TWO VIRGINIAS

one that's thriving, one that's dying

Addressing population loss in Southwest Virginia through Talent Attraction Programs

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DEDICATION

This report is dedicated to my grandparents; Eldred Hiter Robinson, Jane Haddon Pitt, DeWitt Miller, and Jane Ann Miller.

Memories of my childhood are comprised of family reunions, holidays, weddings and funerals set against the scenic backdrop of the Blue Ridge Mountains, the rolling hills of the Shenandoah Valley and my grandfather's family farm. To me, Virginia was always a pastoral paradise, a mix of people working blue collar, and professional jobs.

When I moved to Washington, DC, I experienced Arlington and Northern Virginia for the first time. It was a bustling metropolis with construction around every corner and overcrowded metro stops. It was a stark contrast to the Virginia of my grandparents. As I grew older, I traveled back to visit my extended family. Long gone were the lively main streets of Galax and Floyd; instead, there were empty buildings, shuttered stores, and closed restaurants.

Although traditional economists may argue that migration to urban centers is necessary and inevitable, it ignores and diminishes the lives of the people who have lived there and called these places home for generations. This report studies this migration phenomenon and how population loss contributes to the growing dichotomy between the Virginia of my youth and the large city that I had lived in for the past six years.

Thanks to the power of the places we call home, I know that these small towns are rich with cultural and potential economic value. Revitalizing these areas will be a challenge and require innovative solutions, but abandoning these regions and the Virginians who live there would be inconceivable.

ACKNOWLEDGMENTS

I would like to thank Evan Feinman and Stephanie Kim of the Tobacco Region Revitalization Commission for their input and guidance in assisting my research studying economic development initiatives and their subsequent impact in Virginia. I thank them for their interest, flexibility and willingness to meet with me over the past year. I would also like to thank Professor Kirsten Gelsdorf and Professor Lucy Bassett of the Frank Batten School of Leadership and Public Policy. Professor Gelsdorf, you inspired me to find a new passion for my project, and coached me on the importance of defending one's work and handling the hurdles of dogmatic bureaucracy. Professor Bassett, your patience, support, encouragement and mentorship allowed me to navigate this stressful and challenging semester. I could not have made it through this APP without both of you. Thank you to Nora Surbey, Meagan Thompson, Landon Webber and Juliet Buesing for their superior edits and advice on the direction of this report.

CLIENT

This research was compiled and prepared for the Tobacco Region Revitalization Commission (TRRC). TRRC's mission is to promote economic growth in former tobacco-dependent communities.

DISCLAIMER

The author conducted this study as part of the program of professional education at the Frank Batten School of Leadership and Public Policy, University of Virginia. This paper is submitted in partial fulfillment of the course requirements for the Master of Public Policy degree. The judgments and conclusions are solely those of the author, and are not necessarily endorsed by the Batten School, by the University of Virginia, or by any other agency.

HONOR STATEMENT

On my honor as a student, I have neither given nor received unauthorized aid on this assignment.

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KEY ABBREVIATIONS

TRRC: Tobacco Region Revitalization Commission
TAP: Talent Attraction Program
USDA: United States Department of Agriculture
ROI: Return on investment

KEY TERMS

Curse of knowledge: Believing that someone has the background knowledge to understand what another is communicating.

High school reunions: Meeting former high school classmates after a period of time post-graduation. Generally scheduled every five years or so.

In-Migration: Process of people moving to a new area to live there permanently.

Individual fixed effects: Variables that are constant across a group of individuals i.e. gender or ethnicity. These variables either don't change or change at a constant rate over time.

Out-Migration: The movement of persons away from a place or locality to settle in another

Rural development: Improving economic or social conditions in rural areas, combatting isolation, preserving natural resources, and supporting business.

Qualitative research: Research that relies on data obtained from interviews, observations, focus groups etc. Data is nonnumerical.

EXECUTIVE SUMMARY

National and regional trends indicate rural communities in the U.S. and in Virginia continue to face population loss due to migration and departure patterns. Data supports this finding, with every county in Southwest VA losing population since 2010. For example, in rural areas of Virginia, over half of these counties have experienced population loss, whereas the rest of VA has seen a population increase of 6.5 percent from 8,001,024 to 8,517,685.[1] This rural "brain drain" impacts local economies and seriously threatens the existence and vitality of these communities.

However, economic development efforts have shown some success; many small towns across the nation are experiencing in-migration (Appendix 1).[2] Designing and implementing financial incentives to attract and retain talent is a task primarily led by state and federal government. A well-developed talent attraction program can combat population loss and act as a stimulus for reviving local and regional economies. There are different program strategies, and oftentimes the challenge for legislators and public officials is finding the right type of talent attraction program to achieve sustainable population growth and subsequent increase in tax revenue to support these communities.

Different types of incentive programs exist to attract and retain talent in rural populations. Conditional grants, scholarship, housing credits, loan repayment and forgiveness programs are some of the most commonly used tactics to target newly graduated college students. These programs face two major challenges: metrics to evidence significant returns and a focused incentive strategy that shows a positive return on investment. Federal talent acquisition programs focused on medical and teaching fields have been successful. However, rural populations, including Southwest VA, have yet to identify the key to attracting talent to revive these shrinking communities.

In 2020, the Virginia Tobacco Region Revitalization Commission (TRRC) unveiled a new talent attraction program known colloquially as the TAP Program. As TRRC administers and evaluates TAP, I have identified four alternatives that the Commission could adopt to better combat population loss:

1. Status Quo
2. Awareness and Education Efforts
3. Expansion Beyond Traditional Audiences
4. Diversification of Financial Incentives

I will evaluate these alternatives using four criteria to inform my recommendation to the Tobacco Region Revitalization Commission. Criteria include:

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[1] Sorrell, "Southwest Virginia's population continues to drop, Weldon Cooper Center data shows."
[2] Anderson, "Biggest Boomtowns in Every State."

1. Degree of Ownership and Administrative Capacity
2. Equity
3. Time Horizon
4. Likelihood of Retention and attraction

These alternatives would complement or be incorporated into the existing TAP program. This approach will allow the TRRC's TAP program to complete its pilot year and create a smoother process for alternative consideration and implementation after "year one" of the existing program is complete.

Considering the approach and analysis outlined above, **I have recommended a two-phased approach, starting with an awareness and education initiative followed by an expansion of the program to include untraditional audiences.** TRRC should consider these recommendations and implementation plan during the assessment and planning phase of the next iteration of TAP.

PROBLEM DEFINITION

While Northern VA and Richmond VA have seen an increase of an estimated 12 percent in population growth since 2010, Southwest VA has experienced a decline of over 8 percent.[3] This population loss has contributed to a significant decrease in tax revenue. For example, severance tax revenue has declined 50 percent in recent years, limiting critical community services such as education and healthcare. Furthermore, these regions battle an aging population with a median age of over 40, higher than the state average of 37. The poverty rate in Southwest VA is 65 percent higher than the state average and the median income is 41 percent lower than the state average.[4]

Virginia state government and local non-profits have attempted to attract or retain a younger working population through financial incentives such as scholarships, grants and loans; however, these programs have so far been ineffective with many recipients not fulfilling the terms of the financial agreements. Ultimately, there are still too few migrants and returning populations to support sustainable economic development. If these programs remain unsuccessful and population continues to decline, Southwest VA will stay financially vulnerable. These communities will likely turn into ghost towns, with existing residents paying the ultimate price.

CLIENT PROFILE

The Tobacco Region Revitalization Commission is a loan and grantmaking government commission created in 1999. In 1998, tobacco companies settled lawsuits concerning the costs of smoking-related illnesses.[5] Four tobacco companies, Philip Morris, J. Reynolds Tobacco Company, Brown & Williamson Tobacco Corp, and Lorillard Tobacco Company paid over $200 billion to states for tobacco consumption health care costs.[6] This settlement subsequently raised the cost of tobacco as consumer demand diminished.[7] Virginia, due to its economic dependence on growing and processing tobacco crops, received $4 billion from the lawsuit. Fifty percent was allocated to revitalize tobacco economies by compensating tobacco farmers in identified regions.[8] The government established the Tobacco Region Revitalization Commission tasked with allocating funds to economic development projects in 24 regions in Southside VA and 17 regions in Southwest VA.[9] Twenty-eight elected state delegates and an estimated 6 staff members comprise the Commission. Internal committees within the Commission include: Incentives and Loans, Education, South Side VA, and Southwest Virginia.[10]

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[3] Lombard, "State Population Growth Slows, with Most New Residents in Northern Virginia."
[4] Gibson, "Severance tax decline, layoffs bring tough financial times in coal region."
[5] Tobacco Region Revitalization Commission, "About the Commission."
[6] Ibid.
[7] Felberbaum, "Tobacco companies make payments under state settlement."
[8] Ibid.
[9] Tobacco Region Revitalization Commission, "About the Commission."
[10] Franklin News-Post, "Kilgore and Ehrhardt: "The Tobacco Region Revitalization Commission: Meeting Tomorrow's Challenges."

The commission has changed their economic development strategy and funding allocation multiple times, including a college scholarship program for high school students, a loan forgiveness program, a talent attraction program, and local regional projects.[11] The college scholarship program awarded $2,000 per graduating student from mid 2002 until 2016, but while the scholarship program was well-received, students were not necessarily returning to the region to reinvest their acquired skills.[12] In an attempt to rectify the issue, TRRC pivoted by changing the scholarship to a loan, forgiven if the student returned to the region after graduating. Unfortunately, only about half of recipients returned.[13] Now, TRRC is awarding money to college graduates simply to live and work in Southwest and Southside VA. The goal of this revised talent attraction program is to draw in new residents or incentivize existing residents to stay, find jobs, and create businesses to jumpstart the local economy.[14]

BACKGROUND

National Population Trends

After the Great Recession from 2007 til 2009, counties with fewer than 100,000 residents were disproportionally impacted compared to higher population areas.[15] People living in less dense areas lost 17,500 businesses, while areas with over 1 million residents added businesses.[16] Low employment areas, compounded by the Great Recession, suffered the impact of dying industries and disparate economic opportunities. Country-wide employment trends indicate Americans are moving en mass from more rural areas to urban areas, as 8 in 10 people now live in cities of a half-million people or more. In 2000 approximately, 79 percent of Americans lived in urban areas, compared to 80.7 percent in 2010.[17] Population has increased in about 35% of rural areas across the nation including the Pacific NW, Hill Country in TX and Ozarks in Arkansas. 35% including Southwest VA, have experienced population loss in the last three decades, however, some areas in North Dakota, New Mexico, and rural areas in Pennsylvania are experiencing pronounced de-population, also known as accelerated decline, with lower population rates now than in 1950.[18] (Figure 1).[19]

[11] Friedenberger, "Virginia's coal tax credits, tobacco commission grants falling well short of goals, JLARC finds."
[12] Friedenberger, "Move to rural Virginia, and the tobacco commission will help pay off your student debt."
[13] Ibid.
[14] Ibid.
[15] Thiede, Monnat, "The Great Recession and America's Geography of Unemployment."
[16] Economic Innovation Group, "Distressed Communities Index."
[17] Lambert, "More Americans move to cities in past decade-Census."
[18] Cromartie, Vilorio, "Rural Population Trends."
[19] Anderlik, Cofer, "Long Term Trends in Rural Depopulation and Their Implications for Community Banks." FDIC Quarterly.

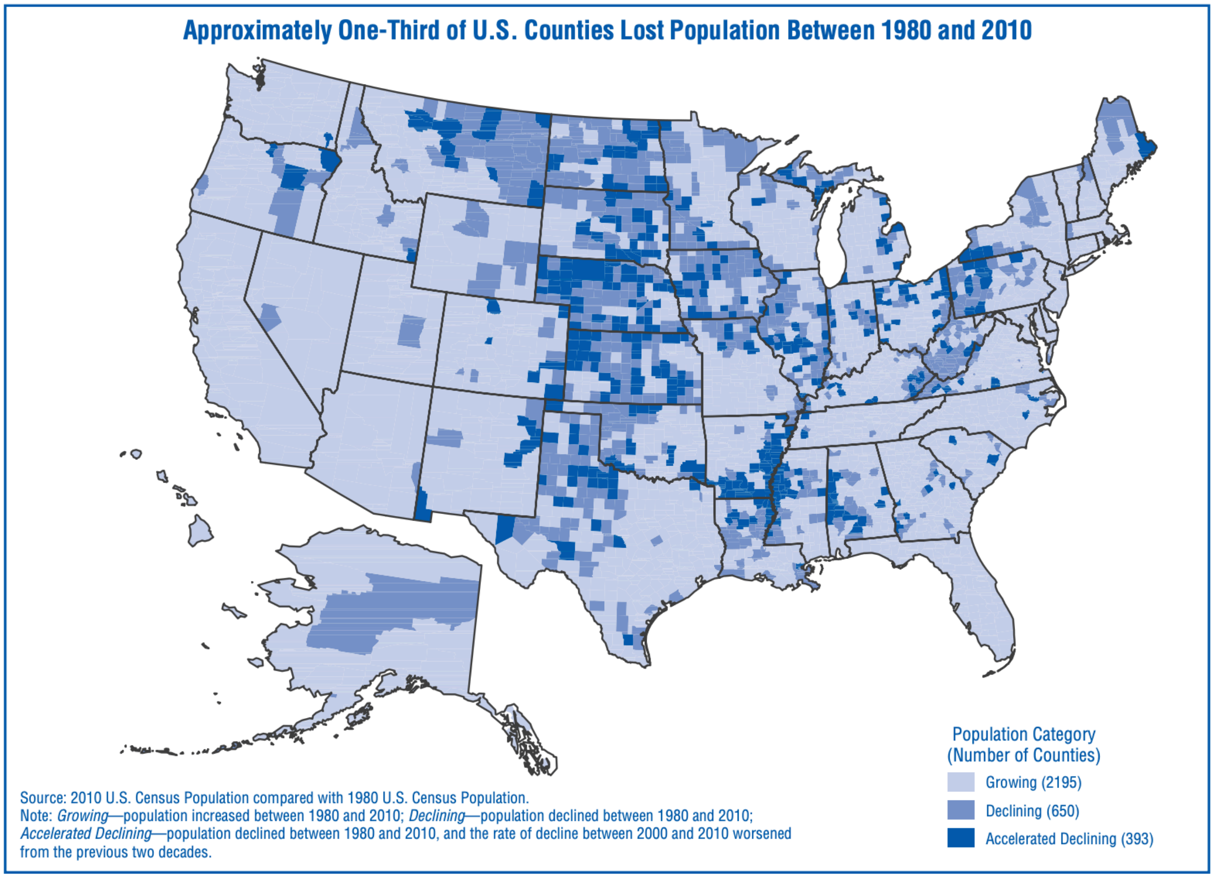

Figure 1: Map of population trends in US from 1980 to 2010, identifying growth, decline and areas experiencing accelerated decline.[20]

Regional Context

While the population has grown in Northern VA, Southwest VA has continued to see a steady decline in residents. For example, the population of Falls Church in Northern VA grew by 5.2 percent from 2016-2017; however, regions in the Southwest lost an estimated 2.3 percent of their residents.[21] Small communities are left with infrastructure, education, critical safety and health services they cannot support.

The decline of the tobacco industry in Southwest VA has contributed to the highest unemployment rate in the state. According to the Bureau of Labor Statistics, cigarette manufacturing employment has declined steadily in recent years from 46,000 in 1983 to 26,000 in early 1999.[22] This decline is especially problematic for VA as the state houses the largest tobacco crop farming and processing center in the nation. Furthermore, this job loss

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[20] Anderlik, Cofer, "Long Term Trends in Rural Depopulation and Their Implications for Community Banks." FDIC Quarterly.
[21] TRS Staff, "Virginia Records 6.5 Percent Gain in Population Since 2010."
[22] USDA, "Vulnerable Workers, Businesses, and Communities."

adversely impacts specific local economies, creating ripple effects that prompt out-migration and stagnate regions (Figure 2, Figure 3).[23]

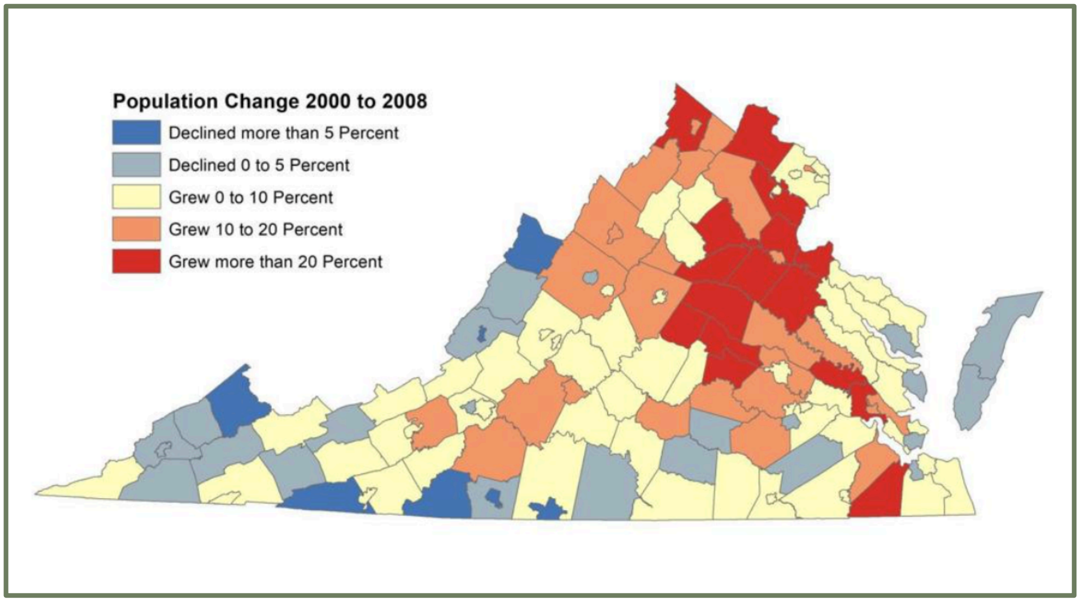

Figure 2: Map of population trends in Virginia from 2000 to 2008[24]

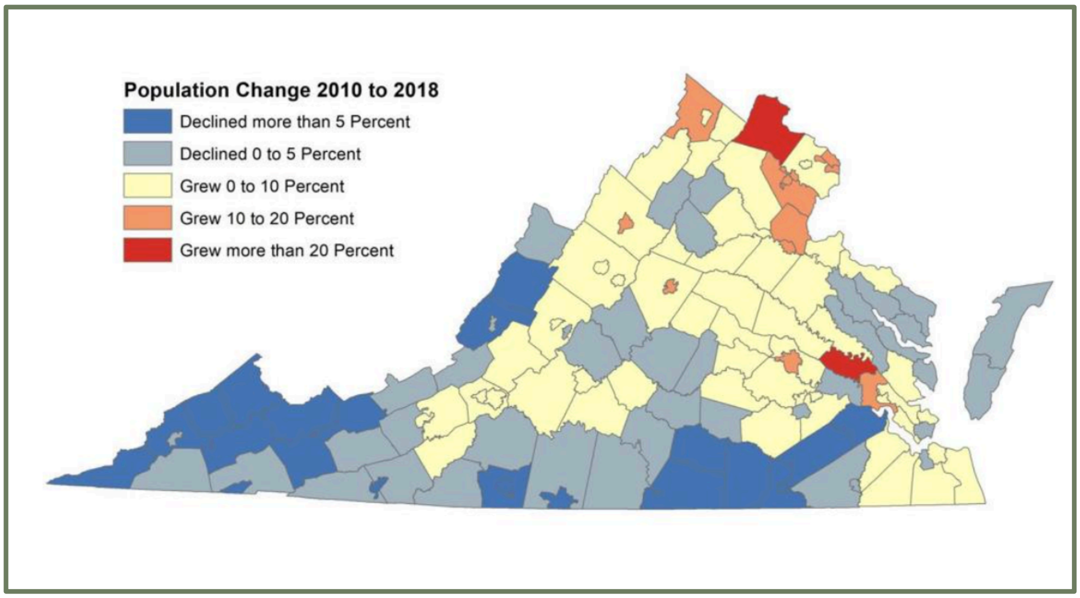

Figure 3: Map of population trends in Virginia from 2010 to 2018 (note increase of blue and dark blue in Southwest VA.[25]

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[23] Gibson, "Severance tax decline, layoffs bring tough financial times in coal region." Weldon Cooper Center, "Editorial: Demography reveals the true state of the commonwealth."

[24] Ibid

[25] Ibid

Young People and Migration

A recent peer-reviewed study by researchers from Georgia Tech and the University of Illinois found that young people have been a significant source of population growth in urban centers and are prone to stay long-term in urban centers.[26] Researchers honed their results based on four different age groups; those aged 20-24, 25-34, 35-44 and 45-64. B. Lee, Y. Lee, and Shubho tracked each cohort using census data from the start of the decade to the ending of the decade. They found that the youngest group, now aged 20-24, are more urban than the preceding generation.[27] However, while migration to urban centers has remained strong for Millennials and Gen X-ers, the specific reasons for location preferences are different.[28]

- 20-24 cohort: Amenities, including entertainment, recreation, food, culture
- 25-34 cohort: Transit, job opportunities
- 34-44 cohort: Ease of commute, access to jobs

This topic is heavily debated today, as Covid-19 has displaced a significant population of urban dwellers (Appendix 2). Reviewing re-location trends compared to a statistical analysis might provide a window into future migration patterns, for example, four out of five urban dwellers report interest in moving to rural areas.[29] Jeffrey Brown, a journalist with PBS news, noted in a recent interview that large US cities are experiencing a decline in young adult populations for the fourth year in a row with a combined loss of 30,000 millennials in 2018.[30] EY's *The Millennial Economy 2018* survey noted that previous urban young professionals are now being drawn to second-tier cities and smaller towns due to more affordable home prices and a better opportunity for entrepreneurial endeavors.[31] Millennials cite home affordability, cost of living and commute time as being primary drivers to relocate in less urban areas.

The Problem of Population Loss

Population loss and poverty are inextricably linked. The poverty rate in Southwest VA is 65 percent higher than the state average and the median income is 41 percent lower than the state average.[32] As population declines there is a rise in dependency ratio: the number of those not in the labor force to those in the labor force.[33] As population declines, the cost rises per person to support previous services and prices. In these rural areas, generations are becoming smaller and smaller in comparison to previous ones. There is a greater pressure on those currently in the work force to do double the work of their parents or grandparents to support their communities. This dynamic can cause rural areas to experience "mini recessions", as their economic value or productivity per person cannot outweigh the decline in

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[26] Florida, "Young People's Love of Cities Isn't a Passing Fad."
[27] Ibid
[28] Ibid
[29] NPR, "Reversing the 'brain drain' in rural America."
[30] Brown, "Why millennials are moving away from large urban centers."
[31] Koch, "Millennials are changing the world around them."
[32] Gibson, "Severance tax decline, layoffs bring tough financial times in coal region."
[33] Smith, Trevelyan, "Older Population in Rural America: 2012-2016." American Community Survey Reports.

total population.[34] The cost of rural population loss and rural poverty manifest in the following ways:

- Healthcare
- Housing
- Food Insecurity

Healthcare

Low population and impoverished rural regions struggle to access healthcare due to affordability, insurance coverage and proximity. These barriers lead to negative health outcomes, including preventative screening and treatment to illnesses. According to a U.S. Census Bureau report, in 2018, 9.1% of non-metro populations did not have any type of health insurance, compared to 8.4% of those in urban areas.[35] Additionally, in a government report, "Impact of the Affordable Care Act Coverage Expansion on Rural and Urban Populations," 26.5% of uninsured, and rural residents put off or did not receive care purely due to cost.[36] Proximity and availability of quality care also remains a challenge for rural areas as limited or non-existent public transportation makes traveling to care impossible without access to a private means of transportation. Rural areas also struggle to recruit or retain health care professionals creating a void of regular providers to establish consistent care for rural populations with 62.93% of areas designated as "Primary Care Health Processional Shortage Areas" were in rural regions.[37]

Housing

While affordable housing impacts communities across the country, housing conditions in rural communities are especially egregious. According to the Housing Assistance Council, more than 3 percent of rural households occupy a residence that has inadequate services like plumbing, heating, or water, and over-crowding.[38] Thirty percent of rural households pay more than 30 percent of their income on housing costs, even though rural housing prices are much lower than the rest of the country.[39] Rural areas were hit especially hard during the 2007 housing crisis, as many home owners borrowed with bad credit, or without stable income to make payments.[40]

Food Insecurity

Another common misperception is that food insecurity is higher in urban areas, however, more than 16.5% of rural households face food insecurity than 13.5% in metropolitan areas.[41] Food

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[34] Ibid

[35] Berchick, Barnett, Upton, "Health Insurance Coverage in the United States: 2018."

[36] Avery, Finegold, Xiao, "Impact of Affordable Care Act Coverage Expansion on Rural and Urban Populations."

[37] US Department of Health & Human Services, "Designated Health Professional Shortage Area Statistics."

[38] Housing Assistance Council, "Poverty in Rural America."

[39] Ibid

[40] Ibid

[41] Food Research and Action Center, "Rural Hunger."

insecurity ties in to health outcomes exacerbated by issues with rural healthcare mentioned above. For example, diabetes is 17 percent higher in rural areas and self-reported adult obesity is 34.4 percent compared to 28.7 percent in metro areas.[42] SNAP participation is also higher in rural areas at about 16 percent compared to 13 percent, however, many of those qualified for SNAP do not receive or renew for benefits due to a lack of access or proximity of offices.[43]

Population loss can also impact urban areas. Cities can experience negative ripple effects like overcrowding. As migrants move from rural areas to larger cities, negative impacts emerge, including:[44]

- Environmental strain
- Unaffordable housing costs
- Respiratory diseases
- Poor public education

LITERATURE REVIEW

Exploring Trends and Approaches to Rural Talent Attraction

In recent years, efforts have been made to address out-migration and poverty issues through financial incentive-based talent attraction programs. While four out of five urban dwellers report interest in moving to rural areas, talent attraction programs have yet to identify the primary catalyst to help interested individuals make the move.[45] Three key considerations for talent attraction programs to consider include:

Approach 1. Targeting populations beyond those designated as "young" or newly graduated
Approach 2: Extending Aid Beyond Traditional College Graduates
Approach 3: Revised Language and Psychological Framing

This analysis will compile existing research to identify the benefits and potential drawbacks of these in-migration considerations.

Approach 1: Population Targeting of a Slightly "Older" Younger Population

In a recent Gallup poll, four out of five Americans that live in an urban area say that if they had a choice they would prefer to live in a rural community.[46] The poll was conducted via telephone interviews with a random sample of 1,499 adults, with 95% confidence.[47] Gallup

[42] Bolin, Ferdinand, "The Burden of Diabetes in Rural America." Southwest Rural Health Research Center.
[43] Food Research and Action Center, "Rural Hunger."
[44] University of Michigan, "Problems of Urban Life."
[45] NPR, "Reversing the 'brain drain' in rural America."
[46] Newport, "Americans big on the idea of living in the country."
[47] Ibid.

found that older participants are more likely to prefer to live in rural areas as compared to younger generations. (Figure 4).[48]

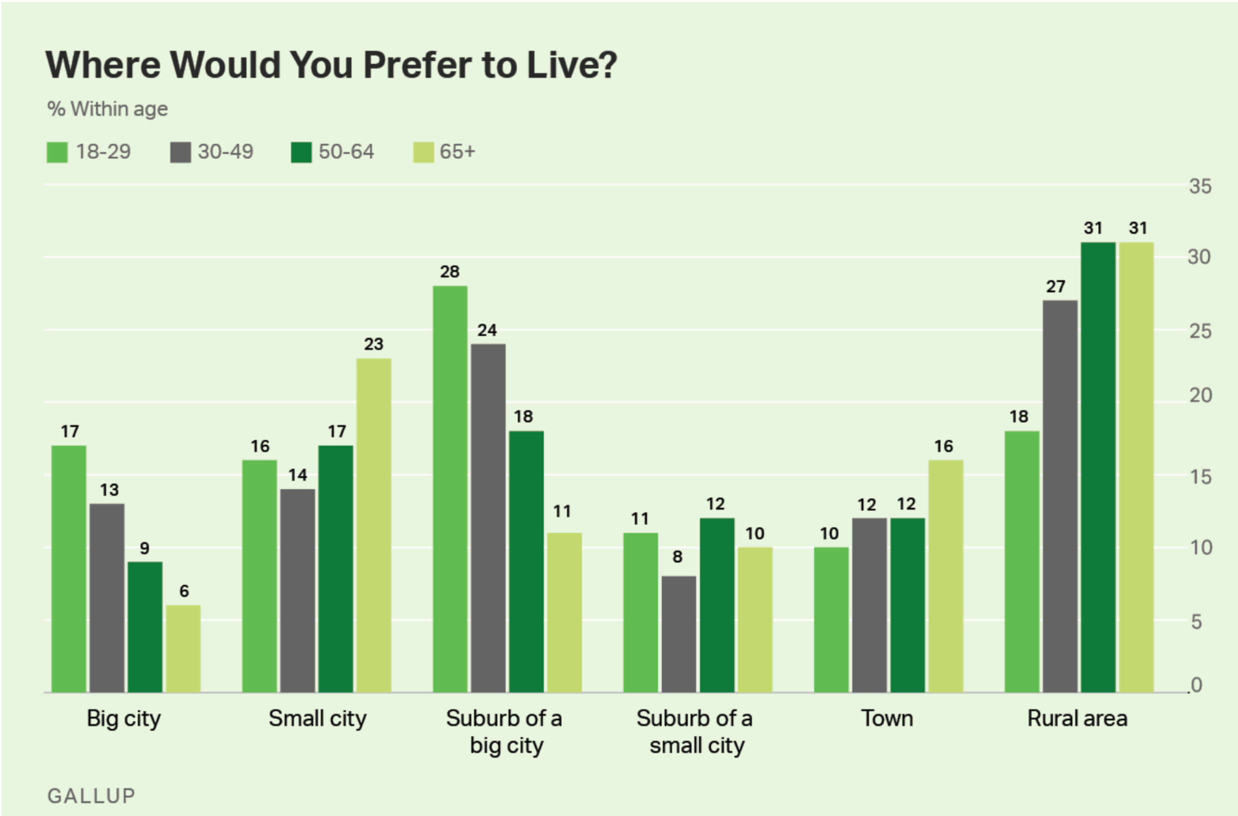

Figure 4: Graph of Americans preferences for where they would like to live versus where they live now.[49]

While desire to live in rural areas is growing, "macro" forces, like rising student loan debt and higher number of well-paying jobs in urban areas, bar this move. Census data shows that while the 20-24 year-olds may be leaving rural communities, 30 to 34-year-olds are migrating back to rural spaces.[50]

A study conducted by the University of Minnesota's Extension Center for Community Vitality reflected these findings. Using a "simplified cohort analysis" researchers examined shifts in Minnesota's rural regions and small towns from 2000 to 2010 and compared their projected or "expected" population size to the actual "observed cohort size."[51] In the 30-34 age range, they found a higher increase in the "observed cohort size" compared to the "expected cohort size" that they had forecasted based on statistics from 2000. These quantitative findings may demonstrate a migration increase in mid-life and mid-career populations compared to new college graduates even beyond Minnesota.

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48 Ingraham, "Americans say there's not much appeal to big-city living. Why do so many of us live there?"
49 Newport, "Americans Big on Idea of Living in the Country."
50 Cromatie, von Reichert, and Arthun, "Factors Affecting Former Residents' Returning to Rural Communities." USDA.
51 Winchester, "Continuing the Trend: The Brain Gain of the Newcomers."

Evidence of this trend has also been observed in a plethora of qualitative studies. In-migration and returning populations are highly influenced by family, community and scenic considerations.[52] A 2015 USDA report conducted 300 interviews in 21 rural counties between 2008 and 2009. These interviews took place at 10-year high school reunions and asked attendees their motivating factors in determining whether to leave, stay or return back to their hometowns. Researchers Cromartie, von Reichert, and Arthun identified this 10-year period between graduation and career (approximately ages 18 to 28) is the most "demographically dense stage of life" (i.e. getting married, receiving promotions and job experience, joining the military, and starting a family). This study utilized open ended interviews with subjects that shared similar childhood upbringings yet made different decisions on where to live. Three trends emerged through these interviews with reunion attendees: family, community, and access to outdoor amenities influenced their return to rural communities. In a recent Brookings report, "Examining the Local Value of Economic Development Incentives," returning and new populations take a "place conscious" approach when considering relocating.[53] Desired regions share unique characteristics such as, access to nature, outdoor amenities, historic spaces, and cultural artifacts. These features can be used to lure interested migrants.[54] However, the inability to connect anecdotal stories about why participants are attracted to the region and their subsequent relocation motivation presents a significant drawback to this approach, and requires more quantitative research to evidence this phenomenon.

Case Study: Alaska

Permanent Fund Dividend
New permanent residents receive $1600. Administered by the Department of Alaska Revenue, this permanent fund dividend attracts potential residents and encourages the existing population to stay.

Case Study Alaska*[55]

Approach 2: Extension of Aid Beyond Traditional College Graduates

Community college two-year degree students, certificate students, and high school dual degree students are three populations that are often overlooked for educational financial assistance or loan repayment. However, graduates from these types of programs can qualify and fill a number of well-paying jobs that offer substantial middle-class wages.[56] Some of these careers include; phlebotomist (est. median salary: $36,000), dental assistant (est. median salary: $41,000), and landscaper (est. median salary: $31,000).[57]

[52] Cromatie, von Reichert, and Arthun, "Factors Affecting Former Residents' Returning to Rural Communities." USDA.
[53] Parilla, Liu, "Examining the Local Value of the Economic Development Incentives." Brookings Institution.
[54] USDA, "Rural America."
[55] Ocampo, "Places that Pay You to Move There in 2021."
[56] Ullrich, "Community Colleges in the Fifth District: Who Attends, Who Pays?" Econ Focus.
[57] Williams, "10 Certification Programs for Careers that Pay Well."

Certificate Programs

Certificate programs are non-degree programs that tend to focus on skills-based training for jobs that don't require a college degree. The Integrated Postsecondary Education System reported that 41 percent of community college credentials are non-degree programs instead of traditional associate or bachelor degree programs.[58] Additionally, researchers at Georgetown University's Center on Education and the Workforce found that 24 percent of workers ages 23-65 attended a "vocational, technical, trade, or business program beyond high school," and 75 percent of those attendees successfully completed their program.[59] Initial evidence suggests that certificate programs specifically may be correlated with a higher probability of employment and an increase in wages.[60] Notably, certificate graduates earn 20 percent more than high school graduates who do not have postsecondary education.[61]

Certificate programs can carry a hefty fee and are typically not covered or only partially covered by government loans. Attendees who need financial help are left to pursue limited scholarships or private loans.[62] Eligibility for federal loans require 300 hours and eligibility for Pell Grants, a subsidy from the federal government that are awarded to those who have a demonstrated financial need and are pursuing their first bachelor's degree, require 600 hours for students enrolled in for-credit programs at accredited institutions. The time requirements are often less than what is required for financial assistance eligibility.[63] Currently, 70% of students in certificate programs face an estimated $10,000 of debt. According to an Urban Institute report, "Seventeen percent default within 6 years of graduation and that number rises to 28 percent after 12 years."[64]

However, recent studies have shown promising economic returns of certificate programs. In the study "What About Certificates? Evidence on the Labor Market Returns to Nondegree Community College Awards in Two States" found that positive economic patterns emerged including a significant, and positive short-term and long-term impact on earnings and probability of employment.[65] Researchers Xu and Trimble utilized a fixed-effects model on the individual level, comparing a student's post college earnings with their precollege earnings. They then analyzed the size of this change between certificate earners and those who left college without a degree or certificate. They determined certificate holders, especially in

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[58] Xu, Trimble. "What about certificates? Evidence on the labor market returns to nondegree community college awards in two states." Educational Evaluation and Policy Analysis.
[59] Carnevale, Rose, Hanson, "Certificates: Gateway to gainful employment and college degrees." Georgetown University.
[60] Xu, Trimble. "What about certificates? Evidence on the labor market returns to nondegree community college awards in two states." Educational Evaluation and Policy Analysis.
[61] Carnevale, Rose, Hanson, "Certificates: Gateway to gainful employment and college degrees." Georgetown University.
[62] Finkel, "At rural colleges, workforce development on a budget."
[63] Baum, Holzer, Luetmer, "Should the federal government fund short-term postsecondary certificate programs?" Urban Institute.
[64] Ibid.
[65] Xu, Trimble. "What about certificates? Evidence on the labor market returns to nondegree community college awards in two states." Educational Evaluation and Policy Analysis.

vocational programs, have a higher economic return than those who did not hold any kind of degree or certification.[66]

Some research contradicts the significance of these claims and argues that economic returns are much lower for certificate programs especially for programs that are less than a year in length.[67] A Kentucky-specific study from the Journal of Labor Economics found that certificate programs have less of an economic return than community college associate or bachelor degrees. Using panel data, findings showed an associate's degree had a quarterly return of $1500 for men and $2000 for women, whereas certificates had a return of only $300.[68] Researchers from the Georgetown study disagreed with this finding, citing that including healthcare certificates in the study dramatically obfuscated the overall impact of certificate programs. When healthcare certificates are removed, there is not a significant difference in returns between associate or bachelor degrees with a certificate credential.[69]

Dual degree and two-year community college programs

Talent attraction does not have to begin after college graduation. The literature describes the benefits of early education and awareness efforts to establish a population primed to take advantage of financial incentives such as loan repayment, conditional grants, and scholarships upon college graduation. Targeting talent attraction communications to high school students could encourage more students to take advantage of the program upon college graduation and encourage them to return to their hometowns.

Targeting not just general high school students but also those pursuing a dual degree may be effective in creating a more successful talent attraction program. Dual enrollment programs allow high school students to take college-level courses at their local community college. While overall community college attendance and graduation rates have declined, findings indicate that dual enrollment can produce strong graduation rates and successful skills training.[70] Currently, dual enrollment is notably high with 800,000 high school students taking advantage of free college courses.[71]

Although there is a limited range of evidence of effectiveness and no randomized controlled trials yet to date, researchers have preliminary findings indicating notable returns of dual degree programs.[72] According to a White House Summit on Community Colleges Conference white paper, dual degree programs can increase the likelihood of high school graduation, postsecondary degree completion, and a higher grade point average.[73] Furthermore, in

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[66] Ibid.
[67] Jepsen, Troske, Coomes, "The labor-market returns to community college degrees, diplomas, and certificates." Journal of Labor Economics.
[68] Ibid.
[69] Carnevale, Rose, Hanson, "Certificates: Gateway to gainful employment and college degrees." Georgetown University.
[70] Ibid.
[71] Barnett, Hughes, "Community college and high school partnerships." Community College Research Center.
[72] Ibid.
[73] Ibid.

Virginia alone, dual degree recipients earn higher wages after graduation, $2100 higher per year than their peers.[74] In rural Virginia, the number of dual degree students is higher than the national average with 33.7 percent compared to national average of 19 percent of all community college attendees being under the age of 18.[75] Targeting dual degree students while in high school may promote participation in a talent attraction incentive or encourage them to stay and work in the area after graduation.

Approach 3: Language and Psychological Framing

Language and psychological framing of student loans are critical in communication and education materials promoting college attendance. Psychological framing is when someone emits a certain reaction based on how an idea or concept is presented to them. Harnessing the right kind of communication can encourage students to consider a degree as well as understand the benefits of a loan repayment or scholarship program. While evidence shows a significant return from a postsecondary program, nationally, college attendance is down 21.7 percent from 2019, twice the rate of decline from 2018.[76] The rising cost of a college education may contribute to this phenomenon as research shows that students are hesitant to accrue debt.[77]

In a study from Vanderbilt University, language and framing of student loan information and education materials can have a substantial impact on a student's interest and comfort taking out a student loan.[78] In a randomized trial, six thousand high school seniors, community college students and adults without a college degree were studied to investigate effects of language in preferences for borrowing for college.[79] Twenty to 40 percent of high school seniors reported an aversion to taking out student loans. The act of labeling payment for college a "loan" versus a financial contract reduced "the likelihood of selecting that option by 8-11 percentage points among the samples."[80]

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[74] Ullrich, "Community Colleges in the Fifth District: Who Attends, Who Pays?" Econ Focus.
[75] Ibid.
[76] Carnevale, Rose, Cheah, "The College Payoff: Education, Occupations, Lifetime Earnings," Georgetown University Center on Education and the Workforce", Nadworny, "'Losing a Generation': Fall College Enrollment Plummets for 1st-Year Students."
[77] Nadworny, "'Losing a Generation': Fall College Enrollment Plummets for 1st-Year Students."
[78] Evans, Boatman, Soliz, "Framing and Labeling Effects in Preferences for Borrowing for College: An Experimental Analysis." Research in Higher Education.
[79] Evans, Boatman, Soliz, "Framing and Labeling Effects in Preferences for Borrowing for College: An Experimental Analysis." Research in Higher Education.
[80] Ibid.

Case Study: Onalaska, Washington

In Onalaska, Washington the number of 20 to 30-year olds living and working in the town doubled in the last 10 years. Furthermore, elementary school enrollment has risen from 327 students to 391 students, evidence that even with a nation-wide decline in birthrates, families are growing in Onalaska.[1] Locals point to the high school as the motivation for these rising population numbers. A "Senior Success" class is a requirement for graduation were students take part in a "High School and Beyond Plan."[1] The class underscores financial literacy, job and career planning, and information on local opportunities in town.[1] Returning families cited the cultural aspects of the town as primary reasons for moving. Noting the strong "school spirit," traditional high school activities such as football games and community service projects revitalizing shared and public spaces all help foster a sense of connection to the town.[1] While difficult to measure, these anecdotal accounts can indicate a value-proposition for another route to creating incentives to stay.

Case Study Onalaska, Washington *[82]

The Federal Reserve conducted an analysis and noted a correlation (not causation) between student debt and outmigration. Fifty percent of rural residents who took out student loans remained in their hometowns six years later compared to approximately 67 percent who didn't.[81] Students who take out loans can then qualify for a talent attraction or retainment program that offers financial assistance for education-related debt.

Final Takeaways from the Literature

Academic analysis and research references three talent attraction approaches that could stimulate stagnant rural regions: recruiting those ages 25 to 35, considering applicants for financial assistance programs who do not have a traditional four-year degree and finally, framing the benefits of financial incentives through revised language and a new psychological framing approach. TRRC will need to evaluate these approaches proposed in the literature and keep in mind that all of these options should focus on sustainability to address persistent talent retention and attraction issues.

PROPOSED POLICY ALTERNATIVES

While the Tobacco Region Revitalization Commission (TRRC) implements multiple economic development initiatives, their Talent Attraction Program (TAP) seeks to address the deeply engrained issue of population loss. TRRC recently launched a newly reimagined financial incentive-based TAP via loan repayment. Based on trends in the literature as well as the scope

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[81] Picchi, Aimee, "Rural America's "brain drain": How student debt is emptying small towns."

[82] Gillepsie, "How one tiny town is battling "Rural Brain Drain."

of the problem, the following four interventions are recommended for TRRC to inform or adopt for the next iteration of TAP:

Summation of Alternatives	
Status Quo	Continue TAP as a loan repayment program. Target newly graduated college students to move to or stay in the region as a means to combat population loss and subsequent stagnant economic conditions.
Awareness and Education Efforts	Broaden awareness and elevate the program to different outlets in order to successfully educate new populations about TAP.
Expansion Beyond Traditional Audiences	Create a divergent model to speak to untraditional or non-degree seeking individuals.
Diversification of Financial Incentives	Implement a wider range of financial incentives beyond just loan repayment to attract new and returning populations as well as retain the current population.

EVALUATIVE CRITERIA

The following four criteria will be used to assess the proposed alternatives. These criteria were chosen based on accessibility of data, ease of assessment, and relevancy to TRRC's programmatic goals and current strategy. Through this process, alternatives will each be evaluated under the same criteria to successfully inform the final recommendation.

Description	Method of Measurement
Degree of ownership and administrative capacity	Low Degree, Medium Degree, High Degree
Equity	Low Equity, Medium Equity, High Equity
Time Horizon	<4 years <8 years <12 years
Likelihood of Retention and Attraction Impact	Low Likelihood, Medium Likelihood, High Likelihood

Criterion 1: Degree of ownership and administrative capacity

In addition to 7 staff, TRRC is overseen by 27 government appointed commissioners. Limited human resources and a complex hierarchical structure will greatly influence TRRC staff's ability to implement proposed alternatives. Considering these constraints, I will assess TRRC's degree of ownership in implementing each alternative and assess TRRC's administrative capacity and available resources to execute the proposed alternative. An alternative is only viable if TRRC can oversee and effectively administer the program. I will use a qualitative scale of a *low, medium or high degree* to determine necessary staff resources and skills as well as the complexity of organizational sign-offs. While degree of ownership and administrative capacity describe different kinds of viability, they tend to move in tandem, and thus are included as one criterion.

Criterion 2: Equity between minority students and white peers

Talent attraction programs are typically structured to attract or retain individuals that have a desirable occupation or salary. Current program design does not necessarily factor in equity to be a major consideration when evaluating applications for loan repayment. An analysis of the current breakdown of financial incentives indicates that applicants and awards are less likely to be given to people of color. In order to make the program as equitable as possible, alternatives will be assessed on a qualitative scale of *low, medium or high equity* based on available employment data, student lending data, and post-secondary education data. High equity is preferred to address underlying biases and prejudices and equally consider all applicants regardless of race.

Criterion 3: Time Horizon

TRRC's current TAP will not complete the full cycle of applications and initial loan repayment allocations until 2022. Further, recipients will not receive their payments until completing the two year or four-year requirements. Therefore, a full assessment of "Year 1" of the program can only occur in 2024. Considering the extended life-cycle of the program, each alternative will be assessed on whether it can be implemented rapidly or if it requires more time.

TAP works in four-year cycles:
Year 1: Apply and receive pledged repayment amount
Year 2: Complete initial requirements for living and working in the region
Year 3: Complete second year of requirements for living and working in the region
Year 4: Receive loan repayment after providing documentation of program requirements

Therefore, alternatives will be assessed if their time horizons are <4 years, <8 years, and <12 years.

Criterion 4: Likelihood of Retainment or Attraction

Low population in a region impacts tax revenue, resulting a limited tax base to fund essential services. Therefore, it is critical that alternatives be measured on the likelihood of drawing in new residents or retaining those that can provide economic returns to the region. While research in this field is ongoing and limited data exists on returns and retainment in low-population regions, we can assess through case studies and qualitative data the likelihood of each alternative to encourage in-migration or retainment of targeted population. Likelihood of retainment or attraction will be measured on a low likelihood, medium likelihood or high likelihood scale. Alternatives with high likelihood will be preferred over those who receive low likelihood in order to maximize benefits to Southwest VA.

ALTERNATIVES

Alternative 1: Maintain Status Quo

The status quo of the Tobacco Region Revitalization Commission's efforts addressing "rural brain drain" in Southwest VA consists of a talent retention and attraction program (TAP) that features a loan repayment program targeted to specific occupations.

Current targeted occupations include:

- Public School Teacher specializing in STEM
- Public School Special Education Teacher
- Speech Language Pathologist
- Physical Therapist
- Occupational Therapist
- Industrial or Electrical Engineer
- Informational Security, Network or Computer Systems Analyst

The "status quo" alternative will maintain the current offering, occupation targeting and application process. While efforts to encourage in-migration and retention have taken multiple financial incentive forms, the current program features only one form of financial incentive: loan repayment.

Loan repayment is a well-adopted strategy across smaller regions and towns in the U.S. aimed at incentivizing new and existing populations. TRRC's current loan repayment program was launched in 2020 and this round of applications will not officially close until April 2021. The average amount of a loan repayment is $18,000, but this repayment can increase or decrease based on the loan amount. Current staff at TRRC have adopted the loan repayment model in contrast to previous models including grants and loan forgiveness. The program was narrowed to just the loan repayment model to more effectively distribute and track fulfillment of the program requirements. The revised TAP may sufficiently address Southwest's dwindling population and subsequent economic issues.

Degree of ownership and administrative capacity

Ownership: TRRC staff have a **high degree of ownership** over the status quo alternative. Within the Commission, the Education Committee oversees funding and approves or makes recommendations regarding the program structure. TRRC received approval for the funding and structure of TAP in 2019. With recent approval, TRRC has a high degree of ownership to implement the program as it currently stands.

Administrative Capacity: Current staff executing the talent attraction program include Stephanie Kim, Director of Finance and one staff member, a financial services specialist, overseen directly by Stephanie. Additionally, there is a grants system manager who reports to a different team and other TRRC staff who gather to allocate awards. While the current TAP is in the pilot stage recruiting participants and awarding initial loan repayment amounts, **the degree of administrative capacity is high** based on the rolling nature of applications and the number of staff. Application for funds is open from January to April. There are currently 60 applications submitted so far in 2021 in comparison with 120 submitted in 2019.

Equity between minority students and white peers

Currently, there is no consideration for race or social status in the status quo alternative. Industries and professions in the current loan forgiveness program are limited to teaching, occupational and physical therapy, computer and tech, and engineering. Each of these industries has a low level of racial diversity. For example, diversity in the teaching field has grown minimally over the last 20 years with white teachers deceasing from 87 percent in 1988 to 80 percent in 2016.[83] A Washington Post article indicates that people of color are less likely to go into teaching and less likely to stay in it.[84] 80 percent of occupational therapists are white, and 6.61 percent are Asian compared to 6.23 percent who are Black.[85] Large tech firms only report single digit percentage increases in the amount of Black employees in the last six years,[86] and the engineering industry reports that 87 percent of its overall workforce is white.[87] While these numbers are estimates from the total US population, overall trends indicate that these professions are largely white and less diverse than other industries. This option has a **low degree of equity** because of TRRC's limited occupation considerations, and no consideration of an applicant's race.

Time Horizon

This option will take **less than four years** to phase in. The status quo has already been implemented and the cycle has begun for accepting and evaluating applications. The first round of awards will be awarded by October 2021; however, applicants are required to obtain or maintain a job for six months after receiving award. Recipients will receive the first half of their reward after completing 12 months of employment and residency in the region and the second half will be distributed an additional 12 months after that. The total amount of years for the total award payment will take until 2024.

Likelihood of Retainment or Attraction

The likelihood of retainment or attraction will remain relatively low if the status quo persists. This analysis is based on two factors. First, the majority of current applicants already resided in

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[83] Department of Education, "The State of Racial Diversity in the Educator Workforce."
[84] Meckler, Rabinowitz, "America's schools are more diverse than ever. But the teachers are still mostly white."
[85] Data USA, "Occupational Therapists."
[86] Rooney, Khorram, "Tech companies say they value diversity, but reports show little change in last six years."
[87] Walker, "Why Diversity is key to the future of engineering."

the region before applying for the loan repayment program. This indicates that the "attraction" portion of this criteria is less likely. Second, retainment is yet to be determined since the first cycle is not complete. However, when reviewing the former loan forgiveness model TRRC employed, only half of recipients remained or came back to the region to successfully claim their reward. Therefore, the **likelihood of retainment or attraction is low** for the status quo option.

Evaluation Matrix

Option	Ownership and Capacity	Equity	Time Horizon	Likelihood of Attraction or Retention
Status Quo	High degree of ownership and capacity	Low degree of equity	<4 years	Low likelihood of attraction or retention

Alternative 2: Awareness and Education Strategy

This alternative recommends amplifying and raising awareness of the existing program to garner more participants. Expanding the program can address the growing level of student debt and reach more individuals who could qualify (Appendix 3). This alternative will address two key areas: 1. Acknowledge the evolution of the program and why it has changed over the last few years, and 2. Communicate the immediate monetary as well as the long-term financial health benefits this program could provide recipients.

Program Structure: TRRC's TAP has evolved significantly over the last 10 years. It has transitioned back and forth between a loan forgiveness, scholarship and a loan repayment program. The specifics of the program are muddied for applicants and TRRC will need to explain why this program is different than past programs and the value proposition of this current strategy compared to programs in the past. Under this alternative, TRRC will restructure communication materials and distill the specifics of the program including: the application process, participant commitment throughout the life cycle of the program, the loan forgiveness amount, and the process for receiving the funds.

Language Communicating the Value Proposition: As the second prong of this alternative, TRRC will research the underlying motivations as to why graduates take out student loans in the first place in order to gauge the desirability of a loan repayment. By reassessing communication materials to understand the following questions, TRRC will additionally be able to uncover biases that currently inform who does and does not apply and who subsequently craft messages that attract people who have not yet participated

TRRC should address the following questions in their awareness and education materials:

1. Why is this program different than the last iterations—what is the increased value proposition of the revised loan repayment program?
2. What documentation should I submit when I apply and where would I find this financial information (i.e. the registrar's office etc.)?
3. What does paying off my loans mean for my future financial health?
4. Will this impact my credit score and why is my credit score important?
5. How will this repayment decrease my monthly loan payments?
6. How do I use the repayment funds after I receive them?

Degree of ownership and administrative capacity

Ownership: TRRC staff will have a **high degree of ownership** over the awareness and education strategy alternative. Since this alternative does not require a program re-structuring, but simply employs a new communication and awareness strategy, TRRC staff should be able to implement this alternative operating under the same approval they received for TAP in 2019. TRRC already has autonomy over program communications and outreach strategy and therefore will have a high degree of ownership to implement this solution.

Administrative Capacity: Current staff can leverage existing materials as a foundation for creating new communication that harness the recommended messaging changes. While integrations of new prose will take time, Stephanie Kim and the systems manager working on TAP can reasonably execute this approach. TRRC staff will have sufficient time to complete this work after the call for applications period closes in April. Therefore, TRRC will have a **high degree of administrative capacity** to execute this recommendation.

Equity between minority students and white peers

This alternative has a **high degree of equity** because it uses more inclusive language and its explanation of the program is more accessible to different populations. TRRC staff will uncover biases including framing and selection cognitive biases, as well as the curse of knowledge. The curse of knowledge bias occurs when a group or individual assumes that the recipient has the background information or knowledge to understand what they are communicating. This alternative will offset the curse of knowledge by shaping materials to speak to more than the current population that may have a high degree of knowledge on program specifics. Distilling the program into easy-to-understand concepts as well as articulating why the loan repayment program is different than past iterations will counter the curse of knowledge bias and the presumption that potential applicants will understand these terms and the benefits.

Modifying descriptive language would counter a potential applicant's framing biases. Minority college students have a greater amount of debt than white peers, with Black students owing over $7400 more on average than their white peers.[88] Historic inability to pay off debt may

[88] Scott-Clayton, Li, "Black-white disparity in student loan debt more than triples after graduation." Brookings Institution.

influence future minority generations when it comes to borrowing for college. Vanderbilt researchers found that not only were 20-40 percent of high school students adverse to taking out a loan; even labeling a "college financial contract" as a "loan" further reduced interest in that financing option by 8-11 percentage points.[89] Notably, these effects were even greater for minorities. Black and Hispanic students were twice as likely to reject college financing labeled as a loan as white respondents.[90] Therefore, the term "loan" in the current talent attraction program communications may have an opposite impact than intended by TRRC. Minority groups may be hesitant to even consider a program with the words "college loan" or "loan repayment."

In addition to psychological framing based on words or phrases, the overall value and benefits of this program may not be currently compelling to minority populations. In a preliminary paper by the American Economic Association, research found that minorities had a financial literacy score that was 9 to 16 percentage points lower than their white peers in the study. This alternative will edit communication materials to include information on the greater benefits the program offers individuals for improving their overall financial health. This option to modify TAP communications to include more inclusive framing and detailed financial benefits has a **high degree of equity.**

Time Horizon

This alternative will take **less than 4 years** to phase in. The next recruitment phase or call for applications will not open again until January 2022. TRRC staff thus has adequate time to prepare a revised version of some of their communication materials before the next round of recruitment. Furthermore, this is an iterative approach; every year there is a call for applications and recruitment. TRRC can then further refine their materials to be informative and compelling for different audiences.

Likelihood of Retainment or Attraction

By tailoring TAP's outreach and communications strategy, TRRC may garner a greater number of applicants and a population that demonstrates higher interest of the loan repayment program. While this alternative is not a direct retainment or attraction solution, it is a key variable that can increase not only applications, but also sustained participation in the program. This solution will communicate the value of the loan repayment program in more accessible language that motivates a more diverse population. Therefore, this alternative has a **high likelihood of retainment or attraction.**

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[89] Evans, Boatman, Soliz, "Framing and Labeling Effects in Preferences for Borrowing for College: An Experimental Analysis." Research in Higher Education.
[90] Ibid.

Evaluation Matrix

Option	Ownership and Capacity	Equity	Time Horizon	Likelihood of Attraction or Retention
Awareness and Education Strategy	High degree of ownership and capacity	High degree of equity	<4 years	High likelihood of attraction or retention

Alternative 3: Expansion Beyond Traditional Audiences

Given the rising number of unfilled job openings for four-year college degree seeking students, TRRC could expand their recruitment efforts beyond the current eligible audience. TRRC targets four-year and master's degree students. Under this alternative, certificate-seeking students and two-year associate degree students would be included as eligible for the loan repayment program. Below the Technical Certificate Program, and the CDL Certificate Program, are two examples of certificate programs that offer significant returns on investment.[91]

Technical Certificate Program

Technical certificate programs are already being offered in VA. Lancaster Community College in partnership with a local businesses and economic development organizations created a short-term certificate program for unmanned systems technicians. This certificate specializes in repairing and maintaining drones. The returns and opportunities this program has provided has been significant. A Florida-based drone incubator has opened a location in Clifton Forge that will hire 25 of these certificate trained technicians. Workers will earn on average $50,000 per year.

CDL Certificate Program

Commercial driver's license (CDL) certificate programs can lead to significant wages. In Virginia, this certification pay-off is $35 dollars an hour, and there is a dearth of employment openings in the state. The Bureau of Labor Statistics reports that there is also a shortage of 60,000 drivers according to the American Trucking Association. The CDL certificate program at Lancaster Community College in Clifton Forge VA costs approximately $2400 and can be completed in less than 60 days, however, this cost could provide a barrier even though the return is significant.

According to The Bureau of Labor Statistics, careers without a traditional college degree requirement are projected to grow and pay significant salaries.[92]

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[91] Dabney S. Lancaster Community College, "News." "Commercial Driver's License (CDL) Program-Class A." Costello, "Truck Driver Shortage Analysis 2019." American Trucking Associations.
[92] Hoff, "25 high-paying jobs of the future that don't require a college degree."

While the cost of certificate programs and associate degrees present a barrier for students, the total cost is still significantly lower than traditional four-year institutions. TRRC would increase ROI for TAP by providing more funds of lower monetary value to these recipients. This alternative would require three steps: Research current job openings in the region, connect with community college programs, and promote the program to students in identified industry areas. If successful, TRRC would address low population and subsequent shrinking tax revenues by expanding TAP beyond its current scope.

Degree of ownership and administrative capacity

Ownership: TRRC staff will have a **medium degree of ownership** over this alternative. If TAP expands recruitment beyond traditional four-year and master's degree students, the program would have to significantly change and the goals of TAP redefined. Instead of recruiting based on job openings in specific industries that offer higher salaries, TAP would be focused on drawing as many people to the region as possible. TAP would consider people working in mid to high level jobs that do not require a traditional degree. This shift beyond traditional programs would require TRRC staff would need to work with Commissioners to re-define TAP goals. Commission members are appointed by the General Assembly's Senate Rules Committee and the body is comprised of ten standing committees. TRRC would have to gain approval to expand the program to consider non-degree seeking individuals. Considering the many stakeholders involved and their political priorities, making this change would require Commissioner buy-in.

Administrative Capacity: TRRC will have a **medium degree of administrative capacity** to implement this alternative. Expanding the program will require three key actions: 1. Identifying certificate or two-year programs that cater to industries that have job openings in the region 2. Fostering new partnerships with community college or certificate program contracts, and 3. Reviewing and tracking more loan applications and funding awards. Staff will keep the current loan repayment system and review process; however, additional human resources may be needed to oversee these responsibilities. Therefore, this alternative has a **medium degree of administrative capacity.**

Equity between minority students and white peers

Expanding TAP to include non-degree seeking students would have a **high degree of equity**. Since two-year associate degrees and certificate programs are administered through community colleges, we can observe equity within these institutions to extrapolate minority opportunities offered by this alternative. In Virginia's fifth district community college, 22.8 percent were Black while 9.8 percent were Hispanic and 13.2 percent belonged to other racial or ethnic minority groups.[93] The proportion of students of color is higher than traditional four-year degree programs and extending loan repayment to this population would increase equity

[93] Ullrich, "Community Colleges in the Fifth District: Who Attends, Who Pays?" Econ Focus.

in TRRC's TAP. Furthermore, nationwide those enrolled in associate degree or certificate programs include a higher number of minorities, outnumbering the percentage of white college enrollees. 56 percent of Black students and 62 percent of Hispanic students seek associate or certificate programs.[94] Extending this program to populations beyond four-year or master's degree students would **highly increase equity.**

Time Horizon

This alternative will take **less than 8 years** to phase in. I estimate that gaining buy-in and approval from the Commission will not commence until after the first pilot cycle. During the initial phase, staff will have to perform research and present this new approach. Realistically, this revised recruitment strategy and expanded call for applications will not take place until January 2024 with repayment taking place in 2026 when program requirements have been met. Considering the extended nature of the program and the lifecycle of application and pay-out, this alternative would reasonably take six to eight years to fully implement.

Likelihood of Retainment or Attraction

This alternative has a **high likelihood of retainment or attraction** based on compelling findings from the literature. In a Federal Reserve Bank of Richmond study, four-year institutions are less common in rural areas as compared to community colleges. Within the community college system dual degree students earn higher wages, approximately $2100 more per year, than high schoolers who did not attend college or certificate programs.[95] Certificate holders in vocational programs are also found to have a higher economic return compared to those who do not hold a postsecondary degree or certificate.[96] The earning potential and plethora of potential recipients is compelling to consider them a key demographic to target for TAP. Funding remains an issue for these students, as they are more likely to depend on federal and state aid, yet many live below the poverty line.[97] Furthermore, certificate-seeking students do not qualify for most types of aid. These statistics illustrate positive conditions to create an opportunity for TRRC to grow these rural area's tax base by extending aid for this population to finish associate degrees and certificate programs.

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[94] Ashford, "Report affirms value of associate degrees, certificates."
[95] Ullrich, "Community Colleges in the Fifth District: Who Attends, Who Pays?" Econ Focus.
[96] Xu, Trimble. "What about certificates? Evidence on the labor market returns to nondegree community college awards in two states." Educational Evaluation and Policy Analysis.
[97] Amour, "Low-Income Community College Students Most Likely to Cancel Plans."

Evaluation Matrix

Option	Ownership and Capacity	Equity	Time Horizon	Likelihood of Attraction or Retention
Expansion Beyond Traditional Audiences	Medium degree of ownership and capacity	High degree of equity	<8 years	High likelihood of attraction or retention

Alternative 4: Diversify Financial Incentives

The literature identifies mid-career individuals and families who may be more motivated than recent graduates to relocate or return to low population regions. Diversifying financial incentives beyond loan repayment would promote a suite of options that specifically appeal to these persons. Potential financial incentives tailored to this age-range in addition to loan repayment could include:

1. Loan forgiveness
2. Scholarships
3. Relocation expenses
4. Tax credits
5. Stipends for new homeowners

While evidence is limited to qualitative research, this model has become widely adopted and shows promise especially in the current Covid-19 climate, as a greater number of individuals are able to work remote, providing more flexibility in where they live.[98] For example, in Newton, Iowa, the Newton Housing Initiative offers up to $10,000 to first time homebuyers and a "Get to Know Newton" welcome package" valued at $2500. Researcher Ben Winchester from the University of Minnesota has found promising trends in Census data. While "brain drain" research has been centered around new graduates, Winchester has found that while this younger cohort leaves to find jobs in larger cities, people in their 30s, 40s, 50s are migrating either back or moving to less dense areas.

Degree of ownership and administrative capacity

Ownership: TRRC staff will have a **low degree of ownership** over this alternative. Creating a new portfolio of financial incentives would require budget restructuring and partnering with Virginia state government. This partnership would require collaboration with a number of stakeholders including; TRRC staff and leadership, TRRC Commissioners, elected officials, and a relevant state agency for example; the Virginia Economic Development Partnership (VEDP)

[98] Roper, "Covid-19 is pushing Americans out of cities and into the country."

or the Department of Housing and Community Development. While some of these financial incentives could be monitored by TRRC and funded by TRRC's budget, any tax credit or homebuying grant would require inter-agency collaboration.

Administrative Capacity: TRRC will have a **low degree of administrative capacity** to implement this alternative. Expanding the program beyond loan repayment will require research, allocation of funds, new application processes, as well as new implementation procedures. Since current staff is limited to three individuals within TRRC who also perform other duties, TRRC must coordinate with other internal resources or outsource some of these duties to other agencies.

Equity between minority students and white peers

Evaluating equity of this alternative is challenging. While diversifying financial incentives would include those who may have other needs beyond loan repayment, depending on which incentive is chosen, some may cater more to white populations than minorities. For example, there are significant racial disparities among homeowners in Virginia: 11.9 percent of loan applications from Black Virginians are rejected while only 5 percent of loan applications from whites were rejected. [99] A homeowner tax credit or incentive, therefore, might not be as equitable as a relocation grant. A relocation grant could be more equitable if each individual who becomes a permanent resident receives a fund dividend, regardless of home ownership or job placement. For each of these financial incentives, TRRC will need to review the underlying statistics and data to ensure that the incentive benefits all populations. Therefore, this alternative has a **medium degree of equity.**

Time Horizon

[99] South, "The bedrock of wealth inequality: Data shows big racial disparities in mortgage loans and homeownership."

Case Study: Vermont

Vermont is offering a relocation grant to attract remote workers. The program is targeted to professionals who can work from anywhere and would be interested in relocating to the region. The Remote Worker Grant offers up to $7500 to resident who move and take a job with a Vermont business, and those who relocated to Vermont to become a full-time resident. The grant is more flexible than a loan-repayment and can be appealing for those who have flexibility in choosing where to live and potentially raise families.

Case Study Vermont*[100]

This alternative will take **a minimum of 12 years** to phase in. Collaborating with state government and relevant agencies, receiving elected officials' approval, and re-structuring the program will demand an iterative long-term strategy. This time line hinges on staff continuity and availability of resources. While TRRC will be able to use past TAP strategies to inform the diversification of financial incentives, any of these new approaches will require significant changes and time to implement.

Likelihood of Retainment or Attraction

Emerging qualitative studies have unearthed trends that indicate that even without incentive programs, those born between 1981 and 1996 are moving out of cities to more rural areas or returning back to their hometowns. These trends combined with anecdotal accounts indicate that this alternative would produce a **high likelihood of retainment or attraction**. While new college graduates and those in their early twenties are more likely to leave their towns to look for their first job in larger metropolitan areas, according to a recent Brookings report, returning populations are those who are motivated by "place-based" characteristics.[101] Families looking to raise children, access affordable housing, outdoor amenities and living close to relatives were primary reasons to return or move out of more urban areas. As shown in the case studies above, a greater number of cities are offering financial incentives targeted to mid-career professionals as opposed to newly graduated students. By observing these existing population trends along with emerging qualitative and anecdotal studies, there is **high likelihood of retainment or attraction** if TRRC follows suit and offers more diverse financial incentives that appeal to an older population that is interested in transitioning away from urban centers.

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[100] Ocampo, "Places that Pay You to Move There in 2021."

[101] Parilla, Liu, "Examining the Local Value of the Economic Development Incentives." Brookings Institution.

Evaluation Matrix

Option	Ownership and Capacity	Equity	Time Horizon	Likelihood of Attraction or Retention
Diversify Financial Incentives	Low degree of ownership and capacity	Medium degree of equity	<12 years	High likelihood of attraction or retention

OUTCOMES MATRIX

Option	**Ownership and Capacity**	**Equity**	**Time Horizon**	**Likelihood of Attraction or Retention**
Status Quo	High degree of ownership and capacity	Low degree of equity	<4 years	Low likelihood of attraction or retention
Awareness and Education Strategy	High degree of ownership and capacity	High degree of equity	<4 years	High likelihood of attraction or retention
Expansion Beyond Traditional Audiences	Medium degree of ownership and capacity	High degree of equity	<8 years	High likelihood of attraction or retention
Diversify Financial Incentives	Low degree of ownership and capacity	Medium degree of equity	<12 years	High likelihood of attraction or retention

RECOMMENDATION

I recommend a two phased approach to addressing talent attraction and population loss in rural Southwest VA. First, in the short term TRRC should implement **a new awareness and education strategy.** TRRC has recently re-vamped TAP by reverting back to a loan repayment program. After the pilot year ends, TRRC has the ownership and administrative capability to review their communication and outreach strategy. Including accessible language and additional details about how this program could benefit an individual’s full financial health will not only increase equity in the program, but also increase the likelihood of retaining or attracting individuals and potentially increasing the number of interested applicants. This option's time horizon is less than four years and will not greatly impact funding levels.

Second, in the long-term, TRRC should **expand the program beyond traditional audiences.** If the underlying goal of TAP is to grow the tax base and population numbers, TRRC should consider individuals beyond the current industry-focused approach. There are a wide number of potential applicants that TRRC is missing because of current restrictions of the program. Certificate and two-year community college professionals have access to good-paying jobs in the region. Loan or certificate repayment catered to these populations would increase the number of applicants and create a more equitable program. While the time horizon is longer for this alternative, the benefits of approaching TAP from a different angle deserves consideration. If TAP were to consider expanding eligibility, they could access a population with significant earning potential and fill a more diverse set of jobs in the region.

IMPLEMENTATION

The cyclical nature of TRRC's TAP provides a challenge to immediately implement these recommendations. TRRC must approach the alternatives by considering where they would best fit in the program structure. This gradual approach to sequencing alternatives could mitigate risk and provide an opportunity for short-term and long-term changes.

Short Term

Alternative 2: A New Awareness and Education Strategy
This alternative will need to address two key areas: 1. Acknowledge the evolution of the program and why it has changed over the last few years and 2. Communicate the immediate monetary and long-term financial health benefits this program could provide recipients. The awareness and education recommendation will require thoughtful and research driven implementation. The following steps lay out a suggested approach:

1. **Retrospective assessment:** After the pilot year ends (2022), TRRC will conduct retrospective interviews with applicants. Even though recipients have not yet received their loan repayment due to their position in the life-cycle of the program, TRRC can create a set of qualitative and quantitative questions to understand what outreach efforts.

Retrospective Assessment Questions

1. How did you hear about TRRC's talent attraction program?
2. What about the program piqued your interest?
3. Did you know the details of a loan repayment program—or have you heard of loan repayment programs in the past?
4. Have you experienced any confusion during this process i.e. you were unsure about how to apply, when you would receive your funds, and fund payout stipulations?
5. Did you experience any barriers to completing your application?
6. What would you suggest TRRC do in the future to make the program more accessible?
7. Did you stay or move to the region because of the loan repayment program?

2. **Environmental research and communications material development:** Within the talent attraction and economic development ecosystem, TRRC should collect relevant data and compile a literature review on best practices for effective and accessible recruitment and education materials for all populations, including diverse socio-economic and minority groups. TRRC can use this research to uncover biases and how they manifest in program recruitment communications. TRRC should approach this research by identifying language and messaging that would motivate people of color to apply. By diving into research and data driven studies, TRRC can revamp their materials to include more accessible language on what the program is and how it works. TRRC should create a causal chain to demonstrate the impact of loan repayment funds on an individual's overall financial health. As noted in Figure 5, the benefits of paying off student loans far exceed just eliminated the debt in general.

3. **A/B testing:** TRRC should test their newly created communications plan on different focus groups. First, TRRC should create the same list of questions to ask Group A and Group B. Group A will receive the previous TAP communications and Group B will receive the revised communications. They will then assess the accuracy of the program specifics, persuasiveness of messaging, ability to communicate the overall benefits of the program, and finally, how they felt about the communications they received.

4. **Retrospective Assessment:** After TRRC has completed these pieces and implemented them in the next round of recruitment, they should then return back to these steps and repeat to judge if the new communications were successful and garnered more diverse applicants than before.

Long-Term

Alternative 3: Expansion Beyond Traditional Audiences

Whereas the short-term plan may be integrated during the recruitment and application phase, this alternative would require a strategic plan to re-design key aspects of the program. This alternative calls for TRRC to redefine their goals for TAP. Currently, TRRC focuses on specific industries and recruiting four-year college degree or master's students. If the goal of the program is to increase population and expand the tax base, TRRC can look beyond their current focus and consider jobs that pay competitive salaries yet require no bachelor or master degree. The implementation process will be slower and focus on long-term results. An iterative approach will increase the likelihood of success for this approach. Steps include:

1. **Research and skeleton design:** TRRC will research two major elements; first, they will explore the potential population outside of traditional industries and college degree students. They will collect data on job openings and earning potential for associate and certificate students. "Loan repayment" will transition to a more inclusive "financial education support," distributing funds to pay for more than just debt from traditional college programs. TRRC will create a suite of potential Q&As to ensure they are prepared to answer any questions when presenting this alternative and new overarching goal to the Commissioners.

2. **Cultivate stakeholder buy-in:** Gaining approval and support from multiple stakeholders and personnel will ensure that TRRC has the capacity and authorship to implement this new iteration of TAP. Relevant audiences include:
    a. TRRC staff
    b. Commissioners
    c. External relationships with community college and certificate programs

3. **Identify individual champions:** TRRC has a plethora of economic development programs. Allocating funding can be a difficult task for the Commission and having committee chairs champion the new program design will elevate its importance for TRRC. Champions could include: The Honorable Chris L. Hurst, Chairman of the Southwest Virginia Committee, Ms. Julienne D. Hensley, Vice Chairwomen of the Southwest Virginia Committee, the Honorable Lashrecse D. Aird, Chairwoman of the Incentives & Loans Committee, and the Honorable Terry G. Kilgore, Vice Chairman of the Incentives and Loans Committee. Recruiting these gatekeepers will keep this alternative on the agenda.

4. **Solidify program design:** Create a presentation-ready strategic program design. TRRC will deliver a detailed approach to expanding TAP. The goal of this step is to receive final sign-off and funding for this alternative.

5. **Launch:** Launch in an estimated 2-4 years when the recruitment portion and call for applications takes place. Allocate loan repayments or financial incentives to individuals who meet program requirements and are likely to successfully complete the cycle and ultimately receive funds.

CONSIDERATIONS

A key consideration for each of these alternatives is measurability. Setting goals for each alternative, developing indicators for success, and a rubric for measuring results is essential to determining the effectiveness of each of these alternatives. This information could prove vital in the iterative approach to the program or refining the scope of both the awareness and education and the expansion beyond traditional audiences' approach.

CONCLUSION

TRRC's talent attraction program holds great promise for revitalizing Southwest VA by attracting professionals to live and work in the area. As it evaluates the "pilot year" of the program, the Commission can take into considerations these findings from the literature, recommended alternatives, and implementation guide. TRRC first and foremost identify the overarching goal of the program. If the goal of the program is to increase population in Southwest VA and expand the tax revenue base, are there other ways to achieve that goal more efficiently? Does TRRC want to continue to only target certain occupations that require a four-year degree or does it see value in opening up applications to those without a four-year degree but who qualify for available well-paying jobs? TRRC should consider these alternatives and implementation approach to continue to strengthen the TAP program, especially as it enters this new phase and pilot year.

BIBLIOGRAPHY

"About the Commission – Virginia Tobacco Region Revitalization Commission." revitalizatiova.org.

Amour, Madeline. 2020. "Analysis: Low-Income Community College Students Most Likely to Report Canceling College Plans." Inside Higher Ed.

Anderlik, Cofer. 2014. "Long Term Trends in Rural Depopulation and Their Implications for Community Banks." FDIC Quarterly 8. No. 2, pp 44-59.

Anderson, Joel. 2021. "Biggest Boomtowns in Every State." Go Banking Rates.

Artz, Georgeanne. 2003. "Rural Area Brain Drain: Is It a Reality?" Extension and Outreach Publications, 90.

Avery, Finegold, Xiao. 2016. "Impact of the Affordable Care Act Coverage Expansion on Rural and Urban Populations." Department of Health and Human Services.

Barnett, Elisabeth, Hughes, Katherine. 2010. "Community College and High School Partnerships." The White House Summit on Community Colleges Conference.

Baum, Sandy, Holzer, Harry, Luetmer, Grace. 2020. "Should the Federal Government Fund Short-Term Postsecondary Certificate Programs?" Urban Institute's Center on Education Data and Policy.

Berchick, Barnett, Upton. 2019. "Health Insurance Coverage in the United States: 2018." US Census Bureau.

Bowers, Douglas, Rogers, Carolyn, Simms, Dale. 2002. "Rural America." Economic Research Service USDA.

Brown, Jeffrey. 2019. "Why Millennials Are Moving Away from Large Urban Centers." PBS NewsHour.

Brown, Mike. 2020. "Student Loan Debt by School by State 2020." LendEDU.

Bureau, US Census. "Numeric Population Change by County and Municipio, 2010-2018." The United States Census Bureau.

Carnevale, Anthony, Rose, Stephen, Hanson, Andrew. "Certificates: Gateway to Gainful Employment and College Degrees." Georgetown University's Center on Education and the Workforce.

Carnevale, Anthony, Rose, Stephen, Cheah, Ben. 2011. "The College Payoff: Education, Occupations, Lifetime Earnings." Georgetown University Center on Education and the Workforce.

Cohn, D'Vera. 2020. "About a Fifth of U.S. Adults Moved Due to COVID-19 or Know Someone Who Did." *Pew Research Center* (blog).

Cromartie, John, von Reichert, Arthun, Ryan. 2015. "Factors Affecting Former Residents' Returning to Rural Communities." Economic Research Services USDA. 185.

Cromartie, Vilorio 2019. "Rural Population Trends." Rural America at a Glance. USDA.

Economic Innovation Group. "The Spaces Between Us: The Evolution of American Communities in the New Century." Economic Innovation Group.

Editorials, Roanoke Times. 2019. "Editorial: Demography Reveals the True State of the Commonwealth." Roanoke Times.

Evans, Brent, Boatman, Angela, Soliz, Adela. 2019. "Framing and Labeling Effects in Preferences for Borrowing for College: An Experimental Analysis." Springer Association for Institutional Research 60. No. 4, pp 438-457.

Felberbaum, Michael. 2019. "Tobacco Companies Make Payments under State Settlement." Richmond Times-Dispatch.

Finkel, Ed. 2020. "At Rural Colleges, Workforce Development on a Budget." Community College Daily.

Florida, Richard. "Young People Really do Prefer Cities." Bloomberg.com.

Food Research and Action Center. "Hunger and Poverty in America."

Freedman, William. 2020. "Rural Millennials." Sharestates Resource Center.

Friedenberger, Amy. 2019. "Move to Rural Virginia, and the Tobacco Commission Will Help Pay off Your Student Debt." Roanoke Times.

Friedenberger, Amy. 2020. "Virginia's Coal Tax Credits, Tobacco Commission Grants Falling Well Short of Goals, JLARC Finds." Roanoke Times.

Gibson, Allie. 2019. "Severance Tax Decline, Layoffs Bring Tough Financial Times in Coal Region." HeraldCourier.com

Henderson, Vernon. 2003. "The Urbanization Process and Economic Growth: The So-What Question." Journal of Economic Growth 8, no. 47-71.

Hoff, Madison. 2020."25 High-Paying Jobs of the Future That Don't Require a College Degree." Business Insider.

Inc, Gallup. 2018. "Americans Big on Idea of Living in the Country." Gallup.com.

Ingraham, Christopher. 2018. "Americans Say There's Not Much Appeal to Big-City Living. Why Do so Many of Us Live There?" Washington Post.

Jepsen, Christopher, Troske, Kenneth, Coomes, Paul. 2014. "The Labor-Market Returns to Community College Degrees, Diplomas, and Certificates." Journal of Labor Economics 32. No. 1, pp 95-121.

Khorram, Kate Rooney, Yasmin. 2020. "Tech Companies Say They Value Diversity, but Reports Show Little Change in Last Six Years." CNBC.

"Kilgore and Ehrhardt: The Tobacco Region Revitalization Commission: Meeting Tomorrow's Challenges." 2020. The Franklin News Post.

Kirkham, Elyssa, "5 Benefits of Paying Off Student Loans Early." The Balance.

Koch, Cathy. 2020. "The Millennial Economy 2018." Ernst and Young.

Koninkrijksrelaties, Ministerie van Binnenlandse Zaken en. "Causes and Effects of Population Decline - Population Decline - Government.Nl." 2014. Onderwerp.

Li, Judith Scott-Clayton and Jing. 2016. "Black-White Disparity in Student Loan Debt More than Triples after Graduation." Brookings (blog).

Lombard, Hamilton. 2020. “State Population Growth Slows, With Most New Residents in Northern Virginia.” UVA Today.

Mannat, Shannon, Thiede, Brian. 2016. “The Great Recession and America’s Geography of Unemployment.” US National Library of Medicine National Institute of Health 35, no. 891-928.

Meckler, Laura, Rabinowitz, Kate. 2019. “America’s Schools Are More Diverse than Ever, yet Teachers Are Still Mostly White.” Washington Post.

Sorrell, Robert. 2019. “Southwest Virginia’s Population Continues to Drop, Weldon Cooper Center Data Shows.” HeraldCourier.com.

Roper, Willem. 2021. “COVID-19 Is Pushing Americans out of Cities and into the Country.” World Economic Forum.

Nadworny, Elissa. (2020). “‘Losing A Generation’: Fall College Enrollment Plummets For 1st-Year Students.” NPR.org.

NPR. 2019. “Reversing The ‘Brain Drain’ In Rural America.” NPR.org.

Popken, Ben. 2020. “Millions of Americans Moved during the Pandemic — and Most Aren’t Looking Back.” NBC News.

“Occupational Therapists | Data USA.” Deloitte.

Parilla, Joseph, Liu, Sifan. 2018. “Examining the Local Value of Economic Development Incentives.” Metropolitan Policy Program at the Brookings Institution.

Picchi, Aimee. 2019.“Rural America’s ‘Brain Drain’: How Student Debt Is Emptying Small Towns.” CBS News.

Quinton, Sophie. 2016. “The Student Debt Crisis at State Community Colleges.” PEW Research Center.

Rose, Jeff. 2020. “Time To Move? Data Suggests Americans May Flee To Rural Areas Post-COVID.” Forbes.

South, Jeff. 2020. "The Bedrock of Wealth Inequality': Data Shows Big Racial Disparities in Mortgage Loans and Homeownership," Virginia Mercury.

Staff, T. R. S. 2019. "Virginia Records 6.5 Percent Gain in Population Since 2010." *The Republican Standard* (blog).

Student Borrower Protection Center. 2019. "With the Explosion of Student Debt Across the Commonwealth, Virginia Must Take Action to Protect Borrowers."

"Tobacco and the Economy." Economic Research Services USDA. 789.

Ullrich, Laura. 2019. "Community Colleges in the Fifth District: Who Attends, Who Pays?" Econ Focus.

U.S. Department of Education, Office of Planning, Evaluation and Policy Development, Policy and Program Studies Service. 2016. "The State of Racial Diversity in the Educator Workforce."

U.S. Department of Health and Human Services. 2021. "Designated Health Professional Shortage Areas Statistics." Bureau of Health Workforce.

Walker, Sharon.2018. "Why Diversity Is Key to The Future of Engineering." UC Riverside.

Winchester, Ben. 2012. "Continuing the Trend: The Brain Gain of the Newcomers." Extension Center for Community Vitality.

Xu, Di, Trimble, Madeline. 2016. "What About Certificats? Evidence on the Labor Market Returns to Nondegree Community College Awards in Two States." Educational Evaluation and Policy Analysis 38, no. 22, 272-292.

APPENDIX 1: Small Town Outliers for Population Growth

Examples of Small Towns Experiencing Population Growth

Town	Change in Population 2010-2015
Madison, Alabama	+9.61%
Queen Creek, Arizona	+32.94%
Horizon West, Florida	+113.72%
Chamblee, Georgia	+97.35%
Maple Grove, Minnesota	+10.32%
Olive Branch, Mississippi	+7.84%
Nashua, New Hampshire	+2.12%
Uniondale, New York	+30.42%
Mount Juliet, Tennessee	+27.57%
Herriman, Utah	+52.18%

Figure 6[102]

[102] Anderson, "Biggest Boomtowns in Every State."

APPENDIX 2: Student Loan Debit in Virginia

Problem of Student Loan Debt

Virginia college students have on average $30,688 in student loan debt.[103] The state is ranked 34 out of 50 states for having the most college debt and 1 in 6 Virginians owe student debt.[104] While four-year degree programs are significantly more expensive than community college programs, student loan debt in Virginia for 2-year community college graduates is also on the rise with 41 percent of students in debt.[105]

This college debt creates barriers for Virginians to invest in other areas of the economy, and many still owe even as they continue to age.[106] Student debt has resounding impacts, not just on the individual but the state as a whole. Borrowers who default receive bad credit scores, lost wages, fees, and potential loss of their driver's license.[107]

Virginia student debt overview

Average balance	$37,098
Total outstanding debt	$44.2 billion
Number of borrowers	1.2 million
Average total monthly payment	$293

Note: Averages include federal and private student loan debt.

Source: Student Loan Hero

[103] Brown, "Student Loan Debt by School by State 2020."
[104] Student Borrower Protection Center, "With the Explosion of Student Debt Across the Commonwealth, Virginia Must Take Action to Protect Borrowers."
[105] Quinton, "The Student Debt Crisis at State Community Colleges."
[106] Ibid.
[107] Ibid.

APPENDIX 3: Covid-19 and Migration

Covid-19 Impact on Migration

Adults moving because of Covid-19 are transitioning to lower population areas, leaving most major cities. One in five Americans moved permanently or temporarily changed residences due to the pandemic, or know of someone who did.[108] People surveyed cited health risks, higher housing costs, and difficulties raising a family as reasons for making the move. Coronavirus cases worldwide have been concentrated in larger cities, approximately 90 percent of all reported cases.[109] New York, Chicago, Boston, Los Angeles, Houston and Miami are just a few of the major cities to experience population loss during the pandemic, with people choosing to live elsewhere to weather the storm. Remote work has opened up an opportunity to move somewhere different without having to leave their job. Susan Wachter, a professor from the Wharton School of the University of Pennsylvania cited that the pandemic will have long-term demographic shifts.[110]

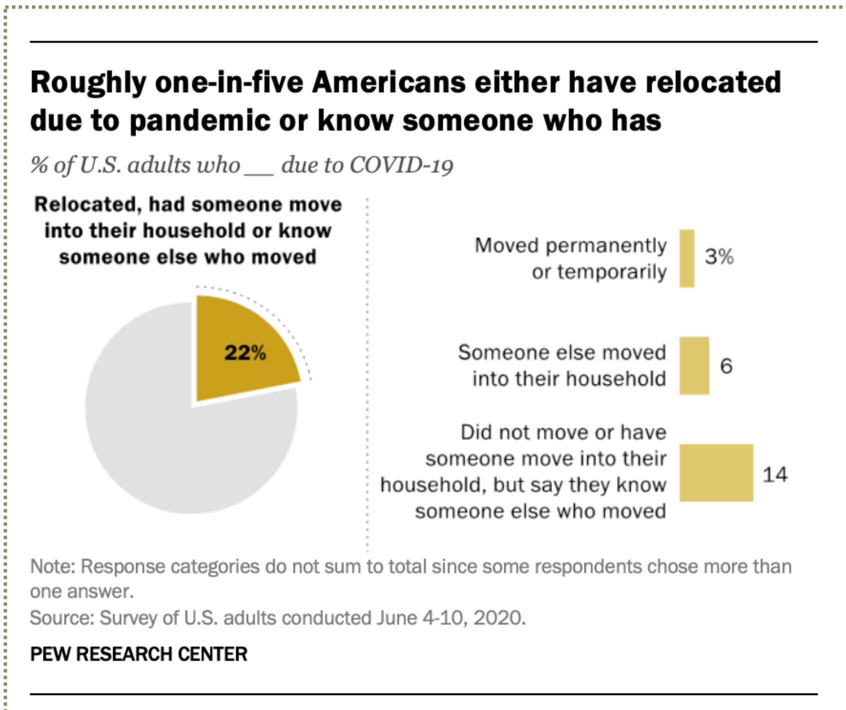

Figure 7[111]

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[108] Cohn, "About a fifth of U.S. adults moved due to Covid-19 or know someone who did."
[109] Rose, "Time to Move? Data Suggests Americans May Flee to Rural Areas Post-Covid."
[110] Popken, "Millions of Americans moved during the pandemic—and most aren't looking back."
[111] Cohn, "About a fifth of U.S. adults moved due to Covid-19 or know someone who did."