

The Impact of Opportunity Zones: An Initial Assessment

The Council of Economic Advisers
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Executive Summary

The Tax Cuts and Jobs Act of 2017 not only cut taxes for businesses and individuals broadly but also made targeted cuts to spur investment in economically distressed communities designated as Opportunity Zones (OZs). This report from the Council of Economic Advisers (CEA) compares the advantages of OZs with those of other Federal antipoverty programs and documents the characteristics of the nearly 8,800 low-income communities designated as OZs. It also quantifies the effect of OZs investment and finds that a large increase is already benefiting OZ residents while potentially having only a small effect on the Federal budget.

OZs chart a new course in Federal policy aimed at uplifting distressed communities. Antipoverty transfer programs subsidize the consumption of goods such as housing and healthcare but can lead to reduced economic activity by raising taxes and discouraging eligible, working-age participants from seeking jobs. Also, under other existing place-based development programs, the Federal government selects who receives grants or tax credits and narrowly prescribes their use. By comparison, OZs cut taxes to increase economic activity by spurring private sector investment, job creation, and self-sufficiency. They also give greater scope for market forces to guide entrepreneurs and investors because they have no cap on participation and require no government approval.

The CEA finds that OZs, which are census tracts nominated by State governors and certified by the U.S. Department of the Treasury to be eligible for the investment tax cuts, are among the poorest communities in the United States. These communities have an average poverty rate more than double that of all other communities and are home to a higher share of African Americans, Hispanics, and high school dropouts. Even among all the communities eligible to be an OZ under Federal law, every State selected communities that, on average, had a median household income less than that of communities that were not selected.

The CEA also finds that the OZ tax cuts have spurred a large investment response. This report estimates that Qualified Opportunity Funds raised \$75 billion in private capital by the end of 2019, most of which would not have entered OZs without the incentive. This new capital represents 21 percent of total annual investment in OZs and helps explain why the CEA also finds that private equity investment in OZ businesses grew 29 percent relative to the comparison group of businesses in eligible communities that were not selected as OZs.

The growth in investment has already made OZs more attractive to their residents, as reflected in what buyers are willing to pay for homes located in the OZs. The CEA estimates that Opportunity Zone designation alone has caused a 1.1 percent increase in housing values. Greater amenities and economic opportunity behind the housing value increase will be broadly

enjoyed, and for the nearly half of OZ residents who own their homes, the increase provides an estimated \$11 billion in new wealth.

Regarding effects on the Federal budget, the CEA finds that each \$1 raised by Qualified Opportunity Funds through 2019 has a direct forgone Federal revenue effect of 15 cents. By comparison, each \$1 in investment spurred by the New Markets Tax Credit, an existing Federal program with similar goals, results in 18 cents of forgone revenue. Including indirect effects, the CEA estimates that the OZ incentive could be revenue neutral, with economic growth in low-income communities reducing transfer payments and offsetting forgone revenues from taxes on capital gains. Thus, the CEA projects that the capital already raised by Qualified Opportunity Funds could lift 1 million people out of poverty and into self-sufficiency, decreasing poverty in OZs by 11 percent.

The COVID-19 pandemic slowed investment everywhere in the second quarter of 2020, including in Opportunity Zones, but the initial evidence suggests that the OZ model has power to mobilize investors; engage State, local, and tribal stakeholders; and improve the outlook for low-income communities—all with limited prescription from the Federal Government. This report's findings highlight the potential for the Opportunity Zone model to help spur the post-COVID-19 recovery in thousands of distressed communities across the United States.

Introduction

One of the main provisions of the Tax Cuts and Jobs Act, which was signed in December 2017, reduced U.S. corporate income tax rates to bring them in line with international levels. Lowering the corporate tax rate decreases the cost of capital, thereby stimulating investment and growth in gross domestic product and wages (CEA 2017). The Opportunity Zones (OZs) provision of the act mirrored this effort to lower capital taxes but with a focus on distressed communities. By reducing taxes on the capital gains invested in such communities, the provision lowers the cost of capital for businesses, which is expected to lead to new investment, jobs, and economic opportunity that has been lacking for decades. This CEA report compares the advantages of OZs relative to other Federal antipoverty programs, and it documents the characteristics of the nearly 8,800 low-income communities designated as OZs. The CEA also quantifies the effect of OZs on investment, finding a large increase that is already benefiting residents while potentially having only a small effect on the Federal budget.

To stimulate investment in OZs, the provision provides three potential tax benefits to investors that invest capital gains in Qualified Opportunity Funds, which are vehicles for investing in qualified OZ properties. The first benefit of investing in these funds is that the investor can defer paying taxes on capital gains rolled into OZs until potentially as late as 2026. Second, when these taxes are paid, the investor may omit 10 percent (15 percent) of the original gain if the investment is held there for at least five (seven) years.¹ Finally, and most important, any capital gains that accrue to investments in a Qualified Opportunity Fund are tax free if the investment is held for at least 10 years.

Funds can make equity investments in partnerships or corporations that operate in OZs as determined by various tests, such as where they generate income or where their assets lie. A Qualified Opportunity Fund can also directly purchase tangible property for use in the fund's trade or business, but the property must have its original use begin with the fund or the fund must substantially improve the property. For example, a Qualified Opportunity Fund could purchase and install new solar panels in an OZ, or it could buy an apartment building and substantially improve it.

Although the Federal tax incentive described here is at the core of OZs, all levels of government have worked to complement this incentive. At the Federal level, on December 12, 2018, President Trump signed Executive Order 13853, which established the White House Opportunity and Revitalization Council.² The order gave the council the mission of leading

¹Because an investor must pay capital gains taxes on the original gain by 2026, the original option to pay taxes on only 85 percent of the original has expired and would not apply to investments made in 2020. This is because the investments could not be held for the original seven years before having to pay the tax.

² The council's various efforts are highlighted on the interagency website [OpportunityZones.gov](https://www.opportunityzones.gov).

efforts across executive departments and agencies “to engage with State, local, and tribal governments to find ways to better use public funds to revitalize urban and economically distressed communities.” In its one-year report to the President, the council made 223 recommendations to this end and, as of this CEA report’s publication, has taken more than 270 related actions.

Complementary efforts have also occurred at the State and local levels. For example, the Alabama Incentives Modernization Act provides additional State tax breaks for Qualified Opportunity Funds, and the State of New Jersey has created an OZ website and data tool with resources for local governments, investors, and businesses. The city of Erie, Pennsylvania, along with local businesses and nonprofit leaders has created the Flagship Opportunity Zone Development Company to encourage investment in the city’s OZs. And the city of Cleveland has taken a similar approach by creating the Opportunity CLE initiative to promote local OZ investments.

The CEA finds that OZs, which are census tracts selected by governors to be eligible for the investment tax cuts, are among the poorest communities in the United States. These communities have an average poverty rate that is more than double that of other communities and are home to a higher share of African Americans, Hispanics, and high school dropouts. Even among all the communities that were eligible to be an OZ under Federal law, every State selected communities that, on average, had a lower median household income than did eligible communities that were not selected.

The CEA also finds that the OZ tax cuts have spurred a large investment response. The report estimates that Qualified Opportunity Funds raised \$75 billion in private capital by the end of 2019, most of which would not have entered OZs without this incentive. This new capital represents 21 percent of total annual investment in OZs and helps explain why the CEA also finds that private equity investment in OZ businesses grew 29 percent relative to eligible communities that were not selected as OZs and thus act as a control group.

This growth in investment has already made OZs more attractive to their residents as reflected in the prices buyers are willing to pay for homes located in OZs. The CEA estimates that OZ designation alone has caused a 1.1 percent increase in housing values. The greater amenities and economic opportunity behind this housing value increase will be broadly enjoyed, and for the nearly half of OZ residents who own their homes, the increase provides an estimated \$11 billion in new wealth.

Regarding effects on the Federal budget, the CEA finds that each \$1 raised by Qualified Opportunity Funds through 2019 has had a direct forgone Federal revenue effect of 15 cents. By comparison, each dollar in investment spurred by the New Markets Tax Credit, an existing

Federal program with similar goals, results in 18 cents in forgone revenue. Including indirect effects, the CEA estimates that the Opportunity Zone incentive could be revenue neutral, with economic growth in low-income communities reducing transfer payments and offsetting forgone revenues from taxes on capital gains. Also, the CEA projects that the capital already raised by Qualified Opportunity Funds could lift 1 million people out of poverty into self-sufficiency, decreasing poverty in OZs by 11 percent.

Comparing Opportunity Zones with Other Antipoverty or Place-Based Programs

Unlike antipoverty transfer programs—which raise taxes and reduce the incentive for program recipients to participate in productive economic activity—OZs lower taxes to stimulate economic activity in distressed areas. Relative to other place-based policies, the OZ incentives are more open-ended and less top-down in their design, which makes OZs more effective at attracting investment to communities most in need.

Antipoverty Transfer Policies

Antipoverty transfer programs provide cash grants or subsidies for the consumption of goods. Notable examples are housing vouchers, food stamps, cash assistance for needy families, and Medicaid. Although these programs support many Americans in need, they can also weaken the incentive for working-age adults to find employment. Because of eligibility requirements linked to income, taking a job or working more hours can cause a participant to become ineligible if his or her income exceeds a program's threshold. Considerable evidence confirms that such programs typically discourage employment (e.g., Hoynes and Schanzenbach 2012; Jacob and Ludwig 2012; Bloom and Michalopoulos 2001).

Antipoverty transfer programs also raise taxes to fund these transfers. Even if the transfers and associated eligibility requirements did not discourage work, they would still come at a cost. Each \$1 raised through taxes costs society more than \$1 because of the positive marginal cost of public funds. This cost captures the effect of a tax in driving a wedge between the market value of what an extra hour of labor produces and the worker's value of that hour (i.e., her opportunity cost). Given this tax wedge, each \$1 in funds raised by taxes costs society an estimated 50 cents in forgone value (Dahlby 2008; CEA 2019).

The rules governing OZs do not create a disincentive to work because eligibility is based on community-wide measures of poverty and income rather than those of any particular individual. Nor does the OZ incentive have the same marginal cost of public funds associated with transfers funded by tax revenues. The incentive cuts taxes on capital supplied to low-income communities, which reduces the tax wedge associated with the supply and demand for capital. The forgone Federal revenue might be made up through higher taxes elsewhere, or it could be offset by declines in government transfers because of rising incomes in poor neighborhoods, which is considered in a later section.

OZs, nonetheless, are not a substitute for cash grants or subsidies. Not everyone can work, and most people living in poverty do not live in OZs. To the extent that transfer programs have appropriate work requirements for those who are able to work, OZs complement such programs by fostering job creation.

OZs also complement the Earned Income Tax Credit (EITC), which is an antipoverty tax incentive. The EITC targets low-income workers, especially those with children, and is phased out as a family's income rises. Because the EITC is only provided to low-income families with earnings, it encourages people to enter the workforce. Empirical research confirms that the EITC increases workforce participation for single mothers, who benefit the most from the credit (Nichols and Rothstein 2015). In this sense, the EITC increases the supply of labor, while OZs stimulate demand for it.

Federal Place-Based Policies: The New Markets Tax Credit Program

The Federal program most comparable to Opportunity Zones is the New Markets Tax Credit (NMTC), though OZs offer improvements over the NMTC program. Both use tax incentives to encourage private investment in low-income communities, but the total tax benefit available through the NMTC program is capped, limiting how much investment it can spur.³ In most years since 2007, Congress has authorized the NMTC program to award tax credits to support about \$3.5 billion in place-based investments. On average, these credits account for about half of total project costs, so the program supports roughly \$7 billion in investment annually. As of 2016, nearly 3,400 census tracts have received NMTC program credits since the program's inception in the early 2000s (Tax Policy Center 2020).

³ NMTCs are a limited allotment of tax credits that reduce investors' Federal tax obligations. Tax credits differ from tax deductions, which decrease the amount of income subject to being taxed.

In addition to being smaller in scale than the OZ initiative, the NMTC program has a top-down approach to distributing tax benefits. The U.S. Department of the Treasury administers the NMTC program through its Community Development Financial Institutions Fund (CDFI), which ultimately selects what applicants can receive tax credits. Community development entities must first apply to the CDFI to be qualified for the program. Those that are qualified then identify investment opportunities and submit applications to compete for a limited pool of credits. In 2018, development entities requested \$14.8 billion in NMTC funds, but only \$3.5 billion were available, and only about a third of all applicants received funding (Lowry and Marples 2019).

Even for approved applicants, the NMTC program places greater restrictions on investors. Funds must remain invested and compliant with program requirements for seven years or else forgo all their tax benefits (with interest and penalties). With OZs, funds can liquidate one investment and roll the proceeds into a new one without penalty, though standard taxes apply to any capital gains. OZs are also flexible in other ways; investors can contribute funds up to any size, and they can pool their funds with any number of other investors (Vardell 2019; Bernstein and Hassett 2015).

Many of the participants in the NMTC program are large financial intermediaries equipped to navigate the CDFI's application process and manage compliance risk (Vardell 2019; Hula and Jordan 2018). To manage the risk, most NMTC transactions use a complex leverage model that combines debt and equity. According to Hula and Jordan (2018,23), the model requires "a team of accountants and attorneys" with relevant expertise to structure the investment. By contrast, any investor with eligible capital gains can invest in a Qualified Opportunity Fund. These funds, in turn, need only self-certify their investments on their tax returns and follow the broad guidelines provided by the Department of the Treasury's regulations.⁴

Although the NMTC program is more prescriptive than OZs, it is more flexible than the economic development grants given by the CDFI Fund. Harger, Ross, and Stephens (2019) find that the tax credits—but not the grants—increased the number of new businesses in low-income communities. They attribute the difference in part to the greater flexibility of the tax credit relative to the grants. At the same time, the authors found that even the NMTC program may not have had much effect on local employment.

⁴ The final regulations are available at www.irs.gov/pub/irs-drop/td-9889.pdf.

Other Federal Place-Based Development Programs

Along with Opportunity Zones, in recent decades three other Federal programs have also relied on tax policy to spur economic development in specific places: empowerment zones (EZs), enterprise communities (ECs), and renewal communities (RCs). EZs and ECs date to 1993, while RCs were authorized in 2000. These programs extended a mix of tax benefits and grants to businesses in designated census tracts. These programs had a smaller geographic reach, with many States having little or no participation in them. A key tax benefit among these programs was an employment tax credit of up to \$3,000 on the wages paid to people who lived and worked in the designated tract. Other tax benefits included increased limits for expensed deductions, tax-exempt bond financing, and exemptions from certain capital gains taxes (CRS 2011). The EC and RC programs have both ended, and only the tax benefits associated with the EZ program continue. Early research on the effects of the programs showed little evidence of success, but more recent studies have documented beneficial effects on unemployment, wages, and poverty (CRS 2011; Ham et al. 2011; Busso, Gregory, and Kline 2013).

The Federal Government also supports place-based economic development through grant programs, with the largest being the Community Development Block Grant program. The U.S. Department of Housing and Urban Development (HUD) administers the program and provides about \$3 billion a year in block grants. The program's structure makes rigorous evaluation difficult, and few systematic evaluations have been done, especially in recent years (Theodos, Stacy, and Ho 2017). HUD allocates funds using a formula based on population, poverty, housing conditions, and other factors. State and local government grantees have considerable discretion, within broad guidelines, on how to use the funding, such as that at least 70 percent of the funds must be used to benefit low- and moderate-income persons. The flexibility of the program is similar to OZs, but its design is very different in that it relies solely on public funding and does not seek to incentivize private investment.

The Economic Development Administration (EDA) of the U.S. Department of Commerce also administers grants for economic development. EDA's 2019 appropriation was roughly \$300 million, but the Coronavirus Aid, Relief, and Economic Security Act (CARES Act) appropriated an additional \$1.5 billion to administer grants to States and communities adversely affected by the COVID-19 pandemic. As with the HUD grants, few rigorous evaluations have been done of EDA's grants (Markusen and Glasmeier 2008).

Characteristics of Opportunity Zones

The census tracts designated as OZs have some of the most entrenched poverty in the United States. These communities had an average median income just over half of the U.S. average in 2000 and they fell further behind over the subsequent 16 years.

The Opportunity Zone Selection Process

As prescribed by law, governors nominated which census tracts should be designated as Opportunity Zones by the U.S. Department of the Treasury. To be eligible for designation, a census tract must:

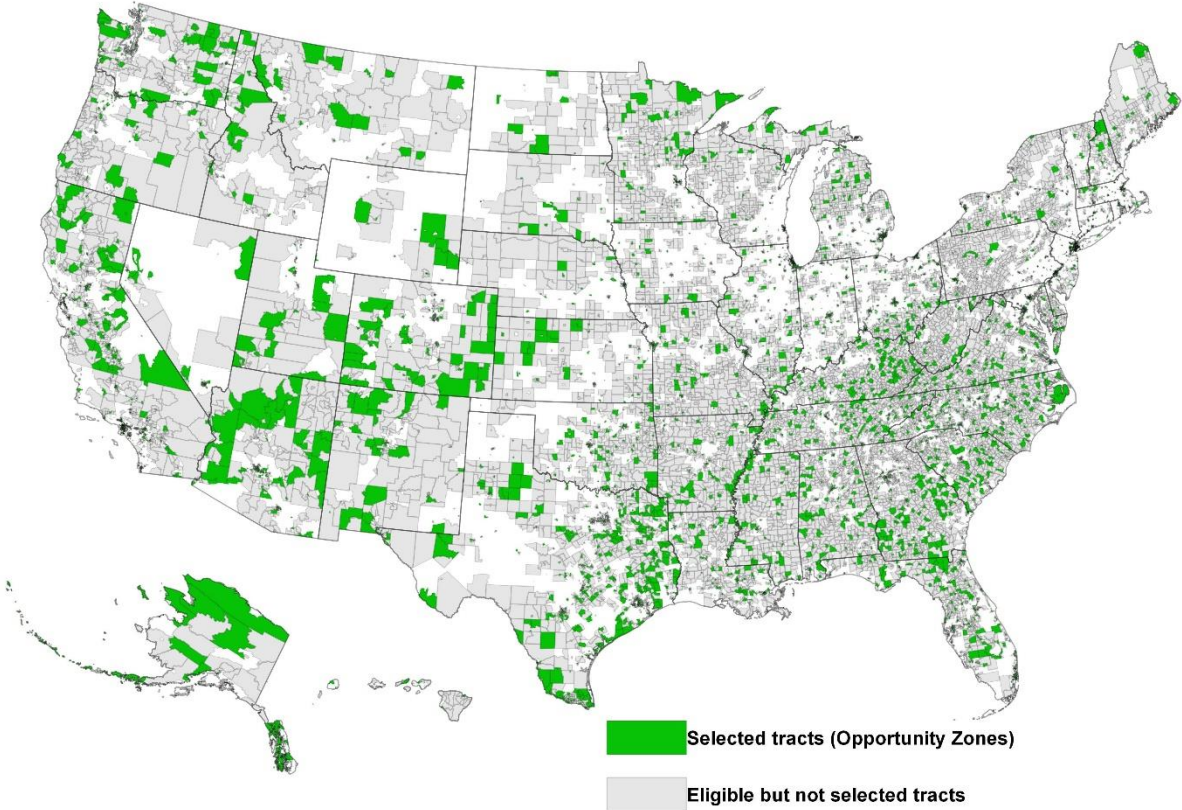
- Have a poverty rate of at least 20 percent; or
- Have a median income below 80 percent of that in the State or metropolitan area, or for rural census tracts, 80 percent of that in the entire State; or
- Be contiguous with a census tract meeting one of the above conditions and have a median income less than 125 percent of the qualifying contiguous census tract.

Governors could designate up to 25 percent of their qualifying census tracts, or up to 25 tracts for those States with fewer than 100 eligible tracts. Eligible, contiguous tracts were restricted to make up no more than 5 percent of designated OZs in any State.

Aside from these restrictions, States could determine how, and which, census tracts would be designated as OZs, thereby drawing on State and local expertise. With this Federal design, States took diverse approaches in nominating their OZs. Arizona, for example, tasked the Arizona Commerce Authority with meeting with city, county, and tribal governments to select tracts. Kansas took a different approach, with its Department of Commerce requesting “Letters of Interest” from communities seeking OZ designation, allowing communities to explain their need and their ability to attract investment.

All governors submitted tracts for consideration to the U.S. Department of the Treasury by the end of April 2018. The Treasury ultimately designated a total of 8,766 tracts as OZs, with nearly all designations occurring between April and June 2018. Almost all OZs (8,537 tracts) met one of the criteria for low-income communities; the remaining 229, or 2.6 percent of all designated census tracts, were eligible for selection based on contiguity with a low-income tract. Figure 1 highlights the OZ tracts (in green) and the eligible tracts that were not selected (in gray).

Figure 1. The Geography of Opportunity Zones

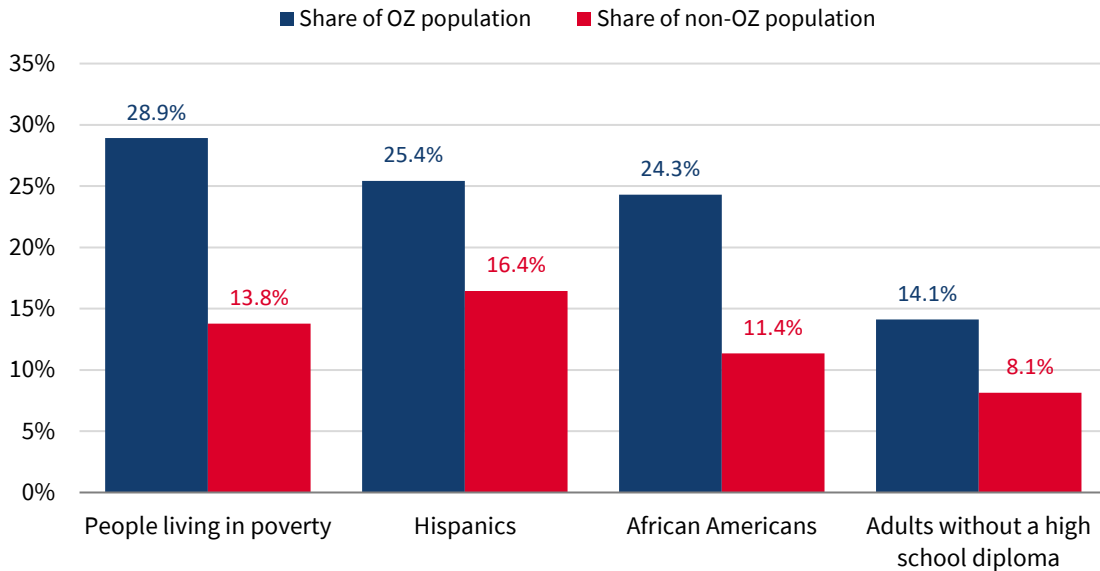


Sources: U.S. Department of the Treasury; U.S. Census Bureau.

The Economic State of Opportunity Zones

This subsection reports on the CEA’s overall findings that census tracts selected as Opportunity Zones are among the poorest communities in the United States. The CEA finds that they have an average poverty rate more than double that of all other census tracts and are home to a higher share of African Americans, Hispanics, and high school dropouts (figure 2).

Figure 2. Demographics of Opportunity Zones, 2012–16

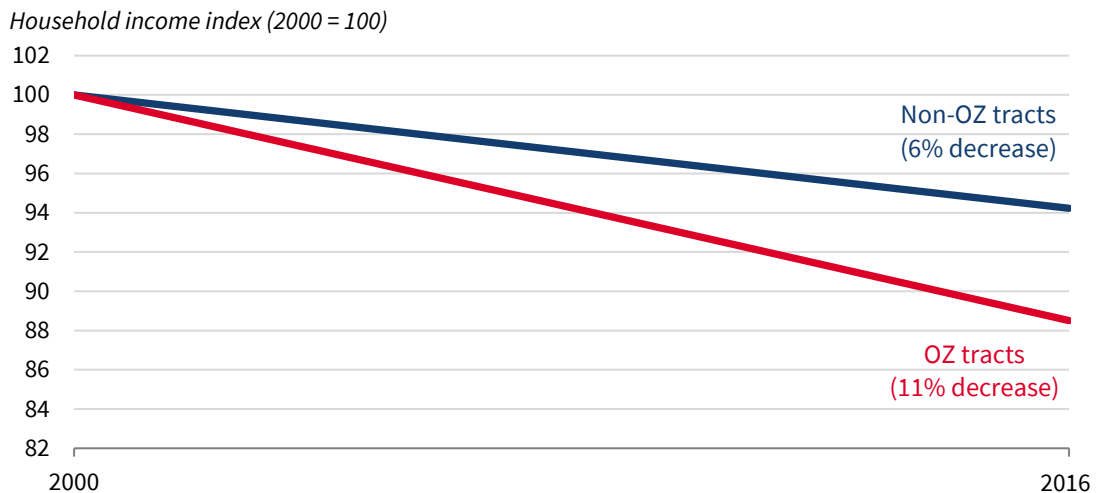


Sources: 2016 American Community Survey (ACS), five-year estimates; U.S. Department of the Treasury; CEA calculations.

Note: This analysis excludes census tracts in Puerto Rico, American Samoa, the U.S. Virgin Islands, Guam, and the Northern Mariana Islands. The 2016 ACS is based on a five-year estimate from 2012 to 2016.

The economic woes of OZs are not new. In 2000, census tracts that later became OZs had an average median household income that was 57 percent of the average in other tracts, \$39,305 compared with \$68,726 as given in the 2000 Decennial Census. In real terms, median household income in the average OZ fell by 11 percent from 2000 to 2012–16, compared with a 6 percent drop in the average non-OZ census tract (figure 3).

Figure 3. Average Median Household Income by Census Tract Designation, 2000–2016

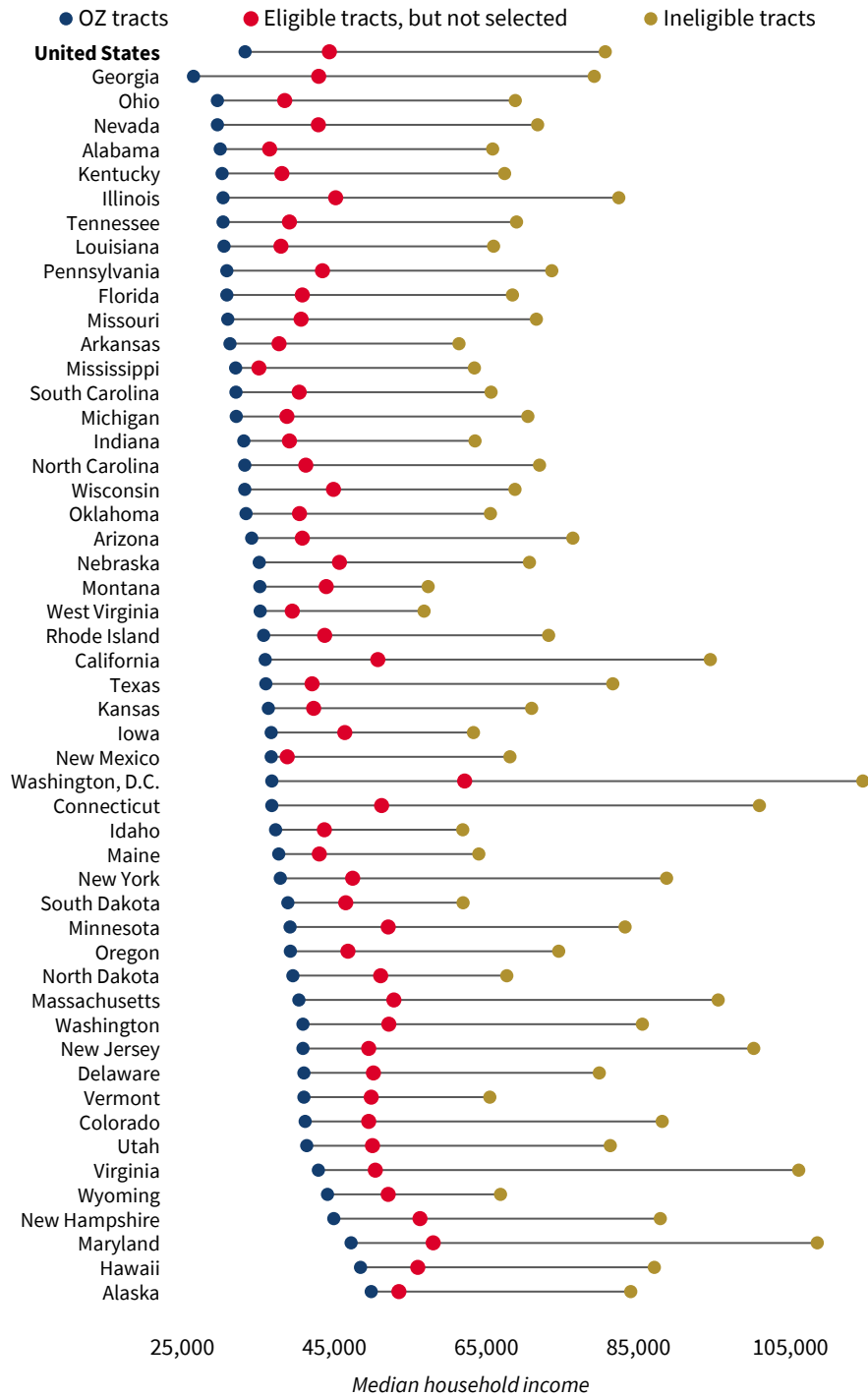


Sources: 2000 Decennial Census; 2016 American Community Survey five-year estimates; U.S. Department of the Treasury; CEA calculations.

Note: This analysis excludes census tracts in Puerto Rico, American Samoa, the U.S. Virgin Islands, Guam, and the Northern Mariana Islands. The 2016 ACS is based on a five-year estimate from 2012 to 2016.

The poverty and income criteria for eligibility explain some of the lower income in selected census tracts; but even among eligible tracts, States consistently nominated low-income tracts. In each of the 50 States and in the District of Columbia, median household income in OZs was lower than in eligible-but-not-selected tracts and considerably lower than in ineligible tracts (figure 4).

Figure 4. Average Median Household Income by Tract Designation and State, 2012–16

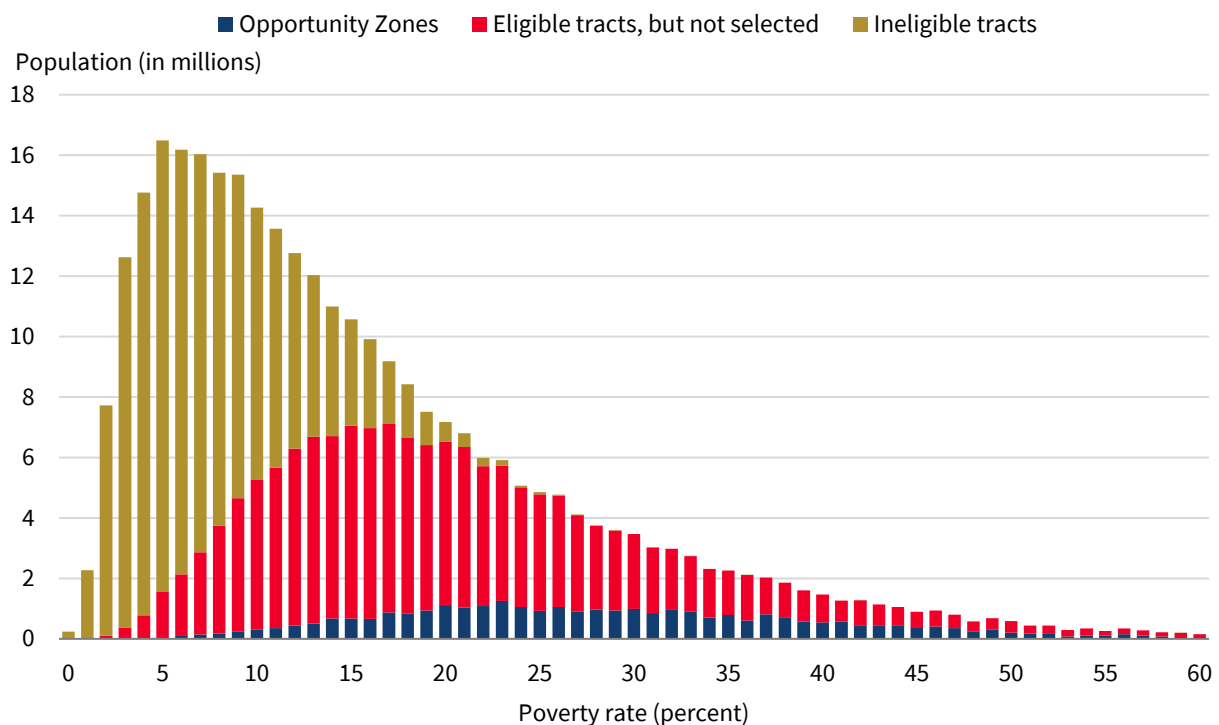


Sources: 2012–2016 American Community Survey, five-year estimates; U.S. Department of the Treasury; CEA calculations. Note: This analysis excludes census tracts in Puerto Rico, American Samoa, the U.S. Virgin Islands, Guam, and the Northern Mariana Islands. The 2016 ACS is based on a five-year estimate from 2012 to 2016. Eligible but not selected tracts include those eligible based on low-income status or on contiguity with low-income tracts.

Figures 2 through 4 indicate that, as a whole, OZs encompass economically distressed areas. Although average values can mask diversity within the OZ group, only 3.2 percent of OZs experienced rapid socioeconomic change according to a metric developed by the Urban Institute (2018). This metric considers changes in income, demographics, educational attainment, and housing affordability.

The patterns shown in figure 5 suggest that States selected tracts that were both economically distressed and demonstrated a potential to attract fruitful investments. They selected tracts with varying levels of poverty, not focusing solely on those with the least poverty (among eligible tracts) nor on those with the highest poverty rates. The strategy has an economic rationale: States would benefit little from OZs if they selected tracts where a designation was unlikely to spur investment.

Figure 5. Population by Poverty Rates and Census Tract Designation



Sources: 2016 American Community Survey (ACS), five-year estimates; U.S. Department of the Treasury; CEA calculations.

Opportunity Zones' Effect on Total Investment

The CEA estimates that by the end of 2019, Qualified Opportunity Funds had raised \$75 billion in private capital. Although some of this capital may have occurred without the incentive, the CEA estimates that \$52 billion—or 70 percent—of the \$75 billion is new investment.

Capital Raised by Qualified Opportunity Funds

The \$75 billion estimate for private capital raised is based on two different samples that track these funds over time. To extrapolate from sample values to population values, we rely on the total number of these funds in existence, as estimated by the Department of the Treasury based on tax filings (1,500 funds in 2018).⁵ Both samples and estimation approaches give a roughly similar estimate for the capital raised by these funds, with the average being \$75 billion.

The first sample covers Qualified Opportunity Funds voluntarily reporting data to Novogradac, a national professional services organization that has tracked funds since May 2019. As of January 17, 2020, the sample had 513 of these funds, a small subset of all funds, which had collectively raised \$7.6 billion in capital.⁶ Qualified Opportunity Funds voluntarily reporting data might not be representative of the general population of funds. However, comparisons with a non-voluntary sample, as discussed below, suggests that it is reasonably representative.

The second sample is based on data from the Securities and Exchange Commission (SEC). The SEC considers investment interests in Qualified Opportunity Funds as securities, which means that funds must register with the SEC unless they file for an exemption. Qualified Opportunity Funds seeking an exemption can file Form D within 15 days of the first sale of securities in an offering. In filing Form D, these funds provide information such as the amount sold in the offering, but they are not asked to identify themselves as funds. To create a sample of these funds from the Form D data, we select all funds with “Opportunity Zone” or similar words (e.g., “OZ Fund” or “QOZF”) in their name. This yields 197 Qualified Opportunity Funds that had filed Form D by the close of 2019, 153 of which had raised capital, totaling about \$2.9 billion. If Qualified Opportunity Fund names are uncorrelated with other fund characteristics, our

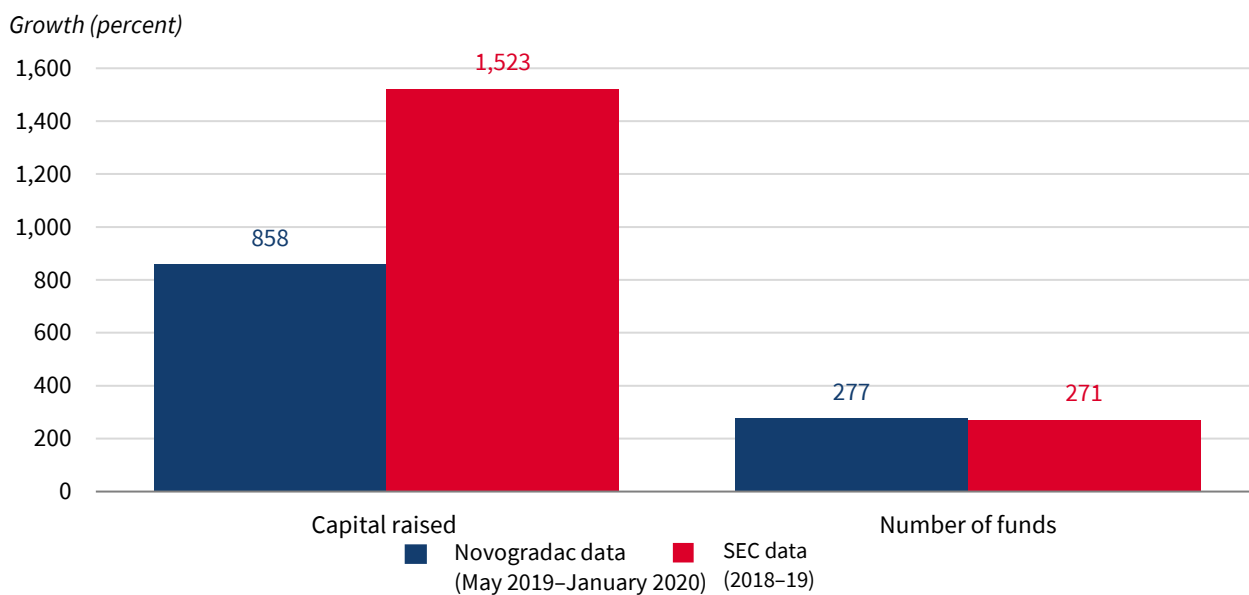
⁵ The count of Qualified Opportunity Funds in the population (1,500) is based on a Treasury Department estimate based on preliminary counts of filings of Form 8996. The Treasury may adjust this count as more information becomes available.

⁶ Although our analysis is for the close of 2019, more recent data from Novogradac show a 31 percent increase in capital raised from January to April 2020.

sample should be reasonably representative of the broader population of funds seeking an exemption from SEC registration.⁷

The Novogradac and SEC samples show similar growth in the number of Qualified Opportunity Funds and capital raised. From May 2019, when Novogradac began tracking these funds, until Novogradac’s January 17, 2020, report, the number of funds increased by 277 percent. The SEC data show a 271 percent increase in the number of these funds from 2018 to 2019, based on information on when each fund was incorporated. Additionally, the capital reported by Novogradac Qualified Opportunity Funds increased by 858 percent over the reporting period, while the capital raised by the SEC sample of funds increased by 1,523 percent from 2018 to 2019. See figure 6.

Figure 6. Growth in Qualified Opportunity Funds, Novogradac and SEC Data



Sources: Novogradac; Securities and Exchange Commission; CEA calculations.

⁷ Funds seeking to make public offerings of securities are generally not exempt from SEC registration and would not file a Form D. We expect such funds to be larger, on average, than those focused on private offerings.

The two samples of Qualified Opportunity Funds inform two different approaches for estimating the total capital raised by funds. The first approach, based on the self-reported Novogradac data, is to multiply the Novogradac total equity amount (\$7.6 billion) by an expansion factor, defined as the number of Qualified Opportunity Funds in the population divided by the number of funds in the Novogradac database. This factor reflects how much of the fund population is captured by Novogradac’s database. The estimate of capital raised is then:

$$\begin{aligned}
 \text{Capital Raised (Novo.)} &= \text{Capital Raised}_{\text{Novo.}} \times \left(\frac{\text{Population count of Funds}}{\text{Novo. count of Funds}} \right) \\
 &= 7.6 \text{ billion} \times \left(\frac{1500 \text{ Funds}}{136 \text{ Funds}} \right) \\
 &= \$84 \text{ billion}
 \end{aligned}$$

The number of Qualified Opportunity Funds (1,500) in the population comes from the Department of the Treasury and corresponds to the end of 2018, and the number of funds in the Novogradac database (136) is from May 2019, the earliest reporting of the Novogradac data. This estimation approach assumes that Qualified Opportunity Funds reporting to Novogradac are similar in size to funds not reporting to Novogradac. It also assumes that our expansion factor accurately reflects Novogradac’s coverage of the Qualified Opportunity Fund population in January 2020.

The second estimation approach, which draws on the SEC sample, multiplies an estimate of the number of Qualified Opportunity Funds in existence at the close of 2019 by an estimate of the average amount of capital raised per fund, among those having raised capital. More specifically, it is:

$$\begin{aligned}
 \text{Capital Raised (SEC)} &= \text{"Population count of Funds"}_{2018} \times \text{"Growth in Fund count"}_{2018-2019} \\
 &\quad \times \text{"Share of Funds with Capital"}_{2019} \times \text{"Capital per Fund"}_{2019} \\
 &= 1,500 \times 3.71 \times 0.60 \times 0.019 \\
 &= \$63 \text{ billion}
 \end{aligned}$$

The population count of Qualified Opportunity Funds is again from the Department of the Treasury, the growth in the fund count is based on the 2018 to 2019 growth in the number of funds incorporated (as reported in the SEC data); the share of funds with capital is as of January 2020 and comes from the Novogradac database; and capital per fund comes from the SEC data (0.019 billion per fund). For the share of Qualified Opportunity Funds with capital (0.60), we use the Novogradac data instead of the SEC data, which primarily cover funds that have already

raised capital since that is what triggers their filing of the SEC form that generates the data. As such, funds that have raised at least some capital are likely to be overrepresented in the SEC data. In summary, the key assumptions of the second approach are that the SEC data provide a reliable estimate of the growth in the number of Qualified Opportunity Funds in the population and, among those with capital, their average capital raised. In line with the Novogradac data, the approach also assumes that 60 percent of all funds raised some capital by the close of 2019.

The standard error of the average amount of capital raised per Qualified Opportunity Fund permits providing a confidence interval around the SEC-based estimate of the total capital raised.⁸ The resulting 90 percent confidence interval is \$33 billion at the lower end and \$93 billion at the higher end. It therefore includes the Novogradac-based estimate and the average of the two estimates, which is about \$75 billion and is our preferred estimate. This is 21 percent of baseline annual investment in OZs, which is reported in the next subsection.

Estimated Investment Growth Caused by the Opportunity Zone Incentive

Not all the capital raised by Qualified Opportunity Funds is necessarily new to Opportunity Zones—some of it may have occurred without the incentive, and it is now occurring through a fund. In this subsection, the CEA draws from the academic literature to estimate how much new investment is likely given the lower tax rates caused by the OZ incentive. We estimate that the incentives have brought \$52 billion in new investment in OZs through 2019, representing 70 percent of the \$75 billion raised by Qualified Opportunity Funds.

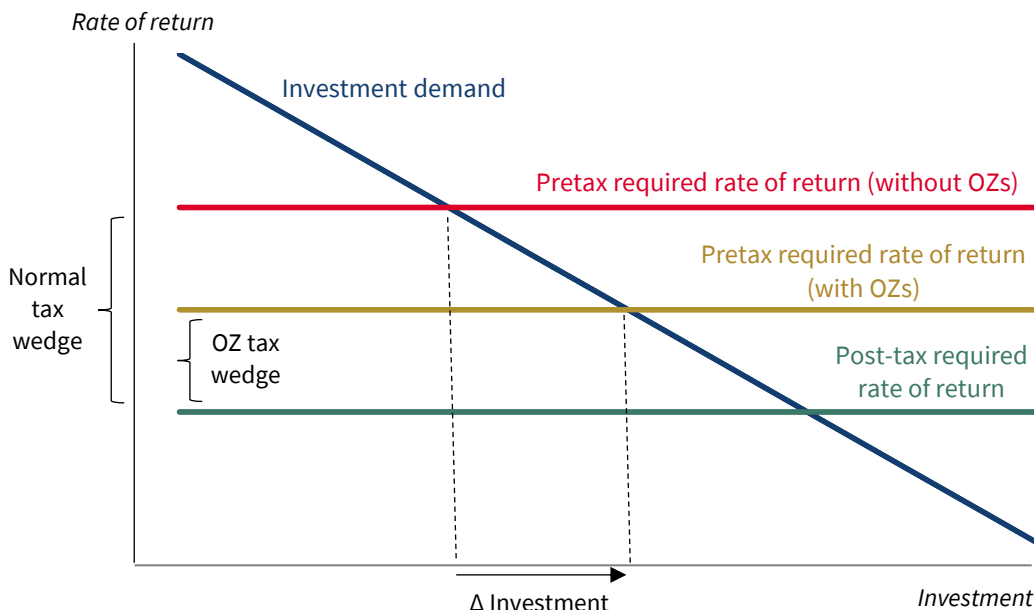
To estimate new investment, we calculate the reduction in the cost of capital caused by the cuts to capital gains tax rates. We then link the cost of capital to investment elasticities from the academic literature. This modeling of the OZ incentive illustrates how the incentive is similar to the corporate tax rate cuts resulting from the Tax Cuts and Jobs Act. These cuts were also projected to increase investment through a decline in the user cost of capital (CEA 2017).

The investment estimates come from first calculating the pretax rate of return needed to attract investors to supply funds in OZs. To achieve the same post-tax return inside OZs as outside them, investors would be willing to accept a lower pretax return because of lower effective tax rates in OZs. The second step of the estimation then calculates the increased investment from OZ businesses that occurs as they have access to new funding at a lower capital cost. Figure 7 illustrates the concepts behind the calculation, showing how the

⁸ The resulting confidence interval reflects uncertainty over the population value of capital per fund. It does not capture uncertainty over other parameters used in the calculation of total capital raised by funds in the population.

reduction in taxes makes investors willing to accept a lower pretax rate of return and still invest in OZs.

Figure 7. Opportunity Zone Investment Supply-and-Demand Model



The numerical estimates rely on three parameters: baseline investment in OZ census tracts that predates the incentives, the post-tax rate of return that is required to attract funds, and the effective tax rate that prevails in OZs with the incentive. For the first parameter, we estimate baseline investment of \$243 billion by apportioning national investment to counties based on gross domestic product, and then from counties to census tracts based on income and population. Second, using data that show a pretax 9.8 percent rate of return earned by investors outside OZs—which then face a capital gains tax rate of 21.3 percent—the required post-tax rate of return is 7.7 percent. We find that, to receive the same post-tax 7.7 percent rate of return in OZs—which feature only a 6.9 percent effective tax rate, as described below in the “Budgetary Effects of Opportunity Zones” subsection—investors only require a pretax rate of return equal to 8.3 percent ($= 7.7 / (1 - 0.069)$) in 2019. Finally, we assume a -9.55 semi-elasticity of investment to the cost of capital, from Ohrn (2019). Over a one-and-a-half-year period, the increase to investment is then calculated as:

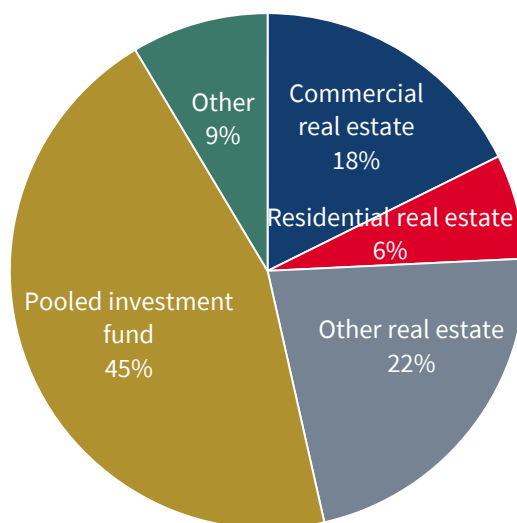
$$1.5 \text{ years} \times (\$243 \text{ billion}) \times (8.3\% - 9.8\%) \times (-9.55) = \$52.2 \text{ billion.}$$

The one-and-a-half-year period is used to reflect the time between the designation of Opportunity Zones (mid-2018) and the end of 2019.

The Industry Focus of Qualified Opportunity Funds

Recent data from the Securities and Exchange Commission allow us to describe the sectoral focus of a sample of Qualified Opportunity Funds, the same one described above. The SEC form completed by Qualified Opportunity Funds requires them to select one industry group. The selections, shown in figure 8, reveal the diverse focus of funds. Slightly less than half of them focus on real estate, with the majority targeting commercial real estate.⁹ Another 45 percent describe their industry as a “Pooled Investment Fund,” which suggests that they have investments across various industries. Finally, about 10 percent are in the “other” category, which includes funds that reported a focus on health care, technology, construction, and investing, and as well as those selecting the “other” option on the form.

Figure 8. Percentage of Qualified Opportunity Funds, by Industry



Sources: Securities and Exchange Commission; CEA calculations.

Note: "Other real estate" includes real estate investment trusts and finance. "Other" includes healthcare, technology, construction, and investing.

The industry focus indicated by the SEC data are consistent with the types of projects seeking to attract Qualified Opportunity Fund investment, as evidenced by data from the Opportunity Exchange, which is a private organization that helps entities showcase OZ businesses and properties to stakeholders locally and nationally. As of February 2020, The Opportunity Exchange hosted \$45 billion in proposed projects across 24 States. About 30 percent of the projects on the Opportunity Exchange are businesses seeking equity investments, 26 percent are real estate projects with a development plan, and the rest are properties for sale without a development plan.

⁹ Form D does not provide definitions for the industry categories that filers can select.

Opportunity Zones' Effects on Business Investment and Housing Values

The CEA finds that receiving an OZ designation led to a 29 percent relative increase in equity investment. Such communities have also benefited from larger house price appreciation, which creates \$11 billion in additional housing wealth for homeowners and improved local amenities for renters.

Equity Investments in Opportunity Zone Businesses

Qualified Opportunity Funds can invest in Opportunity Zones by directly purchasing property or by making equity investments in operating businesses. In this subsection, we present data regarding private equity investment in businesses located in OZs compared with those located elsewhere. Investment data from the Securities and Exchange Commission show that OZ designation led to a 29 percent increase in equity investments in businesses whose principal place of business is in an OZ, compared with businesses in eligible-but-not-selected census tracts.

Many businesses pursuing equity investments must file the same SEC Form D that Qualified Opportunity Funds file. We use address information from this form, which gives the location of the principal place of business, to determine whether the business is located in an OZ census tract, an eligible-but-not-selected tract, or an ineligible tract. To capture nonfinancial operating businesses, we exclude entities that identified themselves as banks or investment funds.¹⁰ To better measure systematic investment trends, as opposed to variation in the behavior of a few large firms, we focus on filings that raised less than \$50 million in any quarter, which captures more than 96 percent of filings.¹¹ We then compile the total investment raised by businesses in each census tract type by quarter.

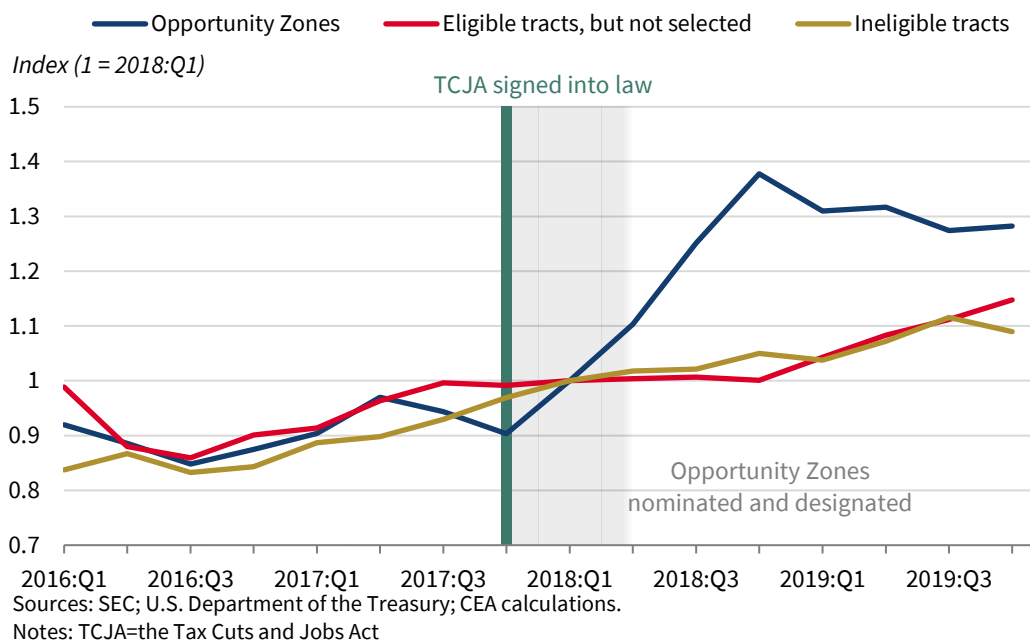
In figure 9, we present the four-quarter moving average of the total equity investment in each group of tracts, with values indexed to their value in the first quarter of 2018. The three groups had similar investment trends until the first half of 2018, when investment in OZ businesses

¹⁰ Specifically, we exclude all firms that identified their industry or their fund as “pooled investment fund,” “commercial banking,” “investment banking,” “other banking and financial services,” or “investing.”

¹¹ Bauguess, Gullapalli, and Ivanov (2018) report that more than 96 percent of filings have an offering size of \$50 million or less. An even larger percentage would actually raise less than \$50 million.

spiked.¹² All States nominated census tracts in March and April 2018, and the Department of the Treasury finalized its formal designation of OZs by the second quarter of 2018. Over the seven quarters 2018:Q2–2019:Q4, equity investment in OZs was 41 percent higher than it was in the prior seven quarters. By comparison, investment was only 13 percent higher in eligible-but-not-selected tracts. This suggests that OZ designation led to a 29 percent increase in equity investment relative to comparable tracts (41.4–12.6 percent).¹³

Figure 9. Private Equity Investment by Tract Group, 2016–2019



Opportunity Zone Designation and Housing Values

Evidence from real estate markets suggests that the Opportunity Zones incentive is making many OZs more attractive for both residents and investors. This increase in housing value has led to an estimated \$11 billion in additional wealth for the nearly half (47 percent) of OZ residents who own their housing.

¹² Not every businesses in an OZ is necessarily a Qualified Opportunity Zone Business as defined by statute and regulation.

¹³ The location of a business in a particular OZ does not mean that the business’s activities must be concentrated in that particular OZ. A business can achieve the status of a Qualified Opportunity Zone Business if 50 percent of its gross income is derived from its business activities in any OZ. Thus, a business could have multiple income-earning centers spread across various OZs. Alternatively, the business can qualify if at least 50 of the services purchased and used by the business (measured by hours or dollars) occur in OZs or if at least 50 percent of its tangible property and management functions are in OZs.

Real Capital Analytics tracks commercial real estate properties and portfolios valued at \$2.5 million or more. Its data show that year-over-year growth in development site acquisitions surged in OZs by more than 50 percent late in 2018 after the Department of the Treasury had designated the OZs, greatly exceeding growth in the rest of the United States. Similarly, Sage, Langen, and Van de Minne (2019) use the same data and find that OZ designation led to a 14 percent increase in the price of redevelopment properties and a 20 percent increase in the price of vacant development sites as of early 2019.

Sage, Langen, and Van de Minne (2019) find a price increase only for particular property types and conclude that the OZ incentive is having limited economic spillovers in communities. Their data, however, only include commercial properties valued at \$2.5 million or more. An analysis by Zillow, which was based on transactions of varying property types and values, suggests that the OZ incentive is having broader effects. After designation, the year-over-year change in the average sales price for properties in OZs rose to more than 25 percent while falling to below 10 percent in eligible-but-not-selected census tracts.

The Zillow analysis is limited in that it is based on changes in sales prices over time, without controlling for any changes in the composition of properties being sold. It is not based on price per square foot or, more ideally, on price changes for homes that are similar in many other dimensions. Chen, Glaeser, and Wessel (2019) provide a more rigorous assessment of effects on housing prices, though only through 2018. For a measure of housing prices, they use the Federal Housing Finance Agency (FHFA) repeat sales index for single-family homes. Their analysis centers on comparing OZs with eligible but not selected low-income tracts (thus excluding tracts whose eligibility was based solely on contiguity with low-income tracts). Across the two groups, they compare the growth in housing values in 2018 relative to that of prior years (2014–17). Their estimated effects are much smaller than those suggested by the Zillow analysis: their base model gives an estimate of 0.25 percent higher appreciation, with the estimates across models ranging from 0.09 to 0.74.

We replicate and extend the analysis done by Chen, Glaeser, and Wessel. First, we replicate the results from their base model and find a similar result (table 1, first and second columns). Then we reestimate the model with updated FHFA data released in May 2020. The update improves data from prior years and adds 2019 data.^{14,15}

¹⁴ The data are available at www.fhfa.gov/DataTools/Downloads/Pages/House-Price-Index-Datasets.aspx. See “Census Tracts (Development Index; Not Seasonally Adjusted).”

¹⁵ We also normalize the housing price index to make 2013 the base year (= 100). The renormalization ensures that that changes in the index are approximate percentage changes, with a 1-point change in the index corresponding to a 1-percent increase in values. If index values are about 300, which is typical in the original index, a 1-point increase represents a 0.3-percent increase in values. The renormalized values are also much less skewed than the original index values.

With the updated and expanded data, we estimate that OZ designation led to a higher annual appreciation of 0.53 percent. Over two years, this implies a roughly 1.1 percent ($= 1.0053^2 - 1$) increase in values. This is a notable finding because it is based on OZ designation, not on whether a tract has actually received investment. Moreover, much of the investment raised by Qualified Opportunity Funds was probably not invested by the end of 2019. By comparison, Freedman (2012) looked at census tracts that had actually received investment through the New Markets Tax Credit and failed to find a statistically significant effect of investment on housing values over about five years, with the point estimate implying an annual effect of at most 0.5 percent.

Table 1. The Effect of Opportunity Zone Designation on Home Value Appreciation

Characteristic	Chen et al. (2019)	CEA Estimates	
		Chen et al. Data	Updated Data
Opportunity Zone effect on housing values (percent)	0.25	0.25	0.53
Standard error	0.22	0.22	0.19
Number of Opportunity Zones	2,674	2,674	2,700
Number of eligible zones that were not selected	10,198	10,198	10,288

Sources: Chen, Glaeser, and Wessel (2019); Census Bureau American Community Survey, 2012–16; FHFA; Department of the Treasury; CEA calculations.

Note: The estimated effect is based on comparing Opportunity Zones with eligible but not selected low-income tracts.

The extra 1.1 percent appreciation implies \$11 billion in additional wealth for the nearly half (47 percent) of OZ residents who own their housing. Homeowners can access newly found equity without selling their homes through cash-out refinancing, which has been common in the last two years. This does not mean that rising values only benefit homeowners. The causes of higher values—more local amenities and anticipated economic opportunities—will benefit many renters as well. The renovation of a blighted building, for example, benefits all who live nearby. Brummet and Reed (2019) draw a similar conclusion from a thorough analysis of Census microdata, finding that less exposure to poverty and rising values tend to benefit original residents and led to better outcomes for their children. Using a different data source from Medicaid records, Dragan, Ellen, and Glied (2019) draw a similar conclusion about the effects of rising housing values and neighborhood improvement on residents and their children.

Within Opportunity Zones, the distribution of the benefits from improved amenities is unclear. In some instances, the benefits may go primarily to low-income households. For example, Gamper-Rabindran and Timmins (2013) find that cheaper homes benefit the most from the cleanup of hazardous waste sites because such homes tend to be closer to such sites. In the same vein, the renovation of an abandoned warehouse would mostly benefit the residents in the immediate vicinity, who may also be among the poorest in the neighborhood.

Residents who rent their housing will generally benefit from improved amenities as long as the full value of the amenities enjoyed by residents is not passed on in the form of higher rents. Improved neighborhood conditions do not always result in rent increases for all renters (Brummet and Reed 2019), and sometimes improved amenities increase housing values more than they increase rents (e.g., Granger 2012).

Opportunity Zones' Effects on Poverty and the Budget

The CEA's estimate of new investment suggests that Opportunity Zones may lift about 1 million people out of poverty, an 11 percent decrease in the baseline population in poverty in OZs. This decline in poverty, and with it a reduction in transfer payments, may be sufficient to make the OZ incentive nearly revenue neutral.

Projected Effects of Opportunity Zones on Poverty

Census-tract-level data on poverty for 2019 will not be available for several years. The CEA therefore projects the effects on poverty using a prior study linking investment to poverty. Freedman (2012) uses tract-level data to estimate the effects of investment subsidized by the New Markets Tax Credit on tract-level outcomes. His empirical approach exploits the program's eligibility cutoffs to address the potential that subsidized investment went to tracts that would have performed better even without the subsidy. His most conservative estimate indicates that each \$1 million in subsidized investment (in 2018 dollars) lifts 20 people out of poverty in the tract receiving it. Applying this finding to our estimate of new investment in Opportunity Zones (\$52,000 million) suggests that 1 million people will be lifted out of poverty (= 52,000 x 20).

This effect is arguably applicable to OZ investment. The NMTC program has similar eligibility requirements for census tracts and rules to ensure that the subsidized investment happens in qualified tracts. The main difference is that community development entities must apply to and be selected by the Treasury Department, which only selects a portion of applicants. The

Treasury scores applications using several criteria, including the expected effect of the project on jobs and economic growth in the community. It is possible that applicant reporting and Treasury selections result in the investments having larger effects on poverty. Conversely, the long-term net effects of a particular project on low-income populations is arguably hard to discern with consistency. In any case, our poverty projections are arguably conservative; we use the smallest estimated effect from Freedman (2012), which is about half the main estimate reported, and apply it to new investment as opposed to all subsidized investment, which is the basis of Freedman’s estimate.

Budgetary Effects of Opportunity Zones

The CEA estimates that the Federal Government forgoes \$0.15 for every \$1 in capital gains invested in a Qualified Opportunity Fund before 2020, or about \$11.2 billion for the \$75 billion raised through the end of 2019. The forgone revenues stem from the deferral on the capital gains tax on the original gain, the reduction in taxes on the original gains when paid, and the lack of taxes on the gains earned while invested in the Qualified Opportunity Fund. In our calculation, we assume that taxpayers maximize their tax savings by waiting until 2026 to pay taxes on the original gains, the latest date allowed by law, and that they keep their money in the Qualified Opportunity Fund for at least 10 years.

Our calculations assume that capital gains would normally be taxed at a 21.3 percent rate, as opposed to an effective rate of 6.9 percent in 2019. This lower effective rate arises from the tax deferral and step-up in basis on funds that are invested in OZs to begin with, as well as the exclusion of capital gains taxes on the returns that accrue to those investments after they are held for at least 10 years. For funds invested in 2019, the present values of taxes paid on investments in an OZ are less than one-third what they would be if invested outside an OZ. These calculations are then repeated for each year to incorporate the dynamic nature of the OZ tax incentives, as discussed in a Congressional Research Service report (Lowry and Marples 2019).

When estimating overall revenue impacts, any static calculation that uses only the difference in rates while assuming a fixed tax base gives an inflated measure of tax revenue losses. Therefore, in our approach, we incorporate the response of investment—and hence the tax base—to the incentive. Specifically, we estimate how much of the observed \$75 billion would have occurred anyway—whether in an OZ or elsewhere in the country—versus how much is new investment. Investment that would have occurred anyway and been taxed at a 21.3 percent rate but that is now taxed at a lower rate because of the incentive unambiguously lowers revenues. However, new investment creates offsetting revenue gains, even when taxed at the lower OZ rate.

We employ a similar elasticity-based approach as in the investment section in this report. The approach suggests that of the \$75 billion in Qualified Opportunity Fund capital, \$22.8 billion would have occurred anyway in OZs, even without the incentive. Of the \$52.2 billion balance, another \$24.9 billion is new to OZs but was shifted from elsewhere in the country, based on calculations using the elasticity-of-investment movement done by Koby and Wolf (2019). Thus, the incentive results in revenue losses from this \$47.7 billion (\$22.8 billion + \$24.9 billion) but creates revenue gains from the entirely new \$27.3 billion (\$75 billion – \$47.7 billion) in investment. On net, we estimate the present value of tax revenue losses on capital invested through 2019 to be \$11.2 billion, which is 15 percent of the \$75 billion in Qualified Opportunity Fund capital.

By comparison, the CEA estimates that for each \$1 in investment associated with the New Markets Tax Credit, the Federal government forgoes \$0.18, more than the amount for OZs. Based on estimates from the Joint Committee on Taxation, the lost tax revenue for each \$1 in tax credit authority is \$0.26.¹⁶ However, credit authority typically represents only 69 percent of total private investment associated with projects (Abravanel et al. 2013).¹⁷ This implies about \$0.18 in forgone revenue for each \$1 in associated investment ($=0.26 \times 0.69$).

The previous calculations only consider the effect of the Opportunity Zone incentive on capital gains tax revenues. However, the incentive will have an offsetting effect on the Federal budget by stimulating the economies of low-income areas that receive a large share of transfer payments from the Federal Government. Using county-level data on transfer payments and poverty rates, the CEA estimates that an additional person living in poverty in a county is associated with about \$8,240 additional Federal transfer payments to the county, including transfers related to income maintenance, unemployment insurance, and medical assistance (mainly Medicaid).¹⁸ At this rate, economic growth that lifts 1 million people out of poverty for a little more than one year would save the Federal Government enough to offset the revenues forgone from the capital gains tax cuts (savings of \$11.2 billion = 1 million person reduction in poverty \times 1.36 years \times \$8,240 per person).¹⁹

¹⁶ In December 2019, the Joint Committee on Taxation estimated the dynamic revenue effects from a \$5 billion allocation for the NMTC (see the relevant line at www.jct.gov/publications.html?func=startdown&id=5237).

¹⁷ This is based on footnote 7 in a paper by Abravanel et al. (2013), which reports that qualified equity investments represent 53 percent of total project costs, while public funds represent 23 percent of project cost. This implies that qualified equity investment represents 69 percent of private project cost ($= 0.53 / (1 - 0.23)$).

¹⁸ This estimate is based on Bureau of Economic Analysis county-level data on Federal Government transfers and county-level population and poverty data from the Census Bureau. The average transfer per person in poverty, defined as total transfers in the county divided by the county population in poverty, over a seven-year period was about \$11,500. However, regressing county-level transfers per capita on the poverty rate suggests that, at the margin, an extra person living in poverty is associated with \$8,240 in greater transfers to residents of the county.

¹⁹ Of course, this calculation should be viewed as illustrative because we lack an estimate of the causal impact of poverty reduction (via investment incentives) on total Federal spending.

Conclusion

Much remains to study regarding the effects of Opportunity Zones on real estate markets, entrepreneurship, poverty, and income. In coming years, researchers will have ample data to assess the effects of OZs on diverse community outcomes. As of the 2019 tax year, the Internal Revenue Service's revised Form 8996 will collect detailed information on Qualified Opportunity Fund activity. This information will enable researchers to learn how much Qualified Opportunity Fund investment is occurring in particular census tracts and economic sectors. These data will permit the same rigorous empirical studies that have been done for the New Markets Tax Credit (Freedman 2012; Harger and Ross 2016).

The available evidence shows that Qualified Opportunity Funds are well positioned to invest in communities in 2020: they have raised considerable capital, and the final regulations from the Department of the Treasury, which were published in December 2019, have given further clarity on how the incentive and associated investments will function. However, numerous State-mandated restrictions and preventive behavior to slow the spread of the COVID-19 pandemic have prevented business as usual and have slowed investment everywhere, including in OZs.

It is also possible that a sizable amount of capital will enter Qualified Opportunity Funds in 2020. As noted above, the capital raised by these funds in the Novogradac sample grew by about 30 percent in the first four months of 2020. Late in the first quarter, the pandemic prompted a massive selloff that likely generated capital gains for many investors exiting what had been a long bull market. And the rapid rebound in stock values has created the potential for more gains.

Pre-COVID-19 evidence suggests that the OZ model can help spur economic recovery in thousands of distressed communities across the United States. It has the power to mobilize investors, engage State and local stakeholders, and improve the outlook for low-income communities—all with limited prescription from the Federal Government. In other words, the OZ provision of the Tax Cuts and Jobs Act of 2017 is working as intended.

In nominating communities as Opportunity Zones, States selected places in need that had the potential to attract investment. The provision's incentives have helped mobilize the investment of \$75 billion in private capital in Qualified Opportunity Funds, and some of this capital has already spurred growth in direct equity investments in businesses and real estate. Finally, OZ designation and the associated investment (both anticipated and realized) have made people more optimistic about these communities as places to live and to work in, with designation causing a 1.1 percent increase in housing values as of the close of 2019.

Such initial benefits underscore the potential of the Opportunity Zone model, which rests on private initiative; on engaged State, local, and tribal governments; and on limited Federal prescription—all to further prosperity and self-sufficiency in those areas that most lack it. This dynamic process will be important for helping the relatively poorer part of the population that has been most affected by the economic slowdown from the COVID-19 pandemic.

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