An Economic Impact Estimate of Arizona Prosperity Districts

By Mark Lutter, Ph.D.

This document estimates the economic impact of creating Prosperity Districts in the State of Arizona. Prosperity Districts are special jurisdictions which can opt out of laws, taxes, and regulations which reduce economic growth. They are a tool to empower the creation of new communities with regulatory systems that promote investment, create jobs, and maximize economic opportunity.

Prosperity Districts have two stages. The first stage is the state level. This occurs when Arizona, or another state, passes the Prosperity District legislation. Prosperity Districts, which can opt out of harmful state laws, taxes, and regulations, can then be created. The second stage is the federal level. After two or more states pass the legislation and the interstate compact takes effect, congress can pass a law allowing Prosperity Districts to opt out of harmful federal laws, taxes, and regulations.

This document estimates the economic impact of Prosperity Districts in Arizona. I consider both state level Prosperity Districts and federal level Prosperity Districts. I find that an individual in state level Prosperity Districts with an annual income of $39,000\(^1\) would see, over a five-year period, their income increase by $858 - $1,115 more than the increase of the national average. I additionally find that, as against a comparable city, Prosperity Districts with 100,000 people employed would see 4,000 more jobs added over a decade, Prosperity Districts with a population of 400,000 workers would see 16,000 more jobs added over a decade, and Prosperity Districts with a population of 2 million workers would see 80,000 more new jobs created over a decade.

State level Prosperity Districts with 100,000 residents would have an annual statewide GDP spillover between $108 million and $140 million more at the end of a five-year period than in the absence of districts. The annual statewide GDP spillover of Prosperity Districts with 400,000 residents would be between $432 million and $562 million more at the end of a five-year period than in the absence of districts. The annual statewide GDP spillover of Prosperity Districts with 2,000,000 residents would be between $2.2 billion and $2.8 billion more at the end of a five-year period than in the absence of districts.

Prosperity Districts with 100,000 people employed would see 4,000 more jobs added over a decade; Districts with a population of 400,000 workers would see 16,000 more jobs added.

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I find that a federal level Prosperity District will grow between .54 to .82 percentage points faster than the United States. This means that over a 20-year period Prosperity Districts with 100,000 residents would have GDP between $700 million and $1.1 billion higher than a comparable city. Over a 20-year period Prosperity Districts with 400,000 residents would have an annual GDP $2.8 billion to $4.4 billion higher than a comparable city. Over a 20-year period Prosperity Districts with 2 million residents would have an annual GDP $14 billion to $22 billion higher than a comparable city.

I find the annual statewide GDP spillover of a federal level Prosperity District with 100,000 residents would be between $876 million and $1.4 billion more at the end of a twenty-year period than in the absence of districts. The annual statewide GDP spillover of Prosperity Districts with 400,000 residents would be between $3.5 billion and $5.5 billion more at the end of a twenty-year period than in the absence of districts. The annual statewide GDP spillover of Prosperity Districts with 2,000,000 residents would be between $17.5 billion and $27.7 billion more at the end of a twenty-year period than in the absence of districts.

I use Fraser’s economic freedom index to estimate the economic impact of Prosperity Districts. I calculate the score that Prosperity Districts, both state and federal, would receive. I then use peer reviewed sources which estimate the economic effect of changes in economic freedom. I use the estimates of those changes and apply them to Prosperity Districts.

**Economic Freedom**

Economic freedom is the degree to which a person is able to take economic actions uninhibited by the state. It captures the classically liberal notion of freedom, open markets, free trade, and limited government.

The original economic freedom index originated in a Liberty Fund conference organized by Milton Friedman, Rose Friedman, and Michael Walker. The result of these conferences was the published index, Economic Freedom of the World: 1975–1995. Economic freedom is more formally defined as follows.

*Individuals have economic freedom when (a) property they acquire without the use of force, fraud, or theft is protected from physical invasions by others and (b) they are free to use, exchange, or give their property as long as their actions do not violate the identical rights of others. Thus, an index of economic freedom should measure the extent to which rightly acquired property is protected and individuals are engaged in voluntary transactions. (Gwartney, Lawson and Block, Economic Freedom of the World 1975-1995 1996, 12)*

The original economic freedom index applied to countries. The first edition was published in 1996 and has been published every year since. In 2004 an economic freedom index was created for North America. It ranked Canadian provinces, American states, and Mexican states. It too, has been published every year since.

**State Level Reform**

Economic Freedom of North America is the application of the concept of economic freedom to the state level (Stansel, Torra and McMahon 2015). Economic freedom at the state level has three categories: government spending, taxes, and labor market freedom. State economic freedom ranking is the average of the three categories. Each category of economic freedom has several sub-categories.

Different states have different degrees of economic freedom. New Hampshire has the highest score at 8.2, while New York has the lowest score at 5.6. Arizona is tied for the ninth highest level of economic freedom with a score of 7.3. Arizona’s economic freedom score is likely to fall with the new minimum wage law.

I cannot calculate the new economic freedom score Arizona will receive because several of the adjustment formulas used by the index are not publicly available. I can, however, estimate the new score based on the score other states have received for having a high minimum wage. With the new minimum wage, Arizona’s economic freedom score will drop to at least 7.2.

Prosperity Districts liberate residents, transforming states into strongholds of free markets, federalism and limited government once again. Given that Prosperity Dis-
Districts are distinct jurisdictions, they would have high levels of economic freedom. Prosperity Districts would score highly in each category of economic freedom.

I estimate Prosperity Districts would have an economic freedom score of 8.3. I calculate this estimate by assuming that Prosperity Districts would score equivalent to the highest state score in each category. Given that Prosperity Districts are designed to maximize economic freedom it is reasonable to assume they will as well as the highest scoring states.

New Hampshire has the highest government spending score at 8.3. Prosperity Districts would have little incentive to spend General consumption not related to public goods. Nor would Prosperity Districts have an incentive to transfer wealth or create subsidies. In Prosperity Districts insurance and retirement would be the responsibility of individuals, not the government.

Alaska has the highest tax score at 8.4. Prosperity Districts would raise revenue through fees and leasing land, not by income, payroll, or sales taxes.

Maryland has the highest labor score at 8.2. Prosperity Districts would not impose a minimum wage, have a high union density, or directly employ many individuals. Instead, Prosperity Districts would create the environment for the private sector to create employment.

The total score of Prosperity Districts would then be 8.3. Arizona, including the new economic freedom law has an economic freedom score of 7.2. Therefore, Prosperity Districts score 1.1 points higher than Arizona on the state economic freedom index.

**Per Capita GDP**

The Economic Freedom of North America report includes several general findings of the effect of economic freedom on per capita GDP. They find that states in the top quartile of economic freedom have per capita GDP 6.7% above the national average, while states in the bottom quartile of economic freedom have per capita GDP 7.7% below the national average (Stansel, Torra and McMahon 2015, 16).

Compton, Giedeman and Hoover (2011) authored the most comprehensive estimate of the effect of economic freedom in American states on per capita GDP. They construct a dataset with economic freedom and per capita GDP, averaged over five year periods, from 1980-2004. They complete both an OLS and System GMM estimate on the dataset. The results of their regressions on the effect of a change in economic freedom on growth in per capita GDP are statistically significant.

Their OLS estimate finds that a one point increase in economic freedom over five years increases per capita income growth by 2 percentage points over its mean in a five-year period. Their System GMM estimate finds that a one point increase in economic freedom over five years increases per capita income growth by 2.8 percentage points over its mean in a five-year period. When demographic controls are added, the OLS estimate remains the same while the System GMM estimate finds that a one point increase in economic freedom over five years increases per capita income growth by 2.6 percentage points or its mean in a five-year period.

As previously mentioned, Prosperity Districts have an economic freedom score 1.1 points higher than Arizona. Therefore, according to the OLS estimate, over a five-year period, per capita income in Prosperity Districts would increase by 2.2 percentage points more than the national average.

A person in Prosperity Districts with an annual income of $39,000 would see, over a five-year period, their income increase by $858 more than the increase of the national average.

According to the System GMM estimate, over a five-year period, per capita income in Prosperity Districts would increase by 2.86 percentage points more than the national average. A person in Prosperity Districts with an annual income of $39,000 would see, over a five-year period, their income increase by $1115 more than the increase of the national average.
average.

The graph on the following page shows the increase in per capita income in Prosperity Districts vs a comparable city. I assume per capita income will grow at 2.4%\(^6\) in a comparable city, which the blue line represents. The orange line represents the OLS estimate for growth, 2.2% higher over a five-year period. The grey line represents the System GMM estimate for growth, 2.86% higher over a five-year period. The result is that those living in the Prosperity District will see their incomes rise $858-$1,115 over a five-year period more than those living in a comparable city would.

The total economic impact will depend on the population of the Prosperity District. Prosperity Districts with a population of 100,000 residents would have an annual GDP between $85 million and $111 million more than a comparable city at the end of a five-year period. Prosperity Districts with a population 400,000 would have an annual GDP between $343 million and $446 million GDP more than a comparable city at the end of a five-year period. Prosperity Districts with a population of 2 million would have an annual GDP between $1.7 billion and $2.2 billion more than a comparable city at the end of a five-year period.

The benefits of Prosperity Districts are not limited to the districts themselves. The additional GDP generated in the districts will have positive statewide spillover effects on the rest of Arizona. To estimate the spillover effect, I use the household multiplier from RIMS II. RIMS II is a dataset published by the Bureau of Economic Analysis and frequently used in economic impact studies.\(^7\)

I find the annual spillover of Prosperity Districts with 100,000 residents would be between $108 million and $140 million in more GDP after a five-year period than in the absence of districts. The annual spillover of Prosperity Districts with 400,000 residents would be between $432 mil-

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lion and $562 million in more GDP after a five-year period than in the absence of districts. The annual spillover of Prosperity Districts with 2,000,000 residents would be between $2.2 billion and $2.8 billion more GDP after a five-year period than in the absence of districts.

**Employment**

Prosperity Districts would have positive effects on employment. Garrett and Rhine (2011) examine the impact of economic freedom on the state level on employment. They break the dataset into three periods, from 1980-1990, 1990-2000, and 2000-2005. They then run a regression to find the impact of a change in economic freedom on employment.

They find economic freedom has a statistically significant impact for each of the three periods. From 1980-1990, a one point increase in economic freedom corresponded to a 3.8 percentage point increase in employment growth over the period. From 1990-2000, a one point increase in economic freedom corresponded to a 4.5 percentage point increase in employment growth.

Averaging the three estimates we find that a point increase in economic freedom increases employment growth by 3.7 percentage points over a decade.8 Prosperity Districts in Arizona would see their economic freedom levels increase by 1.1 points. This means Prosperity Districts with 100,000 workers would see 4,000 more jobs added over a decade than a comparable city not designated Prosperity Districts. Prosperity Districts with a population of 400,000 workers would see 16,000 more jobs added over a decade than a comparable city. Prosperity Districts with a population of 2 million workers would see 80,000 more new jobs created over a decade than a comparable city.

**Federal Level Reform**

Once two or more states pass the Prosperity District legislation it becomes an interstate compact. Then congress can pass legislation which exempts Prosperity Districts from harmful federal laws, taxes, and regulations. This section investigates the economic impact of federal level Prosperity Districts.

The economic freedom index ranks economic freedom on a scale of 10. A higher score means a country has more economic freedom while a lower score means a country has less economic freedom. In the most recent report, Hong Kong has the highest score at 9.03, while Venezuela has the lowest at 3.29.

Economic Freedom of the World is calculated with five categories: size of government, legal system and property rights, sound money, freedom to trade internationally, and regulation. Each category is itself made up of several sub-categories with data to determine rankings coming from a number of different sources.

The size of government category measures government spending, subsidies, transfers, and tax rates. A higher score means a smaller size of government. A smaller government means more money is left in the hands of citizens.

The legal system and property rights category measures how well courts enforce property rights and resolve disputes. A higher score means courts generally resolve disputes quickly and fairly. An efficient and fair judicial system expands opportunities for trade and commerce as residents are able to do business with people they might otherwise be unwilling to trust.

The sound money category measures the rate of inflation and the ease of opening bank accounts in other currencies. Given that money is half of every transaction. It is import-
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ant for residents to be able to trust that their money will have the same value tomorrow as it does today.

The freedom to trade internationally category measures the barriers to trading goods and services across borders. This includes tariffs, regulatory barriers, as well as barriers to the movement of people. Free trade helps expand the division of labor and improve economic outcomes.

The final category is regulation. It measures labor market regulations, credit market regulations, and business regulations. Simplifying the hiring and firing process, having access to credit, and ensuring starting a business is easy are all important to ensure continued economic growth.

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To determine the economic impact of Prosperity Districts I estimate the level of economic freedom Prosperity Districts would have. I then use estimate the economic impact an increase in the level of economic freedom would have.

Prosperity Districts would have their own separate legal and regulatory system, somewhat akin to Hong Kong under Chinese rule. This legal and regulatory autonomy allows Prosperity Districts to lower taxes, barriers to trade, and increase competition. The effect of legal and regulatory autonomy will be an increase in the level of economic freedom.

I estimate that Prosperity Districts is likely to have an economic freedom score of 8.67, 92 points higher than the United States economic freedom score. To construct my estimate, I consider the categories which are used to construct the economic freedom index.

Prosperity Districts will have the same score as the United States for both sound money and the freedom to trade internationally. Prosperity Districts are likely to use dollars, meaning the soundness of money will be the same as the United States. Freedom to trade internationally is determined by tariffs, regulatory barriers to trade, and the ease of movement of both capital and people. By and large these barriers are determined by international treaties which Prosperity Districts will not affect. As such, Prosperity Districts will have the same score as the United States for the freedom to trade internationally.

For the three other categories, the size of government, legal system and property rights, and regulation, I use Hong Kong as a proxy for the economic freedom score of Prosperity Districts. Hong Kong is one of the inspirations for Prosperity Districts, a small city which became world class because of rule of law, property rights, and economic freedom. Hong Kong offers a realistic objective for Prosperity Districts to achieve in terms of economic freedom.

Hong Kong is a good proxy because it shows what best practices governance looks like. It routinely ranks at or near the top on different governance indices, not just economic freedom, but the World Bank’s Doing Business Index and the World Economic Forum’s competitiveness index as well. Prosperity Districts are able to adopt best practices in governance. Given Hong Kong is widely accepted as having much of the best practices, it is reasonable to assume Prosperity Districts will achieve a similar economic freedom score.

Of course, the goal for Prosperity Districts is not simply to match Hong Kong, but to surpass it. There are always potential improvements to be made to lower the burden of government. Surpassing the economic freedom levels of Hong Kong will only increase economic growth in Prosperity Districts.

Growth

Numerous studies have found a strong relationship between economic growth and economic freedom. Berggren (2003) offers a useful overview the relevant studies. For the
purposes of this document we are interested in the effect of a change in economic freedom on economic growth. How quickly would Prosperity Districts grow compared to the United States.

I make three population assumptions for Prosperity Districts. The low assumption is that Prosperity Districts will have a population of 100,000 residents. The medium assumption is that Prosperity Districts will have a population of 400,000 residents. The high assumption is that Prosperity Districts will have a population of 2,000,000 residents.

Investigating the effect of a change in economic freedom on economic growth, Pitlik (2002) finds, with a high degree of statistical significance, that over a 20-year period a 1 point increase in economic freedom increases economic growth by .9 percentage points. This translates into Prosperity Districts growing .83 percentage points more than the United States. Pitlik runs a series of robustness tests to ensure his results are valid. For simplicity’s sake, I will use his result from the most standard regression he ran.

Over the last 20 years, the US has grown at a rate of 2.4% annually. For the following calculations I assume US growth will continue at a rate of 2.4% annually. I use this baseline to show the impact of Prosperity Districts. Using Pitlik’s estimate, Prosperity Districts would grow at 3.23% annually, a 33% increase in growth over the national average of 2.4%.

After a 20-year period, Prosperity Districts with a population of 100,000 residents would grow to have an annual GDP of $7.4 billion, $1.1 billion higher than a city with a population of 100,000 not designated a Prosperity City. Prosperity Districts with 400,000 residents would have a GDP of $27.9 billion, $4.4 billion higher than a comparable city. Prosperity Districts with 2,000,000 residents would have a GDP of $139.2 billion, $22 billion higher than a comparable city.

Sturm and Haan (2002) also estimate the economic impact of a change in economic freedom. They find statistically significant evidence that a one point change in economic freedom increases growth .59 percentage points. As Prosperity Districts have an economic freedom score .92 points higher than the United States, they would grow .54 percentage points quicker. Using Sturm and Haan’s numbers, Prosperity Districts would grow at 2.94%, 22% faster than the national average of 2.4%.

Over a 20-year period Prosperity Districts with 100,000 residents would grow to have an annual GDP of $7 billion, $700 million higher than a city with a population of 100,000 not designated Prosperity Districts. Prosperity Districts with 400,000 residents would have a GDP of $27.9 billion, $2.8 billion higher than a comparable city. Prosperity Districts with 2,000,000 residents would have an annual GDP of $139 billion, $14 billion higher than a comparable city.

The graph on the following page represents the growth rate of Prosperity Districts with a comparable city over a 20-year period. I assume the Prosperity District and the comparable city both begin with populations of 400,000 residents and per capita GDP of 39,000. I assume the growth rate of the comparable city is 2.4% annually. The low estimate growth rate for the Prosperity District is 2.94% annually and the high estimate is 3.23% annually.

The Sturm and Haan study represents the low estimate in orange. The Pitlik study represents the high estimate in grey. The comparable city is blue. After the 20-year period the comparable city has a GDP of $25 billion. The low estimate for the GDP of the Prosperity District is $27.9 billion while the high estimate is $29.5 billion.

Federal level reforms will lead to additional spillover effects from Prosperity Districts. I estimate the spillover effect of Prosperity Districts with federal level reforms the same way as for state level reforms.

I find the annual statewide GDP spillover of Prosperity Districts with 100,000 residents would be between $876 million and $1.4 billion more after a twenty-year period than in the absence of districts. The annual statewide GDP spillover effect of Prosperity Districts with 400,000 residents would be between $3.5 billion and $5.5 billion more after a twenty-year period than in the absence of districts.
The annual statewide GDP spillover of Prosperity Districts with 2,000,000 residents would be between $17.5 billion and $27.7 billion more after a twenty-year period than in the absence of districts.

**Conclusion**

In this document, I estimate the economic impact of Prosperity Districts. I distinguish between state and federal level Prosperity Districts. State level Prosperity Districts can opt out of harmful state laws, taxes, and regulations. Federal level prosperity Districts can opt out of harmful federal laws, taxes, and regulations.

I use Fraser’s economic freedom index to estimate the economic impact of Prosperity Districts. I calculate the score that Prosperity Districts, both state and federal, would receive. I then use peer reviewed sources which estimate the impact of changes in economic freedom. I use the estimates of those changes and apply them to Prosperity Districts.

I find that an individual in a state level Prosperity District with an annual income of $39,00012 would see, over a five-year period, their income increase by $858 - $1,115 more than the increase of the national average. I additionally find that, compared to a comparable city, Prosperity Districts with 100,000 people employed would see 4000 more jobs added over a decade, Prosperity Districts with a population of 400,000 workers would see 16,000 more jobs added over a decade, and Prosperity Districts with a population of 2

Over a 20-year period Prosperity Districts with 400,000 residents would have GDP $2.8 billion to $4.4 billion higher than a comparable city. Over a 20-year period Prosperity Districts with 2 million residents would have GDP $14 billion to $22 billion higher than a comparable city.
million workers would see 80,000 more new jobs created over a decade.

I find that a federal level Prosperity District will grow between .54 to .82 percentage points faster than the United States. This means that over a 20-year period Prosperity Districts with 100,000 residents would have an annual GDP between $700 million and $1.1 billion higher than a comparable city. Over a 20-year period Prosperity Districts with 400,000 residents would have an annual GDP $2.8 billion to $4.4 billion higher than a comparable city. Over a 20-year period Prosperity Districts with 2 million residents would have an annual GDP $14 billion to $22 billion higher than a comparable city.
Endnotes


2. Economic Freedom of North America also has data on Canadian provinces and Mexican states. However, the focus of this document is only on American states.

3. Arizona’s $12 minimum wage would be the highest in the country. To estimate the effect of the new minimum wage on economic freedom, I assume Arizona would have the same score as Oregon in the minimum wage category. Oregon currently has the lowest score in the minimum wage category, with a minimum wage of $9.75 per hour. As the Arizona law increases the minimum wage to $10 per hour next year, and $12 per hour by 2020, it is reasonable to assume Arizona will score at least as low in the minimum wage category as Oregon.

4. To calculate Arizona’s new score, I simply plug in Oregon’s minimum wage score to Arizona’s minimum wage category, then recalculate the outcome.

5. This estimate is based on states in Mexico, provinces in Canada, and states in the US.

6. 2.4% is the average annual growth rate of the US over the last 20 years. Data is from World Bank http://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG on 11/9/16

7. I estimate the spillover the by multiplying the final demand output of households by the increase in difference in GDP between Prosperity Districts and a comparable city.

8. \( (3.8+4.5+1.4*2)/3=3.7 \)

9. Once congress passes the interstate compact, Prosperity Districts will be exempt from many federal regulations including the minimum wage.


11. To calculate this number, I multiply Arizona’s per capita GDP by 100,000. Then I use annual growth rates of both 2.4% and 3.2%. The result is the Prosperity District ends with a GDP $668 million higher than a comparable city.

References


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Made possible by a generous grant from: