Indiana's Stellar Communities Designation:
An Evaluation of a State Economic Development Program

Purdue University Department of Agricultural Economics
Undergraduate Honors Thesis

Submitted by:
Mason Gordon

Advisors:
Dr. Michael Wilcox
Dr. Larry DeBoer

May 8, 2020

1. Introduction

1.1 Indiana Stellar Communities Designation Program

1.1.1 Formation
In September 2010, the Indiana Lieutenant Governor's Office created the Indiana Stellar Communities Designation Program (ISC) to fund comprehensive community development projects in two rural Indiana communities annually. (Brown, 2017) ISC is a public-public and public-private rural economic development program designed to forge cross collaborations between local governments, community businesses, organizations and stakeholders, state governmental agencies, and private investors. Initially, three state agencies partnered to launch the program: the Indiana Office of Community and Rural Affairs (OCRA), the Indiana Housing and Community Development Authority (IHCDA), and the Indiana Department of Transportation (INDOT). (Brown, 2017)

1.1.2 Evolution
In 2015, seven other state agencies joined the partnership between OCRA, IHCDA, and INDOT. These new partnerships include the Indiana Arts Commission (IAC), Indiana Bond Bank (IBB), Indiana Department of Health (IDH), Indiana Finance Agency (IFA), Indiana Department of Natural Resources (IDNR), Indiana Office of Tourism Development (IOTD), and Serve Indiana. (Brown, 2017) The seven new state agencies provide technical assistance and encourage cross-collaboration with agencies to accomplish multiple quality of life goals simultaneously.

Understanding that capacity within a community often stems from the community's size, OCRA instituted a two-division approach to ISC in 2015. The two divisions are based on population. Communities with populations below 6,000 are considered division one communities, while communities with populations exceeding 6,000 are considered division two communities. After the divisional approach, one community from each division was selected for the program annually. (Brown, 2017)

In 2018, ISC evolved into a regional partnership design. Now, a minimum of two or more communities can collaborate to create a self-selected region and pursue an ISC designation. (Stellar Communities Program, n.d.) This model embraces the current popularity of regionalism as a rural economic development strategy. Despite the change, ISC funding remains committed to the same impact goals and project types. Given the lack of time elapsed since this change, only individual stellar communities will be evaluated in this paper.

1.1.3 The Process

ISC is a two-step process: application and implementation. To be eligible to apply for ISC, a community must not be eligible for direct Community Development Block Grant (CDBG) funding through the U.S. Housing and Urban Development. To qualify for direct CDBG funding, a community must be the principal city of a Metropolitan Statistical Area (MAS). (US Department of Housing and Urban Development, n.d.) A principal city of a MAS is a community within a MAS with a population of at least 50,000. (US Census Bureau, 2020) In addition to the

requirement mentioned above, a community must have a strategic plan that has been updated within the past seven years to be ISC eligible.

Interested communities that qualify for the program submit letters of interest, complete strategic investment plans, and placemaking proposals, and host a site visit by state agencies. Upon the completion of site visits, partnering state agencies select two ISC designees.

After a community is designated an ISC, phase two of the program begins. (Brown, 2017) During the implementation phase of the program, communities acquire property, conduct environmental assessments, gain grant and contract approvals, design projects, and conclude the construction of projects. This phase occurs within 3-5 years after receiving the ISC designation. OCRA provides technical assistance throughout the implementation phase. (Brown, 2017)

1.1.4 The Communities

	ISC Designees (ISCE)	ISC Finalists (ISCE)
Division 1 Population < 6,000	Corydon (2016) Culver (2017) Delphi (2012) North Liberty (2015)	Churubusco (2017) Dunkirk (2015) Nashville (2014) Petersburg (2012) Union City (2011)
Division 2 Population > 6,000	Bedford (2013) Crawfordsville (2015) Greencastle (2011) Huntingburg (2014) Madison (2017) North Vernon (2011) Princeton (2012) Richmond (2013) Rushville (2016) Wabash (2014)	Angola (2013) Auburn (2012) Batesville (2011) Decatur (2014) Frankfort (2013) Greensburg (2017) Marion (2011) New Castle (2011) Mount Vernon (2014) Portland (2011) Rochester (2011) Shelbyville (2011) Vincennes (2017) Warsaw (2016) Washington (2011) Whitestown (2012)

2. Methodology

2.1 Case Study

A case study approach was utilized to evaluate the economic impact of ISC. Each ISC individual community (2011-2017) was included in this evaluation. As previously mentioned, regional ISC

communities were excluded due to a lack of data history and the involvement of multiple communities in each designation. As a comparison, each community that was named an ISC finalist over the same period was evaluated for impact comparisons.

2.2 Data Analysis

When applicable, an estimated trend analysis was conducted for each community. Yearly values were used to estimate trends for each variable before and after exposure to ISC (ISCE). Slopes of these trends were compared to determine treatment effects. Many variables did not present the opportunity for an establishment of trends given the lack of data points. Variables taken from the American Communities Survey (Educational Attainment, Public School Enrollment, Per Capita Income, and Median Household Income) are published annually, but annual numbers reflect a five-year moving average. Only 2012 and 2017 moving averages were included in the evaluation of the aforementioned variables to avoid duplicative data points.

Given that each community experienced ISCE in different years, the need to align each community based on exposure year was necessary. For data presented annually, ISC exposure year was considered year zero (base year). Negative years should be interpreted as years before ISCE, and positive years should be interpreted as years after ISCE.

Given the widely varying nominal values of data points in each community, the need to index the values was necessary to appropriately compare the impacts across communities of varying sizes. Annual data was normalized around year the base year. The equation for this process is represented by the equation:

$$\left({Data\ Value_{Year\ n}} / {Data\ Value_{Year\ 0}} = Data\ Index\ Value_{Year\ n} \right).$$

The index value for the base year equals 1. Any value smaller than 1 indicates a smaller data value relative to the base year. Any value larger than 1 indicates a larger data value point relative to the base year. Intuitively, this value also tells a greater story about the current value relative to the base year. By following the equation below, percentage change from the base year can be obtained:

$$Data\ Index\ Value_{Year\ n} - 1 = Percentage\ Change\ from\ Year\ 0$$

Percentage change calculations enable a deeper understanding of the magnitude of impact that communities are experiencing post-ISCE.

2.3 Community Vitality Indicators

OCRA has identified five common characteristics that healthy and sustainable communities share. Data involving these five characteristics comprise Community Vitality Indicators (CVI's). OCRA encourages communities to use the CVI's as a benchmark of community success and to incorporate each of them into community plans. The following are the five CVI's:

Assessed Value: The total dollar value assigned to all real property and improvements and personal property subject to taxation.

Per capita income: The mean income computed for every man, woman, and child in a particular group including those living in group quarters. It is derived by dividing the aggregate income of a particular group by the total population in that group.

Population growth: Population growth is the change in the population, resulting from a surplus (or deficit) of births over deaths and the balance of migrants entering and leaving a geographic area.

Educational Attainment Rate: This measures changes in the educational status of each community by age and by the level of education completed.

Public School Enrollment: This is the total number of children (K-12) enrolled in public schools in a geographic area.

Not all of these variables are available with annual data. Educational Attainment rate, per capita income, and public-school enrollment are all data points collected by the American Communities Survey (ACS). The ACS is published annually, but the data points are five-year moving averages. Data presented for these variables will be presented as 2012 and 2017 comparisons. The 2012 variable is a five-year moving average for the years 2008-2012, and the 2017 variable is a five-year moving average for the years 2013-2017.

Public school enrollment is published annually by the Indiana Department of Education (DOE). DOE publishes this data for every school and school corporation. Due to the complexities of school districts and corporation districts, this paper will utilize ACS public school enrollment data to minimize potential errors.

Assessed value data is provided annually by the Indiana Department of Local Government Finance and published on Indiana Gateway, a public data utility.

3 Population Growth

According to OCRA, 54 of Indiana's 92 counties (58.7%) are in absolute population decline. (Indiana Office of Community and Rural Affairs, n.d.) Meaning that annual births and inward migration are not sufficient to overcome annual deaths and outward migration. Population decline has adverse effects on a rural community's available workforce, business activity, school funding, and tax base. OCRA has identified population growth as a key indicator of a community's vitality and a priority of the ISC program.

3.1 ISC Designee Population Growth
Figure 3.1.1 showcases various population characteristics for ISC designees. Only six of the fourteen (43%) ISC designees have increased in population from 2010-2018. Culver represents the largest percentage growth (+6.69%). Culver was also the only ISC designee to exceed the State of Indiana's growth in population over the same time period (+3.16%).

Five of the fourteen ISC designees (35.7%) experienced population growth pre-ISCE while eight of the fourteen ISC designees (57.1%) grew population post-ISCE. In addition, eight of the fourteen ISC designees (57.1%) experienced a more positive (or less negative) population growth rate post-ISCE compared to pre-ISCE. Three of the fourteen ISC designees (21.4%) experienced a greater population decline post-ISCE relative to pre-ISCE. Three of the fourteen ISCE designees (21.4%) experienced population growth pre-ISCE and post-ISCE, but the growth slowed post-ISCE. Four of the fourteen ISC designees (28.6%) experienced population growth post-ISCE despite experiencing population decline pre-ISCE.

Figure 3.1.1 – Population Trends of ISC Designees

| Division	Community	Population-2010	Population-ISCE	Population-2018	% Change 2010-ISCE	% Change ISCE-2018*	% Change 2010-18
1	Corydon (2016)	3,117	3,123	3,164	0.19%	1.32%	1.51%
	Culver (2017)	1,346	1,420	1,436	5.50%	1.19%	6.69%
	Delphi (2012)	2,903	2,891	2,891	-0.41%	0.00%	-0.41%
	North Liberty (2015)	1,912	1,919	1,925	0.37%	0.31%	0.68%
2	Bedford (2013)	13,392	13,319	13,284	-0.55%	-0.26%	-0.81%
	Crawfordsville (2015)	15,942	16,043	16,114	0.63%	0.45%	1.08%
	Greencastle (2011)	10,301	10,347	10,530	0.45%	1.78%	2.22%
	Huntingburg (2014)	6,054	6,034	6,124	-0.33%	1.49%	1.16%
	Madison (2017)	11,991	11,737	11,879	-2.12%	1.18%	-0.93%
	North Vernon (2011)	6,964	6,885	6,712	-1.13%	-2.48%	-3.62%
	Princeton (2012)	8,674	8,626	8,642	-0.55%	0.18%	-0.37%
	Richmond (2013)	36,721	36,211	35,353	-1.39%	-2.34%	-3.73%
	Rushville (2016)	6,322	6,048	6,046	-4.33%	-0.03%	-4.37%
	Wabash (2014)	10,659	10,368	10,054	-2.73%	-2.95%	-5.68%
	Indiana	*6,490,432*	*-*	*6,695,497*	*-*	*-*	*3.16%*

Source: Based on data provided by US Census Bureau
* Examines population change as a percentage relative to the 2010 population

Population index calculations were employed to showcase the population index for ISC designees in Figure 3.1.2. A quick glance at the population index values over time for ISC designees will yield a generally downward sloping trend for a majority of ISC designees which is supported by the aforementioned observation that eight of the fourteen ISC designees (57.1%) declined in

population from 2010-2018. While declines are certainly present, many ISC designees are relatively flat in the most recent years of population index values.

Figure 3.1.2 – Population Trends of ISC Designees
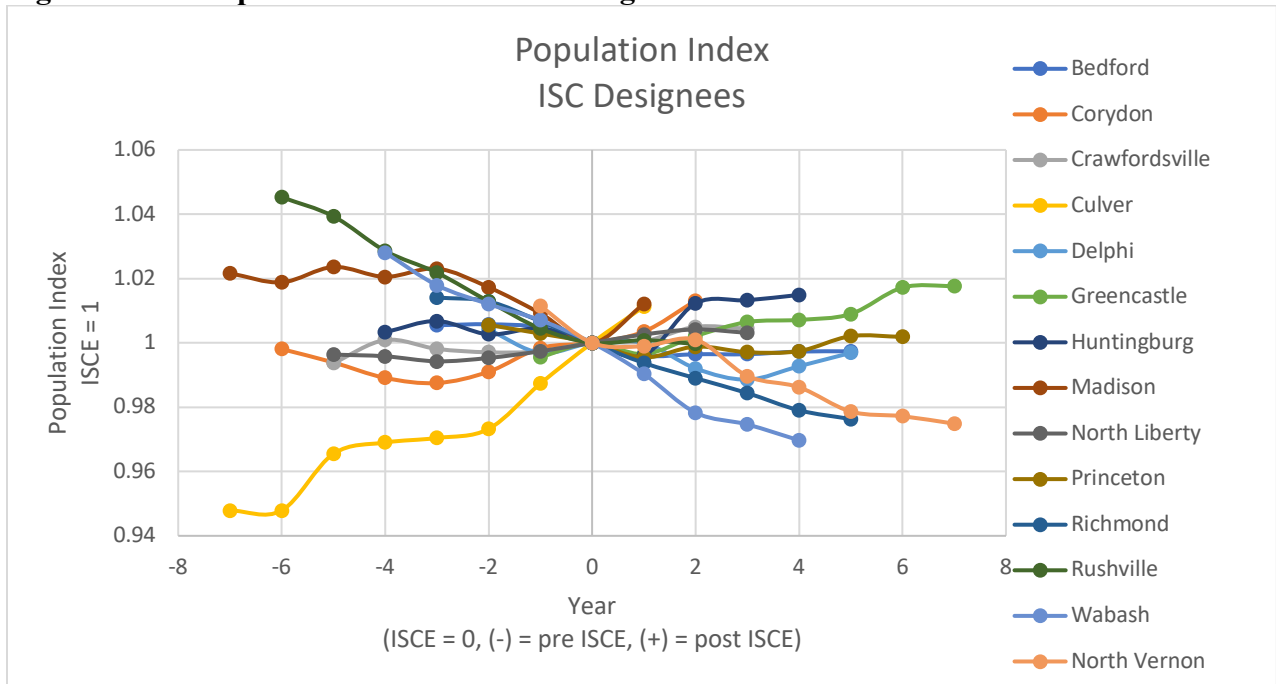
Source: Based on data provided by US Census Bureau

An analysis of population trends before and after ISCE was conducted. Figure 3.1.3 illustrates the average annual population index for ISC designees. Average population index pre-ISCE for ISC designees is represented by the following equation:
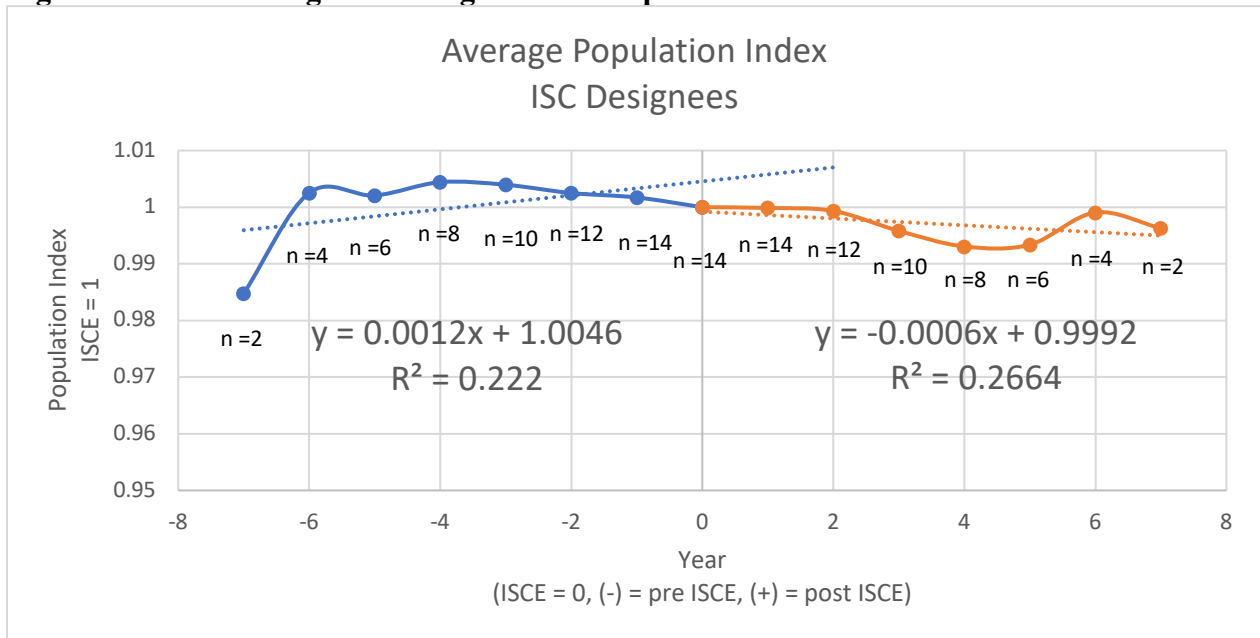
$$y = 0.0012x + 1.0046 \ (R^2 = 0.222)$$

Where y = average annual population index normalized around the population in the year of ISCE or year "0," and x represents year relative to ISCE. Average population index post-ISCE for ISC designees is represented by the following equation:

$$y = -0.0006x + 0.9992 \ (R^2 = 0.2664)$$

Where y and x denote the same variables as the previous equation. According to these two trends, ISC designees were experiencing population growth prior to ISCE and have experienced population decline post-ISCE. These trends do not entirely paint an accurate picture of population growth for certain ISC designees considering the previously mentioned observations that five of the fourteen ISC designees (35.7%) experienced population growth pre-ISCE while eight of the fourteen ISC designees (57.1%) grew population post-ISCE. It is important to note that, based on each trend equation's R^2 value, neither equation presents a desirable level of accuracy.

Figure 3.1.3–ISC Designee Average Annual Population Index

Average Population Index
ISC Designees

$y = 0.0012x + 1.0046$
$R^2 = 0.222$

$y = -0.0006x + 0.9992$
$R^2 = 0.2664$

Population Index
ISCE = 1

Year
(ISCE = 0, (-) = pre ISCE, (+) = post ISCE)

Source: Based on data provided by US Census Bureau

3.2 ISC Finalist Population Growth

Figure 3.2.1 displays the population characteristics of ISC finalists between 2010-2018. Eleven of the twenty-one ISC finalists (52.3%) have increased in population from 2010-2018. Whitestown exhibited the largest population growth – by far – of the finalists (+175.45%). Five of the twenty-one ISC finalists (23.8%) exceeded the State of Indiana's population growth rate from 2010-2018 (+3.16%). Despite many ISC finalists outpacing the state's population growth, several ISC finalists experienced sizable population declines. Vincennes experienced the largest population decline (-6.64%) from 2010-2018.

ISC finalists were nearly split in terms of ISCE's influence on population growth trends. Ten of the twenty-one ISC finalists (47.6%) experienced more positive (or less negative) population growth post-ISCE compared to pre-ISCE. Four of the twenty-one ISC finalists (19.0%) experienced population growth pre-ISCE despite experiencing population decline pre-ISCE. Eight of the twenty-one ISC finalists (38.1%) experienced more rapid population decline post-ISCE relative to pre-ISCE.

**Figure 3.2.1 – Population Trends of Stellar Community Finalists**

Division	Community	Population-2010	Population-ISCE*	Population-2018	% Change 2010-ISCE	% Change ISCE-2018	% Change 2010-18
1	Churubusco (2017)	1,813	1,824	1,863	0.61%	2.15%	2.76%
	Dunkirk (2015)	2,353	2,339	2,289	-0.59%	-2.12%	-2.72%
	Nashville (2014)	1,109	1,092	1,110	-1.53%	1.62%	0.09%
	Petersburg (2012)	2,382	2,363	2,315	-0.80%	-2.02%	-2.81%
	Union City (2011)	3,645	3,625	3,452	-0.55%	-4.75%	-5.29%
2	Angola (2013)	8,599	8,626	8,702	0.31%	0.88%	1.20%
	Auburn (2012)	12,820	12,844	13,391	0.19%	4.27%	4.45%
	Batesville (2011)	6,516	6,478	6,683	-0.58%	3.15%	2.56%
	Decatur (2014)	9,653	9,648	9,843	-0.05%	2.02%	1.97%
	Frankfort (2013)	16,419	16,147	15,831	-1.66%	-1.92%	-3.58%
	Greensburg (2017)	11,537	11,860	11,916	2.80%	0.49%	3.29%
	Marion (2011)	29,857	29,771	28,047	-0.29%	-5.77%	-6.06%
	Mount Vernon (2014)	6,679	6,582	6,457	-1.45%	-1.87%	-3.32%
	New Castle (2011)	18,123	17,963	17,268	-0.88%	-3.83%	-4.72%
	Portland (2011)	6,219	6,262	6,085	0.69%	-2.85%	-2.15%
	Rochester (2011)	6,221	6,196	6,000	-0.40%	-3.15%	-3.55%
	Shelbyville (2011)	19,038	19,014	19,326	-0.13%	1.64%	1.51%
	Vincennes (2017)	18,392	17,303	17,171	-5.92%	-0.72%	-6.64%
	Warsaw (2016)	13,581	14,561	14,941	7.22%	2.80%	10.01%
	Washington (2011)	11,529	11,655	12,149	1.09%	4.28%	5.38%
	Whitestown (2012)	3,132	3,929	8,627	25.45%	150.00%	175.45%
	Indiana	*6,490,432*	-	*6,695,497*	-	-	*3.16%*

Source: Based on data provided by US Census Bureau
* Examines population change as a percentage relative to the 2010 population

Population index calculations were employed to showcase the population index for ISC finalists in Figure 3.2.2. It is obvious that Whitestown's population growth overshadows the population growth of the remaining ISC finalists – evident by the relatively flat population index values pre and post ISCE for a vast majority of ISC finalists and a very sharply increasing population index for Whitetown.
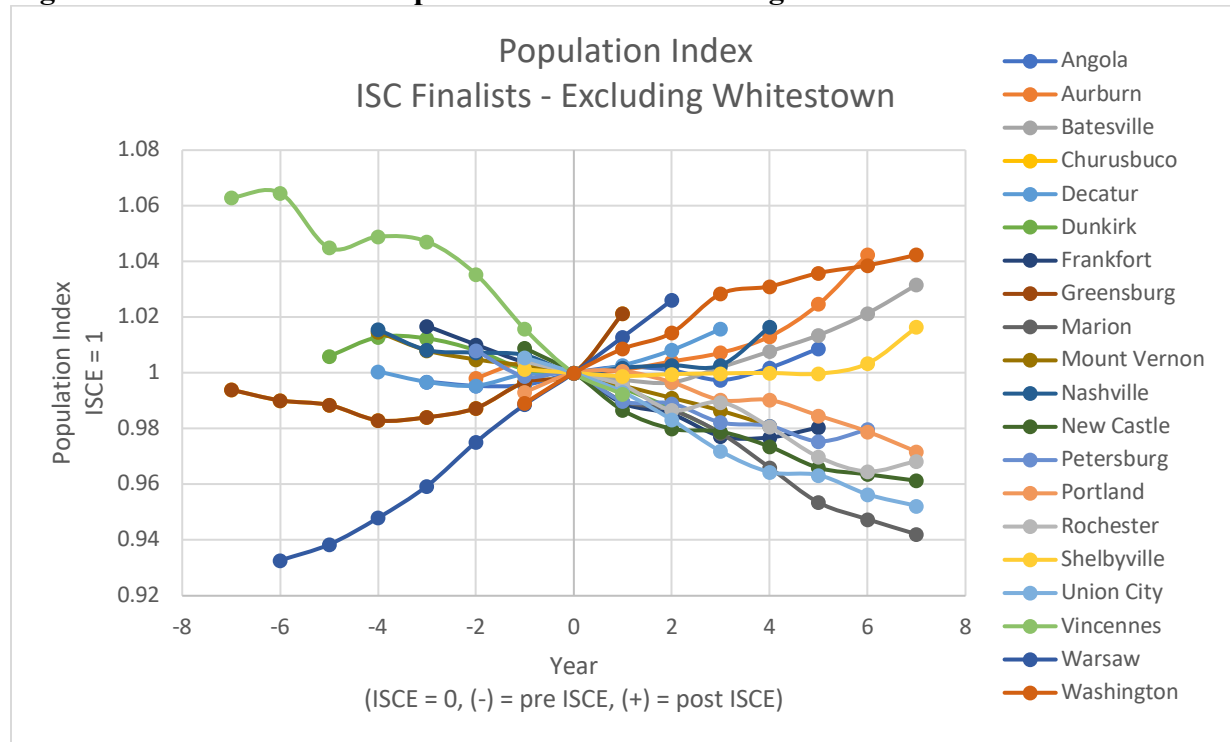
Figure 3.2.2 – ISC Finalist Population Index – Including Whitestown
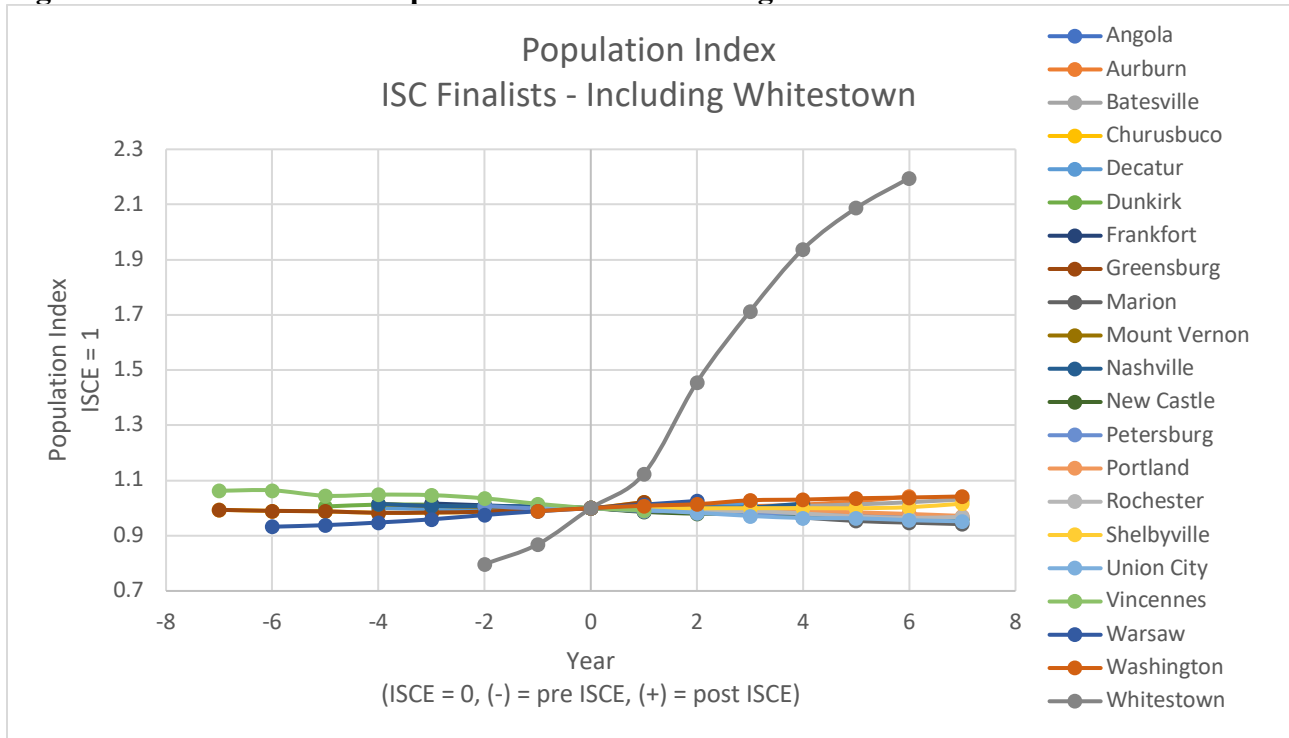
Source: Based on data provided by US Census Bureau

To provide a more accurate depiction of population growth for ISC finalists, Whitestown was excluded from the population indexes displayed in Figure 3.2.3. This display of population index values demonstrates that ISC finalists experienced variation in population growth pre and post ISCE. While ISC finalists demonstrate few commonalities pre-ISCE, ISC finalists seem to be following one of two population index paths post-ISCE – one leads to population growth near four percent and the other leading to population decline of roughly four percent.

Figure 3.2.3 – ISC Finalist Population Index – Excluding Whitestown

Source: Based on data provided by US Census Bureau

An analysis of population trends before and after ISCE for ISC finalists was conducted. Figure 3.2.4 illustrates the average annual population index pre-ISCE and post-ISCE for ISC finalists. Average population index pre-ISCE for ISC finalists is represented by the following equation:
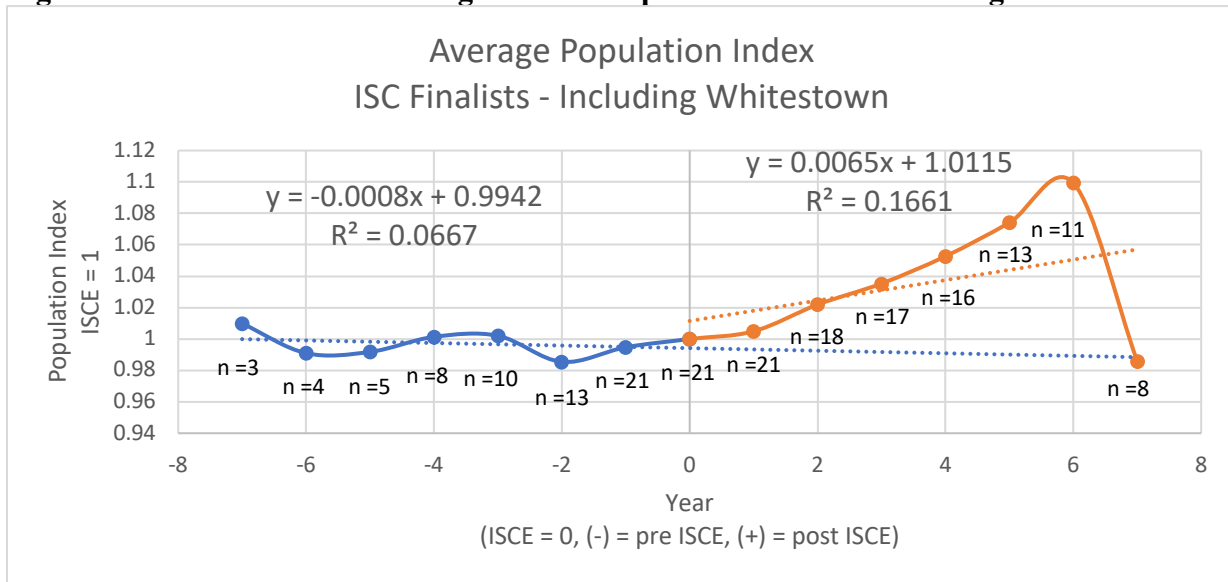
$$y = -0.0008x + 0.9942 \ (R^2 = 0.0667)$$

Where y = average annual population index normalized around the population in the year of ISCE or year "0," and x represents year relative to ISCE. Average population index pre-ISCE for ISC finalists is represented by the following equation:

$$y = 0.0065x + 1.0115 \ (R^2 = 0.1661)$$

Where y and x represent the same variables as the previous equation. According to these trend equations, ISC finalists were declining slightly before ISCE, but have grown following ISCE. Additional analysis of ISC finalist population characteristics supports this assertion. Before ISCE, eight of the twenty-one ISC finalists (30.1%) were growing in population. After ISCE, eleven of the twenty-one ISC finalist (52.4%) grew in population. Ten of the twenty-one ISC finalists (47.6%) exhibited a more positive growth rate after ISCE versus before.

Figure 3.2.4 – ISC Finalist Average Annual Population Index – Including Whitestown

Average Population Index
ISC Finalists - Including Whitestown

$y = 0.0065x + 1.0115$
$R^2 = 0.1661$

$y = -0.0008x + 0.9942$
$R^2 = 0.0667$

n =3, n =4, n =5, n =8, n =10, n =13, n =21, n =21, n =21, n =18, n =17, n =16, n =13, n =11, n =8

Population Index
ISCE = 1

Year
(ISCE = 0, (-) = pre ISCE, (+) = post ISCE)

Source: Based on data provided by US Census Bureau

This average annual population index includes Whitestown, which experienced 175% from 2010-2018. This type of growth is driving the average annual population index to unrealistic and inaccurate levels. Figure 3.2.5 illustrates the average population index for ISC finalists – excluding Whitestown. When Whitestown is excluded, the average population index pre-ISCE for ISC finalists is represented by the following equation:

$$y = 0.0001x + 1.0002 \ (R^2 = 0.0022)$$

Where y = average annual population index normalized around the population in the year of ISCE or year "0," and x represents year relative to ISCE. Average population index pre-ISCE for ISC finalists, excluding Whitestown, is represented by the following equation:

$$y = -0.002x + 1.0003 \ (R^2 = 0.9609)$$

Where y and x represent the same variables as the previous equation. These equations represent very slight – almost neutral – growth in average annual population index pre-ISCE and decline in the average annual population index post-ISCE. Although more communities have experienced population growth post-ISCE versus pre-ISCE, these equations suggest that, on average, ISC finalists are experiencing a population decline post-ISCE.

Figure 3.2.5 – ISC Finalist Average Annual Population Index – Excluding Whitestown
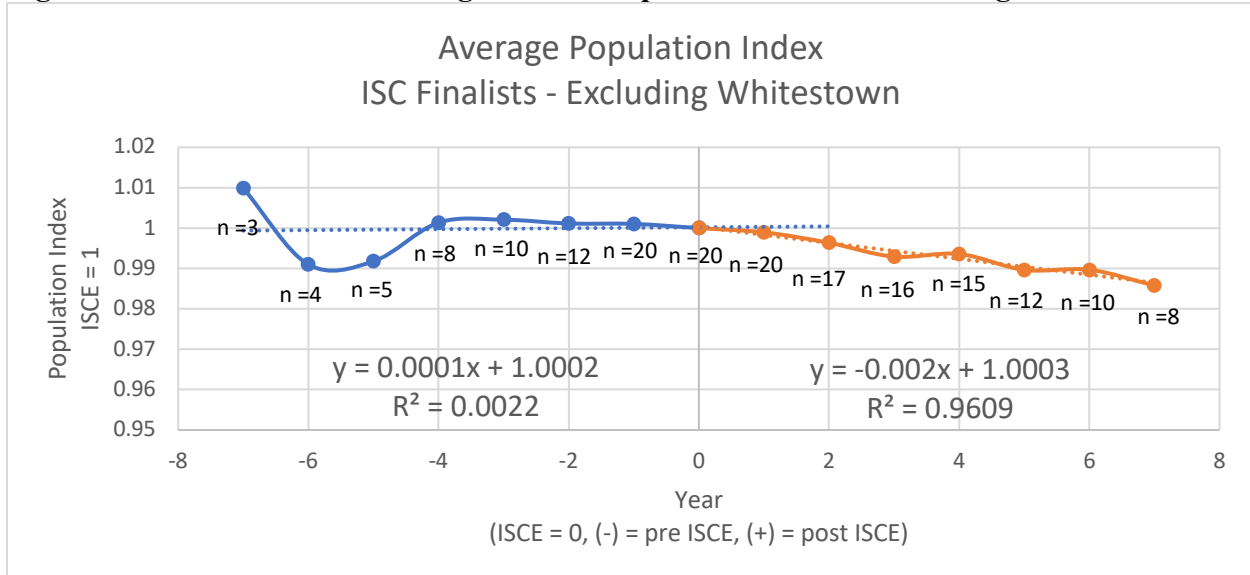
Source: Based on data provided by US Census Bureau

3.3 Population Takeaways

ISC finalists (23.8%) were more likely to experience growth exceeding Indiana's population growth from 2010-2018 compared to ISC designees (7.1%). Both ISC designees and ISC finalists have more communities growing post-ISCE compared to pre-ISCE. ISC designees (57.1%) were more likely than ISC finalists (65%) to experience a more positive population change post-ISCE compared to pre-ISCE. The average annual population index is declining post-ISCE for both ISC designees and ISC finalists. The slopes of average annual population index post-ISCE suggest that ISC designees (-0.0006x) are declining at a much slower rate than ISC finalists (-0.002x).

4 Income

Income is a key indicator of the vibrancy of a local economy. Currently, across rural communites, income is relatively lower when compared to urban counterparts. Strengthening wages in rural communities is essential to ensure rural communities remain competitive in the battle to keep residents from fleeing to wealthier urban centers. The importance of this variable encouraged OCRA to consider per capita income as a CVI.

4.1 ISC Designee Income

Figure 4.1.1 displays the per capita income levels of ISC designees in 2012 and 2017. Only one ISC designee (7.1%) exceeded the state per capita income in 2012 ($24,558) and 2017 ($27,305). The average per capita income of ISC designees was $19,037 in 2012 and $20,837 in 2017. The average per capita income of ISC designees fell far below Indiana's per capita income in both 2012 (-22.5%) and 2017 (-23.7%).

Although per capita income levels remain low for ISC designees, growth in this particular CVI is occurring. In fact, all ISC designees increased in per capita income from 2012-2017. The average growth in per capita income for ISC designees was +21.0%. Growth of per capita income from 2012-2017 for ten of the fourteen ISC designees (71.4%) exceeded the growth level of Indiana's per capita income (+11.2%).

Many ISC designees experienced a much more accelerated growth compared to other Indiana counterparts. Nine of the fourteen ISC designees (64.3%) exceeded the Indiana rate of growth in per capita income by at least five percentage points. Five of the fourteen ISC designees (35.7%) experienced a growth rate that was at least double Indiana's growth in per capita income.

Figure 4.1.1 ISC Designee Per Capita Income

Division	Community (ISCE)	2012 Per Capita Income*	2017 Per Capita Income*	2012-17 % Change Per Capita Income
1	Corydon (2016)	$ 19,080	$ 21,057	10.4%
	Culver (2017)	$ 18,225	$ 21,910	20.2%
	Delphi (2012)	$ 17,657	$ 19,971	13.1%
	North Liberty (2015)	$ 17,084	$ 21,870	28.0%
2	Bedford (2013)	$ 19,130	$ 23,627	23.5%
	Crawfordsville (2015)	$ 18,650	$ 19,689	5.6%
	Greencastle (2011)	$ 18,747	$ 22,685	21.0%
	Huntingburg (2014)	$ 19,849	$ 20,907	5.3%
	Madison (2017)	$ 17,956	$ 26,644	48.4%
	North Vernon (2011)	$ 24,749	$ 28,935	16.9%
	Princeton (2012)	$ 22,356	$ 24,128	7.9%
	Richmond (2013)	$ 16,781	$ 23,558	40.4%
	Rushville (2016)	$ 18,033	$ 21,523	19.4%
	Wabash (2014)	$ 18,214	$ 24,876	36.6%
	Indiana	*$ 24,558*	*$ 27,305*	*11.2%*

Based on data provided by US Census Bureau
*Data as reported by American Community Survey and not adjusted for inflation

4.2 ISC Finalist Income

Figure 4.2.1 displays the per capita income levels of ISC finalists in 2012 and 2017. Unlike ISC designees, several ISC finalists exceed Indiana's per capita income in 2012 and 2017. Four of the twenty-one ISC finalists (19.0%) exceeded the state per capita income in 2012 ($24,558) and 2017 ($27,305). The average per capita income of ISC finalists was $20,837 in 2012 and $22,618 in 2017. Average per capita income for ISC finalists fell below Indiana's per capita income in both 2012 (-15.2%) and 2017 (-17.2%).

ISC finalists were inconsistent in terms of per capita income growth. Not all ISC finalists grew per capita income from 2012-2017. Fourteen of the twenty-one ISC finalists (67.7%) experienced growth in per capita income from 2012-2017. The average growth in per capita income for ISC finalists was +7.3%. Growth of per capita income from 2012-2017 for nine of the twenty-one ISC finalists (42.9%) exceeded the growth level of Indiana's per capita income (+11.2%). Five of the twenty-one ISC finalists (23.8%) exceeded the Indiana rate of growth in per capita income by at least five percentage points. One of the twenty-one ISC finalists (4.8%) experienced a growth rate that was at least double Indiana's growth in per capita income.

4.2.1 ISC Designee Income

Division	Community	2012 Per Capita Income*	2017 Per Capita Income*	2012-17 % Change Per Capita Income
1	Churubusco (2017)	$ 21,635	$ 22,514	4.1%
	Dunkirk (2015)	$ 18,355	$ 17,343	-5.5%
	Nashville (2014)	$ 25,289	$ 28,244	11.7%
	Petersburg (2012)	$ 18,108	$ 21,065	16.3%
	Union City (2011)	$ 15,775	$ 15,433	-2.2%
2	Angola (2013)	$ 22,317	$ 29,911	34.0%
	Auburn (2012)	$ 19,397	$ 20,515	5.8%
	Batesville (2011)	$ 30,264	$ 29,211	-3.5%
	Decatur (2014)	$ 21,194	$ 22,146	4.5%
	Frankfort (2013)	$ 17,677	$ 20,057	13.5%
	Greensburg (2017)	$ 21,023	$ 24,929	18.6%
	Marion (2011)	$ 17,776	$ 17,631	-0.8%
	Mount Vernon (2014)	$ 26,275	$ 29,511	12.3%
	New Castle (2011)	$ 16,989	$ 20,110	18.4%
	Portland (2011)	$ 17,802	$ 18,553	4.2%
	Rochester (2011)	$ 23,245	$ 23,255	0.0%
	Shelbyville (2011)	$ 21,798	$ 24,675	13.2%
	Vincennes (2017)	$ 18,614	$ 19,529	4.9%
	Warsaw (2016)	$ 22,380	$ 27,137	21.3%
	Washington (2011)	$ 21,205	$ 20,300	-4.3%
	Whitestown (2012)	$ 34,779	$ 29,052	-16.5%
	Indiana	*$ 24,558*	*$ 27,305*	*11.2%*

Source: Based on data provided by US Census Bureau
*Data as reported by American Community Survey and not adjusted for inflation

4.3 Income Takeaways

An overwhelming majority of ISC designees (92.9%) and ISC finalists (81%) have per capita income levels that fall below Indiana's per capita income. With that being said, ISC designees (100%) were more likely to experience per capita income growth than ISC finalists (67.7%) from 2012-2017. The average growth in per capita income from 2012-2017 was more intense for ISC designees (+20.26%) than ISC finalists (+7.3%).

5 Public School Enrollment

Children are the future of a community. The number of children enrolled in public school is a key insight into the longevity of a community. Falling public school enrollment is an indication that fewer youth are present in a community. Falling public school enrollment could stem from a few different sources – increased outward migration of young adults, decreased inward migration of young adults, or decreased confidence in a school system – all of which negatively impact a community. Additionally, falling public school enrollment can negatively affect a public school's operating budget given that state funding for a local school corporation is a function of the number of students enrolled in the school system. A shrinking, low budget school system can also serve as a deterrent to young adults considering moving to a rural community.

5.1 ISC Designee Public School Enrollment

Public school enrollment declined over the time period of 2012-2017 for ten of the fourteen ISC designees (71%). Figure 5.1.1 displays the public school enrollment characteristics of ISC designees. Several of the declines were quite sizeable. All ten of the ISC designees with declining public school enrollment experienced declines of at least 10%. Enrollment for four of the declining ISC designees fell in excess of 15%, two fell greater than 25%, and one designee community lost over 40% of enrollment. In terms of the number of students, eight of the fourteen ISC designees shed over 100 students, six of the fourteen lost over 200 students, four of the fourteen decreased by over 300 students, and Richmond lost over 800 students between 2012-2017.

ISC designees are not alone when it comes to facing public school enrollment decline. Public school enrollment in the state of Indiana declined 3% from 2012-17. Ten of the fourteen ISC designees (71.4%) outpaced Indiana's decline in public school enrollment. Four of the fourteen ISC designees (28.6%) experienced a more positive change public school enrollment from 2012-2017 than the state of Indiana.

However, not all of the communities realized a net loss in public school enrollment. Three ISC designees (Crawfordsville, Huntingburg, and North Liberty) grew in excess of 5% over the 2012-2017 time period. Princeton, the only other remaining net positive community, grew one student over the time period for an effective neutral change. Huntingburg added over 600 students to the enrollment (57.7%).

Figure 5.1.1 ISC Designee Public School Enrollment (K-12)

Division	Community	2012 Enrollment	2017 Enrollment	2012-17 Change	2012-17 % Change Enrollment
1	Corydon (2016)	582	338	-244	-41.9%
	Culver (2017)	273	193	-80	-29.3%
	Delphi (2012)	625	559	-66	-10.6%
	North Liberty (2015)	502	582	80	15.9%
2	Bedford (2013)	2,413	2,101	-312	-12.9%
	Crawfordsville (2015)	2,624	2,836	212	8.1%
	Greencastle (2011)	1,639	1,414	-225	-13.7%
	Huntingburg (2014)	1,065	1,680	615	57.7%
	Madison (2017)	1,971	1,609	-362	-18.4%
	North Vernon (2011)	1,295	1,118	-177	-13.7%
	Princeton (2012)	1,738	1,739	1	0.1%
	Richmond (2013)	6,424	5,537	-887	-13.8%
	Rushville (2016)	1,289	1,160	-129	-10.0%
	Wabash (2014)	1,938	1,610	-328	-16.9%
	Indiana	*1,643,356*	*1,598,248*	*-45,108*	*-3%*

Source: Based on data provided by US Census Bureau

5.2 ISC Finalist Public School Enrollment

Like ISC designees, many ISC finalists experienced declines in public school enrollment from 2012-2017. Figure 5.2.1 displays the public school enrollment characteristics of ISC finalists. Public school enrollment declined over the time period of 2012-2017 for ten of the twenty-one ISC finalist communities (47.6%). Five of the twenty-one ISC finalist communities (23.8%) declined in public school enrollment in excess of 10% - three of which declined in excess of 20%.

Seven of the twenty-one ISC finalists (33.3%) outpaced Indiana (-3%) in terms of loss of public school enrollment. Fourteen of the twenty-one ISC finalists (66.7%) experienced a change in public school enrollment that was more positive than Indiana's change in public school enrollment. Half of the ISC finalists increased public school enrollment from the time period 2012-2017. Six of the twenty-one ISC finalists (28.6%) grew enrollment in excess of 10%. Three of the twenty-one ISC finalists (14.3%) grew in excess of 20%. One ISC finalist, Whitestown, over doubled (+130%) public school enrollment from 2012-2017.

In terms of the number of students, four ISC finalists shed over 100 students, two declined over 400 students, and Vincennes lost more than 600 students from 2012-2017. On the flip side, five ISC finalists added over 100 students, four ISC finalists added over 300 students, and Whitestown added 948 students from 2012-2017.

5.2.1 ISC Finalist Public School Enrollment (K-12)

Division	Community	2012 Enrollment	2017 Enrollment	2012-17 Change Enrollment	2012-17 % Change Enrollment
1	Churubusco (2017)	464	380	-84	-18.1%
	Dunkirk (2015)	590	446	-144	-24.4%
	Nashville (2014)	140	138	-2	-1.4%
	Petersburg (2012)	374	461	87	23.3%
	Union City (2011)	796	740	-56	-7.0%
2	Angola (2013)	1,516	1,348	-168	-11.1%
	Auburn (2012)	2,576	2,632	56	2.2%
	Batesville (2011)	1,324	1,200	-124	-9.4%
	Decatur (2014)	1,818	1,810	-8	-0.4%
	Frankfort (2013)	3,133	3,516	383	12.2%
	Greensburg (2017)	2,079	2,436	357	17.2%
	Marion (2011)	4,460	4,364	-96	-2.2%
	Mount Vernon (2014)	1,604	1,130	-474	-29.6%
	New Castle (2011)	3,206	3,278	72	2.2%
	Portland (2011)	1,118	1,135	17	1.5%
	Rochester (2011)	884	1,067	183	20.7%
	Shelbyville (2011)	3,534	3,890	356	10.1%
	Vincennes (2017)	3,060	2,452	-608	-19.9%
	Warsaw (2016)	2,647	2,661	14	0.5%
	Washington (2011)	2,369	2,445	76	3.2%
	Whitestown (2012)	729	1,677	948	130.0%
	Indiana	*1,643,356*	*1,598,248*	*-45,108*	*-3%*

Source: Based on data provided by US Census Bureau

5.2 Public School Enrollment Takeaways

Overall, a decline in public school enrollment has impacted both ISC designees and ISC finalists. However, there were many differences in terms of prevalence and severity of the decline between the two groups. ISC designees (71%) were more likely to experience a decline in public school enrollment than ISC finalists (47.6%) from 2012-2017. Declines in public school enrollment in excess of 10% were much more likely for ISC designees (71.4%) than ISC finalists (23.8%) from 2012-2017. Inversely, growth in public school enrollment in excess of 10% was more likely for

ISC finalists (28.6%) than ISC designees (14.3%). ISC designees (71.4%) were much more likely to experience loss in public school enrollment in excess of Indiana's rate of decline compared to ISC finalists (33.3%)

6. Educational Attainment Rate

Educational attainment measures the percentage of a community's population with various educational attainment levels. Generally, rural communities tend to have a lower percentage of residents with post-secondary education when compared to urban communities. Creating local economies that encourage local residents to pursue a higher level of education is a core priority of the ISC program due to education's implications on income and quality of life levels.
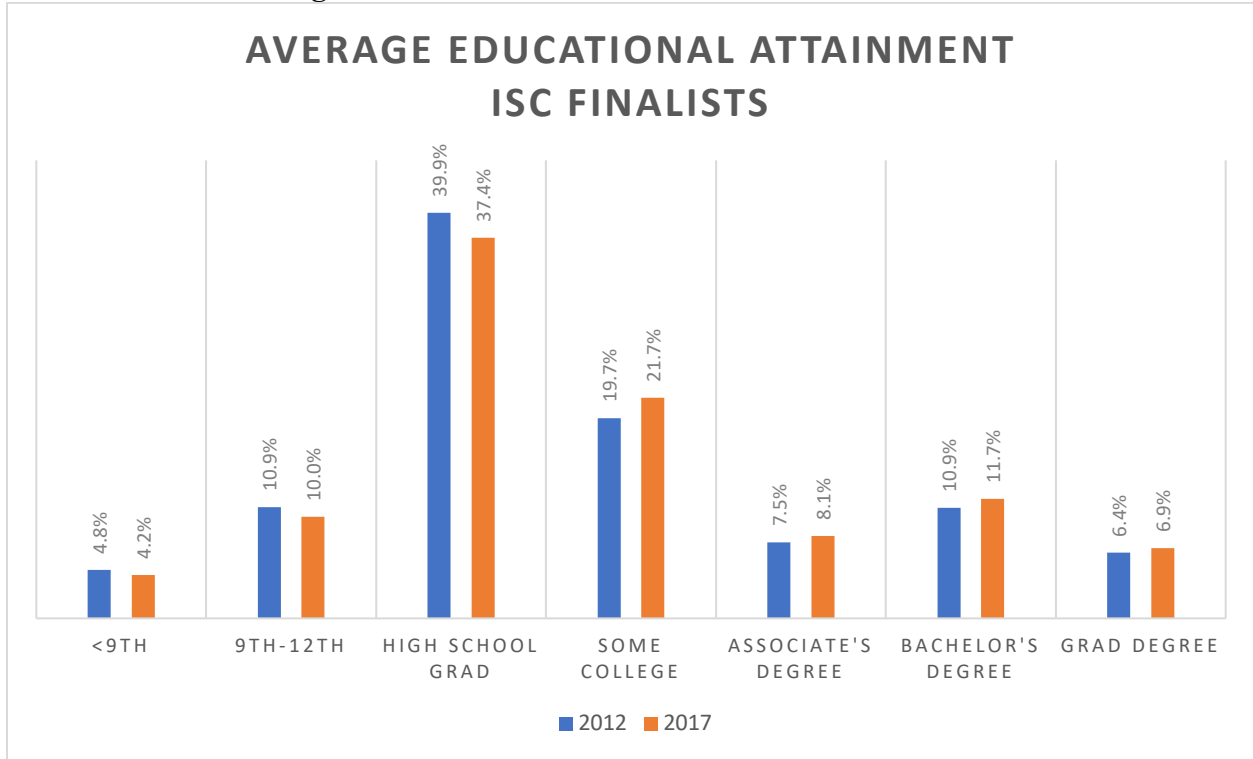
A quick look at Figures 6.1 and 6.2 illustrates that average educational attainment rates among ISC designees and ISC finalists are incredibly similar. Distribution for both follow this simplified trend: roughly 14% with no high school diploma, roughly 58% with a high school diploma only or some college training, but no college degree, and roughly 27% with a college degree. In fact, the average educational attainment rates for both ISC designees and ISC finalists fall within +/-1% of the aforementioned generality.

6.1 ISC Designee Educational Attainment Rates
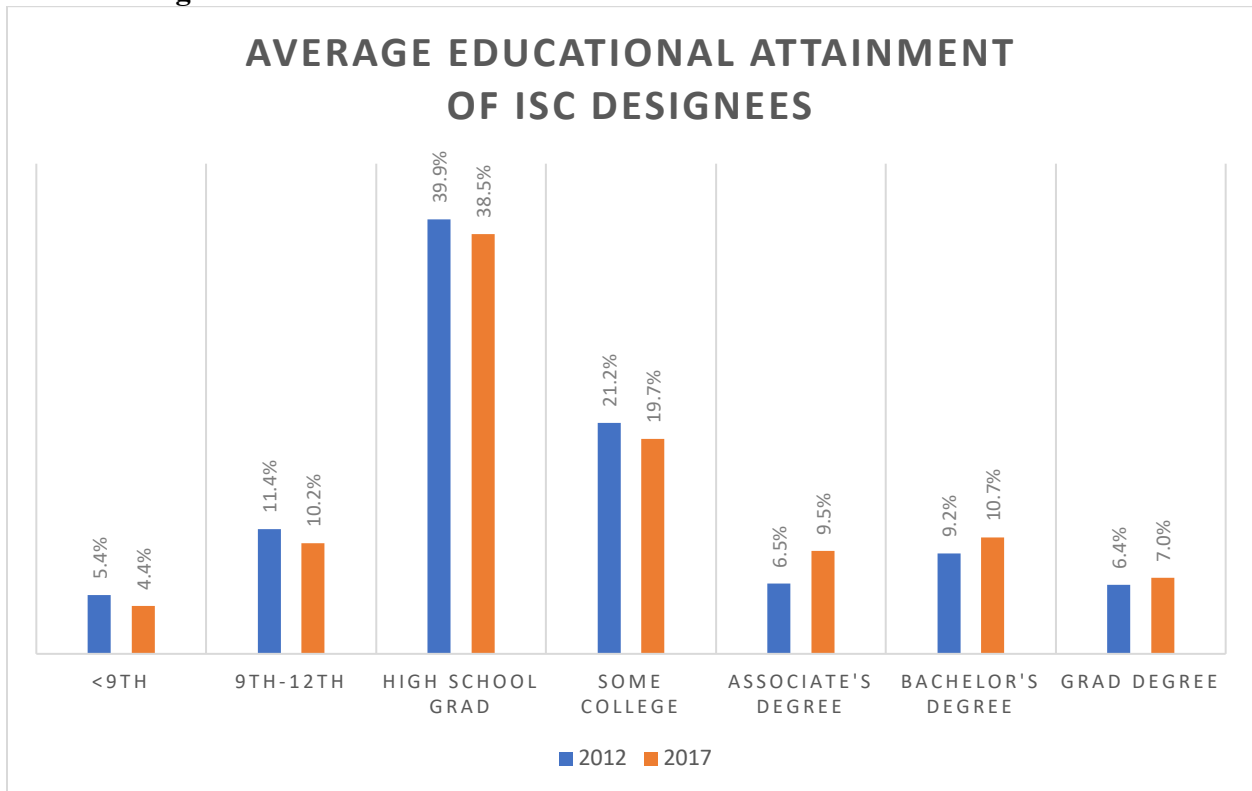
Source: Based on data provided by US Census Bureau
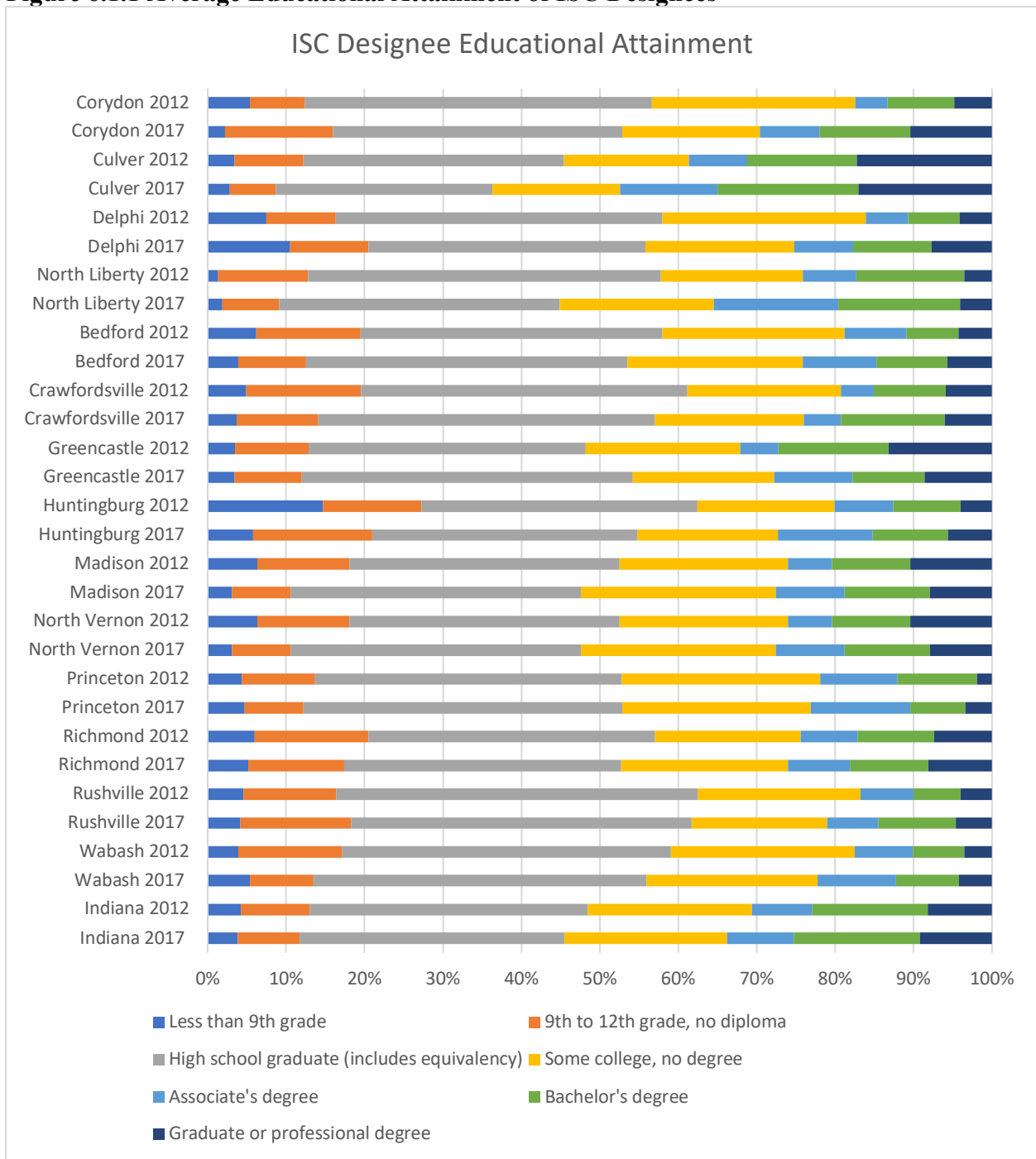
6.2 ISC Finalist Average Educational Attainment Rates

AVERAGE EDUCATIONAL ATTAINMENT ISC FINALISTS

Category	2012	2017
<9TH	4.8%	4.2%
9TH-12TH	10.9%	10.0%
HIGH SCHOOL GRAD	39.9%	37.4%
SOME COLLEGE	19.7%	21.7%
ASSOCIATE'S DEGREE	7.5%	8.1%
BACHELOR'S DEGREE	10.9%	11.7%
GRAD DEGREE	6.4%	6.9%

Source: Based on data provided by US Census Bureau

6.1 ISC Designee Educational Attainment Rates

Despite similar average educational attainment rates for ISC designees and ISC finalists, there are several differences in individual communities among the two groups. Figure 6.1.1 displays the 2012 and 2017 educational attainment rates for ISC designees. While many ISC designees follow a similar pattern, there are a few noteworthy observations. Ten of the fourteen ISC designees (71.4%) exceed Indiana's proportion of residents without a high school diploma (11.7%) in 2017. Even more startling, only one of the fourteen ISC designees (7.1%) exceed Indiana proportion of residents with a college degree in 2017.

Figure 6.1.1 Average Educational Attainment of ISC Designees

ISC Designee Educational Attainment

Legend:
- Less than 9th grade
- 9th to 12th grade, no diploma
- High school graduate (includes equivalency)
- Some college, no degree
- Associate's degree
- Bachelor's degree
- Graduate or professional degree

Source: Based on data provided by US Census Bureau

Educational attainment rates are certainly important to evaluate, but changes in these particular rates provide insight into the direction of a community. Figure 6.1.2 displays the percentage change in each educational attainment level for ISC designees from 2012 to 2017. Ideally, communities will experience growth in post-secondary levels of educational attainment and decline in secondary levels of educational attainment.

A vast majority of ISC designees experienced this ideal shift in educational attainment. In fact, ten of the fourteen ISC designees (71.4%) decreased the proportion of residents without a high school diploma from 2012-2017. Thirteen of the fourteen ISC designees (92.9%) increased the proportion of residents with a college degree from 2012-2017.

Additionally, there were several ISC designees that outpaced the state's percentage change in the respective educational attainment levels. Twelve of the fourteen ISC designees (85.7%) exceeded Indiana's growth in the proportion of residents with an associate's degree; ten of the fourteen ISC designees (71.4%) exceeded Indian's growth in the proportion of residents with a bachelor's degree; and eight of the fourteen ISC designees (57.1%) out-paced Indiana's growth in the proportion of residents with a graduate degree from 2012-2017. At the same time, seven of the fourteen ISC designees (50%) exceeded Indiana's decline in the proportion of residents with less than a ninth-grade education; eight of the fourteen ISC designees (57.1%) exceeded Indiana's decline in the proportion of residents with greater than a ninth-grade education, but no diploma; and five of the fourteen ISC designees (35.7%) exceeded Indiana's decline in the proportion of residents with only a high school diploma.

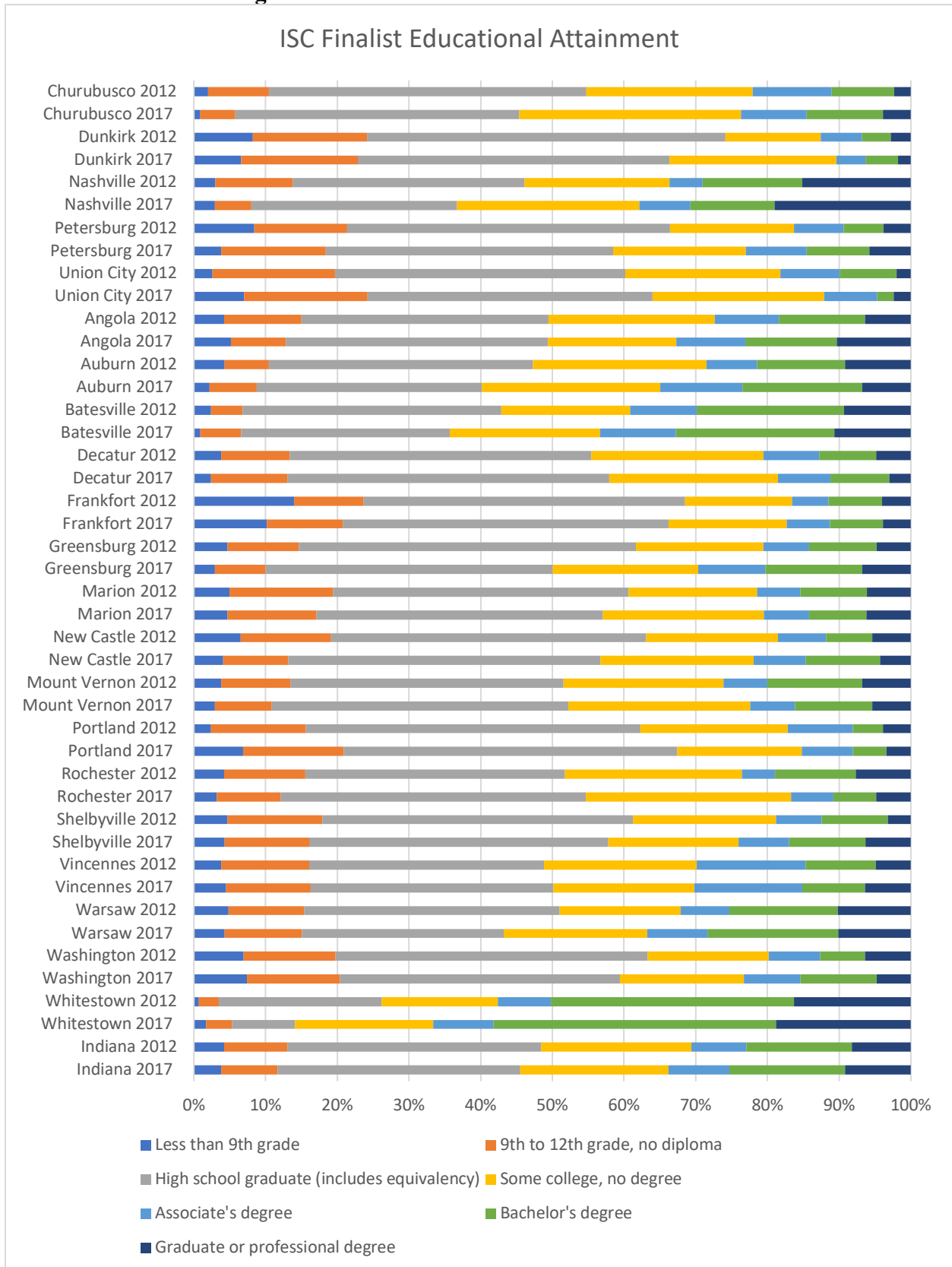**Figure 6.1.2 ISC Designee % Change in Educational Attainment (2012-2017)**

Division	Community (ISCE)	<9th	9-12 No Diploma	High School Diploma	Some College, No degree	Associates Degree	Bachelor's Degree	Graduate Degree
1	Corydon (2016)	-59%	97%	-17%	-32%	85%	36%	117%
	Culver (2017)	-18%	-33%	-17%	3%	68%	29%	-1%
	Delphi (2012)	40%	14%	-15%	-27%	39%	52%	88%
	North Liberty (2015)	46%	-37%	-20%	8%	134%	12%	17%
2	Bedford (2013)	-37%	-35%	6%	-4%	19%	36%	33%
	Crawfordsville (2015)	-24%	-29%	3%	-3%	12%	45%	2%
	Greencastle (2011)	-3%	-9%	20%	-9%	104%	-34%	-35%
	Huntingburg (2014)	-61%	21%	-4%	2%	61%	12%	40%
	Madison (2017)	-51%	-36%	8%	15%	57%	9%	-24%
	North Vernon (2011)	39%	-1%	-2%	-21%	24%	58%	-2%
	Princeton (2012)	7%	-19%	4%	-5%	28%	-31%	79%
	Richmond (2013)	-13%	-16%	-3%	15%	8%	3%	9%
	Rushville (2016)	-9%	19%	-6%	-16%	-4%	65%	15%
	Wabash (2014)	38%	-39%	1%	-7%	35%	21%	20%
	Indiana	*-9.5%*	*-10.2%*	*-4.5%*	*-1.0%*	*10.4%*	*9.5%*	*12.2%*

Source: Based on data provided by US Census Bureau

6.2 ISC Finalist Educational Attainment Rates

Figure 6.2.1 displays the 2012 and 2017 educational attainment rates for ISC finalists. ISC finalists have a higher level of variation in educational attainment levels across the entire group. Fourteen of the twenty-one ISC finalists (66.7%) exceeded Indiana's proportion of residents with no high school diploma in 2017 while only six of the twenty-one ISC finalists (28.6%) exceeded Indiana's proportion of residents with a college degree.

6.2.1 ISC Finalist Average Educational Attainment Rates

ISC Finalist Educational Attainment

Legend:
- Less than 9th grade
- 9th to 12th grade, no diploma
- High school graduate (includes equivalency)
- Some college, no degree
- Associate's degree
- Bachelor's degree
- Graduate or professional degree

Categories (top to bottom):
Churubusco 2012, Churubusco 2017, Dunkirk 2012, Dunkirk 2017, Nashville 2012, Nashville 2017, Petersburg 2012, Petersburg 2017, Union City 2012, Union City 2017, Angola 2012, Angola 2017, Auburn 2012, Auburn 2017, Batesville 2012, Batesville 2017, Decatur 2012, Decatur 2017, Frankfort 2012, Frankfort 2017, Greensburg 2012, Greensburg 2017, Marion 2012, Marion 2017, New Castle 2012, New Castle 2017, Mount Vernon 2012, Mount Vernon 2017, Portland 2012, Portland 2017, Rochester 2012, Rochester 2017, Shelbyville 2012, Shelbyville 2017, Vincennes 2012, Vincennes 2017, Warsaw 2012, Warsaw 2017, Washington 2012, Washington 2017, Whitestown 2012, Whitestown 2017, Indiana 2012, Indiana 2017

Source: Based on data provided by US Census Bureau

Many ISC finalists experienced desirable changes in educational attainment levels from 2012 to 2017. Figure 6.2.2 displays the percentage change in the proportion of residents with each educational attainment level. Sixteen of the twenty-one ISC finalists (76.2%) decreased the proportion of residents without a high school diploma from 2012-2017 while twelve of the twenty-one ISC finalists (57.1%) increased the proportion of residents with a college degree.

Like ISC designees, many ISC finalists outpaced Indiana's percentage change in these respective educational attainment levels. Nine of the twenty-one ISC finalists (42.9%) exceeded Indiana's growth in the proportion of residents with an associate's degree; eleven of the twenty-one ISC finalists (52.4%) exceeded Indiana's growth in the proportion of resident with a bachelor's degree; and ten of the twenty-one ISC finalists (47.6%) exceeded Indiana's growth in residents with a graduate degree. Twelve of the twenty-one ISC finalists (57.1%) exceeded Indiana's decline in the proportion of residents with less than a ninth-grade education; ten of the twenty-one ISC finalists (47.6%) exceeded Indiana's decline in the proportion of residents with greater than a ninth-grade education, but no diploma; and ten of the twenty-one ISC finalists (47.6%) exceeded Indiana's decline in the proportion of residents with only a high school diploma.

Figure 6.2.2 ISC Finalist % Change in Educational Attainment (2012-2017)

Division	Community (ISCE)	<9th	9-12 No Diploma	High School Diploma	Some College, No degree	Associates Degree	Bachelor's Degree	Graduate Degree
1	Churubusco (2017)	-55%	-42%	-11%	33%	-16%	20%	70%
	Dunkirk (2015)	-20%	2%	-13%	75%	-29%	13%	-36%
	Nashville (2014)	-3%	-53%	-11%	26%	54%	-16%	26%
	Petersburg (2012)	-55%	12%	-11%	7%	23%	55%	53%
	Union City (2011)	169%	1%	-2%	11%	-11%	-71%	20%
2	Angola (2013)	24%	-30%	6%	-23%	8%	7%	61%
	Auburn (2012)	-49%	6%	-15%	2%	64%	36%	-26%
	Batesville (2011)	-63%	30%	-19%	17%	14%	8%	15%
	Decatur (2014)	-37%	10%	7%	-2%	-6%	3%	-38%
	Frankfort (2013)	-27%	9%	2%	11%	18%	-1%	-3%
	Greensburg (2017)	-38%	-29%	-15%	14%	47%	44%	42%
	Marion (2011)	-6%	-14%	-3%	26%	3%	-14%	2%
	Mount Vernon (2014)	-37%	-28%	-1%	16%	7%	63%	-20%
	New Castle (2011)	-24%	-18%	9%	14%	2%	-18%	-21%
	Portland (2011)	188%	6%	0%	-15%	-22%	12%	-13%
	Rochester (2011)	-24%	-21%	18%	16%	28%	-46%	-38%
	Shelbyville (2011)	-9%	-11%	-4%	-9%	9%	16%	97%
	Vincennes (2017)	18%	-4%	3%	-8%	-1%	-11%	31%
	Warsaw (2016)	-10%	2%	-21%	18%	24%	21%	-1%
	Washington (2011)	7%	2%	-10%	2%	10%	71%	-25%
	Whitestown (2012)	143%	29%	-61%	19%	14%	16%	15%
	Indiana	*-9.5%*	*-10.2%*	*-4.5%*	*-1.0%*	*10.4%*	*9.5%*	*12.2%*

Source: Based on data provided by US Census Bureau

6.2 Change in ISC Designee and ISC Finalist Educational Attainment Rates

Despite the fact that ISC designees and ISC finalists have a very similar average distribution of educational attainment rates across attainment categories, the two groups experienced different levels of average percent change across the attainment categories from 2012-2017. As evident by the observations in the previous two sections, ISC designees and ISC finalists both decreased the percentage of residents with no high school diploma or only a high school diploma and increased the percentage of residents earning college degrees. ISC designees (-14.9%) decreased the average percentage of residents without a high school degree at a faster pace from 2012-2017 than ISC

finalists (-11.7%). ISC finalists (-7.6%), on the other hand, outpaced ISC designees (-3.0%) in terms of percentage decrease of residents with only a high school degree.

The two groups differed in terms of percentage change of residents with some college, but no college degree: ISC designees decreased by 5.7% on average while ISC finalists increased by 13.3% on average. ISC finalists experienced a decrease in the percentage of residents with only a high school diploma while simultaneously increasing the percentage of residents with some college, but no college degree. This insinuates that many community members made the decision to pursue some sort of college training from 2012-2017 but have yet to earn a college degree. At the same time, ISC designees experienced a decrease in the percentage of residents with some college, but no college degree. This insinuates that community members made the decision to finish college and earn a degree.

The percentage of ISC designee residents earning college degrees increased more substantially compared to ISC finalists from 2012-2017. In fact, the average percentage of ISC designee residents with associate degrees was 47.9% higher in 2017 than in 2012 – compared to 13% higher on average for ISC finalists; The average change in percentage of residents with bachelor's degrees in ISC designee communities increased by 22.3% from 2012-2017 – compared to 9.7% in ISC finalist communities; The average change in percentage of residents with graduate degrees in ISC designee communities increased by 25.5% from 2012-2017 – compared to 11.2% in ISC finalist communities.

Figure 6.2.1 Change in ISC Designee and ISC Finalist Educational Attainment Rates
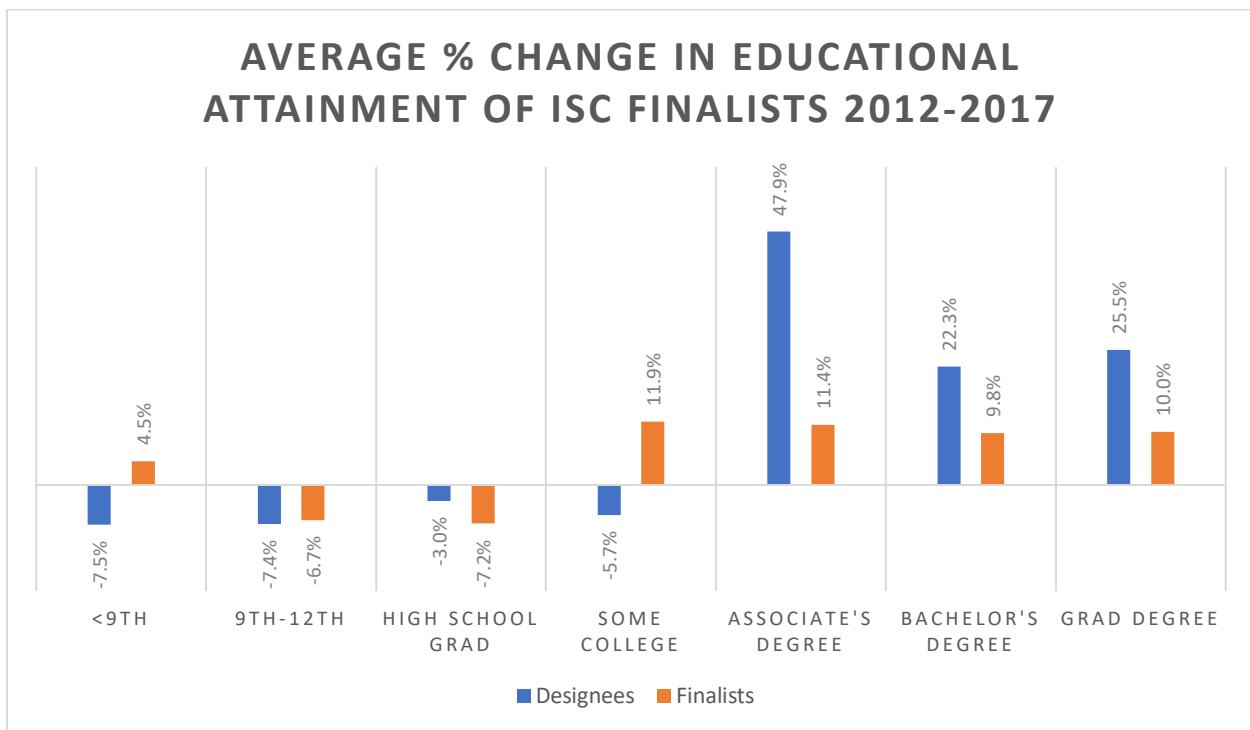
Source: Based on data provided by US Census Bureau

6.3 Educational Attainment Takeaways

Distribution of the average percentage of residents in each educational attainment category for ISC designees and ISC finalists is quite similar. Despite the similarity in distribution, ISC designees outpaced – quite substantially – ISC finalists in terms of percentage growth in college degree categories: associate degree (+47.9% versus +13.1%), bachelor's degree (+22.3% versus +9.7%), and graduate degree (+25.5% versus +11.2%).

7. Gross Assessed Value

Assessed valuation is a key indicator of the value of land and property within a community and serves as the basis of property tax revenues. Due to many small businesses ceasing operations and vacating properties, rural communities have struggled to find a resurgence of assessed valuation. OCRA has identified assessed valuation as a key indicator of investment within a community. Gross Assessed Value (Gross AV) is the assessed value of a property before deductions are subtracted.[1] Local elected county assessors determine the gross assessed value based on guidance from the Indiana Department of Local Government Finance. This value reflects the whole value of a property and serves as the baseline for determining the taxable property value – Net Assessed Value. With aging, vacant, and neglected properties, rural communities have faced a decline in gross assessed values in recent history.

7.1 Gross Assessed Value Since Stellar Exposure

To understand the impact of the ISC designation, Gross AV was evaluated on a timeline based on the year of ISC exposure (ISCE). In each community, the independent variable was adjusted to place ISCE at year "0". Additionally, the Gross AV Index Value was adjusted to normalize Gross AV around the value of Gross AV during ISCE. The process is represented by the equation below:

$$\left. Gross\ AV_{\,Year\ n} \middle/ Gross\ AV_{ISCE} \right. = Gross\ AV\ Index\ Value_{\,Year\ n}$$

7.1.1 ISC Designee Gross Assessed Value Since Stellar Exposure

Figure 7.1.1.1 illustrates the Gross AV index for ISC designess. All fourteen ISC designees grew Gross AV from ISCE-2018. Nine of the fourteen ISC (64.3%) designees have not fallen below ISCE Gross AV levels post-ISCE. Growth of Gross AV post-ISCE was fairly uniform across ISC designees, despite differences in the number of years post-ISCE. Four of the fourteen ISC designees (28.6%) realized post-ISCE growth of Gross AV in excess of 10%. North Liberty (21.3%) was the only ISC designee with Gross AV growth post ISCE exceeding 20%.

Some ISC designees were trending downward in Gross AV before ISCE. Four of the fourteen ISC designees (28.6%) exhibited Gross AV index values that exceeded the ISCE value pre-ISCE – meaning that Gross AV was decreasing prior to ISCE. All four communities had higher Gross AV in 2018 than in the year of ISCE. All four communities also had higher Gross AV in 2018 than the year in which Gross AV peaked prior to ISCE.

---

[1] DLGF: https://gateway.ifionline.org/public/glossary.aspx#A

Figure 7.1.1.1 ISC Designee Gross Assessed Value Since Stellar Exposure
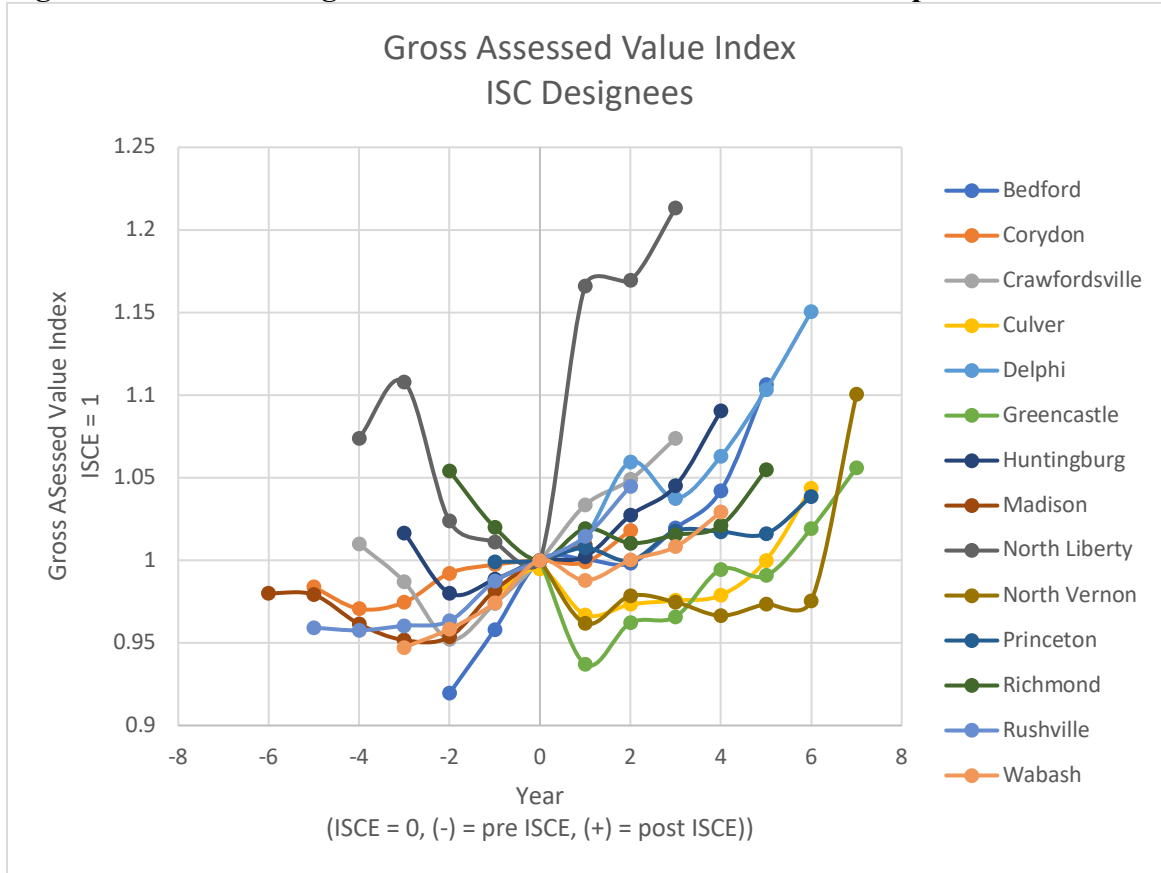
Source: Based on data provided by Indiana Department of Local Government Finance
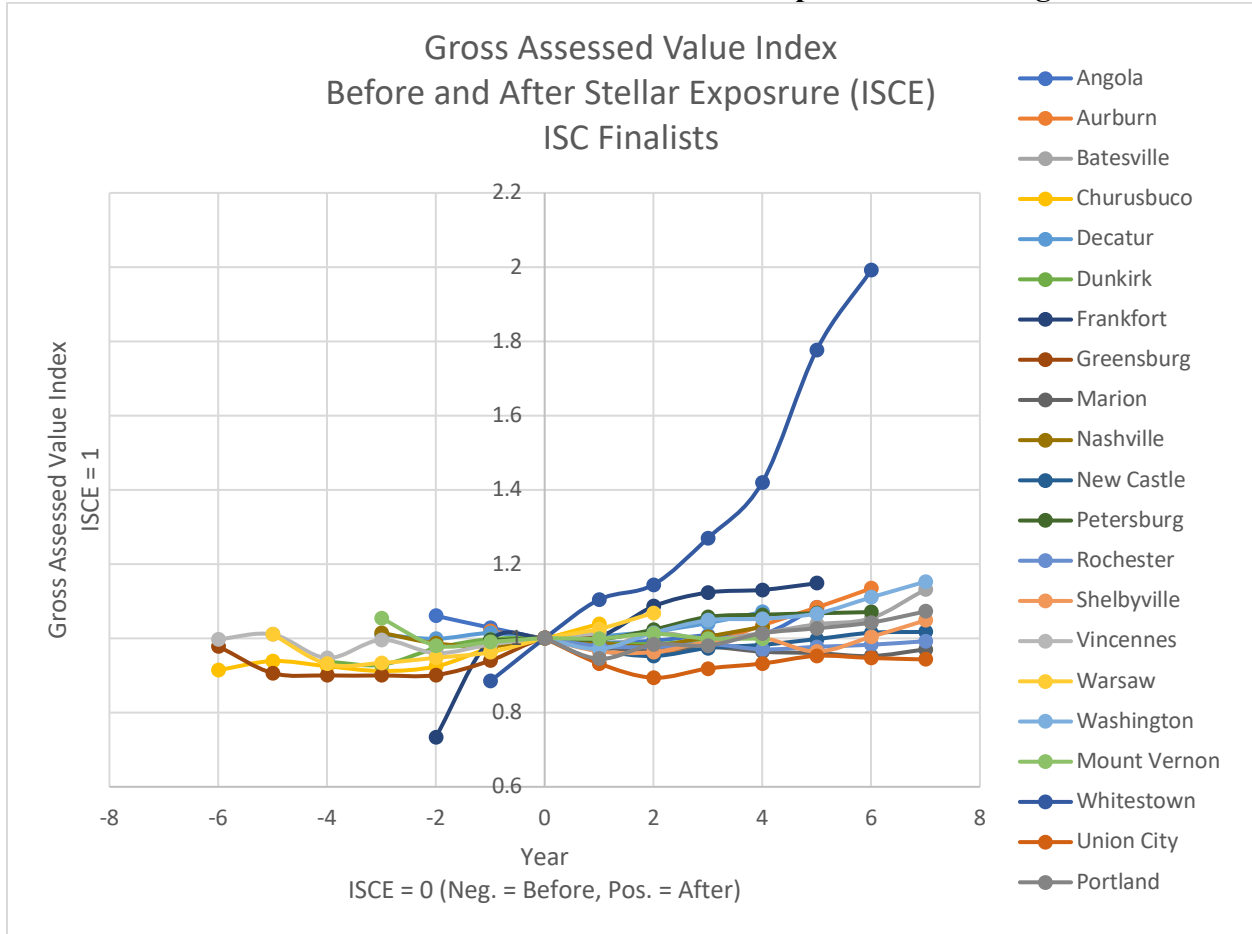
7.1.2 ISC Finalist Gross Assessed Value Since Stellar Exposure

Figure 7.1.2.1 illustrates ISC finalist Gross AV index since ISCE. It is clear that Whitestown far exceeded any other ISC finalist in terms of growth in the Gross AV index post ISCE. Figure 7.1.2.2 excludes Whitestown to provide a more accurate representation of Gross AV for ISC finalists.

An evaluation of ISC finalists shows that, unlike ISC designees, not all communities have grown Gross AV index post ISCE. Six of the twenty ISC finalists (30%) experienced a decreasing Gross AV index from ISCE-2018. Five of the twenty ISC finalists (25%) exceeded 10% growth in Gross AV from ISCE-2018. Whitestown was the only ISC finalist to exceed 20% growth in Gross AV from ISCE-2018.

Similar to ISC designees, there were several ISC finalists that were experiencing decreasing Gross AV indexes prior to ISCE. Seven of the twenty (35%) ISC finalists exhibited Gross AV index values that exceeded the ISCE value pre-ISCE – meaning that Gross AV was decreasing prior to ISCE. All seven communities had higher Gross AV in 2018 than the year in which the Gross AV index value peaked prior to ISCE.

7.1.2.1 ISC Finalist Gross Assessed Value Since Stellar Exposure – Including Whitestown

Source: Based on data provided by Indiana Department of Local Government Finance

7.1.2.2 ISC Finalist Gross Assessed Value Since Stellar Exposure – Excluding Whitestown
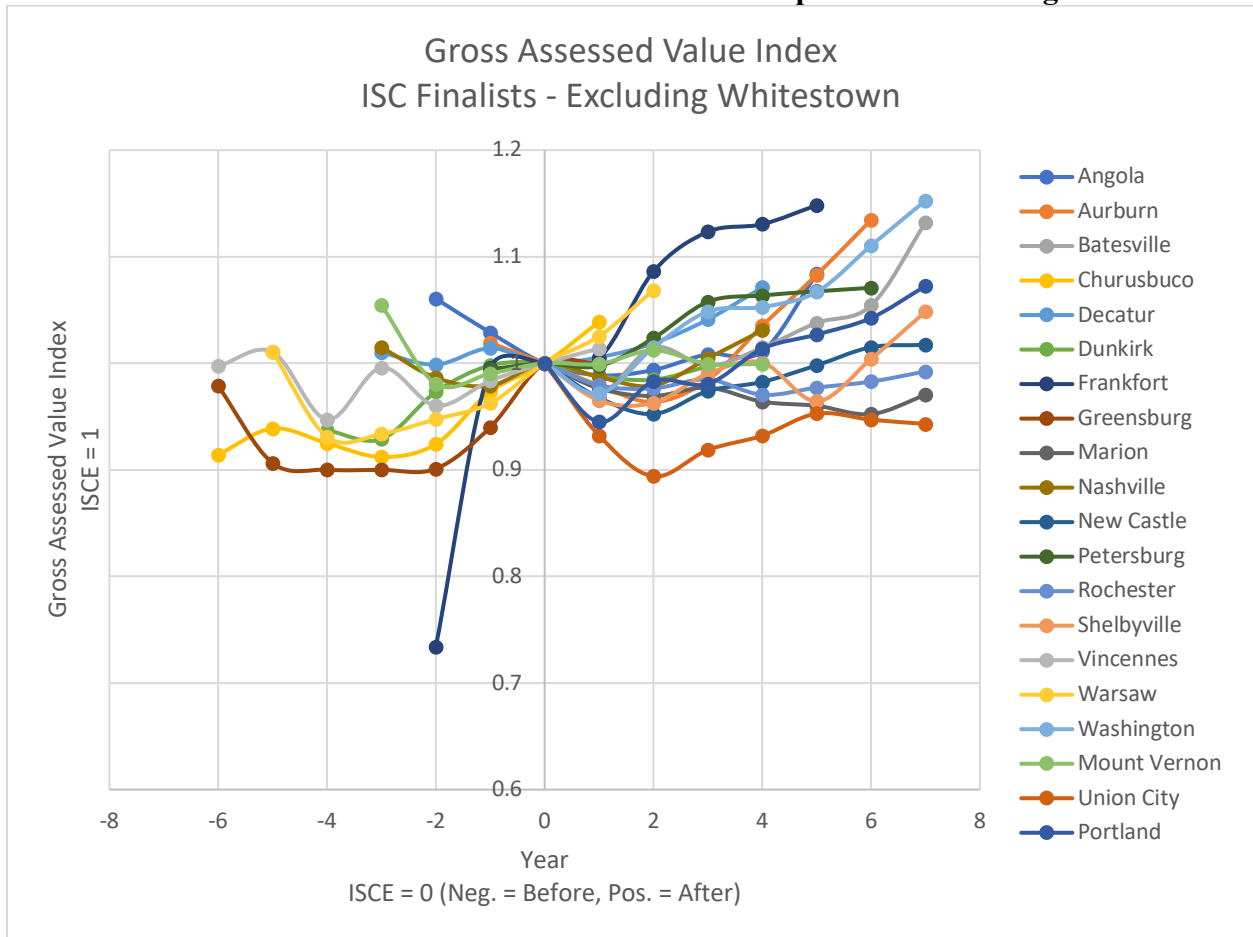
Source: Based on data provided by Indiana Department of Local Government Finance

7.2 Gross Assessed Value Trends Before and After ISC Exposure

While a positive change in Gross AV after ISCE is desirable, the ultimate goal of the ISC program is to alter the trends of Gross AV for long-term, sustainable growth of communities. Separate average annual Gross AV index values were calculated for ISC designees and ISC finalists. The average annual Gross AV index values were plotted to determine the trends pre-ISCE and post-ISCE. Trends before ISCE and trends after ISCE were evaluated to determine potential ISC program impacts.

7.2.1 ISC Designees Gross Assessed Value Trends Before and After ISC Exposure
Figure 7.2.1.1 illustrates the pre-ISCE and post-ISCE Gross AV trends for ISC designees. Prior to ISCE, the Average Gross AV Index trend for ISC designees was represented by the equation:

$$y = 0.0024x + 0.9934 \ (R^2 = 0.3975)$$

Where y denotes the Average Gross AV Index normalized around the year of ISCE or "year 0," and x denotes the year. After ISCE, the Average Gross AV Index was represented by the equation:

$$y = 0.0088x + 1.0029 \ (R^2 = 0.8598)$$

Where y and x are both denoting the same variables as the previous trend equation.

Given these equations, the change in trend slopes indicates that an ISC designation increases Gross AV index by an additional 0.0064 index points annually. Put differently, an ISC designation increases Gross AV by 0.64% annually. The additional 0.0064 Average Gross AV index points, given the initial slope of 0.0024x, represents a 266% increase in average annual index points.

The pre-ISCE trend forecasts Average Gross AV Index to equal 1.0102 in year 7. ISC designees realized an Average Gross AV Index equal to 1.0781 in year 7. This equates to an added .0679 Average Gross AV Index or an added 6.79% to Average Gross AV. Given that the average Gross AV for ISC designees in year ISCE, or year "0," is $584,417,005, the difference in actual Average Gross AV Index and the pre-ISCE trend predicted value represents $39,681,914.64 of additional Gross AV beyond the pre-ISCE trend.

Figure 7.2.1.1 ISC Designees Gross Assessed Value Trends Before and After ISC Exposure
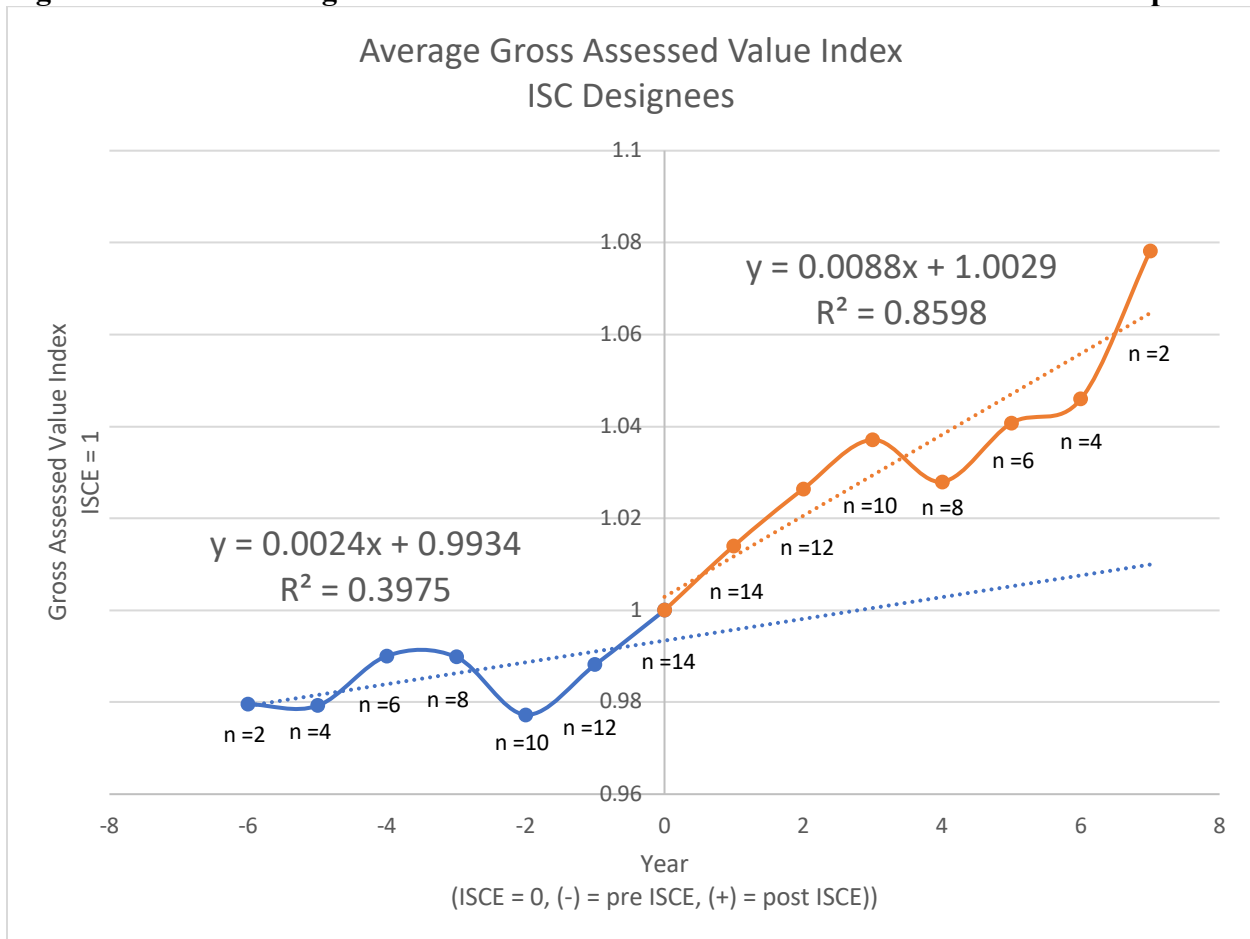
Source: Based on data provided by Indiana Department of Local Government Finance

Note: n denotes the number of communities that were included in the average considering each community had a different base year for year "0."

7.2.2 ISC Finalists Gross Assessed Value Trends Before and After ISC Exposure
The same pre-ISCE and post-ISCE trends were calculated for ISC finalists. Figure 7.2.2.1. illustrates the pre-ISCE and post-ISCE average annual Gross AV index trends for ISC finalists. Prior to ISCE, the trend of Average Gross AV Index is represented by the equation:

$$y = 0.0057x + 0.9821 \ (R^2 = 0.279)$$

Where y = average annual Gross AV index normalized around the Gross AV in the year of ISCE or year "0," and x represents year relative to ISCE. After ISCE, the trend of Average Gross AV Index could be represented by the equation:

$$y = 0.0143x + 0.9885 \ (R^2 = 0.6048)$$

Where y and x represent the same variables as the previous equation. The change in pre-ISCE trend slope and post-ISCE trend slope (0.0143 – 0.0057) represents a 0.0077 annual additional increase in Average Gross AV Index points, or an additional 0.77% annual increase in Average Gross AV. Given the initial slope of 0.0057x, an additional 0.0077 annual index points is a 160% increase in annual Average Gross AV Index points. Given the pre-ISCE trend for the Average Gross AV Index (y = 0.0057x + 0.9821), the predicted Average Gross AV index value for year 7 is 1.022 or a 2.2% increase compared to ISCE. The actual Average Gross AV index value for ISC finalists in year 7 is 1.036 – outpacing the predicted value by 0.014 or an additional 1.4% of Gross Assessed Value in the year of ISCE. Given that the average Gross AV for ISC finalists in year ISCE, or year "0," is $530,752,311.95, the difference between the actual Average Gross AV Index value and the pre-ISCE trend predicted value represents $7,430,532.37 in additional Gross AV beyond the pre-ISCE six-year trend.

The resulting change in slopes before and after ISCE is larger in terms of index points for ISC finalists (0.0077) than for ISC designees (0.0064 index points); however, the percentage change of slopes before and after ISCE is far larger for ISC designees (+266%) than for ISC finalists (+160%). In addition, pre-ISCE and post-ISCE trends are statistically more accurate for ISC designees (pre-ISCE: $R^2 = 0.3975$, post-ISCE: $R^2 = 0.8598$) compared to ISC finalists (pre-ISCE: $R^2 = 0.279$, post-ISCE: $R^2 = 0.5549$).

**7.2.2.1 ISC Finalists Gross Assessed Value Trends Before and After ISC Exposure –
Including Whitestown**
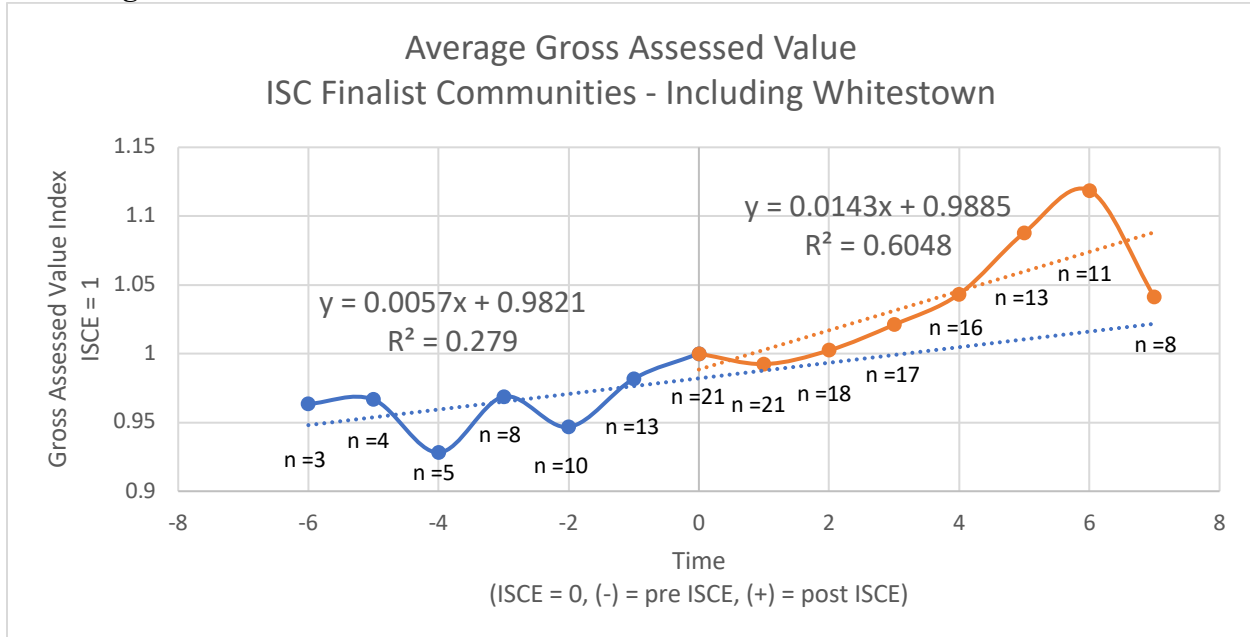
**Source: Based on data provided by Indiana Department of Local Government Finance
Note: n denotes the number of observations that were included in the calculation of average
Gross AV.**

As previously stated, Whitestown far exceeded any other community in terms of growth during
the selected period. Figure 7.2.2.2 illustrates the Average Gross AV Index pre-ISCE and post-
ISCE for ISC finalists, excluding Whitestown. The trends of the average annual Gross AV index
preceding ISCE is represented by the equation:

$$y = 0.0062x + 0.985 \ (R^2 = 0.3077)$$

Where y = average annual Gross AV index normalized around the Gross AV in the year of ISCE
or year "0," and x represents year relative to ISCE. This pre ISCE trend is slightly more positive
(+0.0005) than the model that includes Whitestown. The trend of Average Gross AV succeeding
ISCE is represented by the equation:

$$y = 0.0075x + 0.9871 \ (R^2 = 0.8725)$$

Where y and x represent the same variables as the previous equation. The portion of the graph
preceding ISCE is practically unchanged. Given the number of observations included in the
Average Gross AV each year, Whitestown was not included in the average until Year -1. From
Year -1 forward, the graph changes drastically. Excluding Whitestown, the Average Gross AV
Index trend slopes preceding ISCE and succeeding ISCE were practically unchanged.

The difference in trend slopes is 0.0007 index points annually or a 0.07% increase in Average
Gross AV. Given the pre-ISCE trend equation, the predicted value for Year 7 is 1.0284 Gross AV
Index points or a 2.84% increase in Gross AV from Year 0. The realized increase in the Average

Gross AV Index was 1.037 index points or 3.7%. The difference in post-ISCE realized increase and pre-ISCE predicted increase is .0086 additional index points. Given the Average Gross AV in Year 0, excluding Whitestown, is $516,591,449.45, the additional 0.86% increase equates to an impact of ISCE $4,442,686.47 – far below the impact of the previous two models. The percentage change in the preceding and succeeding ISCE trend slopes (+8.7%) is far below the previous model (+160%).

7.2.2.2 ISC Finalists Gross Assessed Value Trends Before and After ISC Exposure – Excluding Whitestown
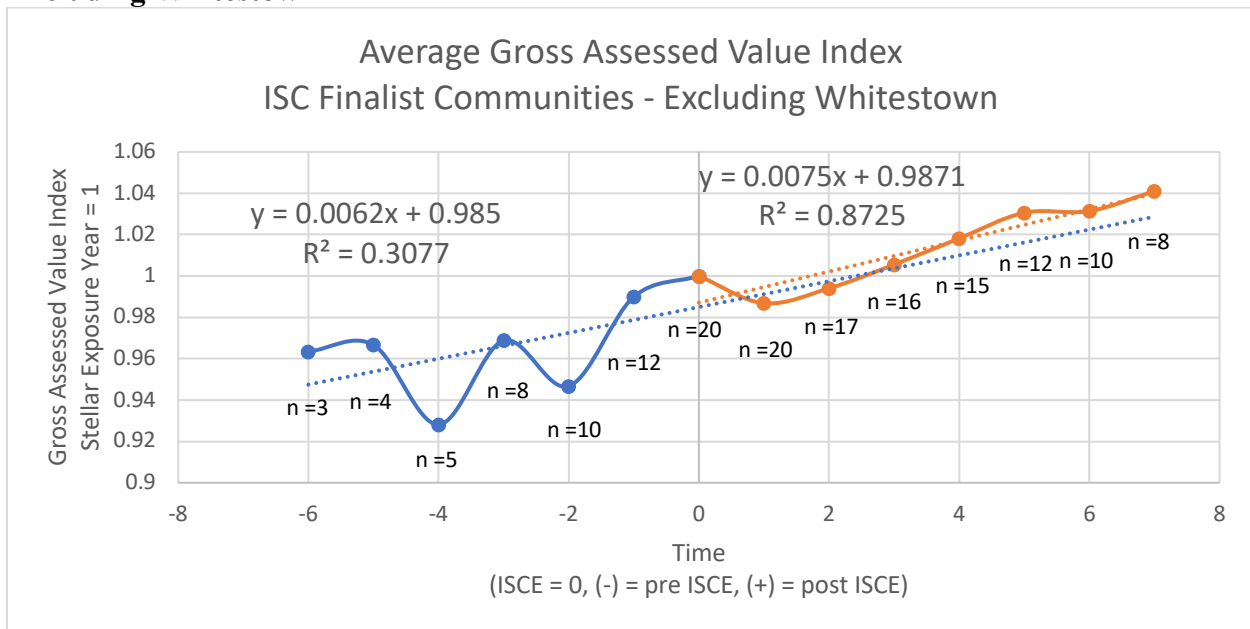
Source: Based on data provided by Indiana Department of Local Government Finance
n denotes the number of observations that were included in the calculation of average Gross AV.

7.3 Whitestown

Growth in population and Gross AV have exploded in Whitestown following ISCE. This accelerated growth has caused Whitestown's Gross AV index value to be a statistical outlier each year (excluding the base year of ISCE = 0). Figure 7.3.1 displays the statistical calculations that demonstrate Whitestown's status as an outlier for Gross AV.

6.3.1 Statistical Outlier Calculations

Year	Q1	Q3	IQR	Bound	Whitestown	Difference from Bound
-1	0.9752	1.0008	0.0255	1.0391	0.8845	-14.9%
1	0.9651	1.0149	0.0498	1.0895	1.1043	1.4%
2	0.9844	1.0085	0.0241	1.0446	1.1447	9.6%
3	0.9821	1.0396	0.0576	1.1260	1.2699	12.8%
4	0.9740	1.0714	0.0974	1.2175	1.4203	16.7%
5	0.9882	1.0667	0.0785	1.1845	1.7770	50.0%
6	0.9868	1.0693	0.0825	1.1930	1.9915	66.9%

A further examination of Whitestown's economic situation is needed to fully understand ISC's role in the community's expansion. Since ISCE, Population has grown 119%, and Gross AV has grown 99% for this Boone County community. These impressive growth rates could lead to the conclusion that ISC has positively impacted this ISC finalist despite not receiving the designation; however, growth in Whitestown was an ongoing theme far before ISCE in 2012.

In May 2019, Whitestown was named the fastest growing community in Indiana – with a population over 5,000 – for the eighth consecutive year (2011-2018) by the Indiana Business Research Center at the Indiana University Kelly School of Business, the State of Indiana's official state representative to the U.S. Census Bureau. (Indiana University Business Research Center, 2019) Given Whitestown's ISCE year of 2012, this statistic indicates that Whitestown was leading the state's growth pre-ISCE.

Whitestown's growth extends back into the 2000s. Whitestown's population in 2000 was 989 residents. Whitestown nearly doubled in population from 2000-2005 (+96%). From 2000-2010, the community's population had nearly tripled (+190%). While that seems impressive, that time period was only just the start for Whitestown's growth – tripling again from 2010-2018 (+201%). In total, Whitestown's population has grown by 772% from 2000-2018 and now stands at 7,638 residents.

While it is not the purpose of this paper to identify the factors that have influenced Whitestown's growth, it is important to identify characteristics of Whitestown that have parallels to the ISC program. In many ways, Whitestown is incorporating the strategies and priorities of the ISC program without receiving a designation. The following factors should not be assumed to be the sole factors in Whitestown's growth. Instead, each should be considered a differentiating factor from the remaining ISC finalists.

First, a leader that understands ISC – Dax Norton, Whitestown's town manager from 2013-2019. (Weidenbener,2019) Norton was the director of the Boone County Economic Development Corporation for eight years before serving as the executive director of OCRA for nine months in 2013. While at OCRA, Norton was responsible for the administration of the ISC program – a position that most certainly provided him with useful techniques and connections to further the development of Whitestown.

Second, a catalyst for growth in community investment – a one-thousand-acre development project dubbed Anson. This private development is the 13th-largest area industrial park that also incorporates retail and housing– all ISC program initiatives. (Olson, 2017) Anson's tangential proximity to interstate 65 makes it a prime location for development. Anson is home to numerous businesses that are attractive to community members, including a one-million square feet Amazon.com facility, which is the company's largest facility in Indiana. (Olson, 2017)

Third, geographical proximity to the largest metropolitan hub of investment in the state – Indianapolis. Whitestown is located within a Metropolitan Statistical Area (MSA). Admittedly, Whitestown is not the only ISC designee or ISC finalist to reside in an MSA. Figure 7.3.2 displays the micropolitan and metropolitan classifications for each community. What separates Whitestown from its metropolitan counterparts is the powerhouse MSA in which it resides: the Indianapolis-Carmel-Anderson MSA. From 1990-2017, the Indianapolis-Carmel-Anderson MSA was home to 53% of the state's job growth while only having 29% of the state's population. (Hicks, 2018) Sure, Whitestown is not the only ISC finalist located within this particular MSA – Greencastle, Nashville, and Shelbyville are, as well. Whitestown's advantage lies in its proximity to one of the MSA's industrial hubs – the northwest side of Indianapolis. This portion of the Indianapolis-Carmel-Anderson MSA is home to the top five industrial parks in the area. (Olson, 2017)

It is for these reasons – Dax Norton's ISC experience prior to his leadership as town manager, Anson's draw as an industrial, retail, and housing powerhouse, and location within the fastest growing MSA in Indiana, Whitestown is certainly an outlier amongst ISC finalists; therefore, it is the opinion of the author that the model for Average Gross AV index that excludes Whitestown is a more accurate portrayal of trends for ISC finalists.

7.3.2 ISC Designee Statistical Area Classifications

Division	Community	Non-Core	Micro-politan	Metro-politan	Name of Statistical Area
1	Corydon (2016)			x	Louisville/Jefferson County
	Culver (2017)		x		Plymouth
	Delphi (2012)			x	Lafayette-West Lafayette
	North Liberty (2015)			x	South Bend-Mishawaka
2	Bedford (2013)		x		Bedford
	Crawfordsville (2015)		x		Crawfordsville
	Greencastle (2011)			x	Indianapolis-Carmel-Anderson
	Huntingburg (2014)		x		Jasper
	Madison (2017)		x		Madison
	North Vernon (2011)		x		North Vernon
	Princeton (2012)	x			
	Richmond (2013)		x		Richmond
	Rushville (2016)	x			
	Wabash (2014)		x		Wabash

Source: US Office of Management and Budget

6.3.2 ISC Designee Statistical Area Classifications

Division	Community	Non-Core	Micro-politan	Metro-politan	Name of Statistical Area
1	Churubusco (2017)			x	Fort Wayne
	Dunkirk (2015)	x			
	Nashville (2014)			x	Indianapolis-Carmel-Anderson
	Petersburg (2012)		x		Jasper
	Union City (2011)	x			
2	Angola (2013)		x		Angola
	Auburn (2012)		x		Auburn
	Batesville (2011)				
	Decatur (2014)		x		Decatur
	Frankfort (2013)		x		Frankfort
	Greensburg (2017)		x		Greensburg
	Marion (2011)		x		Marion
	Mount Vernon (2014)			x	Evansville
	New Castle (2011)		x		New Castle
	Portland (2011)	x			
	Rochester (2011)	x			
	Shelbyville (2011)			x	Indianapolis-Carmel-Anderson
	Vincennes (2017)		x		Vincennes
	Warsaw (2016)		x		Warsaw
	Washington (2011)		x		Washington
	Whitestown (2012)			x	Indianapolis-Carmel-Anderson

Source: US Office of Management and Budget

7.4 Gross Assessed Value Takeaways

ISC designees (100%) were more likely than ISC finalists (70%) to experience growth in Gross AV post-ISCE. When Whitestown is included, ISC finalists (+0.0077) experienced a larger annual increase in Gross AV index points than ISC designees (+0.0064). When Whitestown is excluded, however, ISC designees (+0.0064) experienced a much larger annual increase in Gross AV index points than ISC finalists (+0.0007). The percentage increase in average annual Gross AV tells a much different story: ISC designees (+266%) experienced a larger increase in average annual growth in Gross AV post-ISCE than ISC finalists, including Whitestown (+160%) and an even larger increase when Whitestown is excluded (8.7%).

8. Gross Assessed Value Property Type Evaluation

County assessors evaluate properties based on property types. There are three types of properties: real, personal, and mobile. Real property is land and buildings. Personal property is business, utility, and farm depreciable equipment. Mobile properties are a form of real property specific to mobile homes. Each property type has further subcategory circuit breakers that provide key insights such as the value of land, improvements, homestead properties, commercial apartments, long-term care facilities, and farmland.

An evaluation of the aforementioned subcategory circuit breakers would enable conclusions to be drawn about the aspects of Gross AV that are driving the aggregate Gross AV index changes. Unfortunately, errors in reporting of these subcategory circuit breakers prevent that evaluation in this paper. The value of mobile properties was not included in the appropriate mobile home circuit breaker in numerous communities from 2011-2013. The value of mobile properties was included in multiple circuit breakers (improvements subject to 1% circuit breaker and local personal property) in 2014 and 2015. The value of personal properties was also included in multiple circuit breakers (improvements subject to 3% circuit breaker and local or state personal property) in 2014 and 2015. Despite the circuit breaker reporting errors, an evaluation of AV based solely on property type is still possible. The following sections analyze changes in property type AV.

8.1 Real Property Assessed Value

All land and buildings are classified as real property. As previously mentioned, real property is broken down into subcategories based on circuit breakers. Understanding that many ISC communities have incorporated owner-occupied improvements into ISC projects, a comparison between the growth in the assessed value of residential land and buildings versus growth in value of commercial land and buildings could be conducted. Given the errors in circuit breaker reporting, that evaluation is not possible; instead, the following evaluation includes all subcategories of real property.

8.1.1 ISC Designee Real Property Assessed Value

Figure 8.1.1.1 displays the real property AV index before and after ISCE for ISC designees. ISC designees follow a general upward pattern. Excluding two ISC designees (Greencastle and North Vernon) that experienced significant declines in real property AV index post-ISCE, but have started to rebound in recent years, ISC designees have experienced growth in real property AV index post-ISCE. In fact, twelve of the fourteen ISC designees (85.7%) grew real property AV post-ISCE. In many instances, this growth was minimal. Seven of the fourteen ISC designees (50%) grew real property AV by less than 5%, but five of the fourteen ISC designees (35.7%) grew real property AV index in excess of 5%.

Figure 8.1.1.1 ISC Designee Real Property Assessed Value Index
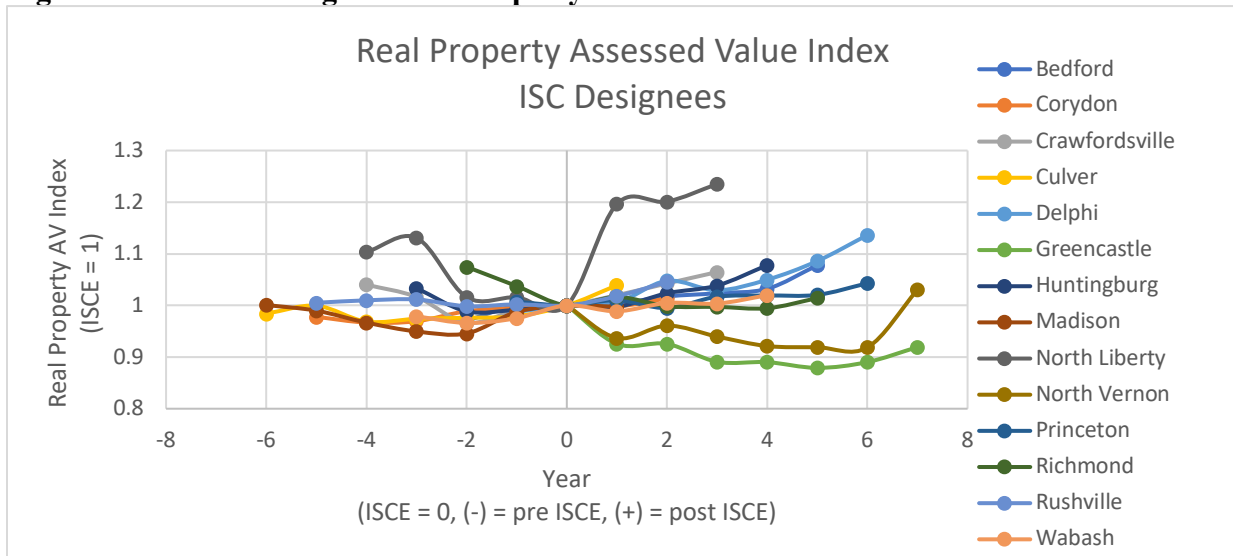
Source: Based on data provided by Indiana Department of Local Government Finance

Figure 8.1.1.2 illustrates the pre-ISCE and post-ISCE trends of the average real property AV index. Despite growth occurring for most ISC designees post-ISCE, ISC designees have decreased in average real property post-ISCE. Growth in average real property AV index pre-ISCE for ISC designees can be represented by the equation:
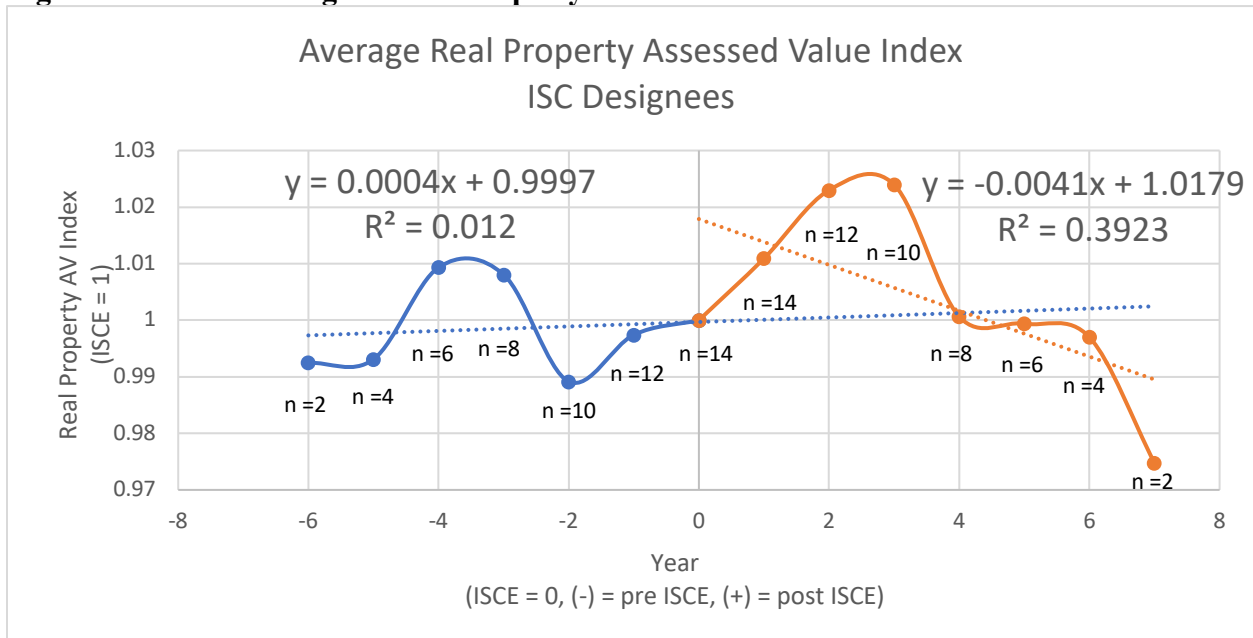
$$y = 0.0004x + 0.9997 \ (R^2 = 0.012)$$

Where y = average real property AV index normalized around the value of real property AV in the year of ISCE or year "0" and x represents year relative to ISCE. The average growth of real property post-ISCE is represented by the equation:

$$y = -0.0041x + 1.0179 \ (R^2 = 0.3923)$$

Where y and x denote the same variables as the previous equation. The pre-ISCE trend slope of 0.0004x indicates an average annual increase in real property AV of 0.0004 index points or 0.04%. The post-ISCE trend slope of -0.0041x indicates an average annual decrease in real property AV of 0.0041 index points or -0.41%. Given the pre-ISCE trend, the forecasted average real property AV index value in year 7 is 1.0025 index points, or 0.25% higher than year 0. The realized average real property AV index value of 0.9748 is 0.02774 index points below the pre-ISCE forecasted index value. Neither R^2 value suggests that either trend equation is very accurate.

Figure 8.1.1.2 ISC Designee Real Property Assessed Value

Average Real Property Assessed Value Index
ISC Designees

$y = 0.0004x + 0.9997$
$R^2 = 0.012$

$y = -0.0041x + 1.0179$
$R^2 = 0.3923$

Real Property AV Index (ISCE = 1)
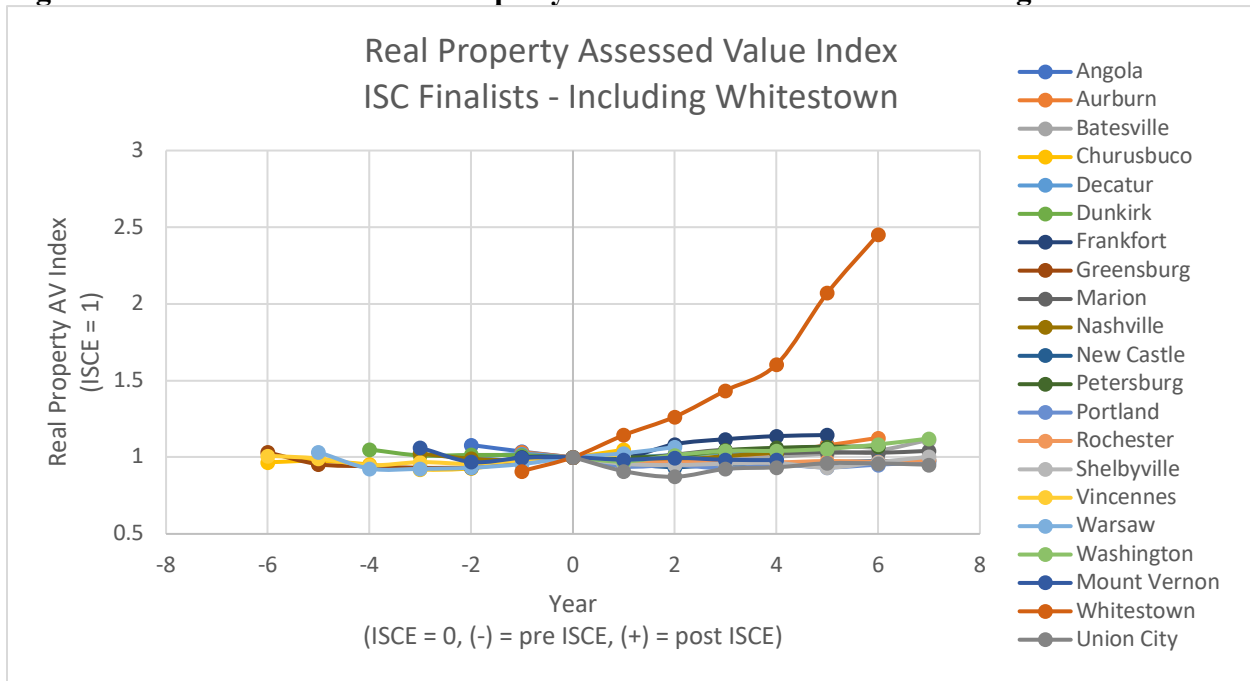
Year
(ISCE = 0, (-) = pre ISCE, (+) = post ISCE)

Source: Based on data provided by Indiana Department of Local Government Finance
n denotes the number of observations that were included in the calculation of average Gross AV.

8.1.2 ISC Finalist Real Property Assessed Value

Figure 8.1.2.1 illustrates real property AV pre-ISCE and post-ISCE for ISC finalists. It is evident by Whitestown's towering dominance over fellow ISC finalists that they are an outlier for this particular variable. Figure 7.1.2.1 displays the data used to classify Whitestown as a statistical outlier.

Figure 8.1.2.1 ISC Finalist Real Property Assessed Value Index – Including Whitestown

Source: Based on data provided by Indiana Department of Local Government Finance

Figure 8.1.2.2 Outlier Calculations

Year	Q1	Q3	IQR	Bound	Whitestown	Difference from Bound
-1	0.9778	1.0045	0.0266	0.9379	0.9099	-3%
1	0.9701	1.0045	0.0344	1.0560	1.1442	8%
2	0.9491	1.0137	0.0646	1.1106	1.2635	14%
3	0.9572	1.0328	0.0756	1.1462	1.4350	25%
4	0.9648	1.0363	0.0716	1.1437	1.6045	40%
5	0.9655	1.0708	0.1053	1.2287	2.0707	69%
6	0.9683	1.0632	0.0949	1.2057	2.4519	103%

Excluding Whitestown provides a much more accurate representation of ISC finalist real property AV index. Figure 8.1.2.3 illustrates real property AV index for ISC finalists. ISC finalists appear to follow a general upward trend in real property AV index post-ISCE. Excluding Whitestown, fifteen of the twenty ISC finalists (75%) grew in real property AV index post-ISCE. This growth for ISC finalists was more likely to exceed 5% compared to ISC designees. Nine of the twenty ISC finalists (45%) grew real property AV index in excess of 5%, while six of the twenty ISC finalists (30%) grew real property AV index, but did not exceed 5% growth.

Figure 8.1.2.3 ISC Finalist Real Property Assessed Value Index – Excluding Whitestown
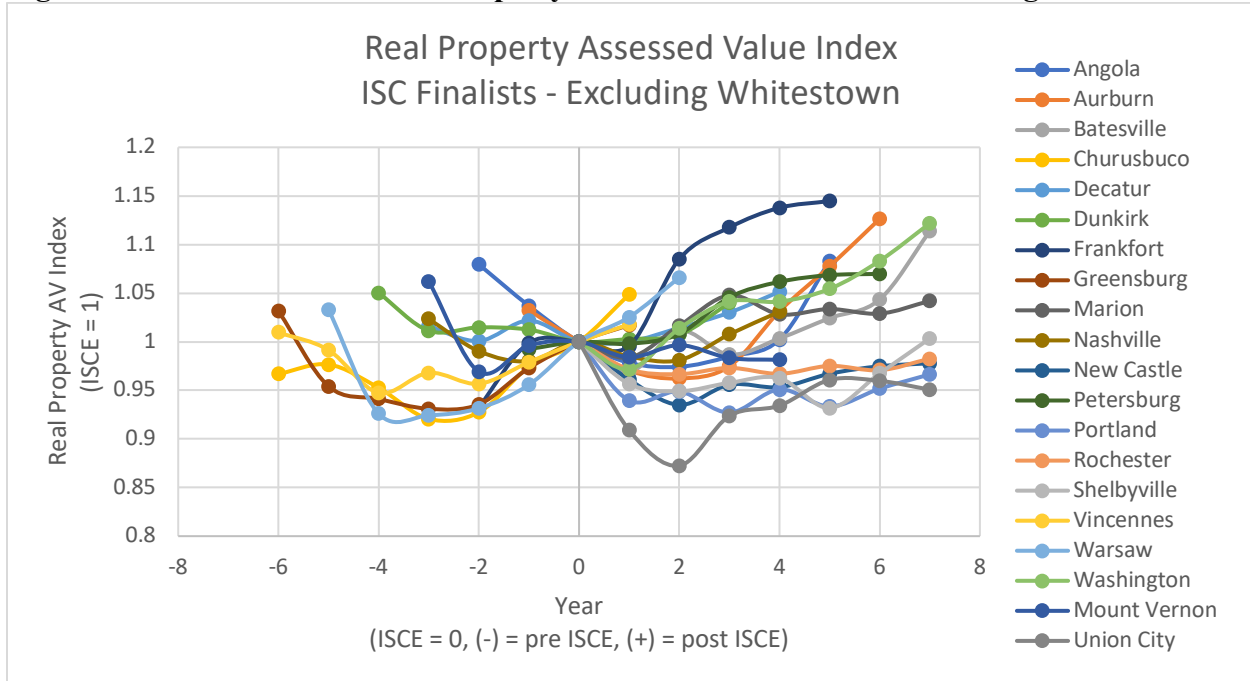
Source: Based on data provided by Indiana Department of Local Government Finance

Figure 8.1.2.4 illustrates the pre-ISCE and post-ISCE trends of average real property AV index for ISC finalists, including Whitestown. The average real property AV for ISC finalists is near-constant pre-ISCE and grows much more rapidly post-ISCE. Growth in average real property AV preceding ISCE is represented by the equation:

$$y = 0.0002x + 0.9828 \ (R^2 = 0.0008)$$

Again, y denotes average real property AV index normalized around the real property AV for year ISCE, or year "0," and x represents year relative to ISCE. Given the R^2 value of *0.0008,* this trend equation does not represent an accurate fit. Growth in average real property AV succeeding ISCE is represented by the equation:

$$y = 0.0163x + 0.9759 \ (R^2 = 0.4109)$$

Where y and x denote the same variables as the previous equation.

Figure 8.1.2.4 ISC Finalist Real Property Assessed Value – Including Whitestown
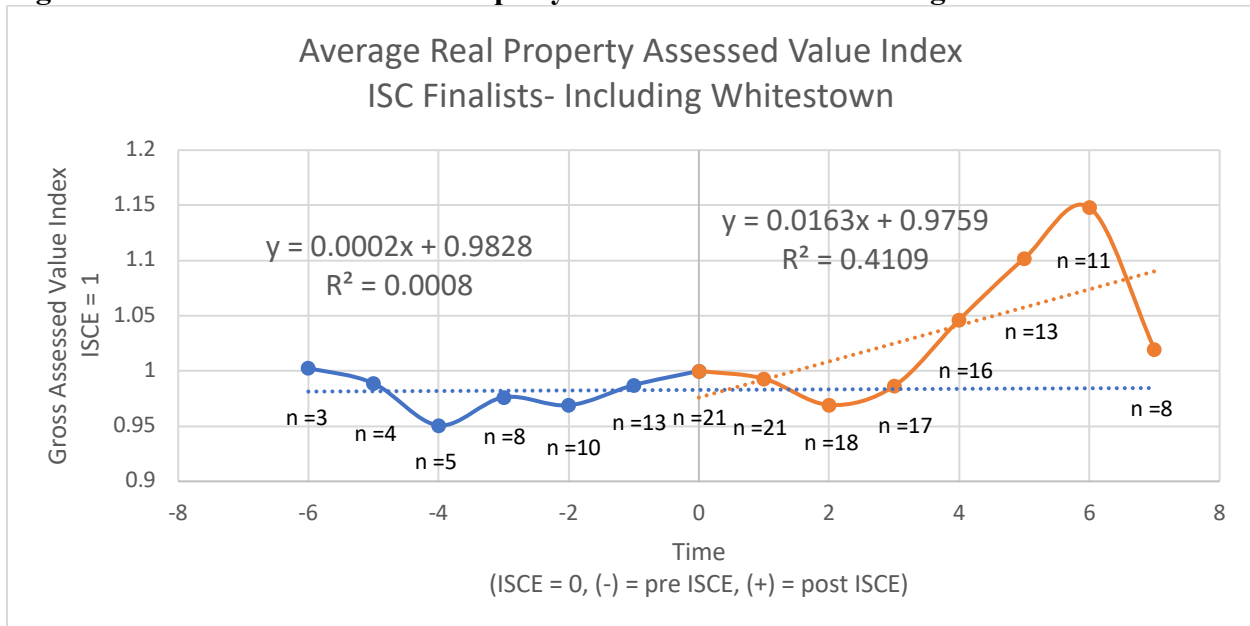
Average Real Property Assessed Value Index
ISC Finalists- Including Whitestown

$y = 0.0002x + 0.9828$
$R^2 = 0.0008$

$y = 0.0163x + 0.9759$
$R^2 = 0.4109$

Source: Based on data provided by Indiana Department of Local Government Finance
n denotes the number of observations that were included in the calculation of average Gross AV.

Excluding Whitestown creates a slightly different story for ISC finalists. Figure 8.1.2.5 illustrates the pre-ISCE and post-ISCE trends of average real property AV index for ISC finalists, excluding Whitestown. Growth in average real property AV preceding ISCE (excluding Whitestown) is represented by the equation:

$$y = 0.0007x + 0.9851 \ (R^2 = 0.0066)$$

Where y and x denote the same variables as the previous two equations. This equation demonstrates that ISC finalists were declining in average real property AV pre-ISCE. Growth in average real property AV succeeding ISCE (excluding Whitestown) is represented by the equation:

$$y = 0.0067x + 0.9721 \ (R^2 = 0.348)$$

Where y and x denote the same variables as the previous three equations. A comparison of R^2 values indicates that neither pre-ISCE trends for ISC finalists are accurate. Post-ISCE trends for both equations represent more accuracy than pre-ISCE trends, but neither is overly accurate. The slope of the later post-ISCE trend equation indicates that the average annual growth of real property AV post-ISCE is not as intense when Whitestown is excluded; however, both equations show growth in average real property AV post-ISCE, unlike ISC designees.

Given the equation for average real property AV pre-ISCE for ISC finalists, excluding Whitestown, the predicted value in year 7 was 0.990 index points or a decline of 1% from year 0

average real property AV. Instead, ISC finalists, excluding Whitestown, reached an average real property AV of 1.027 in year 7, representing a growth of 0.027 index points, or 2.7% from year 0. Comparatively, average real property AV for ISC designees declined by roughly the same percentage (2.53%) over the same post-ISCE time period.

Figure 8.1.2.5 ISC Finalist Real Property Assessed Value – Excluding Whitestown
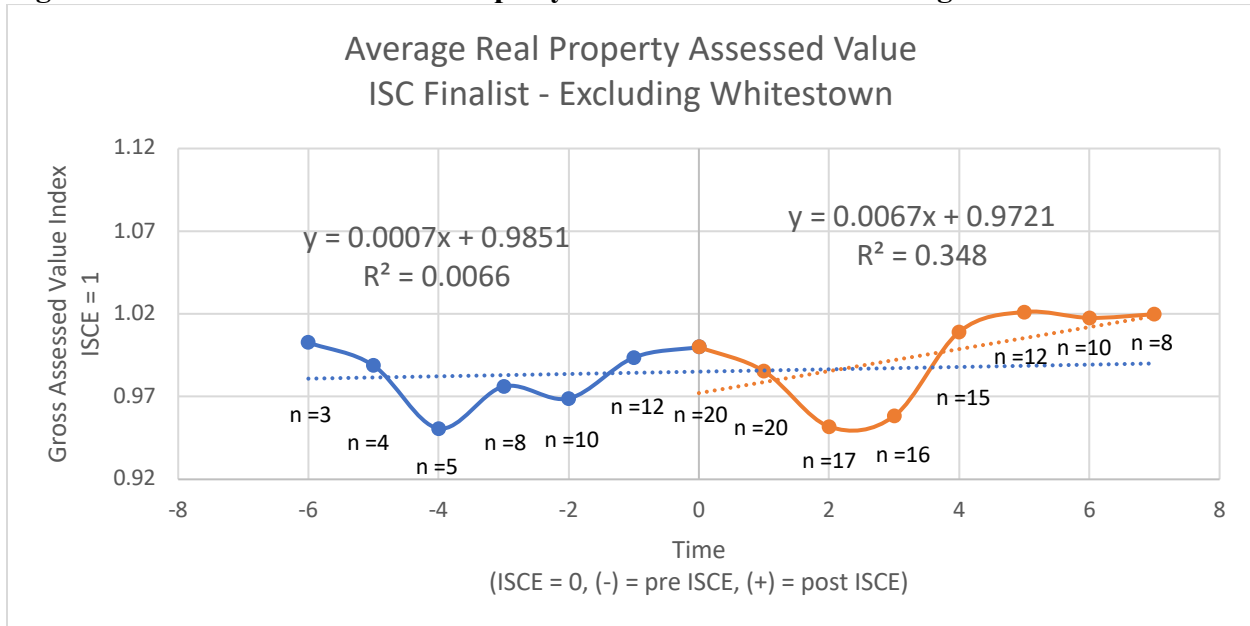
Source: Based on data provided by Indiana Department of Local Government Finance
n denotes the number of observations that were included in the calculation of average Gross AV.

8.1.3 Real Property Assessed Value Takeaways

Pre-ISCE, ISC designees (0.0004x), and ISC finalists (0.0007x) were facing very similar trends for real property AV index. Post-ISCE, however, the two groups experienced very different outcomes: ISC designees decreased post-ISCE (-0.0041x) while ISC finalists increased post-ISCE (0.0067x) according to analysis of average real property AV index trends. An evaluation of each individual ISC community illustrates that a majority of both ISC designees and ISC finalists have experienced a growth in real property AV index post-ISCE.

8.2 Personal Property Assessed Value

Business, utility, and depreciable farm equipment are all classified as personal property. Growth in personal property AV signifies a growth in business investment in a community. An increase in business investment has positive implications on local employment, incomes, and the local economy overall.

8.2.1 ISC Designee Personal Property Assessed Value

Figure 8.2.1.1 illustrates personal property AV index for ISC designees. ISC designees follow a very similar positive trend in personal property AV index post-ISCE. All fourteen of the ISC designees (100%) experienced growth in personal property AV index post-ISCE. Personal property AV index growth was much more intense than growth of real property AV index for ISC designees. Eleven of the fourteen ISC designees (78.6%) experienced growth in personal property AV index that exceeded 5% compared to five of the fourteen ISC designees (35.7%) exceeding 5% growth in real property AV index.

8.2.1.1 ISC Designee Personal Property Assessed Value Index
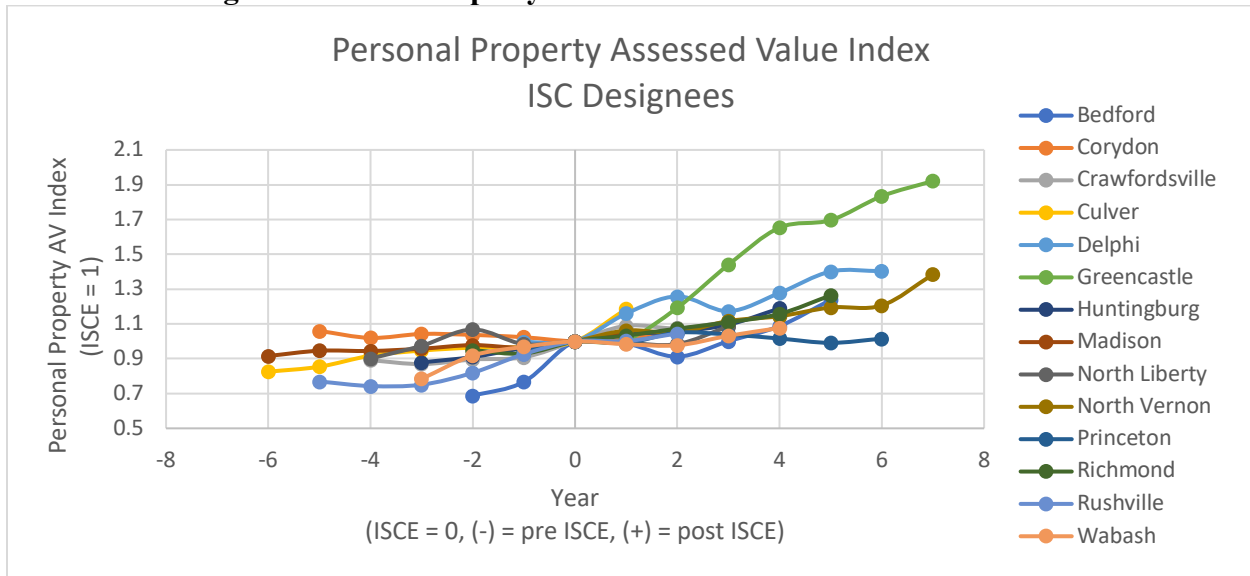
Source: Based on data provided by Indiana Department of Local Government Finance

Figure 8.2.1.2 illustrates the ISC designee pre-ISCE and post-ISCE trends of average personal property AV index. ISC designees have exhibited growth in personal property AV both pre-ISCE and post-ISCE. Growth in average personal property AV pre-ISCE can be represented by the equation:

$$y = 0.0173x + 0.9732 \ (R^2 = 0.8114)$$

Where y represents average personal property AV index normalized around the personal property AV for year ISCE, or year "0," and x represents year relative to ISCE. Growth in average personal property AV post-ISCE can be represented by the equation:

$$y = 0.083x + 0.9273 \ (R^2 = 0.8774)$$

Where y and x represent the same variables as the previous equation. Given the change in trend slopes, ISC designees have experienced an increase in the annual growth of average personal property AV post-ISCE. The changes in slopes, an additional 0.0657 index points, or an additional 6.57% annually from year 0 levels, represents a 379% annual increase in relation to the pre-ISCE trend.

This 379% increase in slopes is quite significant in terms of personal property AV. Given the pre-ISCE trend equation for personal property AV index, $y = 0.0173x + 0.9732$, the predicted index value in year 7 is 1.09. The realized index value in year 7 for ISC designees was 1.65. The difference in realized and the predicted value is an additional .56 index points or an additional 56% of personal property AV relative to ISCE. Given the average personal property AV during ISCE of \$97,294,594..07, this additional personal property AV index results in an average additional \$54,484,972.68 of personal property AV.

**Figure 8.2.1.2 ISC Designee Personal Property Assessed Value**
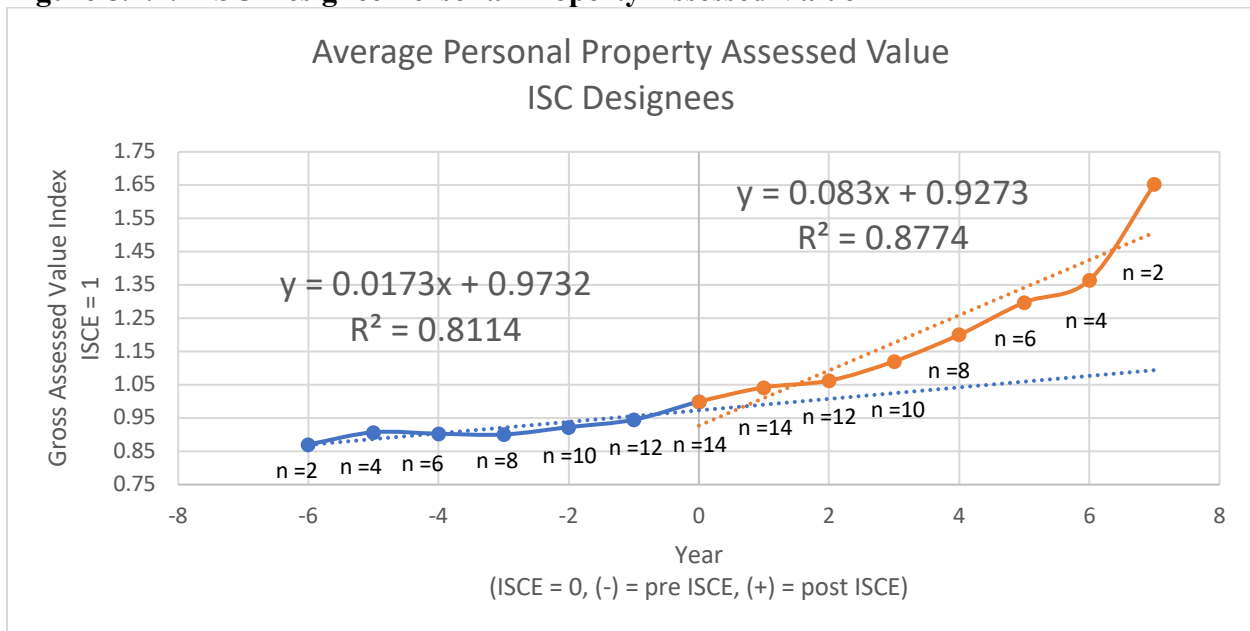
Source: Based on data provided by Indiana Department of Local Government Finance
n denotes the number of observations that were included in the calculation of average
Gross AV.

8.2.2 ISC Finalist Personal Property Assessed Value

Figure 8.2.2.1 illustrates the personal property AV index for ISC finalists. Unlike previous variables, Whitestown is not a statistical outlier for personal property AV index. Although ISC finalists do not appear to follow a positive trend as closely as ISC designees, a majority of ISC finalists have experienced growth in personal property AV index post-ISCE. Fifteen of the twenty-one ISC finalists (71.4%) have grown personal property AV index post-ISCE. Twelve of the twenty-one ISC finalists (57.1%) have exceeded 5% growth in personal property AV index post-ISCE.

Figure 8.2.2.1 ISC Finalist Personal Property Assessed Value
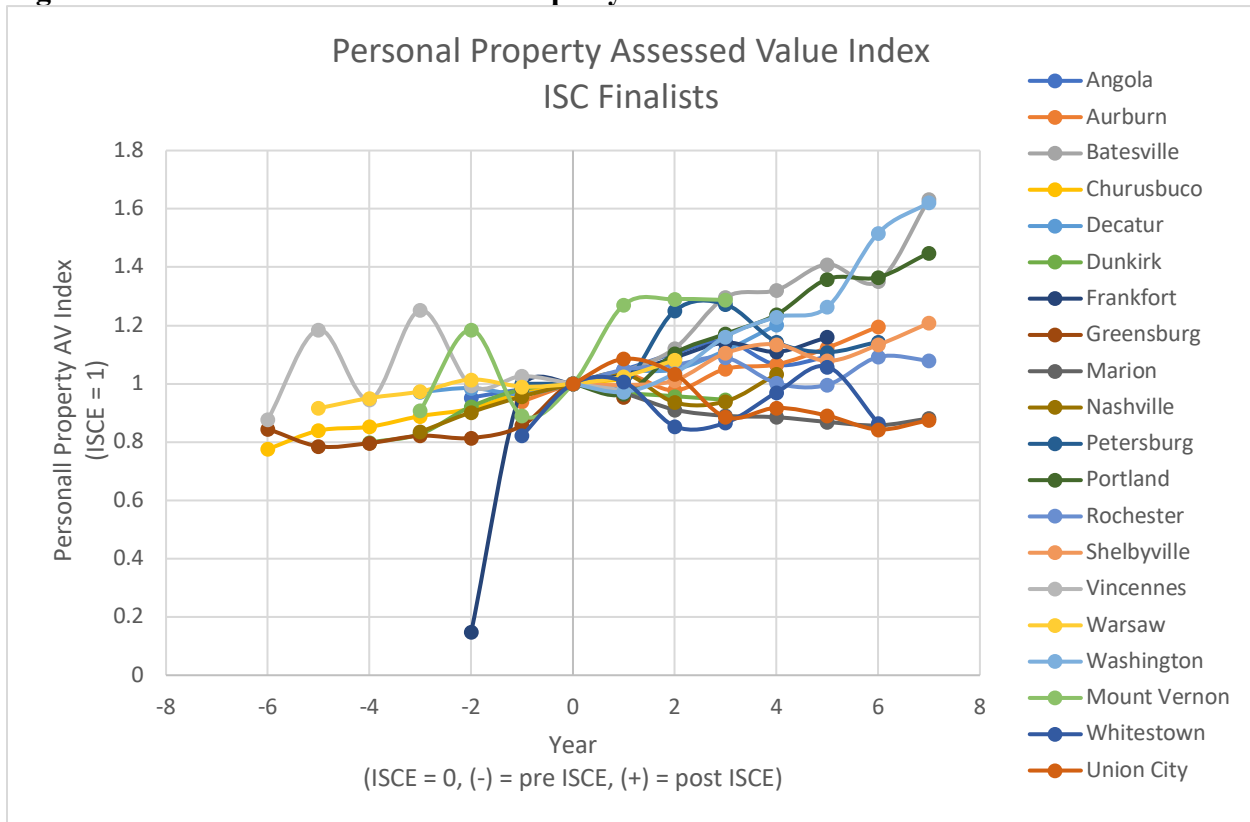
Source: Based on data provided by Indiana Department of Local Government Finance

Figure 8.2.2.2 illustrates the pre-ISCE and post-ISCE trends of average personal property AV for ISC finalists. Overall, ISC finalists experienced gains in personal property AV before and after ISCE. Growth in average personal property AV pre-ISCE for ISC finalists is represented by the equation:

$$y = 0.0193x + 0.9751 (R^2 = 0.5681)$$

Where y represents average personal property AV index normalized around the personal property AV for year ISCE, or year "0," and x represents year relative to ISCE. Growth in average personal property AV for ISC finalists post-ISCE is represented by the equation:
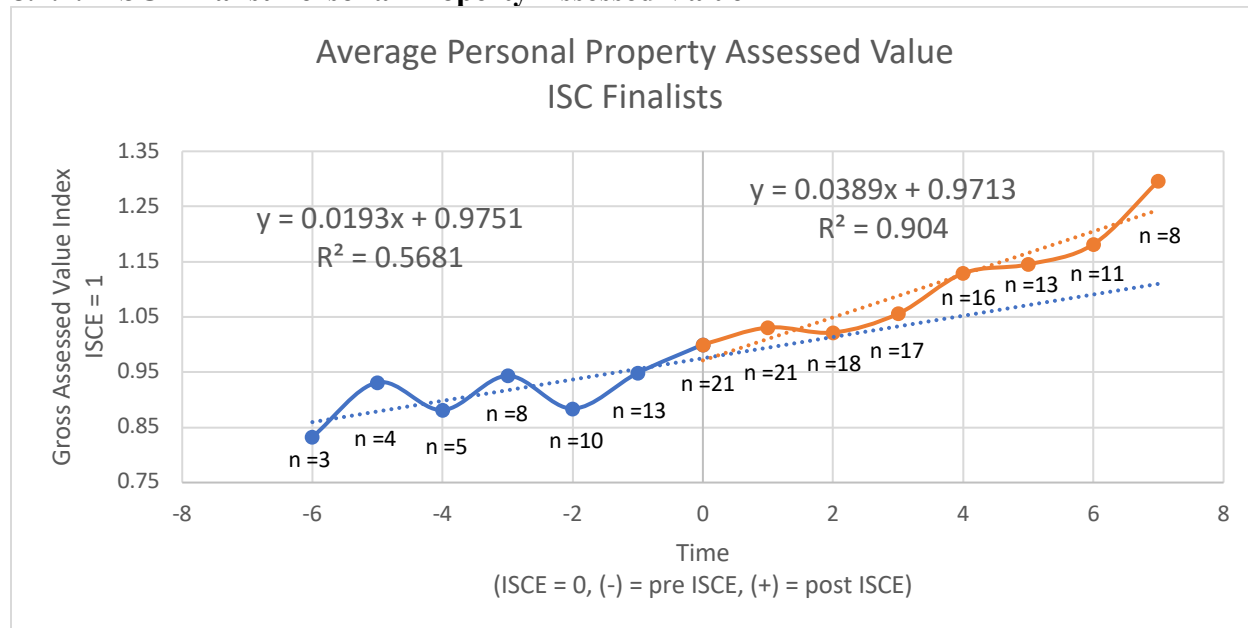
$$y = 0.0389x + 0.9713 (R^2 = 0.904)$$

Where y and x represent the same variables as the previous equation. Given the differences in pre and post-ISCE trend slopes, ISC finalists have experienced larger annual growth in personal property AV post-ICE compared to pre-ISCE. The difference in slopes, an additional 0.0178 index points or 1.78% annually, represents a near doubling (92.28%) in annual personal property AV growth compared to pre-ISC trends.

Given the pre-ISCE trend equation for personal property AV index, $y = 0.0193x + 0.9751$, the predicted index value in year 7 is 1.11. The realized index value in year 7 for ISC designees was

1.27. The difference in realized and the predicted value is an additional .16 index points or an additional 16% of personal property AV relative to ISCE. Given the average personal property AV during ISCE of $100,877,267.95, this additional personal property AV index results in an average additional $16,140,362.87 of personal property AV – far below the additional personal property AV for ISC designees.

8.2.2.2 ISC Finalist Personal Property Assessed Value

Average Personal Property Assessed Value
ISC Finalists

$y = 0.0193x + 0.9751$
$R^2 = 0.5681$

$y = 0.0389x + 0.9713$
$R^2 = 0.904$

(y-axis) Gross Assessed Value Index
ISCE = 1

(x-axis) Time
(ISCE = 0, (-) = pre ISCE, (+) = post ISCE)

Source: Based on data provided by Indiana Department of Local Government Finance
n denotes the number of observations that were included in the calculation of average
Gross AV.

8.2.3 Personal Property Assessed Value Takeaways

ISC designees (100%) were more likely to experience a growth in personal property AV index post-ISCE than ISC finalists (71.4%). ISC designees (0.0173x) and ISC finalists (0.0193x) were facing similar pre-ISCE trends in the growth of personal property AV; however, ISC designees (0.083x) experienced much more rapid growth post-ICSE compared to ISC finalists (0.0354x) resulting in a larger percentage change in growth from pre-ISCE to post-ISCE trends for ISC designees (379%) compared to ISC finalists (92.28%). ISC designees ($54,484,972.68) far exceed ISC finalists ($16,140,362.87) in terms of additional personal property AV post-ISCE that exceeded pre-ISCE trends.

8.3 Mobile Property Assessed Value

Mobile homes comprise mobile property AV. Given the fact that mobile properties are buildings, mobile property is a subset of real property. Historically, mobile homes have been a staple in lower-income rural communities.

8.3.1 ISC Designees Mobile Property Assessed Value

Figure 8.3.1.1 illustrates the mobile property AV index for ISC designees. While there are certainly ISC designees that have experienced growth in mobile property AV index post-ISCE, the overwhelming trend for ISC designees appears to be negative. Nine of the thirteen* ISC designees (69.2%) decreased in mobile property AV index post-ISCE. Declining mobile property AV index occurred pre-ISCE for ISC designees, as well. Eight of the thirteen ISC designees (61.5%) experienced a decline in mobile property AV index pre-ISCE.

*North Liberty did not have any mobile property assessed value which reduced the toal number of ISC designees from 14 to 13.

8.3.1.1 ISC Designees Mobile Property Assessed Value
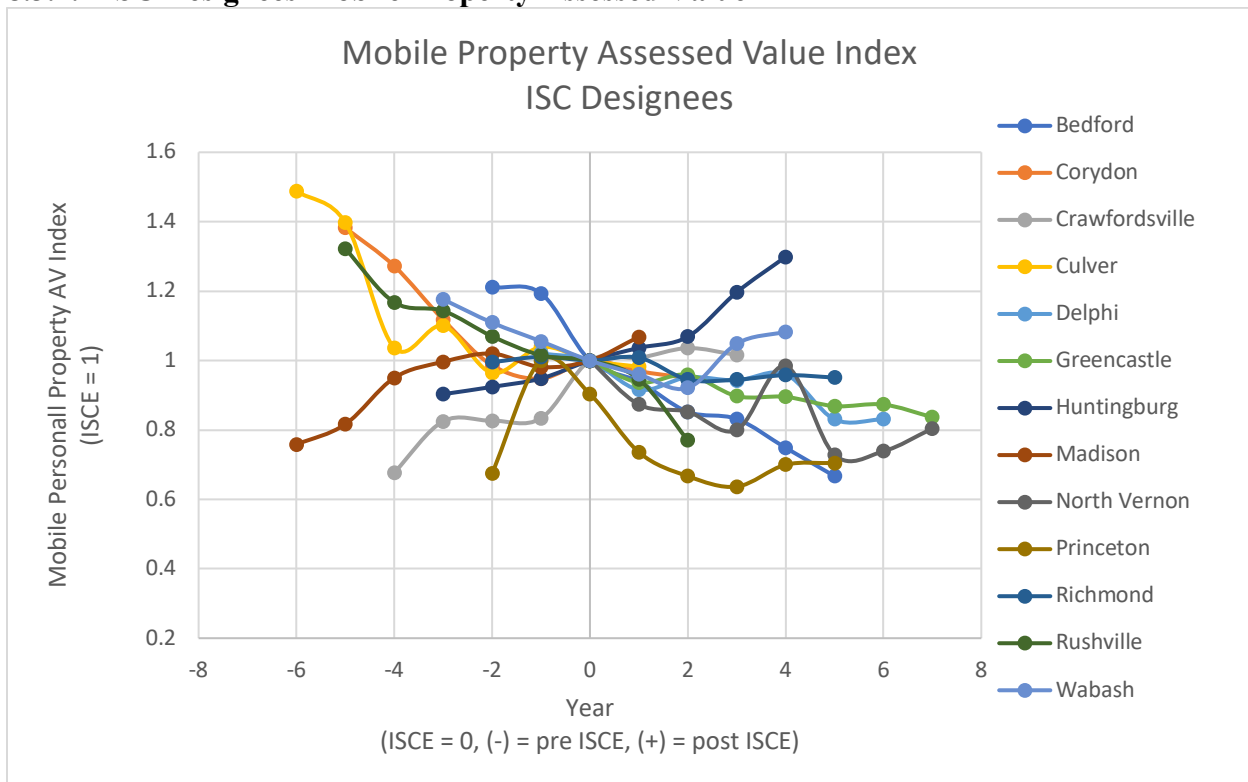
Source: Based on data provided by Indiana Department of Local Government Finance

Figure 8.3.1.2 illustrates the pre-ISCE and post-ISCE trends in the average mobile property AV index for ISC designees. One ISC designee (North Liberty) did not have any mobile property AV throughout the duration of available data. Average mobile property AV for ISC designees has been consistently decreasing preceding ISCE and continued that trend post-ISCE. The decline in average mobile property AV for ISC designees pre-ISCE is represented by the equation:

$$y = -0.0317x + 0.9616 \ (R^2 = 0.5878)$$

Where y represents the average mobile property AV index normalized around the mobile property AV for year ISCE, or year "0," and x represents year relative to ISCE. The decline in average mobile property AV for ISC designees post-ISCE is represented by the equation:

$$y = -0.0297x + 0.9976 \ (R^2 = 0.7732)$$

Where y and x represent the same variables as the previous equation. Both pre-ISCE and post-ISCE trends appear near parallel. In fact, the two equations are separated by only 0.002 index points or 0.2% annually. The pre-ISCE decline became less severe succeeding ISCE by 6.3% relative to the pre-ISCE trend. The predicted average mobile property AV based on pre-ISCE trends at year 7 (0.7897), and the realized actual average mobile property AV (0.8205) are separated by 0.0308 index points or 3.08% of the index value in year 0.

**Figure 8.3.1.2 ISC Designees Mobile Property Assessed Value**
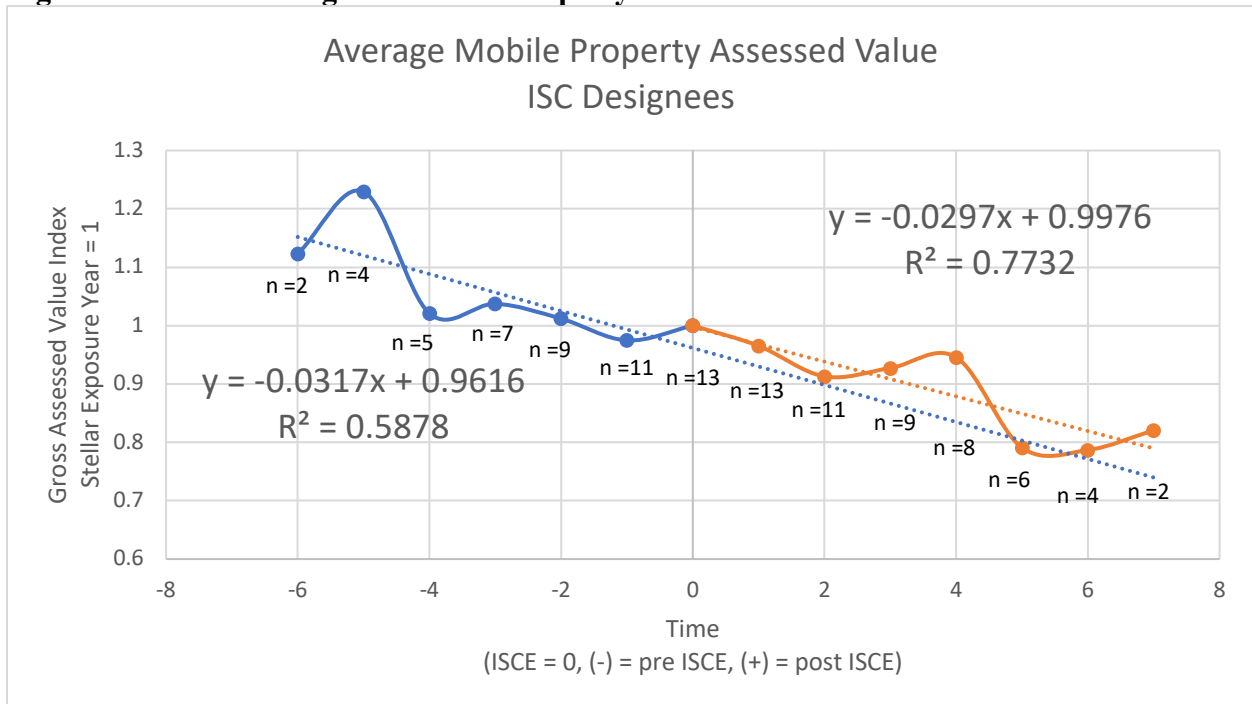
Source: Based on data provided by Indiana Department of Local Government Finance
n denotes the number of observations that were included in the calculation of average
Gross AV.

7.4.2 ISC Finalists Mobile Property Assessed Value

Like ISC designees, there is a strong negative trend in mobile property AV index for ISC finalists. Figure 7.4.2.1 illustrates the mobile property AV index for ISC finalists. Seventeen of the nineteen* ISC finalists (89.5%) experienced a decline in mobile property AV index post-ISCE. In addition, nine of the nineteen ISC finalists (47.4%) experienced a decline in mobile property AV index pre-ISCE.

*Nashville and Whitestown did not have any mobile property AV which reduced the number of ISC finalists from twenty-one to nineteen.

7.4.2.1 ISC Finalists Mobile Property Assessed Value Index
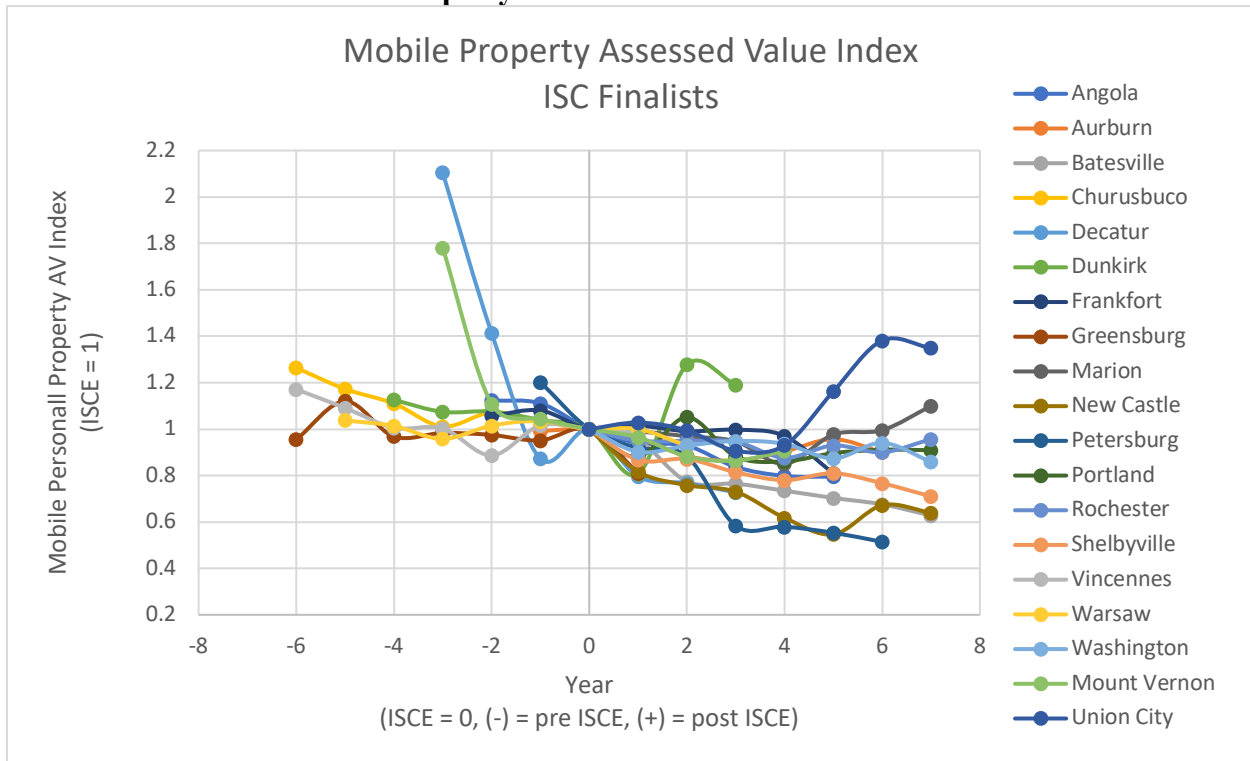
Source: Based on data provided by Indiana Department of Local Government Finance

The pre-ISCE and post-ISCE trends are similar for ISC finalists: average mobile property AV is on the decline. Figure 7.4.2.1 illustrates the pre-ISCE and post-ISCE trends in average mobile property AV for ISC finalists. Two ISC finalists (Nashville and Whitestown) did not have any mobile property AV throughout the duration of available data. The decline in average mobile property AV for ISC finalists pre-ISCE is represented by the equation:
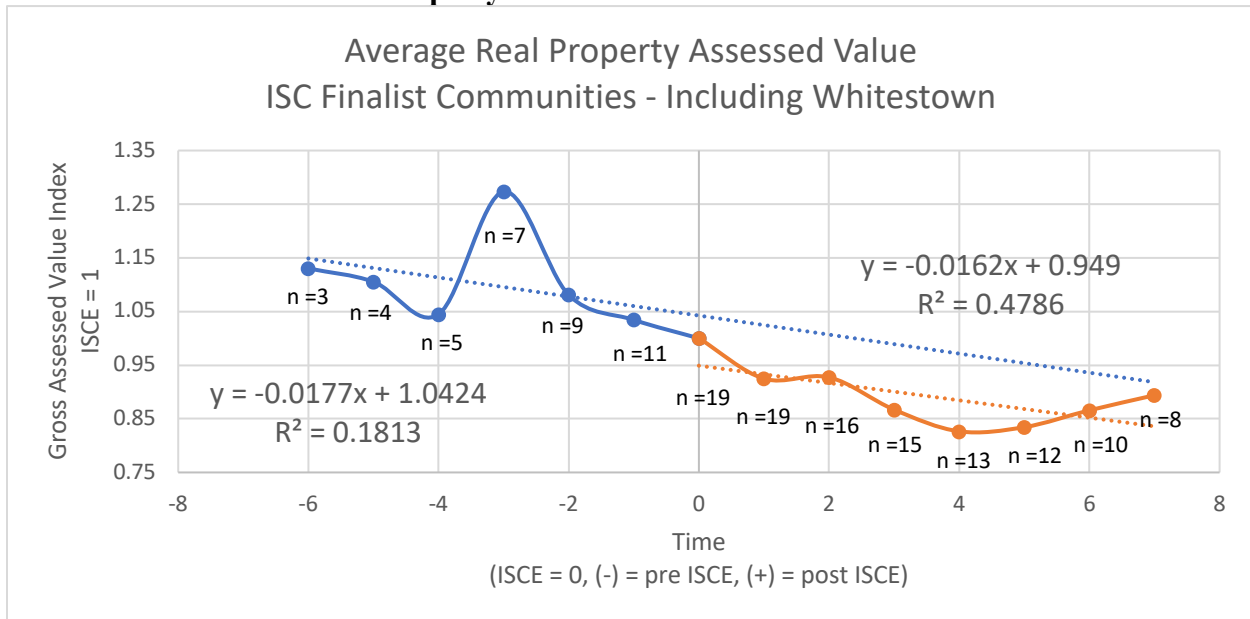
$$y = -0.0177x + 1.0424 \ (R^2 = 0.1813)$$

Where y and x represent the same variables as the previous two equations. The decline in average mobile property AV for ISC designees post-ISCE is represented by the equation:

$$y = -0.0162x + 0.949 \ (R^2 = 0.4786)$$

Again, y and x represent the same variables as the previous three equations. As was the case for ISC designees, trends of pre-ISCE and post-ISCE average mobile property AV are near parallel. The slopes of the two trends are separated by .001 index points or a difference of 0.1% annually.

7.4.2.1 ISC Finalist Mobile Property Assessed Value

Average Real Property Assessed Value
ISC Finalist Communities - Including Whitestown

$y = -0.0162x + 0.949$
$R^2 = 0.4786$

$y = -0.0177x + 1.0424$
$R^2 = 0.1813$

Source: Based on data provided by Indiana Department of Local Government Finance
n denotes the number of observations that were included in the calculation of average
Gross AV.

7.4 Mobil Property Assessed Valuation Takeaways

Mobile property AV is decreasing for both ISC designees and ISC finalists. For both groups, pre-ISCE and post-ISCE trends were near parallel. With that being said, ISC designees (-0.0308 index points) witnessed a larger annual difference in pre-ISCE and post-ISCE trends compared to ISC finalists (0.001 index points).

8. Grant Funding

On February 28th, 2020, OCRA and the Purdue Center for Regional Development conducted a ripple-mapping session with community leaders that were involved in the ISC process in Delphi, Indiana, an ISC designee. The goal of this session was to draw conclusions about the qualitative "ripples" – or tangential outcomes – that have stemmed from the ISC designation. During this session, community members pointed to an increased capacity within the community to successfully compete for grant funding.

A community member stated, "It's a capacity issue for the community so much that they now have the capacity to do these things. They have the experience of having gone through it. And when you've done that a couple of times, it just gives you the ability to do it." Another community leader echoed that sentiment by commenting, "It's a lot easier that we have a system in place now for organization of grants to apply for because we know how to execute it. We know how to set up funds and do the financial side of [grants], so Stellar gave us that."

To quantify the hypothesis that ISC has led to more successful grant applications, state and federal grant funding data was compiled for each community. Annually, the State of Indiana publishes

executive reports regarding the amount of state and federal grant funding that each community received. It is important to note that non-profit and private grant revenues are not included in the values presented in this section.

Due to drastic annual fluctuations in grant funding for several communities, a pre-ISCE and post-ISCE trend analysis of the average annual grant funding index resulted in a high number of data outliers. For reference, figure 8.1.2 and 8.1.4 illustrate the pre-ISCE and post-ISCE trends for annual grant revenue for ISC designees and ISC finalists, respectively. The pre-ISCE and post-ISCE trend analysis will not be discussed in this paper due to the high level of inconsistency. Instead, a calculation of average annual grant revenue pre-ISCE and post-ISCE for each community will serve as the basis of grant revenue evaluation.

8.1 ISC Designee Grant Revenue

Figure 8.1.1 displays the average annual grant revenue for ISC designees pre-ISCE and post-ISCE. Four of the fourteen ISC designees (28.6%) did not receive any grant revenue pre-ISCE. Two of the fourteen ISC designees (14.3%) did not receive any grant revenue post-ISCE. One of the fourteen ISC designees (Greencastle) did not receive any grant revenue pre-ISCE nor post-ISCE.

Average annual grant revenue post-ISCE exceeded average annual grant revenue pre-ISCE for ten of the fourteen ISC designees (71.4%), while three of the ISC designees (21.4%) experienced a decrease in average annual grant revenue post-ISCE compared to pre-ISCE. Of the ten aforementioned ISC designees that experienced growth in annual grant revenues post-ISCE, five communities increased annual grant revenues by at least one-million-dollars per year post-ISCE compared to pre-ISCE annual revenues. In addition, five of the fourteen ISC designees (35.7%) at least doubled (+100%) average annual grant revenue post-ISCE compared to pre-ISCE annual revenues.

Three of the fourteen ISC designees (21.4%) experienced at least a threefold increase in average annual grant revenues post-ISCE compared to pre-ISCE. Bedford experienced an over threefold increase (+447%) in average annual grant revenues post-ISCE compared to pre-ISCE. North Liberty experienced a near fivefold increase (+593%) in average annual grant revenues post-ISCE compared to pre-ISCE. Madison experienced an over sevenfold (+866%) increase in average annual grant revenues post-ISCE compared to pre-ISCE.
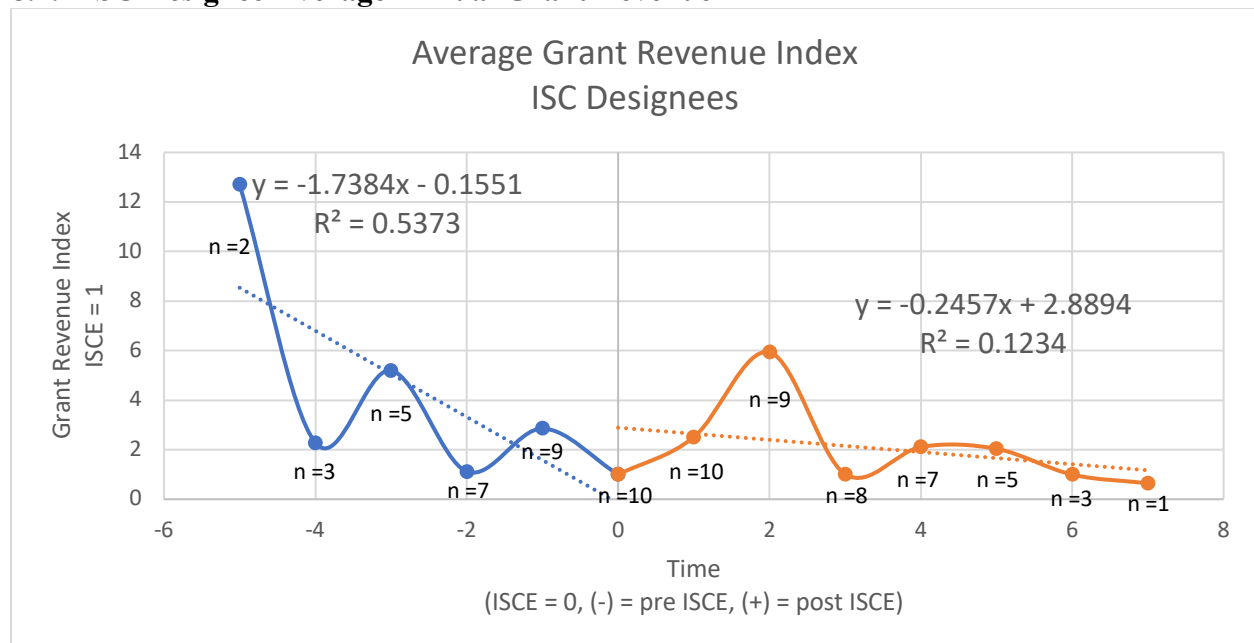
One of the fourteen ISC designee's (7.1%) average annual grant revenues exceeded one-million-dollars pre-ISCE compared to eight of the fourteen ISC designees (57.1%) post-ISCE. The average annual grant revenue for ISC designees pre-ISCE was $743,702.48 compared to a post-ISCE average annual grant revenue of $1,673,284.19 (+125%).

8.1.1 ISC Designee Grant Revenue

Division	Community	Pre-ISCE Avg. Annual Revenue	Post-ISCE Avg. Annual Revenue	Post-ISCE vs Pre-ISCE Difference	Post-ISCE vs Pre-ISCE Difference
1	Corydon (2016)	$ 200,896.00	$ -	$ (200,896.00)	-100%
	Culver (2017)	$ 403,119.48	$ 395,406.00	$ (7,713.48)	-2%
	Delphi (2012)	$ -	$ 1,789,946.57	$ 1,789,946.57	N/A
	North Liberty (2015)	$ 134,475.46	$ 931,979.45	$ 797,503.99	593%
2	Bedford (2013)	$ 281,845.53	$ 1,543,009.99	$ 1,261,164.46	447%
	Crawfordsville (2015)	$ 732,717.97	$ 1,663,459.68	$ 930,741.71	127%
	Greencastle (2011)	$ -	$ -	$ -	N/A
	Huntingburg (2014)	$ 228,888.43	$ 581,671.23	$ 352,782.81	154%
	Madison (2017)	$ 585,352.17	$ 5,654,801.15	$ 5,069,448.98	866%
	North Vernon (2011)	$ -	$ 3,393,929.69	$ 3,393,929.69	N/A
	Princeton (2012)	$ -	$ 1,128,380.20	$ 1,128,380.20	N/A
	Richmond (2013)	$ 6,302,083.54	$ 4,434,617.57	$ (1,867,465.97)	-30%
	Rushville (2016)	$ 656,650.26	$ 874,868.12	$ 218,217.86	33%
	Wabash (2014)	$ 885,805.93	$ 1,033,909.01	$ 148,103.08	17%
	AVERAGE	$ 743,702.48	$ 1,673,284.19	$ 929,581.71	125%

Source: Based on data provided by Indiana Department of Local Government Finance

8.1.2 ISC Designee Average Annual Grant Revenue

Average Grant Revenue Index
ISC Designees

$y = -1.7384x - 0.1551$
$R^2 = 0.5373$

$y = -0.2457x + 2.8894$
$R^2 = 0.1234$

n =2
n =3
n =5
n =7
n =9
n =10
n =9
n =10
n =8
n =7
n =5
n =3
n =1

Grant Revenue Index
ISCE = 1

Time
(ISCE = 0, (-) = pre ISCE, (+) = post ISCE)

Source: Based on data provided by Indiana Department of Local Government Finance

56

8.2 ISC Finalist Grant Revenue

While many ISC finalists increased average grant revenues post-ISCE compared to pre-ISC, overall grant revenue awards were far below ISC designee levels. Figure 5.2.1 displays the average annual grant revenues for ISC finalists. Twelve of the twenty ISC finalists (60%) did not receive any grant funding pre-ISCE. Three of the twenty (15%) did not receive any grant funding post-ISCE. One of the twenty ISC finalists (Dunkirk) did not receive any grant revenue pre-ISCE nor post-ISCE.

Average annual grant revenue post-ISCE exceeded average annual grant revenue pre-ISCE for fourteen of the twenty ISC finalists (70%), while three of the twenty ISC finalists (15%) experienced a decline in average annual grant revenues post-ISCE compared to pre-ISCE. Of the fourteen aforementioned ISC finalists that experienced growth in average annual grant revenues post-ISCE compared to pre-ISCE, four experienced growth that exceeds 100% compared to pre-ISCE levels while only one community (Marion) experienced growth that exceeded one-million-dollars. Warsaw experienced a decline in average annual grant revenues post-ISCE that exceeded three-million-dollars compared to pre-ISCE levels.

For the ISC finalists that received grant funding pre-ISCE, the increase in average annual grant funding post-ISCE was not as intense compared to ISC designees. In fact, only one of the twenty (5%) experienced an increase in average annual grand funding that exceeded a threefold increase. Frankfort experienced an over elevenfold increase (+1,269%) in average annual grant revenues post-ISCE compared to pre-ISCE. While this increase from a percentage standpoint is impressive, Frankfort was the third-lowest dollar value increase (+$148,538.40) among ISC finalists that experienced an increase in average annual grant revenues post-ISCE compared to pre-ISCE. The average annual grant revenue for ISC designees pre-ISCE was $355,844.14 compared to a post-ISCE average annual grant revenue of $450,496.52 (+27%).

Again, for reference, Figure 8.2.2 illustrates the average annual grant revenues for ISC finalists.

r

57

Figure 8.2.1 ISC Finalist Grant Revenue

Division	Community	Pre-ISCE Avg. Annual Revenue	Post-ISCE Avg. Annual Revenue	Post-ISCE vs Pre-ISCE Difference	Post-ISCE vs Pre-ISCE Difference
1	Churubusco (2017)	$ -	$ -	$ -	N/A
	Dunkirk (2015)	$ -	$ -	$ -	N/A
	Nashville (2014)	$ -	$ 475,899.46	$ 475,899.46	N/A
	Petersburg (2012)	$ -	$ 43,609.36	$ 43,609.36	N/A
	Union City (2011)	$ 354,427.15	$ 1,130,883.10	$ 776,455.95	219%
2	Angola (2013)	$ 820,926.33	$ 247,948.73	$ (572,977.60)	-70%
	Auburn (2012)	$ -	$ -	$ -	N/A
	Batesville (2011)	$ -	$ 467,344.94	$ 467,344.94	N/A
	Decatur (2014)	$ 382,639.58	$ 356,353.24	$ (26,286.35)	-7%
	Frankfort (2013)	$ 11,702.40	$ 160,240.80	$ 148,538.40	1269%
	Greensburg (2017)	$ 431,626.08	$ 630,779.45	$ 199,153.37	46%
	Marion (2011)	$ -	$ 1,597,435.91	$ 1,597,435.91	N/A
	Mount Vernon (2014)	$ 51,385.85	$ 175,149.67	$ 123,763.82	241%
	New Castle (2011)	$ -	$ 154,146.01	$ 154,146.01	N/A
	Portland (2011)	$ -	$ 769,888.16	$ 769,888.16	N/A
	Rochester (2011)	$ -	$ 397,123.87	$ 397,123.87	N/A
	Shelbyville (2011)	$ 334,512.82	$ 806,765.72	$ 472,252.90	141%
	Vincennes (2017)	$ -	$ 781,667.82	$ 781,667.82	N/A
	Warsaw (2016)	$ 4,729,662.65	$ 749,219.89	$ (3,980,442.76)	-84%
	Washington (2011)	$ -	$ 299,254.50	$ 299,254.50	N/A
	Whitestown (2012)	$ -	$ 536,107.95	$ 536,107.95	N/A
	AVERAGE	$ 355,844.14	$ 450,496.52	$ 94,652.38	27%

Source: Based on data provided by Indiana Department of Local Government Finance

Figure 8.2.2 ISC Finalist Grant Revenue

Average Grant Revenue Index ISC Finalists
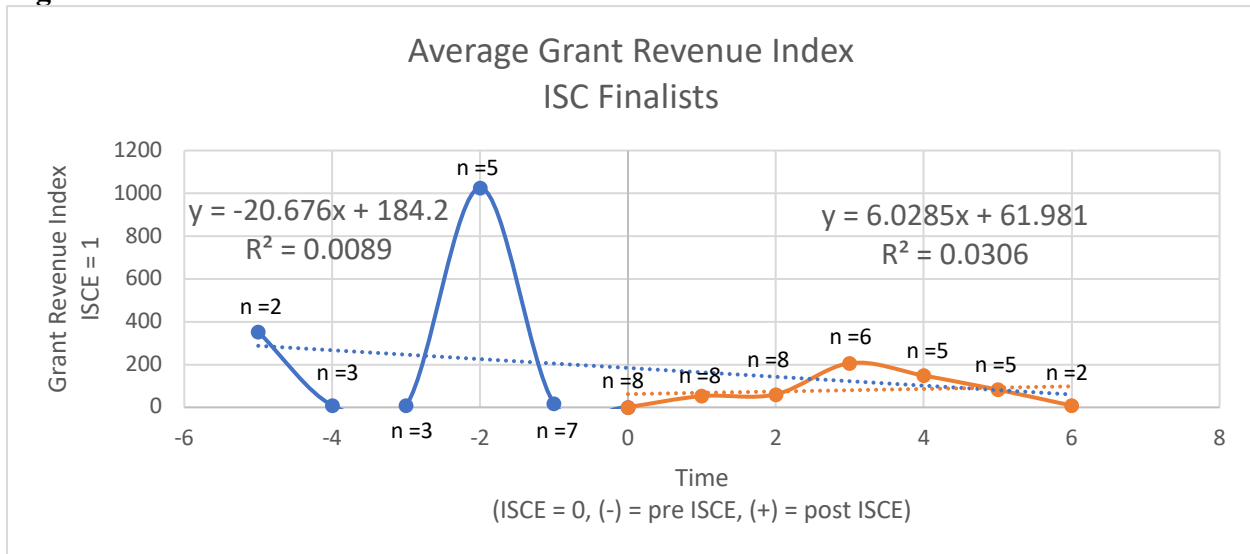
Source: Based on data provided by Indiana Department of Local Government Finance

5.2.1 Grant Revenue Takeaways

ISC designees (71.4%) and ISC finalists (70%) were nearly as likely to increase average annual grant revenues post-ISCE compared to pre-ISCE averages. However, ISC designees (35.7%) were more likely than ISC finalists (20%) to double (+100%) average annual grant revenues post-ISCE compared to pre-ISCE averages. ISC designees (35.7%) were much more likely than ISC finalists (5%) to increase average annual grant revenues in excess of one-million-dollars post-ISCE compared to pre-ISCE revenues. Average annual grant revenues for ISC designees were larger than ISC finalists pre-ISCE (+108%), and the difference increased substantially post-ISCE (+271%).

6. Conclusions

Across a vast majority of the investigated outcomes, ISC designees and ISC finalists are seeing similar trends: dwindling population, income levels that are growing but remaining below state averages, declining public school enrollment, increasing percentages of populations with college degrees, growing Gross AV, and expansion of grant revenues. Some of the aforementioned trends are desirable, while others are not. Many of the less desirable outcomes – dwindling population, declining public school enrollment, and below state average income levels – will take years to overcome, but magnitude changes indicate that ISC designees may have the capacity to reverse these trends faster than ISC finalists.

An ISC designation has had a positive economic impact for ISC designees. Four of the ISC designees increased in population post-ISCE despite declining in population pre-ISCE. ISC designees are declining in population at a slower rate than ISC finalists post-ISCE. ISC designees were more likely to experience growth in per capita income than ISC finalists. The average increase in per capita income was larger for ISC designees than for ISC finalists. The percentage of residents with a college degree is growing much more rapidly for ISC designees than ISC

finalists. Growth in Gross AV post-ISCE is much larger for ISC designees than ISC finalists – excluding Whitestown. ISC designees are receiving a substantially larger amount of grant funding post-ISCE compared to ISC finalists.

It is incredibly important to note that correlation does not justify causation. While the witnessed outcomes indicate that ISC has had a positive economic impact on ISC designees, an assumption that ISC was the sole influence on each outcome would be unjustified. Often times, ISC projects are occurring simultaneously with non-ISC related projects in a given community. ISC projects are not the only community projects that can positively impact a local economy.

References

Brown, J. A. M. (2017). *Indiana Stellar Communities Program: An Evaluative Impact Report of Key Findings* (pp. 4–9). Indianapolis, IN: Sagamore Institute.

Hicks, M. (2018, February 4). Most Indiana Counties Should Stop Pursuing Economic Growth. *Ball State University Center for Business and Economic Research*. Retrieved from https://commentaries.cberdata.org/935/most-indiana-counties-should-stop-pursuing-economic-growth

Indiana Office of Community and Rural Affairs. (n.d.). Community Vitality Indicators. Retrieved March 5, 2020, from https://www.in.gov/ocra/cpi.htm

Indiana University Business Research Center. (2019, May 23). Whitestown and Westfield top list of Indiana's fastest-growing communities. Retrieved March 27, 2020, from https://news.iu.edu/stories/2019/05/iub/releases/23-whitestown-westfield-top-list-of-growing-communities.html

Olson, S. (2017, September 18). Warehouse gold rush. *IBJ*.

Stellar Communities Program. (n.d.). Retrieved January 25, 2020, from https://www.in.gov/ocra/stellar.htm

US Census Bureau. (2020, April 1). Delineating Metropolitan and Micropolitan Statistical Areas. Retrieved April 7, 2020, from https://www.census.gov/programs-surveys/metro-micro/about.html

US Department of Housing and Urban Development. (n.d.). CDBG Entitlement Program Eligibility Requirements. Retrieved April 7, 2020, from https://www.hudexchange.info/programs/cdbg-entitlement/cdbg-entitlement-program-eligibility-requirements/

Weidenbener, L. (2019, January 2). Whitestown Town Manager Dax Norton resigns to work in private sector. *IBJ*. Retrieved from https://www.ibj.com/articles/71914-whitestown-town-manager-dax-norton-resigns-to-work-in-private-sector