers/Server\\_6/File/Government/Economic%20Development/Econ%20Dev%20Plan%20Update%202018/3418%20-%20EDP%202016%20ALL%20loRes.pdf](https://webcms.pima.gov/UserFiles/Servers/Server_6/File/Government/Economic%20Development/Econ%20Dev%20Plan%20Update%202018/3418%20-%20EDP%202016%20ALL%20loRes.pdf)

<sup>49</sup> TIBO, "Port of Tucson shows off improvements, capabilities to increase drastically," December 5, 2016, <http://tiboaz.biz/2016/05/12/port-of-tucsonshows-off-improvements-capabilities-toincrease-dramatically/>; Barbara Grijalva, "Port of Tucson to unveil improvements that could spur economic development in Tucson," *Tucson News Now*, May 11, 2016, <http://www.tucsonnewsnow.com/story/31951610/portof-tucson-to-unveil-improvements-that-couldspur-economic-development-in-tucson>

<sup>50</sup> William Mauldin and David Luhnaw, "Donald Trump Poised to Pressure Mexico on Trade," *Wall Street Journal*, November 21, 2016, <http://www.wsj.com/articles/donald-trump-poised-to-put-pressure-on-nafta-1479746005>

<sup>51</sup> Also, the set of direct flights from Tucson International Airport is expanding. A. E. Araiza, "American to launch Tucson-New York nonstop flight," *Arizona Daily Star*, May 23, 2016, [http://tucson.com/business/local/american-to-launch-tucson-new-york-nonstopflight/article\\_06dbd81b-648c-5c67-bbedbc4606ffb15e.html](http://tucson.com/business/local/american-to-launch-tucson-new-york-nonstopflight/article_06dbd81b-648c-5c67-bbedbc4606ffb15e.html). The funding to guarantee American Airlines' revenues come from an association of local private businesses. One concern, from an economic perspective, is that there are subsidies. These subsidies take the form of "up to \$550,000 in airport incentives through landing-fee waivers, marketing money and other credits..." Unless there are spillover effects (positive externalities), taxpayer dollars should not be used.

<sup>52</sup> Barbara Grijalva, "Port of Tucson to unveil improvements that could spur economic development in Tucson," *Tucson News Now*, May 11, 2016, <http://www.tucsonnewsnow.com/story/31951610/port-of-tucson-to-unveilimprovements-that-could-spur-economicdevelopment-in-tucson>; Shawn Tully, "The railroad with better profit margins than Google," *Fortune.com*, June 4, 2015, <http://fortune.com/2015/06/04/union-pacific-railroad/>; Union Pacific, "Union Pacific Plans to Invest \$37.7 Million in its Arizona Rail Infrastructure," May 25, 2016, <http://www.up.com/media/releases/160525-arizona-investment.html>

<sup>53</sup> Karen Schutte, "FedEx Ground's 210,440 SF Logistics Center Under Construction in Tucson," *Real Estate Daily News and RED Comps*, October 3, 2014, <https://realestatedaily-news.com/fedex-grounds-210440-sf-logisticscenter-construction-tucson/>; Dan Sorenson, "Target fulfills online orders through new Tucson center," *Arizona Daily Star*, September 26, 2009, [http://tucson.com/business/targetfulfills-online-orders-through-new-tucsoncenter/article\\_0aa5ad63-2018-52d5-ae00-3d6b83f6374b.html](http://tucson.com/business/targetfulfills-online-orders-through-new-tucsoncenter/article_0aa5ad63-2018-52d5-ae00-3d6b83f6374b.html); Patrick McNamara, "It's official: HomeGoods bringing up to 900 jobs,"

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*Arizona Daily Star*, April 22, 2015, <http://roselawgroupreporter.com/2015/04/its-officialhomegoods-bringing-up-to-900-jobs-to-tucson/>

<sup>54</sup> Neil O'Farrell, "How to attract people to your city (and it's not just about jobs)," *EconomicDevelopment.org*, April 21, 2015, <http://economicdevelopment.org/2015/04/howto-attract-people-to-your-city-and-its-not-justabout-jobs/#comment-22813>

<sup>55</sup> As in Erik Sherman, "Do subsidies and tax breaks really help create jobs?" CBS MoneyWatch, June 20, 2014, <http://www.cbsnews.com/news/do-subsidies-and-taxbreaks-really-help-create-jobs/> or Richard Florida, "Want to deplete your tax base? Give 'job creators' what they want," *Los Angeles Times*, September 15, 2014, <http://www.latimes.com/opinion/op-ed/la-oe-florida-governmentincentives-to-businesses-20140916-story.html>

<sup>56</sup>  $(.25 * 400) + (.75 * 0) = 100$

<sup>57</sup> Tucson Regional Economic Opportunities, "We Win as One, 2014 Economic Blueprint Update, Setting Priorities to Advance Prosperity in Southern Arizona," p. 2, <http://www.suncorridorinc.com/SunCorridor/media/Sun-Corridor/Documents/Talent/TREO-Talent-Blueprint-Pages.pdf?ext=.pdf>

<sup>58</sup> Tucson Regional Economic Opportunities, "We Win as One, 2014 Economic Blueprint Update, Setting Priorities to Advance Prosperity in Southern Arizona," p. 3, <http://www.suncorridorinc.com/SunCorridor/media/Sun-Corridor/Documents/Talent/TREO-Talent-Blueprint-Pages.pdf?ext=.pdf>

<sup>59</sup> Giovanni Peri, "How Immigrants Affect California Employment and Wages," *California Counts: Population Trends and Profiles*, Vol. 8, No. 3, February 2007, [http://www.ppic.org/content/pubs/cacounts/CC\\_207GPCC.pdf](http://www.ppic.org/content/pubs/cacounts/CC_207GPCC.pdf)

<sup>60</sup> Tucson Regional Economic Opportunities, "We Win as One, 2014 Economic Blueprint Update, Setting Priorities to Advance Prosperity in Southern Arizona," p. 7,

<http://www.suncorridorinc.com/SunCorridor/media/Sun-Corridor/Documents/Talent/TREO-Talent-Blueprint-Pages.pdf?ext=.pdf>

<sup>61</sup> Tucson Regional Economic Opportunities, "We Win as One, 2014 Economic Blueprint Update, Setting Priorities to Advance Prosperity in Southern Arizona," p. 12, <http://www.suncorridorinc.com/component/phocadownload/category/9-2014-blueprintupdate?download=52:2014-blueprint-update>

<sup>62</sup> Manufacturing Institute, "Manufacturing Sector Profitability is Cyclical," Updated May 2013, <http://www.themanufacturinginstitute.org/Research/Facts-About-Manufacturing/Economy-and-Jobs/Profitability/Profitability.aspx>

<sup>63</sup> Tucson Regional Economic Opportunities, "We Win as One, 2014 Economic Blueprint Update, Setting Priorities to Advance Prosperity in Southern Arizona," p. 12. TRIO is now known as Sun Corridor.

<sup>64</sup> Arizona Office of Economic Opportunity, Monthly Employment Report, "Below-Average Gains in Nonfarm Employment; AZ Unemployment Rate Declined to 5.0%," December 15, 2016, <https://laborstats.az.gov/sites/default/files/documents/files/emp-report.pdf>

<sup>65</sup> C. Hoyt Bleakley and Jeffrey C. Fuhrer, "Shifts in the Beveridge Curve, Job Matching, and Labor Market Dynamics," *New England Economic Review*, September/October 1997, <https://www.bostonfed.org/publications/new-englandeconomic-review/1997-issues/issue-septemberoctober-1997/shifts-in-the-beveridge-curve-jobmatching-and-labor-market-dynamics.aspx>

<sup>66</sup> Darren DaRonco, "Business climate infuriates Tucson-area employers, survey finds," *Arizona Daily Star*, March 16, 2014, [http://tucson.com/business/local/businessclimate-infuriates-tucson-area-employerssurvey-finds/article\\_e80a3bb8-44bf-55f8-bddc-5ab2463f12cb.html](http://tucson.com/business/local/businessclimate-infuriates-tucson-area-employerssurvey-finds/article_e80a3bb8-44bf-55f8-bddc-5ab2463f12cb.html)

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<sup>67</sup> An encouraging note is that workforce training proponents are increasingly advocating evidence-based approaches. See for example, “Active Labor Market Policies: Theory and Evidence for What Works,” Council of Economic Advisers Issue Brief, December 2016, [https://www.whitehouse.gov/sites/default/files/page/files/20161220\\_active\\_labor\\_market\\_policies\\_issue\\_brief\\_cea.pdf](https://www.whitehouse.gov/sites/default/files/page/files/20161220_active_labor_market_policies_issue_brief_cea.pdf)

<sup>68</sup> Pima County Economic Development Plan, Update Through 2018, Chapter 12, p. 9, Adopted November 22, 2016, [https://webcms.pima.gov/UserFiles/Servers/Server\\_6/File/Government/Economic%20Development/Econ%20Dev%20Plan%20Update%202018/3418%20-%20EDP%202016%20ALL%20loRes.pdf](https://webcms.pima.gov/UserFiles/Servers/Server_6/File/Government/Economic%20Development/Econ%20Dev%20Plan%20Update%202018/3418%20-%20EDP%202016%20ALL%20loRes.pdf)

<sup>69</sup> For more on randomized trials, see the Jamel Poverty Action Lab’s web page, <https://www.povertyactionlab.org/> and Mary Ann Bates, Deputy Director of J-PAL North America: <https://www.povertyactionlab.org/bates>

<sup>70</sup> James Heckman, “Doing it right: job training and education,” *National Affairs*, [http://www.nationalaffairs.com/public\\_interest/detail/doing-it-right-job-training-and-education](http://www.nationalaffairs.com/public_interest/detail/doing-it-right-job-training-and-education); Heckman argues that public education spending should be targeted at pre-school children to have the biggest impact.

<sup>71</sup> Pima County Economic Development Plan, Update Through 2018, Chapter 14, pp. 1-2, Adopted November 22, 2016, [https://webcms.pima.gov/UserFiles/Servers/Server\\_6/File/Government/Economic%20Development/Econ%20Dev%20Plan%20Update%202018/3418%20-%20EDP%202016%20ALL%20loRes.pdf](https://webcms.pima.gov/UserFiles/Servers/Server_6/File/Government/Economic%20Development/Econ%20Dev%20Plan%20Update%202018/3418%20-%20EDP%202016%20ALL%20loRes.pdf)

<sup>72</sup> Data are also available for rural roads and bridges. See Robert Krol, “Some Facts on Highway, Road, and Bridge Conditions in the United States,” Working paper, December 22, 2016; Krol compares the state of U.S. highways, roads, and bridges in 2014 to 2005 using raw data from the Federal Highway Administration, U.S. Department of Transportation in Highway Statistics 2005 and 2014, <https://www.fhwa.dot.gov/policyinformation/statistics.cfm>

<sup>73</sup> Pima County Economic Development

Plan, Update Through 2018, Chapter 14, p. 2, Adopted November 22, 2016, [https://webcms.pima.gov/UserFiles/Servers/Server\\_6/File/Government/Economic%20Development/Econ%20Dev%20Plan%20Update%202018/3418%20-%20EDP%202016%20ALL%20loRes.pdf](https://webcms.pima.gov/UserFiles/Servers/Server_6/File/Government/Economic%20Development/Econ%20Dev%20Plan%20Update%202018/3418%20-%20EDP%202016%20ALL%20loRes.pdf)

<sup>74</sup> This argument supports the proposal in the Pima County Economic Development Plan, Update Through 2018, Chapter 14, p. 3, to push for state legislation that would allow a Regional Transportation Authority to “ask the voters for a maintenance and repair half-cent sales tax... [for pavement rehabilitation, preservation, and repair]” Consistent with the suggestion that privatization lowers the costs of providing local services (see below in this document), the Plan Update suggests “the work be privately contracted.”

<sup>75</sup> Pima County Economic Development Plan, Update Through 2018, Chapter 1, p. 2, Adopted November 22, 2016, [https://webcms.pima.gov/UserFiles/Servers/Server\\_6/File/Government/Economic%20Development/Econ%20Dev%20Plan%20Update%202018/3418%20-%20EDP%202016%20ALL%20loRes.pdf](https://webcms.pima.gov/UserFiles/Servers/Server_6/File/Government/Economic%20Development/Econ%20Dev%20Plan%20Update%202018/3418%20-%20EDP%202016%20ALL%20loRes.pdf)

<sup>76</sup> Pima County 2012-14 Economic Development Plan, Appendix A, Action Plan Status, <http://webcms.pima.gov/cms/One.aspx?pageId=185091>

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