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The Great "Transfer"-mation

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reliant on income from government.

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Introduction

Income from government transfers is the fastest-growing major component of Americans' personal income. Nationally, Americans received $3.8 trillion in government transfers in 2022, accounting for 18 percent of all personal income in the United States. That share has more than doubled since 1970. Transfer income has grown three times as quickly as non-transfer income over the past several decades.

Transfers' significance as a source of income for American communities has accelerated dramatically since the turn of the century. In 2000, only about 10 percent of counties received a quarter or more of total personal incomes from transfers. By 2022, the most recent data year, 53 percent did.

This expansion of the transfer economy is primarily driven by the country's *demographic* evolution into an older society. Retirement-age Americans make up a rising share of the total United States population. Since the largest transfer programs—Social Security and Medicare—are designed for retirement-age Americans, transfer payments expand as the elderly population grows.

The demographic transformation has not, however, hit all places equally. Younger and faster-growing metropolitan hubs have been less affected by it. It is much more advanced in less-populated regions, many of which are contending with population loss and economic decline. In San Mateo, California, or Arlington, Virginia, transfers account for only 5 percent of total personal income. In parts of eastern Kentucky or rural New Mexico, they account for closer to 50 percent.

The rising transfer share is a consequence of more than just an aging society. It is also driven by rapidly increasing costs of healthcare and a shrinking geography of good earnings opportunities in the United States.

The rise of the transfer share highlights a huge shift in how Americans derive their earnings and raises the question: What does it mean for a community when its economic lifeblood is much less directly tied to work, production, and income earned through labor—and much more directly tied to transfers from the government? In that sense, this work fits into the growing body of scholarship around the mechanisms of economic and demographic decline, and their implications.[1]

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[1] Another important recent contribution is Raj Chetty, et al., "Changing Opportunity: Sociological Mechanisms Underlying Growing Class Gaps and Shrinking Race Gaps in Economic Mobility," NBER Working Paper 32697, July 2024.

The Great "Transfer"-mation will have major implications on the nation's political economy, as well.

The elderly already consume a disproportionate share of federal resources. In 2022, the federal government spent four times as much on each senior as it did on each child.[2] As the elderly share of the population grows even further and their political clout increases, the imbalance is likely to deepen. Older voters have different policy preferences from younger ones. They tend to favor using public finance to preserve or expand their benefits, for example, rather than investing in education or research and development.[3] Our political system also decentralizes power towards low-population rural areas that are even more transfer-dependent than the nation as a whole, potentially distorting the way public funds are allocated.

A rising transfer share portends significant trade-offs down the road. Politically, economic growth is clearly the ideal way to address the nation's fiscal imbalances and drive down the transfer share without cutting the programs and benefits that many Americans hold dear. But growth requires investment and risk-taking, two values that run counter to the inertia of increasing transfer dependence. The danger is that voters themselves demand that resources get diverted away from the very investments in growth that are needed to make the status quo sustainable.

This project's aims are twofold. First, it sets out to document transfers' rising significance in American personal income and better understand the drivers of the phenomenon. Second, it aims to jumpstart a national conversation around how to preserve the benefits and programs that undergird American well-being while building an economy that thrives today and well into the future.

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[2] "Boomers vs Zoomers," Committee for a Responsible Federal Budget.
[3] See for example, Marius Busemeyer, et al., "Attitudes towards redistributive spending in an era of demographic ageing: the rival pressures from age and income in 14 OECD countries," Journal of European Social Policy, Vol. 19, Iss. 3, 2009 or Dotti, Valerio. "No country for young people? The rise of anti-immigration politics in ageing societies." Journal of Public Economics 238 (2024): 105199.

Transfers and American incomes

Government transfers are an increasingly important part of American incomes. They are the third largest source of Americans' personal income, after income from work and investments. The average American received $11,500 in income from government transfers in 2022, compared to $40,500 in income derived from work and $12,900 from investments.[4]

Transfer income is also the fastest-growing component of total personal income. The average American received nearly six times more in government transfer income in 2022 than they did in 1970, adjusting for inflation. Income earned from other sources increased less than half as much.

The result: transfers' share of Americans' total personal income has more than doubled over the past 50 years, from 8.2 percent in 1970 to 17.6 percent in 2022.

Figure 1: Per capita transfers, non-transfer income vs. transfer share of total income
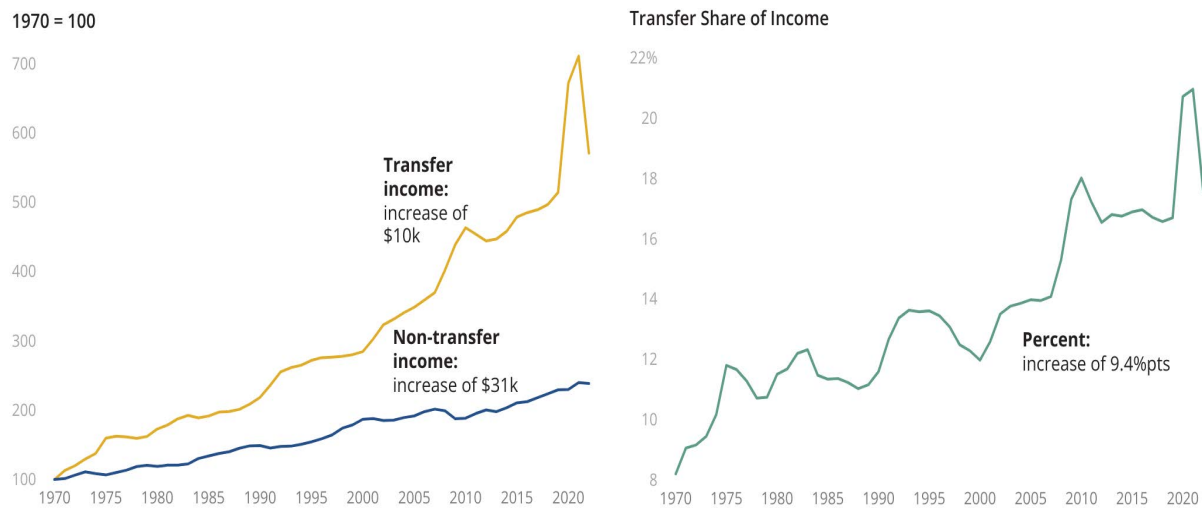
Source: EIG analysis of Bureau of Economic Analysis data

The rise in transfers—both in absolute terms and as a share of personal income—is a long-running trend. Total transfer income has increased in real terms for 47 out of the past 52 years and increased as a share of total personal income in 32 of them.

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[4] These values are the per capita levels of each category. Here work is defined as wages and compensation, supplements to wages and compensation, and proprietor's income (or income derived from owning a business or farm). Investment income is defined as earnings from dividends, interest, and rental properties. Categories are defined by the U.S. Bureau of Economic Statistics. See Appendix I for additional definitions.

Transfer income stems from several different federal programs that together make up the social safety net and includes:

- Old age supports such as Social Security and Medicare
- Medical supports to low-income households such as Medicaid
- Veterans benefits
- Poverty alleviation and income maintenance supports such as the Earned Income Tax Credit (EITC), Supplemental Nutrition Assistance Program (SNAP), and Supplemental Security Income (SSI)
- Unemployment insurance (UI) compensation
- Education and training supports, such as Pell grants

Nationally, increases in transfer income can result from a few factors: the creation or expansion of new programs, changing participation in existing programs, increasing costs of delivering program services, and cyclical responses to the business cycle.

All of these factors are at work in explaining the long-term increase in transfer incomes, but increasing participation (as populations age) and rising underlying costs (driving up the expense of health-related programs, in particular) are the most significant factors at play.

The increase in transfer spending is broad-based across programs, and a few notable patterns emerge from Figure 2.

Figure 2: Transfer income by selected category

1970-2022
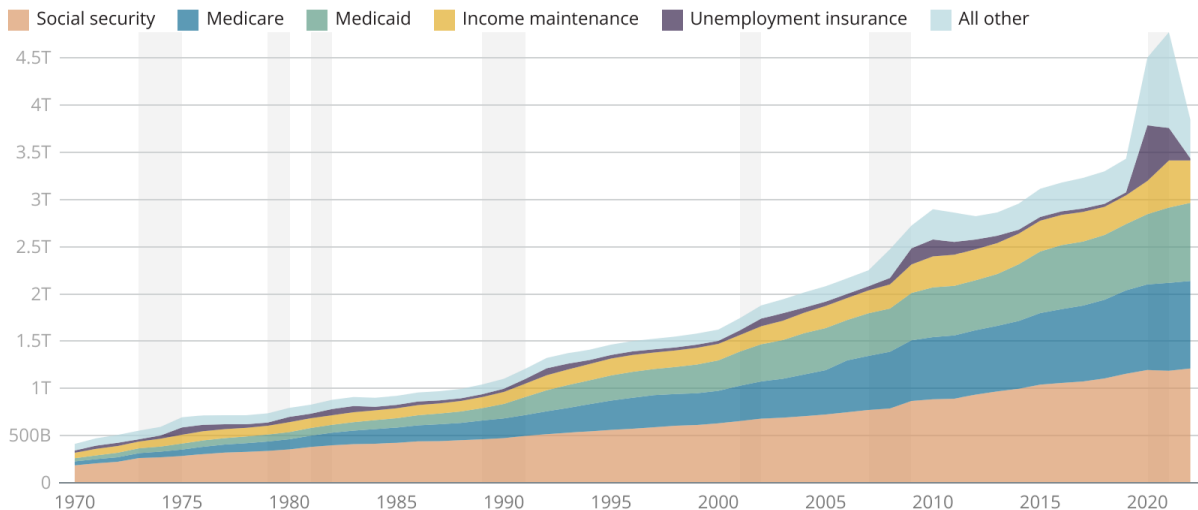
Expressed in 2022 USD

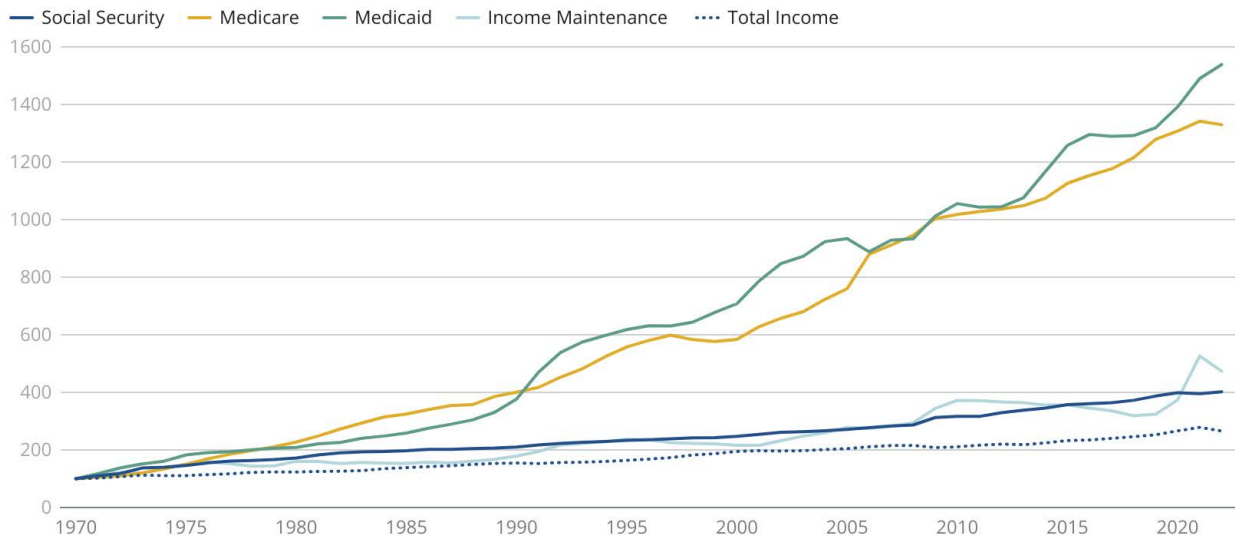Source: EIG analysis of Bureau of Economic Analysis data

First, the persistence of the rise—including during healthy economic expansions—indicates that structural forces are at work pushing the transfer share higher. The steadily aging American population is the overriding contributor, in large part because the two biggest components of transfer spending are the old-age benefits of Social Security and Medicare. The share of the population ages 65 and over has risen from 9.8 percent in 1970 to 17.3 percent in 2022—neatly tracking transfers' rise as a share of total personal income.

Second, economic downturns have accelerated the expansion of the transfer economy. Total transfer income has emerged permanently higher from each recession since at least the 1970s. The resulting stair-step pattern suggests that each downturn leaves a legacy of expanded safety net programs and participation in its wake.

Third, rapidly rising healthcare costs also push the transfer share higher. Healthcare cost inflation directly feeds into key transfer programs, and medical costs have risen nearly twice as quickly as overall inflation over the past several decades.[5] In real (inflation-adjusted) terms, total spending on Medicare and Medicaid has grown more than three times as quickly as total spending on Social Security. To put the growing fiscal strain into perspective: In 1990, Medicare spending was $7,000 for every person 65 and over; by 2022, it had more than doubled to $16,000 in real terms.

Figure 3: Per capita income from selected transfer programs

1970 = 100

Source: EIG analysis of Bureau of Economic Analysis data

Together, Medicare and Medicaid overtook Social Security as the largest source of transfer payments in 1995. Today they account for 46 percent of all transfer spending, compared to Social Security's 31 percent.

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[5] Using the Consumer Price Index for All Urban Consumers, Medical Care vs All Items, U.S. City Average.

Figure 4: Share of transfer income from key safety net programs
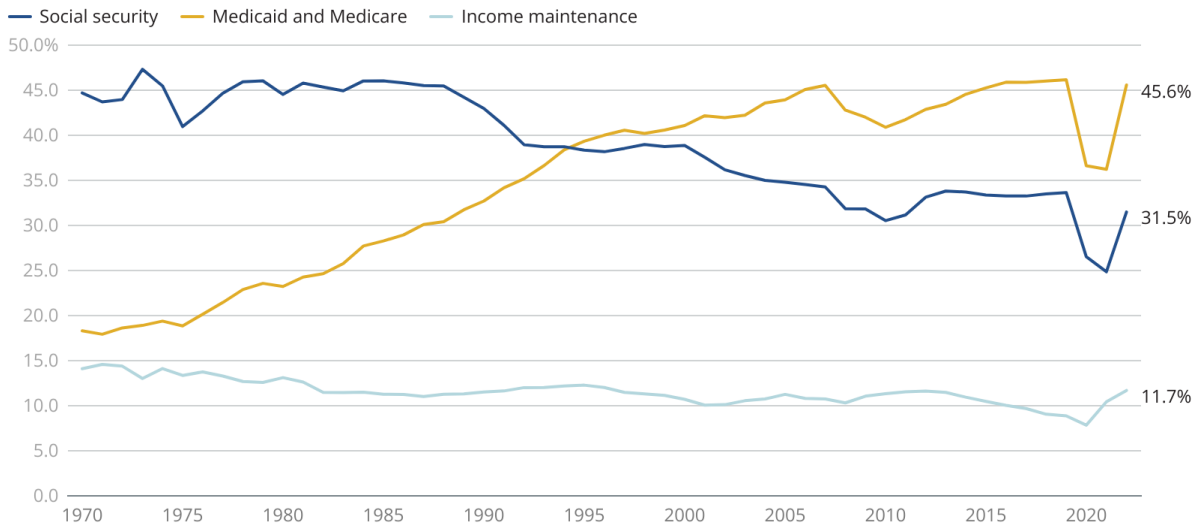
Source: EIG analysis of Bureau of Economic Analysis data

Critically, programs that form the poverty-alleviation bedrock of the social safety net have been contributors but not outsized drivers of the rising transfers share.

Income maintenance programs only account for 11.4 percent of the real increase in transfers from 1970 to 2022. Their share of the growing transfer pie has actually fallen from 14.1 percent in 1970 to 11.7 percent in 2022. How? In stark contrast to the rising elderly share of the population, the poor share has been stable.[6] There has been no change in transfer reliance due to poverty that parallels the extraordinary shift due to aging.

Thus, even when taking into account the introduction of the Earned Income Tax Credit and other expansions of support for low-income workers and families, the income-maintenance portions of the safety net have grown less quickly than other parts of the transfer economy. To be sure, such programs contribute to transfers' increasing importance in American incomes. But as shown in Figure 3, spending on a per capita basis has increased more in line with Social Security than with healthcare-related programs.

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[6] The Official Poverty Measure (OPM) has fluctuated between 10 percent and 15 percent since the 1960s, as shown in "Historical Poverty Tables: People and Families, 1959–2023." In contrast, the Supplemental Poverty Measure (SPM), which accounts for taxes and transfers, has declined from a peak of 18.6 percent to below 10 percent, according to "National SPM Poverty Rates, 1967–2020" by the Center on Poverty and Social Policy.

Geographic divides and transfer income

Across counties, transfer income itself varies according to the characteristics of the local population: how old residents are, how poor they are, how many are veterans, and so forth. Transfer incomes will be higher in the places where people targeted by safety net programs live.

The transfer *share* of local area personal income, for its part, will vary depending on both how much a place receives in transfers *and* how much it generates in other income.

At the local level, large portions of the United States are significantly more reliant on government transfers to sustain personal income than the nation is as a whole.

Altogether, 82.8 percent of counties have a higher transfer share than the nation itself. These counties are home to 55 percent of the population. This figure tells us that transfer reliance generally runs higher across a large number of relatively low-population areas and lower in the country's major population centers.

Transfer income varies much less across places than other earned income.

Since the safety net is not limitlessly generous, transfer income per capita can only climb so high. As Figure 5 shows, fully 95 percent of counties receive somewhere between $9,000 and $18,000 in transfers per capita, falling within a relatively narrow $9,000 range. The amount of other sources of income coming into a community varies much more widely, with 95 percent of counties falling between $23,000 and $69,000—a $46,000 band.

In other words, counties are clustered fairly closely together in terms of the amount of transfers per capita they receive. It is the amount of *other* earnings coming into a county that varies much more significantly.

Figure 5: Distribution of transfer and non-transfer incomes, 2022
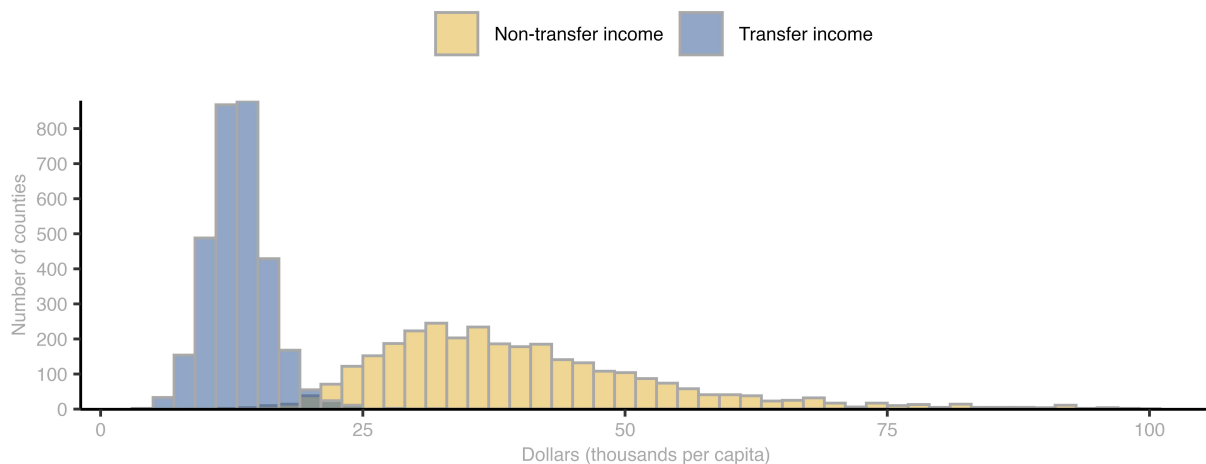
Note: 15 counties with non-tranfer income >100k per capita removed for visual clarity.
Source: EIG analysis of Bureau of Economic Analysis data

Transfers account for at least a quarter of all income in more than half of all counties.

Dividing all U.S. counties into three buckets according to the transfer share of total personal income—those deriving less than 15 percent of income from transfers (low, those deriving from 15 percent up to, but not including, 25 percent of their income from transfers (medium, and those deriving 25 percent or more of their income from transfers (high—helps visualize how this transformation in sources of income has progressed both geographically and over time.

Between 1970 and 1990, the share of counties deriving at least one-quarter of their income from transfers rose while remaining low, rising from less than 1 percent of counties to 5 percent of counties. These were the country's most economically distressed corners. However, beginning in 1990 and accelerating through the 2000s, the share of counties climbing into the high-transfer tier began rising rapidly.

Today, most U.S. counties depend on a level of government transfer income that was once reserved only for the most distressed places. In 1970, not even 1 percent of counties derived a quarter or more of their total personal income from transfers. In 2000, just 10.4 percent did. But by 2022, *53 percent of counties* were receiving a quarter or more of their income from transfers.

Just as stark is the vanishing share of American counties where transfer income plays a relatively minor role in the local economy. In the 1970s, when the population was younger and the safety net thinner, the vast majority of counties fell into the lowest tier of transfer dependence, meaning less than 15 percent of their income was derived from transfers. In 1970, 86 percent of counties fell into this lowest transfer tier. By 2022, only 9 percent of counties did. Low-transfer places have gone from the norm to the exception in just five decades.

Figure 6: Proportion of U.S. counties by transfer share of total personal income

1970-2022
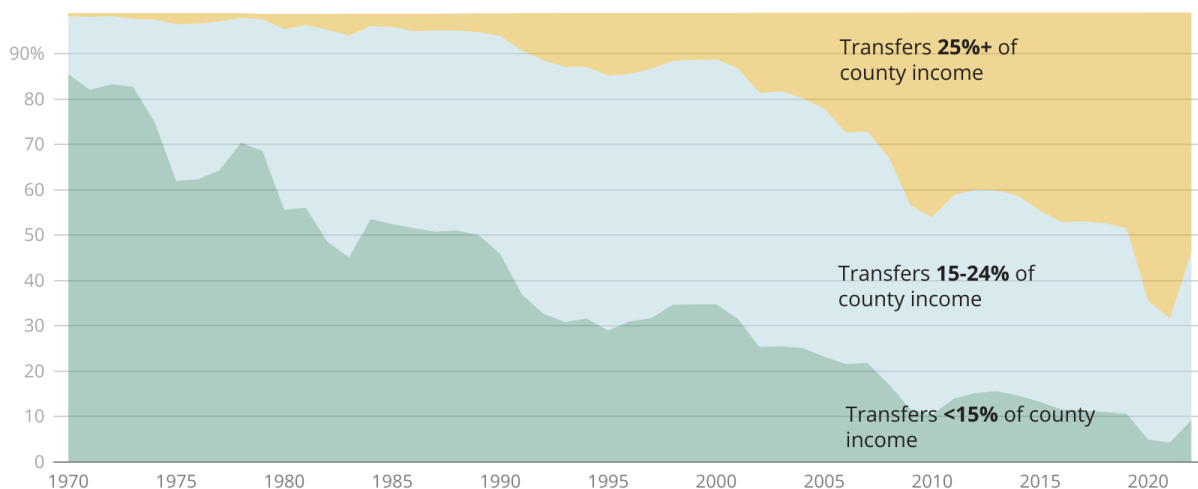
Source: EIG analysis of Bureau of Economic Analysis Data

Thus, the Great "Transfer"-mation in how Americans derive their income happened gradually at the national level but suddenly at the local one. It crashed across the nation's map at the turn of the century and has only deepened since. Almost no corner of the country has been untouched: Since 1970, the transfer share has risen in 99 percent of counties.

Figure 7: Government Transfers share of personal income

Significant (25+%) Moderate (15-24.9%) Minimal (<15%)

1970

2000

2012

2022
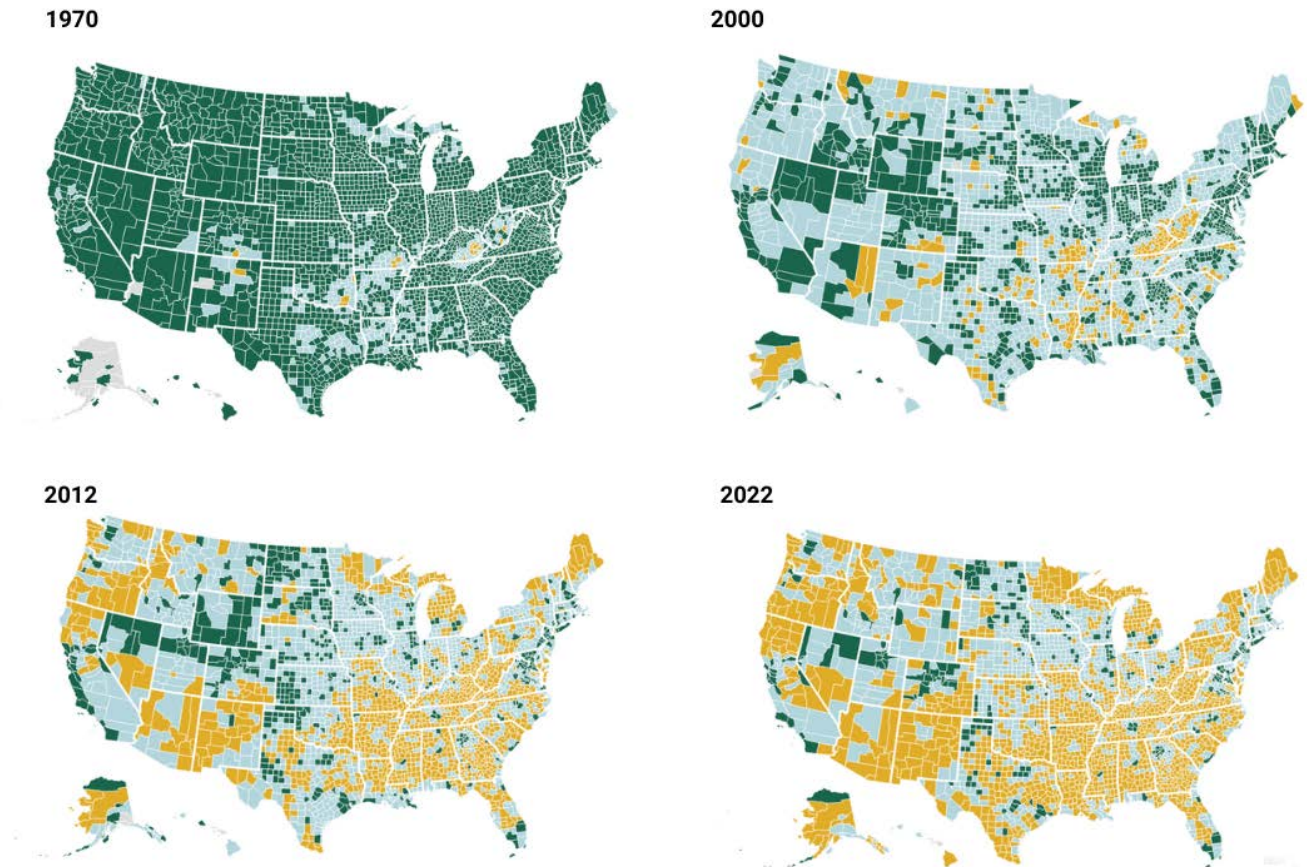
Source: EIG analysis of Bureau of Economic Analysis data

The transfer share runs highest in older, poorer, and more rural areas.

The transfer share runs highest in parts of the country that are rural, old, and poor. These include parts of Appalachia, the tribal Southwest, the rural South, and the northern Great Lakes. Together, 62 percent of counties with above-national elderly shares of the population, 65 percent of counties outside metro areas, and 79 percent of counties with above-national poverty rates fell into the high-transfer tier in 2022.

Figure 8: Government transfers as a share of total income

2022

Government transfers (% of total income)

0.02   0.63
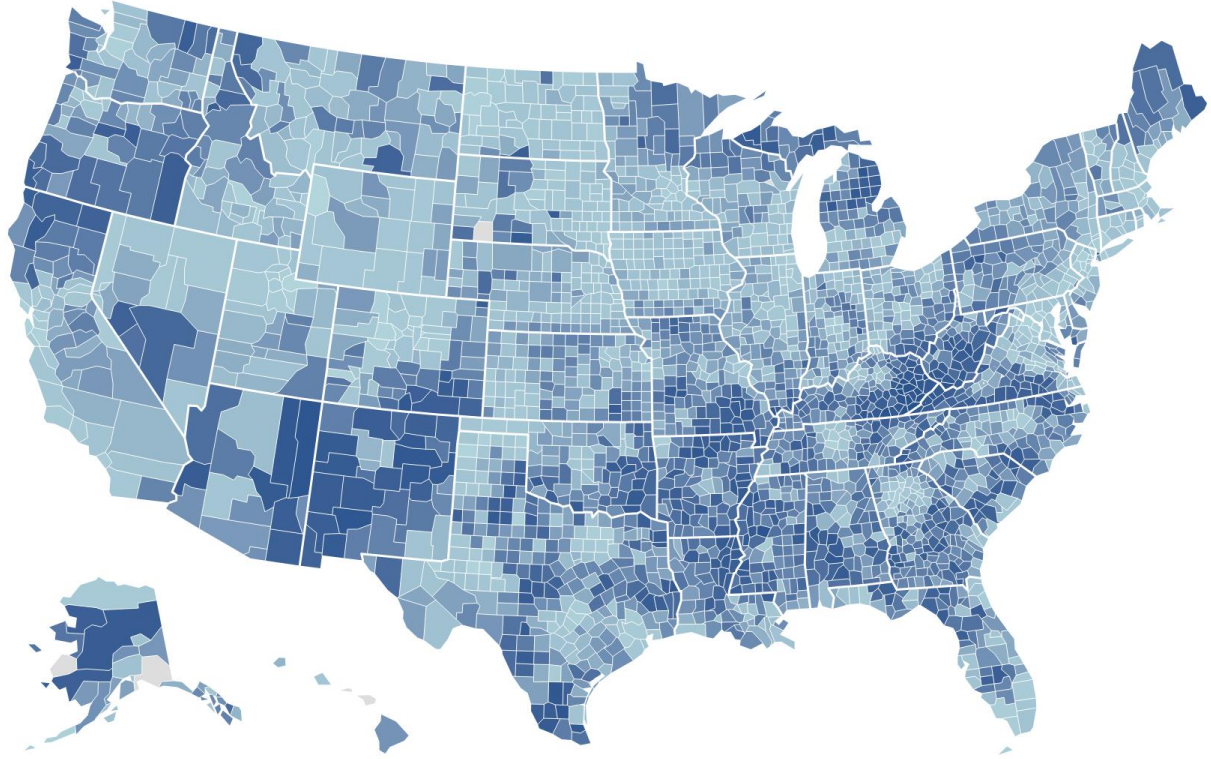
Source: EIG analysis of Bureau of Economic Analysis data

In other words, the transfer share varies along three intersecting gradients: age structure, metropolitan stature, and earnings capacity. A closer look at the map and the counties falling at the top and bottom of the rankings show these gradients at work.

The majority of the most transfer-dependent counties are rural (see text box), but the many populous counties that join them illustrate the diverse paths places have taken to reach the high-transfer tier.

The rural-urban transfers divide

The transfer share of total personal income tends to run much higher in rural areas than it does in large population centers.

Large metro areas make up 14 percent of all counties, yet they account for only 5 percent of high-transfer counties compared to 47 percent of low-transfer ones (defined according to the tiers introduced in Figure 6 above). Non-metro counties fall to the other end of the spectrum, accounting for 63 percent of all counties but three-quarters of those in the high-transfer tier. There are hundreds of rural counties that fall into the low-transfer and medium-transfer tiers, yet the vast majority of rural areas fall into the high-transfer one.

Figure 9: Share of counties in each transfer tier, by metro status

2022

Large metro (n = 431) ■ Medium metro (n = 377) ■ Small metro (n = 349) ■ Non-metro (n = 1,948)
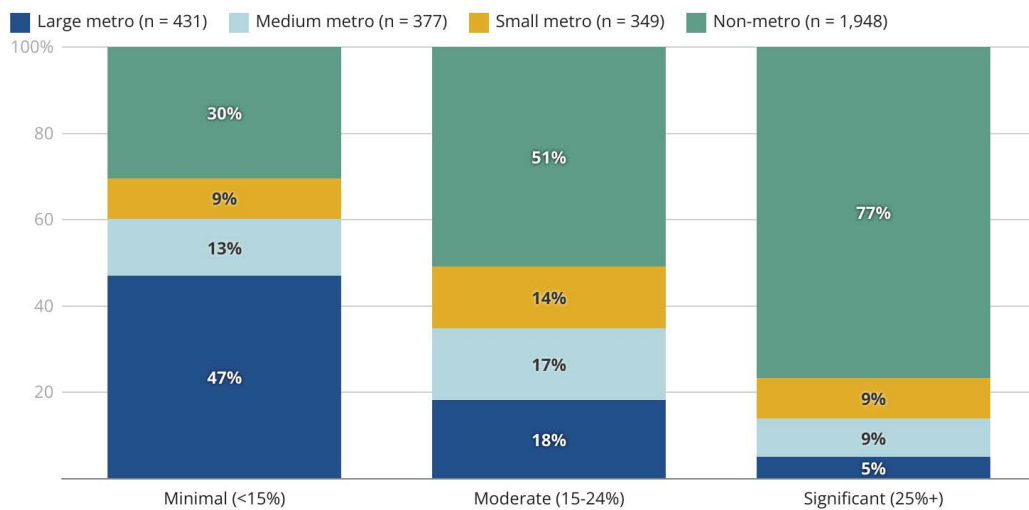
Source: According to NCHS Rural-Urban Continuum Codes 2023. Large metro areas have populations 1 million+, medium metros 250k-1 million, small metros <250k.

To be clear, large metropolitan counties do not *lack* transfer-dependent populations. They have their share of the elderly, veterans, unemployed, children, and low-income households. What they also tend to have are significant earnings from other sources, which bolster total personal income and drive down the transfer share.

The most populous transfer-dependent communities (those with at least 100,000 residents; see Table 1) include a mix of retirement destinations as well as chronically distressed corners of the country and relative newcomers to economic struggles, such as parts of northeastern Alabama and southwestern Pennsylvania. The high-poverty Bronx has the seventh-highest transfer share among populous counties nationally and is the most transfer-reliant large urban county in the United States.

Table 1: 20 Counties with the highest transfer shares and populations 100k+

County	Largest city	2022 Per capita income (excl. transfers)	2022 Per capita income (incl. transfers)	Government transfer share	County type
Navajo, AZ	Show Low	$22,000	$42,100	47.8%	Distressed tribal
Robeson, NC	Lumberton	$24,300	$41,100	40.8%	Distressed tribal
Highlands, FL	Sebring	$25,100	$41,800	40.0%	Retirement destination
Citrus, FL	Homosassa Springs	$27,600	$45,300	39.1%	Retirement destination
Cochise, AZ	Sierra Vista	$31,100	$50,200	38.0%	Distressed tribal
Pittsylvania, VA	Danville	$28,000	$45,000	37.7%	Distressed post-industrial
Bronx, NY	Bronx Borough	$25,400	$40,700	37.5%	Distressed urban
Douglas, OR	Roseburg	$31,900	$49,400	35.5%	Distressed rural
Cambria, PA	Johnstown	$31,200	$48,000	35.0%	Distressed post-industrial
Mohave, AZ	Lake Havasu	$29,300	$44,600	34.4%	Distressed tribal
Fayette, PA	Uniontown	$31,700	$48,300	34.3%	Distressed post-industrial
Etowah, AL	Gadsden	$28,300	$43,000	34.2%	Distressed post-industrial
Cameron, TX	Brownsville	$24,600	$37,300	34.0%	Distressed border
Marion, FL	Ocala	$29,600	$44,500	33.6%	Retirement destination
Garland, AR	Hot Springs	$32,300	$48,500	33.4%	Distressed rural
Hernando, FL	Spring Hill	$31,300	$46,600	32.8%	Retirement destination
Campbell, VA	Lynchburg	$30,600	$45,400	32.6%	Distressed post-industrial
Sumter, FL	The Villages	$46,700	$69,200	32.5%	Retirement destination
Charlotte, FL	Port Charlotte	$36,100	$53,200	32.2%	Retirement destination
Pueblo, CO	Pueblo	$32,200	$47,200	31.9%	Distressed post-industrial

All dollars expressed in 2022 USD

Source: EIG analysis of Bureau of Economic Analysis data

Some rural areas still occupy the low-transfer tier, of course. Those that do typically have large resource- or farming-related income streams. In Figure 8 above, the economic wherewithal of farming communities in the upper Midwest or energy communities in West Texas, where the transfer share is so low in part because income from the land is so high, contrast starkly with rural areas in parts of the South and West, where economic hardship is much more entrenched, or the Upper Great Lakes, where the population is much older.

In metropolitan settings, the least transfer-dependent counties tend to be the country's highest-income enclaves.

Among populous counties, the transfer share runs lowest in the Bay Area and in very high-income white-collar suburbs, such as Loudoun County, VA, outside of Washington, DC, or Williamson County, TN, outside of Nashville.

Not all low-transfer counties are part of major tech hubs or superstar metropolitan areas, however. The top 20 includes Bentonville, AR, and counties on the outskirts of several midwestern metros, too. Some of these elite enclaves even count themselves among the very few places where the transfer share has fallen over time. In general, places with low and falling transfer shares tend to combine strong professional salaries in industries like tech with high investment incomes, too.

Certain patterns visible on the map of the transfer share are familiar: the crescent of prosperity along the eastern seaboard, rising in the metropolitan Mountain West, or running along California's coast, as well as the ridges of distress in Appalachia and straddling the South.

Yet the transfer share also reveals something deeper and cross-cutting about the nation's economic geography.

On the one hand, residents of seemingly diverse places, from the northern Great Lakes to the Deep South, are actually grappling with a similar fundamental struggle to earn a good income.

On the other hand, the geographic diversity of the low-transfer tier reminds that, in a continental-sized economy as diverse and complex as the United States, there are many different paths to local economic self-reliance.

Table 2: 20 Counties with the lowest transfer shares and populations 100k+

County	Largest city	2022 Per capita income (excl. transfers)	2022 Per capita income (incl. transfers)	Government transfer share	County type
San Mateo, CA	San Mateo	$165,800	$175,100	5.3%	Tech hub
Midland, TX	Midland	$137,400	$145,100	5.3%	Oil and gas hub
Arlington, VA	Arlington	$106,200	$112,300	5.4%	White collar suburb
Loudoun, VA	Leesburg	$91,300	$96,900	5.7%	White collar suburb
Williamson, TN	Franklin	$113,100	$119,900	5.7%	White collar suburb
Santa Clara, CA	San Jose	$134,900	$144,400	6.6%	Tech hub
Marin, CA	San Rafael	$159,500	$171,200	6.8%	Tech hub
Collin, TX	Plano	$76,700	$82,600	7.1%	White collar suburb
Forsyth, GA	Big Creek	$73,600	$79,400	7.3%	White collar suburb
Alexandria, VA	Alexandria	$97,500	$105,200	7.4%	White collar suburb
Hamilton, IN	Carmel	$88,700	$95,800	7.4%	White collar suburb
King, WA	Seattle	$105,300	$113,800	7.5%	Tech hub
Douglas, CO	Castle Rock	$91,800	$99,200	7.5%	White collar suburb
Travis, TX	Austin	$79,400	$85,900	7.6%	Tech hub
Fairfax, VA	Fairfax	$93,700	$101,400	7.6%	White collar suburb
Dallas, IA	Waukee	$73,700	$79,900	7.8%	White collar suburb
Somerset, NJ	Somerville	$102,100	$110,800	7.8%	White collar suburb
Delaware, OH	Delaware	$81,800	$88,900	7.9%	White collar suburb
Benton, AR	Bentonville	$90,700	$98,800	8.2%	Blue chip headquarters
Fulton, GA	Atlanta	$92,300	$100,600	8.2%	Blue chip headquarters

All dollars expressed in 2022 USD

Source: EIG analysis of Bureau of Economic Analysis data

Local factors and variation in the transfer share

The local drivers of a rising transfer share parallel the national ones. The country's demographic transformation into an aging society touches almost every corner of the map, and the healthcare cost increases hit nationwide.

But what explains the geographic variation? Three major factors come to the fore:

- Programmatic effects, or differences in eligibility for certain transfer payments due to differences in state or local regulations;

- Aging effects, or the extent to which aging has proceeded more or less rapidly at the local level versus the national level;

- Local economic effects, or differences in the growth of other sources of earned income.

Understanding the relative importance of each of these drivers helps identify the root causes of the Great "Transfer"-mation.

In the end, aging plays the starring role, while programmatic effects explain only marginal changes in transfer levels. Depressed growth in other types of income is not an obvious protagonist at the national level, but its importance becomes very clear in the local context.
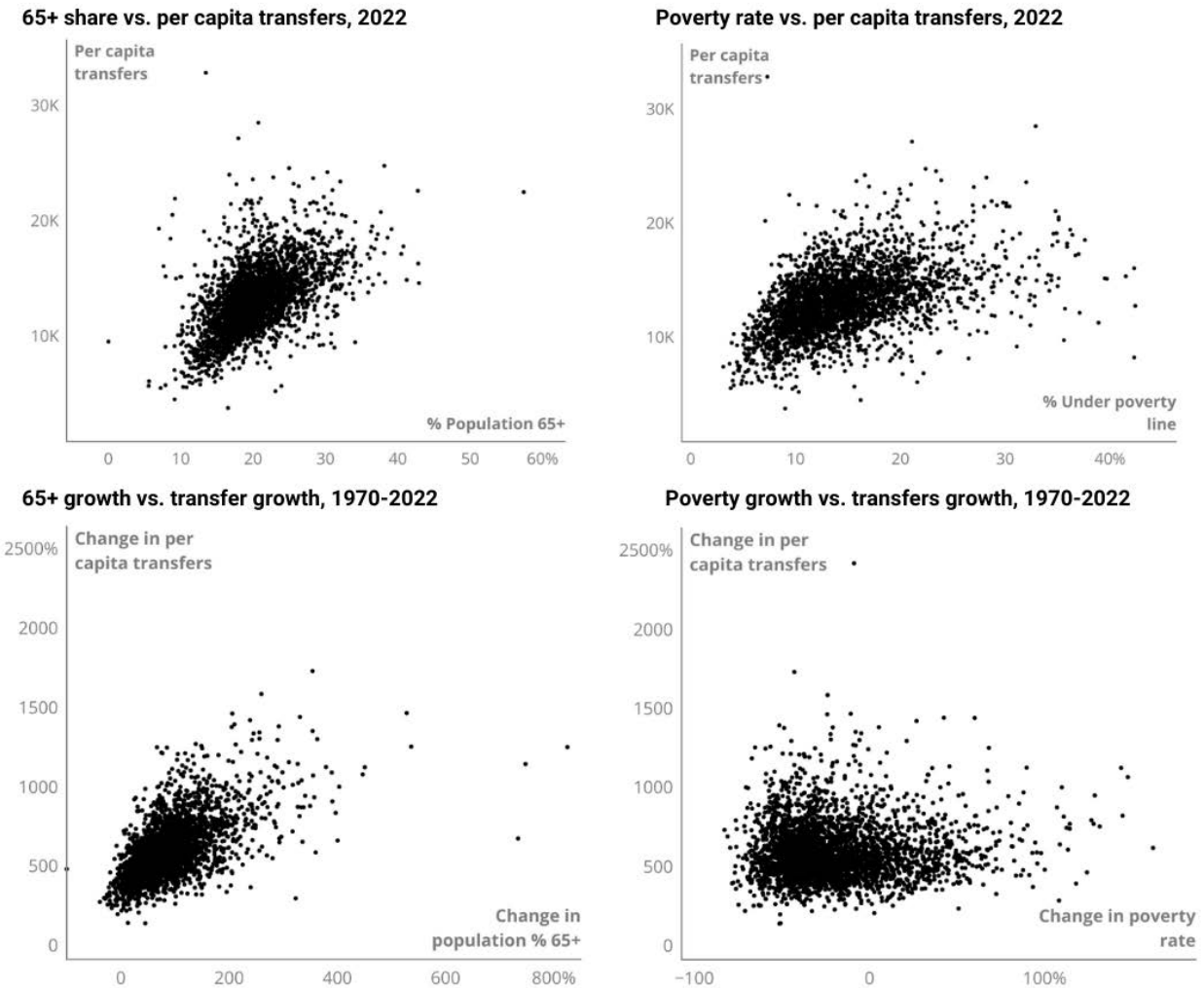
Economic and demographic fundamentals determine the level of transfer spending.

Both the current old-age population and the current poverty rate are strong predictors of counties' per capita transfer receipts today (panels a and b below). This is intuitive, as the two primary goals of the safety net are to care for Americans in both need and old age.

Over the long run, growth in the share of a county's population 65 and over is strongly correlated with growth in real per capita transfers (panel c). However, growth in the share of a county's population in poverty is *not* strongly correlated with growth in real per capita transfers (panel d).

Why not? Because the nation's poor population is growing nowhere near as quickly as its elderly population. Income maintenance programs constitute small portions of both total transfer spending and growth in transfer spending over time.

Figure 10: Relationship between transfers, poverty, and aging

65+ share vs. per capita transfers, 2022

Poverty rate vs. per capita transfers, 2022

65+ growth vs. transfer growth, 1970-2022

Poverty growth vs. transfers growth, 1970-2022

Source: EIG analysis of Bureau of Economic Analysis data

And despite their strong predictive power individually, the 65 and over share of the population and the poverty rate are not strongly correlated with each other, with a correlation coefficient of -0.014.

This suggests that each is useful for explaining transfer *levels* across the map, but that they apply in different places, and only one—aging—is good at explaining nationwide *changes* in transfers over time.

In part, this is because many deeply economically distressed and high-transfer areas—the heart of Appalachia, for example—have been distressed and transfer-dependent for a long time, while aging has been a much more dynamic phenomenon that has also affected more places.

Aging structurally increases the transfer share.

Aging is the factor most responsible for both the national rise and local variation in transfer dependence. Aging remains the single strongest predictor of changes in the transfer share of total personal income (see Appendix for details).

Aging is an especially important driver of the accelerated growth of the transfer share since the Great Recession. In percentage point terms, the 65 and over share of the population rose as much in the 10 years from 2010 to 2020 as it did in the 50 years from 1960 to 2010.[7]

In the 2010s, each percentage point increase in the share of the population 65 and over was associated with a 0.6 percentage point increase in the transfer share of personal income, all else equal. That means aging alone—even after controlling for year fixed effects, which capture some of the rising costs of providing healthcare to the elderly each year, and metro/non-metro fixed effects, which account for the systematically higher levels of aging present in rural areas—structurally expanded the transfer share by almost 2 percentage points over the course of the 2010s, as the 65 and over share of the population increased nearly 3 percentage points.

Compare the effect of aging to that of Medicaid expansion (see text box). A single percentage point increase in the share of the population over the age of 64 has roughly the equivalent effect on the transfer share as one and one-third Medicaid expansions.

The marginal effect of program expansions

The expansion of the social safety net—new programs, increased generosity, and increased coverage—explains only a small portion of the overall rise in the transfer share. Take the decision of some states to expand Medicaid to households with incomes up to 138 percent of the federal poverty line as one of the most consequential recent examples. Medicaid is the fastest-growing component of transfer income (Figure 3).

Its expansion to cover more low-income households led to an increase in government transfers for medical programs and an increase in the share of personal income being derived from government transfers in participating states, but the effects were *relatively* small. Taking advantage of the staggered rollout of Medicaid Expansion, we find that states that expanded Medicaid saw a 0.46 percent increase on average in the share of personal income derived from government transfers in the years that followed.

A policy as consequential as Medicaid expansion had only three quarters the effect on transfer spending annually as a single percentage point increase in the share of the population aged 65 and over.

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[7] Zoe Caplan, "U.S. Older Population Grew From 2010 to 2020 at Fastest Rate Since 1880 to 1890," U.S. Census Bureau, 2023.

Aging through attraction differs from aging through attrition.

People tend to leave the labor force when they age. Not only does transfer income then rise, but labor income often falls. This combination of rising transfers and falling wage and salary incomes generates a powerful structural push towards increased transfer reliance in aging places that do not have sufficient in-migration of working-age adults to offset the effect.

But aging is not always associated with high or rising transfer shares. Places can age in different ways. Some places age in line with the nation, riding the rising gray tide of U.S. demography. Others age faster, and they do so either through the in-migration of retirees or through the out-migration of workers and the young. The difference is between aging through attraction and aging through attrition. The rise of the transfer share is usually greater in counties that have aged through attrition.

Counties that age through attrition typically lose adults of prime working age (25–54) to areas with more attractive job opportunities. As lower tiers of the population pyramid hollow out, economic decline accelerates. Such places are especially susceptible to high and quickly rising transfer shares, all the more so if weak local economies cause remaining residents to tap into poverty relief and income maintenance programs disproportionately.

Other places age rapidly because they are retirement destinations. Places that age through attraction tend to be much less reliant on transfers than communities that have aged through attrition. These destinations often welcome retirees who have more—and more diversified—income. In addition, new arrivals contribute to population growth, which itself fosters a much healthier local economy, as new businesses sprout up to cater to new residents and their spending. So while retirees migrating to these communities may tap into Social Security and Medicaid just like their peers in other parts of the country, they bring their own complementary earnings and induce yet more earned-income in the wider local economy.

Consider the contrast between **Sarasota County, FL**, and **Roscommon County, MI**. The two counties are comparably old today, but their income profiles are very different.

Figure 11: Trends in government transfers and non-transfer income for selected aging counties

Retirement community: Sarasota, FL
Economic stagnation: Roscommon, MI
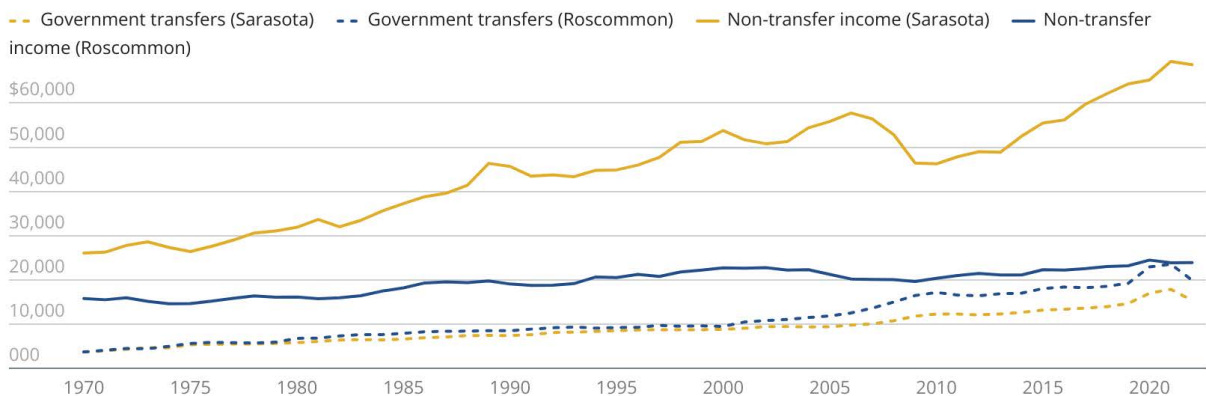
Expressed in 2022 USD

Source: EIG analysis of Bureau of Economic Analysis data

Sarasota, with a population of 462,000 in 2022, is one of the nation's top retirement destinations, with 37 percent of residents aged 65 and above. Its population has nearly quadrupled since 1970. Per capita transfer incomes have risen in Sarasota, and its residents receive nearly twice as much in Social Security and Medicare transfers per capita as nationally.

However, Sarasotans also derive substantial amounts of income from other sources. On a per capita basis, Sarasotans earned more than four times as much in other income as they did from transfers in 2022. That includes sizable streams of investment income, suggesting that the area's retirees may be living quite comfortably from their diversified assets. Sarasota is elderly but economically vibrant; transfers are high due to its attractiveness as a retirement destination, but growth in other types of income has kept the rise of the transfer share in check.

Roscommon, MI, tells a very different story. It has experienced negative or stagnant population growth since 2004, and the share of its population 65 and over has risen from 17.2 percent in 1970 to 33.1 percent in 2022. It has aged through attrition. Real non-government earnings have stagnated for decades, while transfers have risen steadily, almost reaching equivalence in 2021. Roscommon has a similar old-age profile as Sarasota, but with a poorer population, it receives more in transfers per person—including $1,500 per capita from income maintenance programs in 2022 compared to Sarasota's $600 per capita. Roscommon County is so reliant on transfer income in part because its residents have few other sources: The county received only $9,000 per capita in investment income in 2022, less than one-quarter of Sarasota's $38,500.

As these examples illustrate, aging need not herald a steep rise in the transfer share. Places can age while remaining economically vibrant with diversified income sources. However, there are many more American communities like Roscommon, where work and working age populations are disappearing and the transfer economy is filling in behind them, than there are communities like Sarasota.

### Economic stagnation has further boosted the transfer share.

Aging goes a long way in explaining the total rise in transfer dollars flowing to a community, but it only tells part of the story underlying a rising transfer *share* of total income.

Earned income varies much more across counties than transfer income does.

Strong local earnings growth over the past several decades helps explain where the transfer share *has not* risen more, just as chronic distress and weak local economic performance help explain where the transfer share has risen significantly. Local variation in both the numerator (transfer income) and denominator (total personal income) explains variation in the share.

Figure 12 below separates counties into the three tiers introduced earlier: those with significant, moderate, and minimal transfer shares. The vertical black line is placed at the national rate of real per capita growth in all non-transfer incomes between 1970 and 2022 (238 percent). Counties in bins to the left of that experienced slower than national growth, and counties to the right experienced faster than national growth.

Figure 12: Real per capita growth in all non-transfer incomes between 1970 and 2022

Real per capita growth in all non-transfer incomes
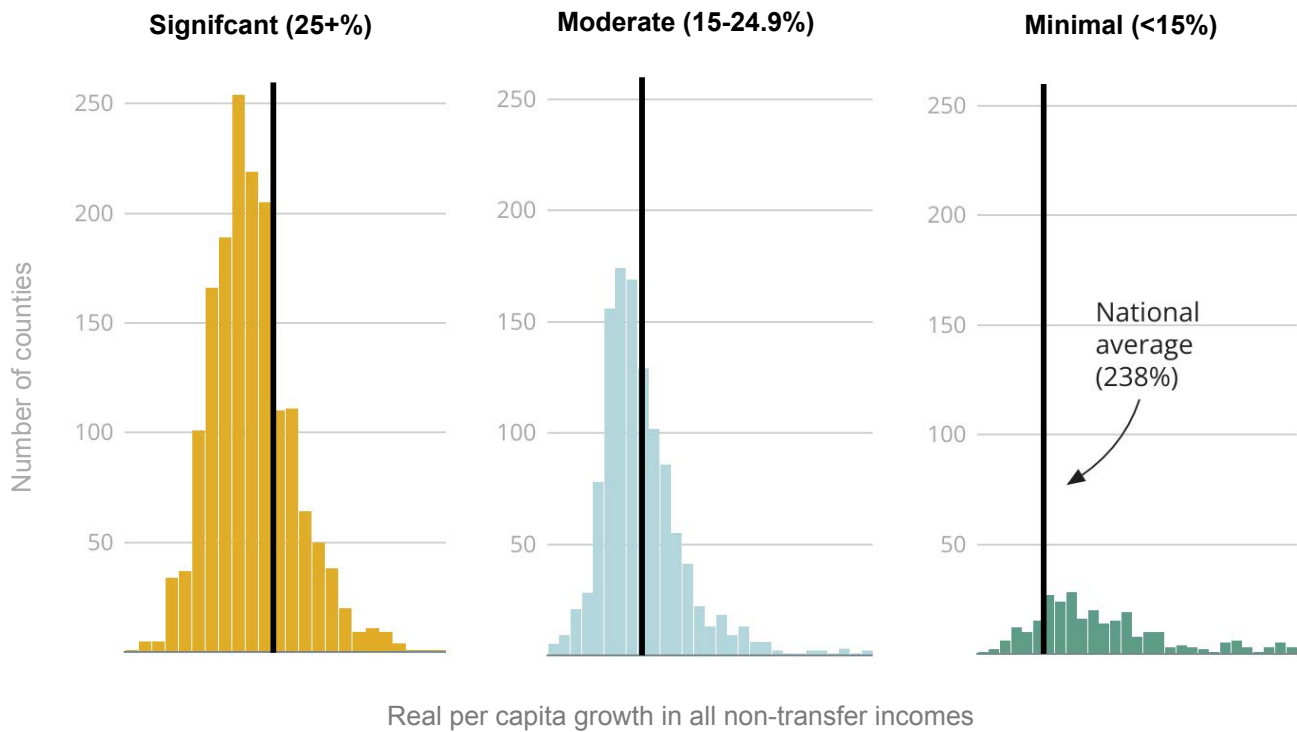
Source: EIG analysis of Bureau of Economic Analysis data

Most counties have lagged behind national growth in non-transfer incomes over the past several decades; 63.3 percent of counties have experienced lower income growth than the nation from 1970–2022. This fact helps explain why the rise of the transfer economy looks even more dramatic at the county level than it does at the national one.

There is a strong relationship between poor economic performance and growth in per capita transfer incomes. Fully 78 percent of counties that fall into the high-transfer tier did so in part because they experienced below-average earnings growth from 1970 to 2022. On the flip side, 85 percent of counties in the low-transfer tier beat national earnings growth over that same period.

A few vignettes demonstrate the role of poor local economic performance in accelerating the rise in the transfer share.

Take **Delaware County, IN**, where **Muncie** is the largest city. Among counties with at least 100,000 residents in 2022, it has experienced some of the highest growth in the transfer share since 1970, with a 24.7 percentage point increase.

In the 1970s, per capita earnings in the Muncie area were just below the national average, but they were close and moved together. Per capita transfers were also close to the national average. The county basically maintained its position relative to the nation up through the mid-1990s.

But a wide gap started to open by 2000, as major plant closures sent earnings on a decade-long decline. Per capita non-transfer earnings fell from 85 percent of U.S. per capita earnings in 1995 to 60 percent by 2010. By 2022, they were even less, as earnings growth locally coming out of the Great Recession was half of what it was nationally.

Transfers have increased in the county, and Muncie area residents now receive nearly $3,000 more in per capita transfers than their national peers. However, the collapse in earnings is the primary driver behind the growing transfer share, not rising transfer income themselves.

Figure 13: Non-transfer income and government transfers per capita

Muncie, IN versus U.S. overall
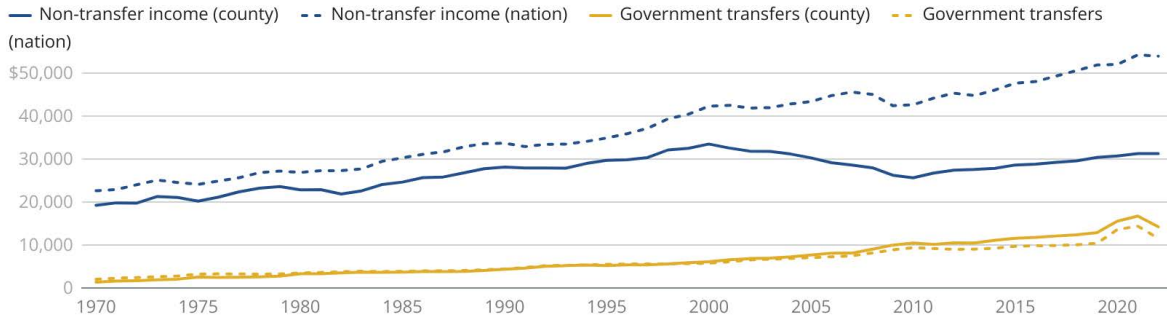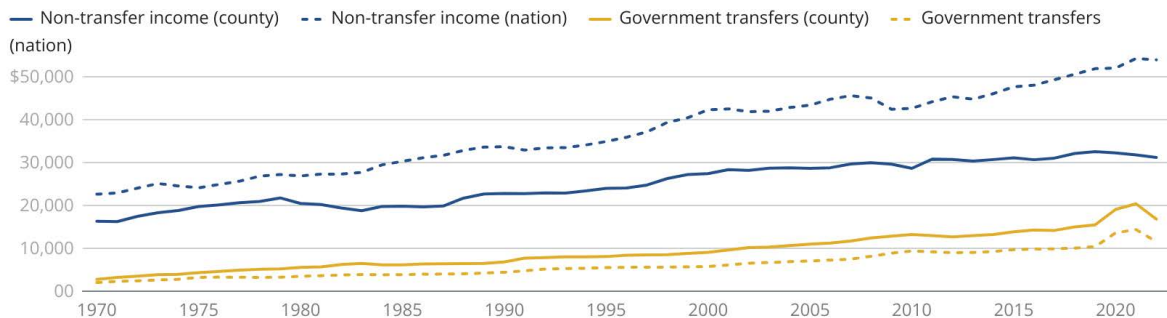

Expressed in 2022 USD

Source: EIG analysis of Bureau of Economic Analysis data

Cambria County, PA, home to **Johnstown** and another of the most populous counties in which the transfer share has risen most, saw earnings collapse and transfers begin a steady climb after the closure of local steel plants in 1980. And yet, even though per capita transfer income has always run high in the county, the main explanatory factor behind the high local transfer share today is that *earnings* have stagnated for decades.

Cambria County did not just fail to recover from an initial negative economic shock in the early 1980s, but it also appears to have lost its *ability* to recover from subsequent shocks: The county experienced no rebound in earned incomes at all coming out of the Great Recession. Residents of the county now receive $17,000 in transfers per capita—more than $5,000 above the national average—even as they received almost $23,000 *less* in all non-government transfer sources of income per capita than the national average in 2022. A sapped local economy and decades of stagnant earnings opportunities are the main protagonists behind the rising transfer share in Johnstown.

Figure 14: Non-transfer income and government transfers per capita

Johnstown, PA versus U.S. overall

Expressed in 2022 USD

Source: EIG analysis of Bureau of Economic Analysis data

In his book, The Divided City, author and Rust Belt urbanist Alan Mallach describes how communities such as Johnstown come to subsist on transfer income as it circulates in the local economy. After all, one resident's transfer income becomes another's earned income once it is spent locally:

> "Payments to hospitals, colleges, and local governments create jobs, which in turn generate consumer spending, while the money from SSI, Social Security, vouchers, and SNAP is spent in the community, in food stores or through rent payments. That spending, in turn, enables a few retail businesses and service providers to survive, and it generates some more jobs for bank tellers, grocery store clerks, and home health aides. Not all of this money stays in the community, of course, but much of it does. Transfer payments create an economic floor for a community's survival, providing a regular and predictable flow of dollars. What they do not do is offer any shot at prosperity."

Such equilibriums explain how communities do not disappear even after their traded sectors (i.e. firms that sell goods or services to people *outside* the region, bringing money from elsewhere in) fade, and they also explain how demographically declining places can remain economically stable, at least for a time.

High transfer shares combined with low earnings, however, show that a location is subsisting —not that it is thriving.

Such communities risk being trapped in low-level economic equilibriums, and other communities risk being dragged down with them by a range of demographic and economic headwinds. Reversing the transfer share will only be possible by reigniting the opportunity to earn by other means across a much greater portion of the nation's map. If the Great "Transfer"-mation is to rewind, more people in more places must have the chance to earn well.

Discussion

We have explained why the transfer share of income is so high across so much of the country. But what is the right way to interpret the fact? Put simply, is a high and rising transfer share *bad*?

The answer is yes, unequivocally. It is bad for what it signals about the economic health of American communities, and it is bad for the fiscal health of the country.

Across huge swathes of the American map, aging has pushed transfers higher while local economic struggles have suppressed growth in other earnings. The result is a reshaping of how communities derive their livelihood—and a fading importance of work and productive activity in generating local incomes.

Perhaps most troubling is that the demographic headwinds accelerating this transformation are set to continue. The rapid aging of the U.S. population will persist through the 2030s before slowing but not abating.[8] The nation's working age population is projected to grow by 6 million between now and 2040, while the over-65 population will swell by 20 million.[9]

As the ratio of non-workers to workers has grown, the rising amount of transfer payments—and their rising size relative to the U.S. economy—has placed immense fiscal pressure on the nation.

The country is on a collision course with politically fraught trade-offs. Raising revenues through significantly increased taxes could choke off the very economic activity that finances transfers. Dramatically cutting spending on programs and benefits would unravel parts of the safety net that dignify life in the United States. Tax hikes and entitlement reform are also not enough to solve the problem, either alone or together. Both options must be part of the solution—but not the only part.

Faster economic growth is essential to regaining the path back to fiscal health. Investments in research and innovation, an expansive and better designed immigration policy, tax and regulatory policies that foster economic dynamism and participation in the workforce—these and other parts of a growth agenda represent the ideal way to reduce dependence on transfers, by boosting incomes earned from work and investing.

And yet the same demographic challenges that contributed to the problem also make it tough to solve. Oxford University political scientist Tim Vlandas warns that aging advanced economies—the United States among them—will find it increasingly hard to muster the support for the growth agendas they need in order to sustain their populations in old age.[10] On the current trajectory, spending on today's transfer benefits will crowd out the very investments necessary to make those programs sustainable in the future.

The age-old trade-off between guns and butter in the present is giving way to a more complex intergenerational calculus between pensions today and playgrounds tomorrow.

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[8] Congressional Budget Office, "The Demographic Outlook: 2023 to 2053." U.S.

[9] Census Bureau, "2023 National Population Projections Tables."

[10] Tim Vlandas, "From Gerontocracy to Gerontonomia: The Politics of Economic Stagnation in Aging Democracies," The Political Quarterly, August 2023.

The risk, as Vlandas puts it, is that an aging society boxes itself into "democratically-sanctioned economic stagnation" as the public comes to value economic security now more than economic prosperity in the future.

Not since the aftermath of World War II has the country been forced to confront such a troubling fiscal situation. In recent years the federal debt has returned to those all-time highs as a share of GDP—only it has happened through the normal course of business rather than the exigencies of war.[11] The country now runs historically large deficits at every point in the business cycle.

In the immediate post-war period, favorable demographics could be counted on to grow the economy back to fiscal sustainability. No such tailwind exists today. That is why, to truly address the underlying challenge, a growth agenda must include a heavy focus on making it easier to start and sustain families. Demographic vitality and economic vitality go hand in hand.

If there is a silver lining, it is that the rapid aging of the U.S. population is, at least relative to the same trend in other advanced economies, a new phenomenon. By reinvigorating the productive capacity and demographic health of the United States, it is still possible to prevent the country from becoming an ever more dependent one—but only if we get started now.

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[11] Congressional Budget Office, "The Long-Term Budget Outlook: 2024-2054."

Appendices

I. Sources and methods

The Bureau of Economic Analysis's regional economic account files are the primary source of data.[12] These data cover a variety of local Gross Domestic Product, Personal Income, and Personal Consumption Expenditures for a range of locality sizes. We rely on the files CAINC4 - "Personal income and employment by major component by county" and CAINC35 - "Personal current transfer receipts," which provide county-level income and transfer receipts from 1969 to 2022.

Supplementary data for the old-age population by county, defined as individuals 65 and older, comes from the Census Bureau's County Intercensal Tables program.[13] Poverty rates come from the Census's Small Area Income and Poverty Estimates program.[14] Counties' metropolitan status definitions come from the National Center for Health Statistics (NCHS) Rural-Urban Continuum Codes for 2023.[15] All dollars in this report are in 2022 USD, converted using the Bureau of Economic Analysis's Personal Consumption Expenditures Price Index.

Total personal income, transfer income, and non-transfer income consist of the following:

- **Total Personal Income** is provided directly by BEA in CAINC4 (line 10) and represents the sum of:[16]

  a. Net earnings (line 45) which is itself the sum of:
     i. Wages and salaries (line 50)
     ii. Supplements to wages and salaries (line 60)
     iii. Proprietors' income (line 70)
     iv. *Minus*: contributions from government social insurance (line 36)
     v. *Minus*: adjustments by place of residence. This is to account for incomes earned by individuals in other localities, such as individuals traveling across county lines for work. (line 42)
  b. Dividends, interest, and rent (line 46)
  c. Personal current transfer receipts. These include transfers from governments, from nonprofit institutions, and from businesses. (line 47)

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[12] https://apps.bea.gov/regional/downloadzip.htm

[13] Population estimates by selected age group are published separately by decade. Follow this link for the 1970-1979 files as an example.

[14] https://www.census.gov/data/tables/time-series/dec/census-poverty.html

[15] The codes are updated approximately every decade. 2023 are the most recent estimate. https://www.cdc.gov/nchs/data_access/urban_rural.htm

[16] From CAINC4. For more information on the composition of personal income, see: https://www.bea.gov/system/files/methodologies/SPI-Methodology.pdf

- **Government Transfer Income** is provided directly by BEA in CAINC35, which consists of:[17]
  a. Retirement and disability insurance benefits, including social security (line 2100)
  b. Medical benefits, including Medicare, Medicaid, and military medical insurance benefits (line 2200)
  c. Unemployment insurance composition (line 2400)
  d. Veterans' benefits (line 2500)
  e. Education and training assistance (line 2600)
  f. Other transfer receipts of individuals from governments (line 2700)

- **Non-Transfer Income** is defined as total personal income minus transfer payments from governments, which is (Total Personal Income - Government Transfer Income). We include transfers from non for profit institutions and businesses in this "non-transfer" sum, since our focus is on government-assisted income. Such non-government transfers are a negligible proportion of real personal incomes, standing at 0.07 percent in 2022. For completeness, the following income sources are included in Non-Transfer Incomes:
  a. Net earnings adjusted by place of residence (CAINC 4, line 45)
  b. Dividends, interest, and rent (CAINC 4, line 46)
  c. Current transfer receipts of nonprofit institutions (CAINC 35, line 3000)
  d. Current transfer receipts of individuals from businesses (CAINC 35, line 4000)

All supporting documentation, data, and code can be found on our GitHub page.[18]

II. Decomposing the drivers of the transfer share

We conducted a regression analysis to decompose the contribution of different factors influencing the level and growth in transfer incomes nationally and across counties.

First we identified three conceptual drivers that might explain the rising share of government transfers as a component of personal income: the rules governing transfer programs themselves, the demographic characteristics of the U.S. population, and economic factors influencing both the uptake of transfer programs and the amount of Americans' other earnings.

- *Programmatic factors:* All transfer programs are governed by certain eligibility criteria based on age, income, or other characteristics or status (e.g. veteran status). As new programs are created, the generosity of existing programs changes, or rules pertaining to eligibility are altered, transfer spending changes in turn.

- *Demographic factors:* Even if program rules stay the same, changes to the underlying demographics of the population will change the number of people moving into and out of eligibility for each stream of transfer spending dependent on demographics. For

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[17] From CAINC35.
[18] https://github.com/EIG-Research/EIG-Great-Transfer-Mation

example, if the share of the population that is either young or elderly
changes, transferspending as a share of personal income will change too,
given that transfer spending runs highest on those segments of the
population.

- *Economic factors:* A critical function of the safety net is to provide a floor to support
  Americans' well-being when hard times hit. As a result, transfer spending is responsive
  to the business cycle. It rises when unemployment rises; it falls when the poverty rate
  falls. Critically, the transfer *share* of total personal income is also dependent on the
  strength of earnings and growth in earnings from other sources.

Over the 50-plus year timeline we study, all three contribute to changes in the transfer
incomes and the transfer share, but to varying degrees. We attempt to separate these three
factors and define their relative importance. We also assess how the strength of their
contributions have varied over time.

Given the diversity of programs that comprise the federal social safety net, and therefore
transfer spending, we decided to focus on one of the most consequential programmatic
changes during the study period: Medicaid expansion following passage of the Affordable
Care Act. Focusing on such a large program expansion should increase the likelihood we can
detect a meaningful effect and allow us to set a plausible outer bound for how significant a
role programmatic effects are likely to have played in the long-term rise in the transfer share.

The expansion of Medicaid among participating states covered individuals below 138 percent
of the federal poverty line, but had the largest impact among non-elderly low-income adults
without children younger than 18. We can explore what effect the expansion had among
counties in expansion states after conditioning on the demographic and economic profiles of
their respective populations.

We find unsurprising results - Medicaid expansion led to an increase in the share of personal
income being derived from government transfers. By expanding the rules to include a broader
base of program participants, the transfer outlay increased.

Figure 15: Change in government transfers/personal income

Effect of Medicaid expansion in impacted states, defined by the year relative to expansion.

Across the post treatment period, ATT is 0.4585 and the SE is 0.072.
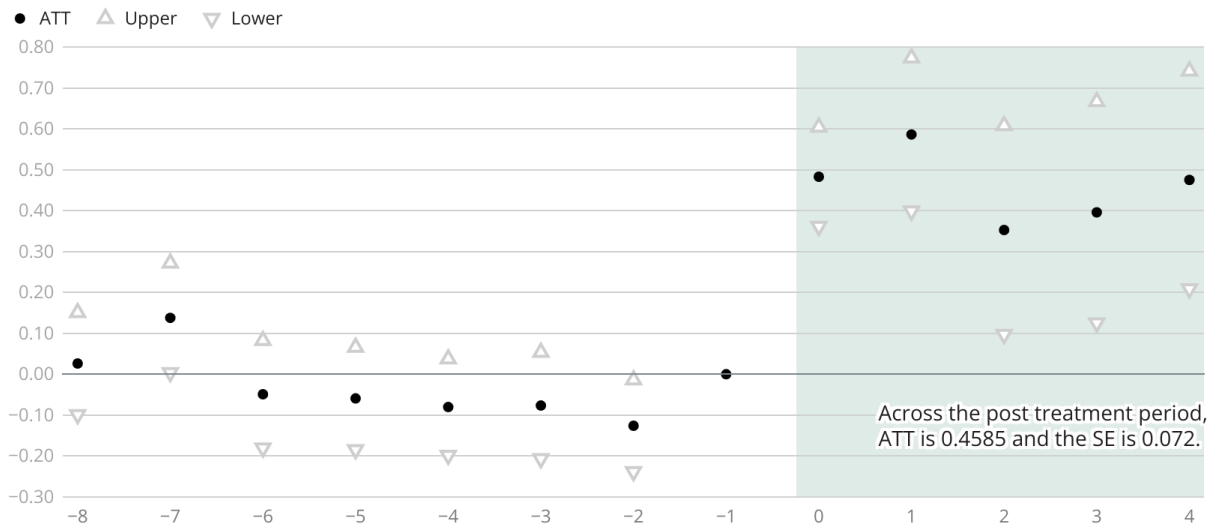
Standard errors are clustered by year and state. Upper and lower bounds depict a 95 percent confidence interval. Calculated using the staggered difference-in-difference methodology outlined in Callaway, Brantly, and Pedro HC Sant'Anna. "Difference-in-differences with multiple time periods." Journal of econometrics 225.2 (2021): 200-230. It was estimated using the balanced panel of counties over the sample period with a formula accounting for the population of each county, the employed share of the population in each county, the share of the population 65 year old and over, and the poverty rate of the county. The aggregated average treatment on the treated effect is calculated using the dynamic specification outlined in the "did" package in R. Across the post treatment period, the ATT is 0.4585 and the SE is 0.072.

That being said, the increase in transfers as a share of personal income is relatively small. The aggregated average treatment on the treated effect of Medicaid expansion on the share of personal income derived from government transfers was an increase of 0.46 percentage points.

How should we think about the size of the impact of Medicaid expansion on the share of income derived from government transfers relative to factors like an aging population or the incidence of poverty?

To do this, we estimated the relationship between changes in demographic and economic county characteristics, on the one hand, and those same counties transfer dependence in the long-run. In the simple model that follows, we estimate the relationship between the following variables on the three outcomes of interest (transfers as a share of total personal income; transfers per capita; and total personal income per capita):

- Share of a county's population 65 and over (a proxy for aging and program participation)
- Poverty rate of a county (a proxy for both economic strength and program participation)
- Employment to population ratio (proxy for economic strength)
- Urban status of counties (proxy for economic structure)

● Year fixed effects (account for nationally impactful shocks independent of a given county's characteristics)[19]

Table 3: Effect of demographic and economic characteristics

Estimating the relationship between demographic and economic characteristics and measures of transfer dependence from 1970- 2022.

Dependent var.:	Gov. transfers/personal income	Gov. transfers per capita	Personal income per capita
Share 65+ - Baseline effect (1970s)	0.4331*** (0.0339)	26.11*** (3.885)	34.80 (55.32)
Share 65+ in 1980s	*0.0644*** (0.0183)*	*36.93*** (4.797)*	*-41.09 (33.80)*
Share 65+ in 1990s	*0.0706* (0.0282)*	*73.75*** (8.092)*	*-101.3* (46.74)*
Share 65+ in 2000s	*0.1577*** (0.0412)*	*147.0*** (14.83)*	*-169.5* (67.09)*
Share 65+ in 2010s	*0.1725*** (0.0381)*	*237.8*** (19.04)*	*-7.108 (62.61)*
Share 65+ in 2020s	*0.0799* (0.0315)*	*288.6*** (15.54)*	*81.92 (61.63)*
Poverty Rate - Baseline effect (1970s)	0.1632*** (0.0193)	-1.402. (0.8075)	-197.1*** (16.29)
Poverty Rate in 1980s	*0.1199*** (0.0127)*	*2.935* (1.422)*	*-136.0*** (14.32)*
Poverty Rate in 1990s	*0.2646*** (0.0174)*	*32.09*** (4.361)*	*-180.0*** (23.40)*
Poverty Rate in 2000s	*0.4255*** (0.0284)*	*76.29*** (8.101)*	*-378.2*** (37.03)*
Poverty Rate in 2010s	*0.6221*** (0.0283)*	*133.9*** (12.18)*	*-670.9*** (44.79)*
Poverty Rate in 2020s	*0.8479*** (0.0377)*	*228.9*** (24.22)*	*-928.8*** (56.72)*
Emp./Population	-0.1167*** (0.0154)	-6.350** (2.075)	259.8*** (34.95)
Fixed Effects:			
Year	Yes	Yes	Yes
County Type	Yes	Yes	Yes
S.E.: Clustered	By: Year & State	By: Year & State	By: Year & State
Observations	164,138	164,138	164,138
R2	0.80230	0.95417	0.76886
Within R2	0.63584	0.49697	0.45261

Two key stories emerge in our analysis of the forces impacting the state of transfers in America, the aging of the population and the declining incidence of poverty. Relative to 1970, the typical (median) county saw the share of the population aged 65 and older increase by 7.6 percent. On the other hand, the typical county saw their poverty rate fall by 4.9 percent.

Aging is the strongest force impacting the expanding reliance on transfers, particularly in the context of a declining incidence of poverty. To account for the possibility that aging's impact has varied over time or from one economic or policy era to another, we determine a base effect for the 1970-1979 period, which corresponds to the first decade of our study window.

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[19] Note that we do not include a measure of population change in this analysis. Given that this cut of the data is exploring year-by-year changes in transfers, it is poorly suited for a measure of the long-run impact of population growth rates, particularly changes in growth as measured over a multi-year time horizon.

We then incorporate dummy variables to identify different decade linked effects for the 80s, 90s, 2000s, 2010s, and the first few years of the 2020s. In interpreting the table, the coefficients for subsequent decades should be added to the base coefficient to yield the full effect of aging in each period.

Reading Table 3, we find that the effect of aging has grown steadily since the 1970s. The largest jump occurred between the 1990s and the 2000s, as the effect of a 1.0 percentage point increase in the share of the population 65 years or older on the transfer share of personal income increased from 0.50 percentage points to 0.59 percentage points. That is a 17.3 percent increase in the effect size from one decade to the next. The aging effect weakens in the 2020s, but this is presumably due to the surge of pandemic-related transfer spending during two of the three years of the decade captured by our sample.

After programs to support old-age Americans, programs to support poor and low-income Americans constitute the next largest tranche of transfer spending. Accordingly, we see relatively strong coefficients for the poverty rate's effect on the transfer share. Appropriate for the nature of this indicator is the fact that we see jumps in effect size across decades– culminating in the largest coefficient in the 2020s, when much pandemic-era relief was distributed to low-income households. The stronger coefficients do not necessarily mean more money, they may also imply improved targeting of transfer spending towards high-poverty areas and in response to economic shocks.

Among our proxies for economic strength, the impact of the employment-to-population ratio was in the expected direction: as the employment-to-population ratio falls, the transfer share rises. However, the effect of such lagging local economic performance is small after controlling for the effect of aging or the baseline degree of economic distress captured by the poverty rate. We find that the employed share of the population would need to increase by 1.2 percentage points to offset a single percentage point increase in the share of the population 65 and over.[20]

How can we compare the relative impact of an aging population and shifts in the prevalence of poverty across the country over time? We can use our regression to predict what the transformation might have looked like had the share of the population aged 65 and above and the poverty rate remained at the same level as in 1970. As we can see in Figure 16, the reduction in poverty since the 1970s has led to a lower dependence on transfers, while the aging of the population has led to a higher level of dependency. Between the two, it is clear that the elevated level of transfers is a more direct result of the age profile of the country, as shifts in the prevalence of poverty have actually worked to reduce dependence even in a potentially more generous transfer environment.

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[20] A one percent increase in the employed share of the population increases personal income per capita by $259.80. A one percent increase in the share of the population aged 65+ results in a $314.71 increase in government transfers per capita throughout the 2020s.

Figure 16: What have the shifts in demographic and economic characteristics meant for the transfer share of income in the median county?

Using the regression model, we generate predictions for the median counties transfer share while holding the age profile constant at the 1970s level or poverty rate constant at the 1970s level.

— Kept 1970s share of 65+   — Kept 1970s share in poverty   — Observed
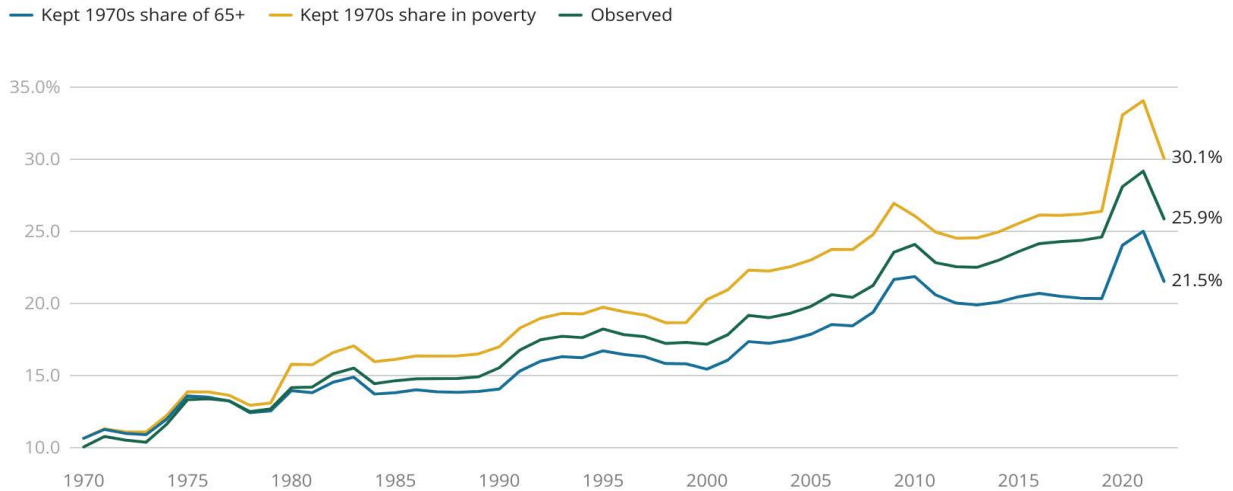
Source: EIG analysis of Bureau of Economic Analysis data

A missing element of this analysis is the long-run signal of population changes. While the report itself discusses the importance of population gain and loss as a driver, we do not include that explicitly here. Broad and long-running trends in population growth are implicit in some variables, but the explicit estimation of the effect of population change is left outside this regression because we are exploring year-by-year changes in transfers. Such an annual focus makes the model a poor fit for assessing the impact of long-run population growth and change.

III. Random Forest Analysis

Statistical techniques make it possible to control for aging to see where the transfer share has risen more or less than would be expected based on the share of the population over 64 alone. Specifically, we utilize a predictive modeling tool, random forests, to generate reasonable predictions of what the transfer share of a county would be if we only consider the age profile of a county.

Random forests are a machine learning model built on the ideas of recursive partitioning. The advantage of a random forest is the nonparametric design and high dimensionality, allowing for the modeling of complex and nonlinear relationships between inputs and outputs. In the case of aging, we are looking to explore the simple relationship between the transfer share of personal income and the share of the population over the age of 65. We opt to use a random forest because increases in the age profile of a county may not have a linear, or easily identified polynomial, relationship to transfers and personal income. Rather than impose a parametric structure, we instead allow the data to tell the story.

After training the random forest on county-by-year data, we can generate a set of

predictions.[21] The difference between predicted transfer share of income and the observed value help break apart the demographic and economic factors of rising transfer dependence across space.

The transfer income hotspots and cold spots, defined by the measured difference between prediction and observation, allow us to identify where healthy local economies have served as bulwarks against a rising transfer share, and where weak local economies have buckled under its weight.

The rise of the transfer share has been much less than expected given local age structures across the upper Great Plains, Mountain West, and high-earning coastal regions. These areas have seen some of the nation's strongest growth in other sources of income, which have compensated for an aging profile of residents. In Sarasota County, for its part, the transfer share has risen more or less in line with predictions (falling within one standard deviation of the prediction).

By contrast, the rise in the transfer share above and beyond what aging alone could predict has been much greater in areas of chronic economic distress. It has also risen faster than aging alone would have predicted in Roscommon County and several of its neighbors in Northern Michigan.

Many Americans—53 million spread across 349 counties—live in areas that are far less reliant than their age structure would predict, defined as being one standard deviation below the model's prediction.

But relatively few people—10 million—live in the counties that are most reliant on age conditioned transfers, spread across 428 counties, defined as more than one standard deviation above prediction. These extremely transfer-reliant counties received 4.4 percent of all transfers paid in 2022 (compared to their 3.1 percent of total population.)

The vast majority of Americans, then—270 million people, or 81 percent of the total population —live in places where the transfer share is rising more or less in line with peers and as predicted given their age. These are the places riding the gray wave of "Transfer"-mation.

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[21] Code available on our GitHub page (https://github.com/EIG-Research/EIG-Great-Transfer-Mation). All random forest analyses were done in R using the Ranger package.

Figure 17: Transfer incomes increasing in excess of aging

1970 - 2022

> 2 sd above prediction > 1 sd above within 1 sd > 1 sd under
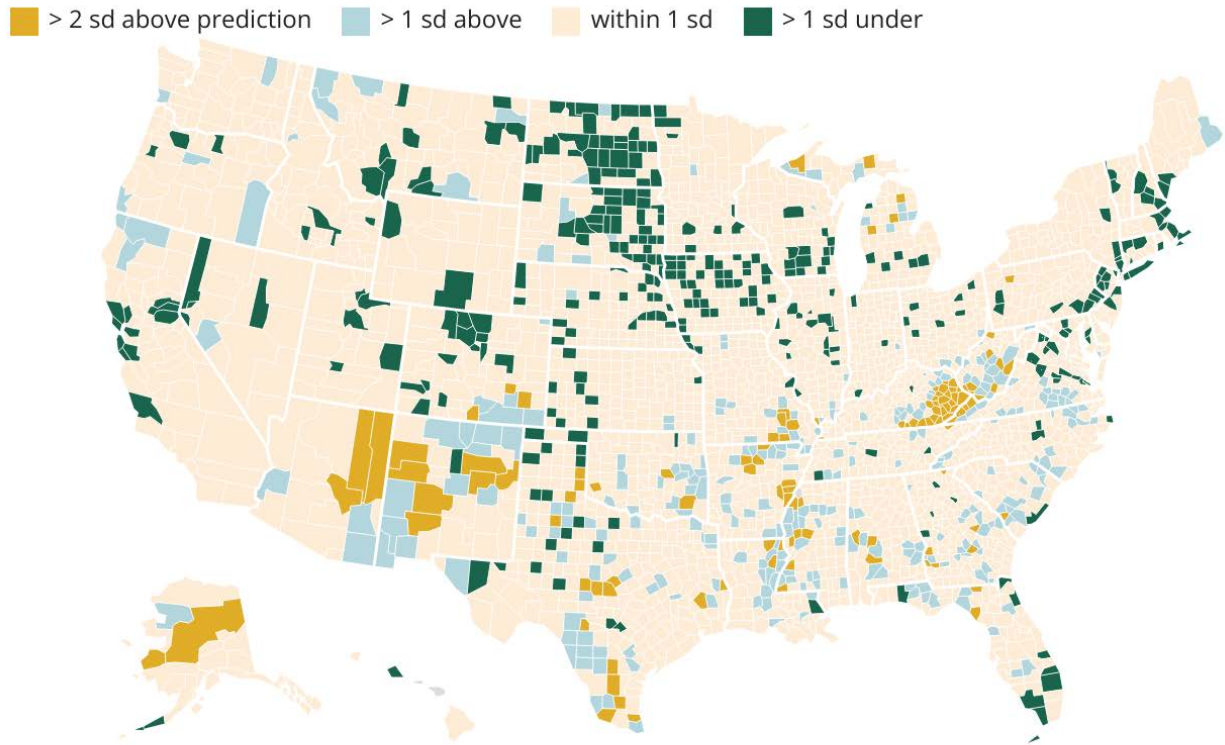
Note: Actual government transfers / non-transfer income ratio relative to predicted ratio, based on demographic aging.

Source: EIG analysis of Bureau of Economic Analysis and Census Bureau data