Research Brief

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Examining the Issue of "Brain Drain": Implications for Mississippi and Shrinking Cities

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Abstract

This research brief examined the issue of "Brain Drain" (defined as highly-educated and/or skilled persons moving from one area to another area offering more desirable opportunities), and the issue of "shrinking cities" (defined as cities experiencing sustained population losses and increasing levels of vacant and abandoned properties). Both Brain Drain and shrinking cities can result in a declining workforce and tax base; an aging population; and a loss of racial, social, and cultural diversity. This study's findings regarding population changes indicated states such as Georgia, Texas, Florida, and Colorado experienced significant "double-digit" population gains for the time period 2010 to 2023, whereas Mississippi experienced a small decrease in population over that time period. In a comparison of residents aged 25 and over with a bachelor's degree who moved into, and out of, seven southern states during 2010 to 2019, Mississippi was the only state experiencing a "net loss" (-17.1%), while the other states experienced a "net increase" ranging from 7.9% to 64.2%. In a comparison of 24 cities similar to Jackson (MS), eleven of the 24 cities experienced population losses with Jackson leading all comparison cities in terms of percentage of population loss (-11.4%) for the time period 2010 to 2020, and (-6.5%) for the time period 2020 to 2023. Issues contributing to Brain Drain and Shrinking Cities include lack of jobs and other economic opportunities; lack of desirable "quality of life" factors such as affordable housing, low crime rates, high quality schools; lack of ample entertainment options; prevailing cultural trends; and perceptions regarding a state's (or cities) level of openness regarding governance and social tolerance. Recommendations for addressing the Brain Drain and Shrinking Cities issues in Mississippi include offering financial and nonfinancial incentives to attract and retain young educated professionals; increasing inclusiveness and open governance measures; promoting more inter-regional collaborations; and improving desired quality of life indicators.

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Introduction

In April 2019, the Joint Economic Committee (JEC) in Washington, D.C. released a report called "Losing Our Minds: Brain Drain Across the United States" as part of its Social Capital Project (Joint Economic Committee, 2019). That report highlighted the societal phenomenon known as "**Brain Drain**" – defined as highly-educated and/or skilled persons moving from areas "that offer lower returns… to places that offer greater returns." This movement can result in the imbalanced placement of highly-educated/skilled persons across the nation, poor economic growth for areas losing those persons, urban/rural adversarial relationships rather than collaborative ones, and increased cultural segregation (Joint Economic Committee, 2019).

This research brief examined the issues of "Brain Drain" and "Shrinking Cities" in Mississippi, and how those issues are potentially impacting the state from various economic, social, and governance perspectives. Its goal is to heighten the awareness of this societal phenomenon, and to provide public, private, non-profit officials and other interested parties with information that can help stabilize and/or reverse the "Brain Drain" trend in Mississippi. This report also examines the trend's possible effects and implications for cities like Jackson, Mississippi that are experiencing significant population losses.

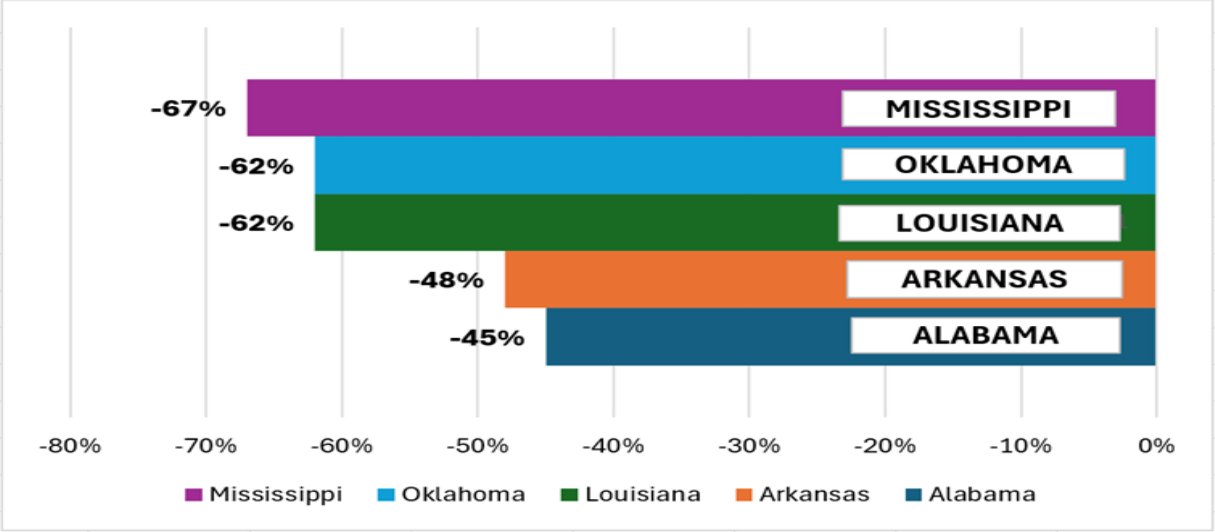
Brain Drain Among Southern States

An early reporting of 2020 Census data initially identified Mississippi as one of just three states with a reduction in population along with West Virginia and Illinois (Frey, 2021).[1] In April 2022, the Mississippi State Auditor's office released a report stating Mississippi had lost nearly ten percent of its young adult population – a demographic colloquially known as "Millennials," many of them college-educated (White, Piazza, & Reeves, 2022). A 2023 Census report found that among southern/southeastern states, Mississippi had a 67% "net outflow" rate; that is, more college-educated residents moving out of Mississippi than moving into the state (Kupriyanov, 2024). This rate was the highest in the region, and second highest in the nation following only

[1] It should be noted that a subsequent reporting of the 2020 Census Post-Enumeration Survey in 2022 estimated there was likely a 4.11% undercount of Mississippi's population by the Census Bureau (United States Census Bureau, 2022).

South Dakota at 72% (Kupriyanov, 2024). Figure 1 displays a bar chart comparing negative net outflow rates for selected southern states.

Figure 1. Southern States with the Highest "Net Outflow" of College-Educated Residents (2023).



Sources: Kupriyanov, V. (2024); U.S. Census Bureau Annual Social and Economic Supplement (ASEC) of the Current Population Survey (2023).

"Shrinking Cities"

Similar to the idea of Brain Drain is the concept of "shrinking cities". This concept refers to "older industrial cities with significant and sustained population loss (e.g., 25% or greater over the past 40 years), and increasing levels of vacant and abandoned properties including blighted residential, commercial and industrial buildings" (Schilling & Logan, 2008). The *Shrinking Cities International Research Network (SCIRN)* defines the concept as . . . "a population-dense urban area with a minimum population count of 10,000 that has seen reduction for at least two years, and is undergoing economic transformations with some symptoms of a structural crisis" (Ribant & Chen, 2020). There are numerous causes contributing to the concept of "shrinking cities" including suburbanization, the postindustrial shift from manufacturing to service industries, and social and cultural changes" (Ribant & Chen, 2020). Based on significant population losses, high levels of unemployment, infrastructure challenges, growing numbers of abandoned and vacant properties, and declining revenue sources, the above definitions of shrinking cities somewhat accurately describe urban areas in Mississippi like Greenville, Clarksdale, and the city of Jackson (U.S. Census Bureau, 2024). For example, since seeing its population peak at 202,895 in 1980, the city of Jackson's population has steadily declined to 153,701 residents as of 2020 (United

States Census Bureau, 1982; 2024). The city of Jackson (MS) like other shrinking cities have experienced not only a loss in population, but also lower levels of per capita income, increased poverty rates, increased losses of tax revenue, declining housing stock, increased unemployment rates, and an exodus of highly-educated and/or skilled persons - "Brain Drain" (U.S. Census Bureau, 2024; Joint Economic Committee, 2019; Miller & Collins, 2022; Milligan, 2019; Beauregard, 2009).

The combination of Mississippi's Brain Drain, and a growing list of shrinking cities like Jackson, poses a serious cause for concern regarding Mississippi's future economic outlook. A Mississippi State Auditor's Office report (White, Piazza, & Reeves, 2022), along with an economic impact report from the Mississippi Institutions of Higher Learning's University Research Center (Miller & Collins, 2022), highlighted how graduates of Mississippi's public universities are leaving the state at an alarming rate and negatively impacting the state's economy, with half of this specific population leaving the state within three years of graduation. The impact of this Brain Drain phenomenon has particular relevancy for shrinking cities like Jackson who are struggling to acquire and keep a skilled workforce needed to promote social and economic growth in critical areas. For example, a June 2024 report by the Bloomberg news outlet discussed the "crisis of opportunity" created in cities who are in desperate need of federal monies for infrastructure repairs and improvements, but lack the needed staff to successfully apply for grants and fill critical positions (Sisson, 2024). As this highly trained and skilled workforce continues to leave Mississippi at such disturbing rates, some state officials are questioning the wisdom of continuing to invest taxpayers' dollars in persons and programs not contributing to the long-term benefit of Mississippi (White, Piazza, & Reeves, 2022).

As these "Brain Drain" and "Shrinking Cities" trends continue, it becomes increasingly important that Mississippi policymakers and other interested parties ramp-up their efforts to retain and attract more human capital and talent to the state. This research brief seeks to provide those officials and interested parties with additional insight on these trends, as well as offer potential policy and programmatic recommendations that could help stabilize or reverse the loss of highly trained and skilled Mississippi residents leaving the state. The remaining sections of this report presents those insights along with other helpful information addressing the Brain Drain issue in Mississippi overall, and for its shrinking cities in particular.

Methodology

This report utilized a mixed methods approach that included reviewing qualitative-oriented research reports from academic, government, and professional associations, and reviewing quantitative-oriented data sources such as the U.S. Census Bureau's Decennial and American Community Survey datasets. Qualitative data was analyzed by identifying key recurring themes and insights on the potential social, economic, and cultural impact of the brain drain phenomenon. Quantitative data was analyzed using descriptive statistics (e.g., percentages, mean and range scores, frequency counts), and visual measures such as bar charts to identify key trends and patterns at the local, state, and national levels.

The specific methodology used to identify and compare "shrinking cities" consisted of reviewing quantitative population data of U.S. cities within an approximate population range of 5,000 residents to Jackson, MS. This resulted in a listing of all cities with population sizes of approximately 138,000 to 151,000, as reported by 2023 American Community Survey (ACS) data. Using the *Shrinking Cities International Research Network* (SCIRN) definition discussed earlier of a shrinking city encompassing at least a two-year period (Ribant & Chen, 2020), Census data was compared for the decennial census years of 2010 to 2020, as well as ACS data for the years of 2020 to 2023. This process was repeated for the states in which each of the cities identified are located.

Findings

Shrinking Cities Comparisons

Table 1 presents findings comparing cities similar to Jackson (MS) in terms of population losses and gains occurring for the periods of 2010 to 2020, and 2020 to 2023. The cities highlighted in green are those with a population loss for the years 2010-2020 **and** 2020-2023. Many of the other cities listed experienced significant population gains for the years 2010-2020 **and** 2020-2023.

As can be seen from viewing Table 1, the city of Jackson led all comparison cities in terms of percentage of population loss (-11.4%) for the time period 2010 to 2020, and (-6.5%) for the time period 2020 to 2023. Jackson was also one of only three cities in the comparison to experience population losses from 2010 to 2023 (see green highlighted areas). Overall, eleven of the 24 cities experienced population losses for the years 2020 to 2023. These findings indicate the phenomenon of shrinking cities is occurring in various geographic areas across the United States.

Table 1 City Population Comparisons for Years 2010-2020 and 2020-2023

City	Population Estimate		2010 Census	2010 to 2020 Change (Gain/Loss)		2020 to 2023 Change (Gain/Loss)	
	April 1, 2020	July 1, 2023		Number	Percent	Number	Percent
Escondido, CA	151,077	148,122	143,911	7,166	5.0	-2,955	-2.0
Bridgeport CT	148,642	148,028	144,229	4,413	3.1	-614	-0.4
Savannah GA	147,774	147,748	136,286	11,488	**8.4**	-26	-
Olathe KS	**141,285**	**147,461**	**125,872**	**15,413**	**12.2**	**6,176**	**4.4**
Mesquite TX	150,225	147,317	139,824	10,401	7.4	-2,908	-1.9
Pasadena TX	151,897	146,716	149,043	2,854	1.9	-5,181	-3.4
McAllen TX	142,194	146,593	129,877	12,317	**9.5**	4,399	**3.1**
Rockford IL	148,924	146,120	152,871	-3,947	-2.6	-2,804	-1.9
Gainesville FL	**141,137**	**145,812**	**124,354**	**16,783**	**13.5**	**4,675**	**3.3**
Syracuse NY	148,615	145,560	145,170	3,445	2.4	-3,055	-2.1
Pomona CA	151,470	145,502	149,058	2,412	1.6	-5,968	-3.9
Visalia CA	141,570	144,998	124,442	17,128	**13.8**	3,428	**2.4**
Thornton CO	141,863	144,922	118,772	23,091	**19.4**	3,059	**2.2**
Waco TX	140,122	144,816	124,805	15,317	12.3	4,694	3.3
Jackson MS	153,703	143,709	173,514	-19,811	-11.4	-9,994	-6.5
Columbia SC	136,810	142,416	129,272	7,538	**5.8**	5,606	**4.1**
Lakewood NJ	**135,158**	**139,866**	**92,843**	**42,315**	**45.6**	**4,708**	**3.5**
Fullerton CA	143,639	139,250	135,161	8,478	6.3	-4,389	-3.1
Torrance CA	146,955	139,224	145,438	1,517	1.0	-7,731	-5.3
Victorville CA	134,804	138,869	115,903	18,901	**16.3**	4,065	**3.0**
Midland TX	**132,528**	**138,397**	**111,147**	**21,381**	**19.2**	**5,869**	**4.4**
Orange CA	139,904	138,337	136,416	3,488	2.6	-1,567	-1.1
Miramar FL	**134,710**	**138,319**	**122,041**	**12,669**	**10.4**	**3,609**	**2.7**
Hampton VA	137,157	137,098	137,436	-279	-0.2	-59	-

Source: U.S. Census Bureau Decennial Census 2010, 2020; American Community Survey 2023 (***Note***: *Cells that are occupied by a hyphen symbol* (-) *experienced a percentage change that was greater than zero, but less than 0.1 percent*).

Table 2 provides a similar "population loss/gain" comparison for selected states included in this research brief. Results indicate Mississippi and Illinois experienced population losses for the years 2010 to 2020. The table results also support literature findings that certain states such as Georgia, Texas, Florida, and Colorado are experiencing significant "double-digit" population gains. Of particular relevancy for this report is the proximity of Southern states like Texas and

Georgia which have been shown to benefit from the brain drain of other states like Mississippi (JEC, 2019).

Table 2. State Population Comparisons for 2010-2020 and 2020-2023

State	Population Estimate			2010 to 2020 Change (Gain/Loss)	
	April 01, 2020	July 01, 2023	2010 Census	Number	Percent
CALIFORNIA	39,538,212	38,965,193	37,253,956	2,284,256	6.1
CONNECTICUT	3,605,912	3,617,176	3,574,097	31,815	0.9
GEORGIA	10,713,771	11,029,227	9,687,653	1,026,118	10.6
KANSAS	2,937,835	2,940,546	2,853,118	84,717	3.0
TEXAS	29,145,459	30,503,301	25,145,561	3,999,898	15.9
ILLINOIS	12,813,469	12,549,689	12,830,632	-17,163	-0.1
FLORIDA	21,538,216	22,610,726	18,801,310	2,736,906	14.6
NEW YORK	20,202,320	19,571,216	19,378,102	824,218	4.3
COLORADO	5,773,707	5,877,610	5,029,196	744,511	14.8
MISSISSIPPI	2,961,306	2,939,690	2,967,297	-5,991	-0.2
SOUTH CAROLINA	5,118,422	5,373,555	4,625,364	493,058	10.7
NEW JERSEY	9,289,039	9,290,841	8,791,894	497,145	5.7
VIRGINIA	8,631,373	8,715,698	8,001,024	630,349	7.9

Source: U.S. Census Bureau American Community Survey 2023

Brain Drain and Mississippi's Public Four Year Institutions

Tables 3 and 4 provide a comparison of residents aged 25 and over with a bachelor's degree who moved in- and out- of a state the previous year. Viewed collectively, Mississippi experienced a net "loss" of residents with bachelor's degrees over the time period (see Table 4). This trend is consistent with the definition of a jurisdiction experiencing a "brain drain" of a large portion of its highly educated potential workforce.

Table 3 --- Number and share of residents age 25 and older with a bachelor's degree who moved out of a State the previous year

	Alabama		Arkansas		Florida		Louisiana		Mississippi		Tennessee		Texas	
2010	18,578	2.70%	10,512	2.80%	79,261	2.40%	18,903	3.00%	10,168	2.70%	29,014	3.00%	77,796	1.90%
2011	22,148	3.10%	11,467	2.90%	79,168	2.40%	17,796	2.80%	11,683	3.10%	31,491	3.10%	86,872	2.10%
2012	23,416	3.10%	9,420	2.30%	87,964	2.50%	17,641	2.70%	10,187	2.60%	30,502	2.90%	88,542	2.10%
2013	19,857	2.60%	11,137	2.80%	95,866	2.60%	19,343	2.80%	11,627	2.90%	35,220	3.30%	97,833	2.20%
2014	21,185	2.80%	9,860	2.40%	101,703	2.70%	18,192	2.60%	15,415	3.70%	37,832	3.40%	97,655	2.10%
2015	22,333	2.80%	14,515	3.40%	105,171	2.60%	21,106	3.00%	14,959	3.70%	36,773	3.20%	101,714	2.10%
2016	22,627	2.80%	13,484	3.00%	105,630	2.60%	20,402	2.80%	11,792	2.80%	41,756	3.50%	110,380	2.20%
2017	24,764	2.90%	12,676	2.70%	106,728	2.50%	23,799	3.20%	15,510	3.60%	37,891	3.10%	121,347	2.30%
2018	23,339	2.70%	13,141	2.80%	119,116	2.60%	21,836	2.90%	14,288	3.10%	38,608	3.10%	123,875	2.20%
2019	23,419	2.70%	12,741	2.70%	118,579	2.60%	21,957	2.80%	14,083	3.20%	41,110	3.10%	128,813	2.30%

Source: Miller and Collins, 2022 / American Community Survey 1-year Estimates

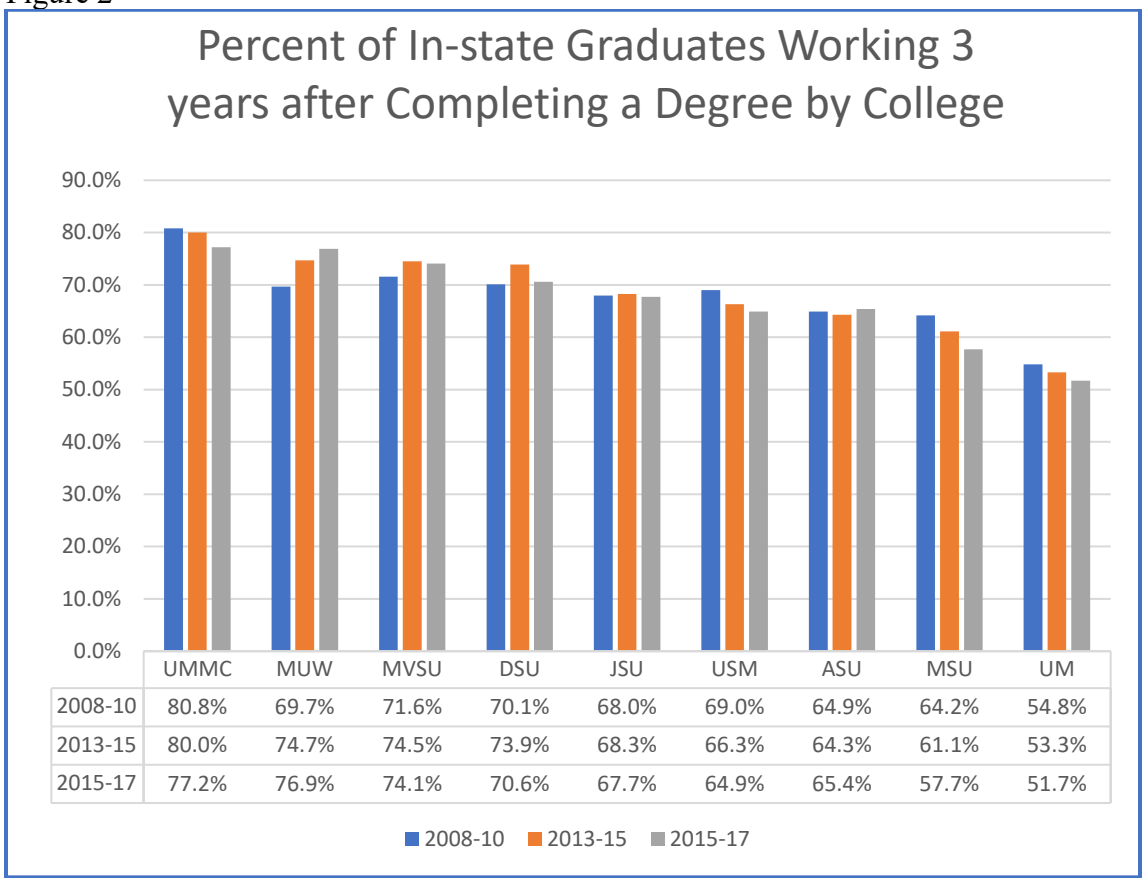
Table 4 --- Net number and share of residents aged 25 and over with a bachelor's degree who moved into a state the previous year

	Alabama		Arkansas		Florida		Louisiana		Mississippi		Tennessee		Texas	
2010	1,837	0.3%	4,452	1.2%	49,437	1.5%	74	0.0%	705	0.2%	5,902	0.6%	63,788	1.6%
2011	335	0.0%	2,146	0.5%	75,841	2.2%	3,101	0.5%	-540	-0.1%	21,645	2.1%	71,829	1.7%
2012	3,098	0.4%	4,465	1.1%	65,888	1.8%	3,911	0.6%	1,076	0.3%	8,199	0.8%	66,580	1.5%
2013	4,436	0.6%	1,148	0.3%	67,344	1.8%	2,171	0.3%	-2,574	-0.7%	9,750	0.9%	76,888	1.7%
2014	3,467	0.5%	4,610	1.1%	82,550	2.2%	4,278	0.6%	-1,741	-0.4%	6,755	0.6%	95,689	2.0%
2015	2,355	0.3%	2,825	0.7%	101,512	2.5%	5,214	0.7%	-3,034	-0.7%	13,392	1.2%	104,914	2.1%
2016	8,159	1.0%	39	0.0%	116,777	2.8%	453	0.1%	-479	-0.1%	4,684	0.4%	94,971	1.8%
2017	169	0.0%	1,780	0.4%	118,282	2.7%	-3,882	-0.5%	-2,064	-0.5%	14,101	1.1%	82,424	1.5%
2018	2,597	0.3%	2,287	0.5%	104,959	2.3%	-323	0.0%	-803	-0.2%	21,248	1.7%	92,405	1.6%
2019	2,834	0.3%	-1,897	-0.4%	105,204	2.2%	-2,829	-0.4%	-2,545	-0.6%	14,319	1.1%	83,500	1.4%
Total	29,287	15.2%	21,855	21.6%	887,794	64.2%	12,168	7.9%	-11,999	-17.1%	119,995	32.6%	832,988	49.4%

Source: Miller and Collins, 2022 / American Community Survey 1-year Estimates

Figure 2 provides a comparison of Mississippi's public four year universities percentages of in-state graduates working 3 years after completing a degree for the years 2008 to 2017. The data indicates considerable fluctuations by university, and by years, in the percent of graduates working in the state three years after completing their degrees. This data was extracted from a report prepared by the Mississippi Auditor's Office titled *Money Down the Brain Drain: Are Taxpayers Getting Their Money's Worth?* (White, Piazza, & Reeves, 2022).

Figure 2



	UMMC	MUW	MVSU	DSU	JSU	USM	ASU	MSU	UM
2008-10	80.8%	69.7%	71.6%	70.1%	68.0%	69.0%	64.9%	64.2%	54.8%
2013-15	80.0%	74.7%	74.5%	73.9%	68.3%	66.3%	64.3%	61.1%	53.3%
2015-17	77.2%	76.9%	74.1%	70.6%	67.7%	64.9%	65.4%	57.7%	51.7%

Source: Mississippi Office of the State Auditor Report (White, Piazza, & Reeves, 2022)

Legend

UMMC --- Univ. of Mississippi Medical Center	USM --- Univ. of Southern Mississippi
MUW --- Mississippi University for Women	ASU --- Alcorn State University
MVSU --- Mississippi Valley State University	MSU --- Mississippi State University
DSU --- Delta State University	UM --- University of Mississippi
JSU --- Jackson State University	

Also of note is that for the state's two largest universities (i.e., Mississippi State University and the University of Mississippi), both universities experienced recurring yearly declines in the percent of in-state graduates working three years after completing their degree.

Table 5 provides a comparison of Mississippi's public four year universities' specific degree programs most and least likely to lead to employment in Mississippi three years after graduation. The programs *most likely* to lead to employment tend to be more social-science oriented; whereas the *least likely* to lead to employment tend to be more business and science/technology oriented. The list of least likely degree programs offers some insight on possible employment areas graduates are pursuing outside of Mississippi.

Table 5 Specific programs most and least likely to lead to employment 3 years after graduation

	Most Likely to Work in Mississippi
1	Kindergarten I Preschool Education and Teaching
2	Social Science Teacher Education
3	Mathematics Teacher Education
4	Education, Other
5	Dental Hygiene / Hygienist
6	Social Studies Teacher Education
7	Elementary Education and Teaching
8	English I Language Arts Teacher Education
9	Child Development
10	Registered Nursing / Registered Nurse

	Least Likely to Work in Mississippi
1	Hospitality Administration I Management, General
2	Geology / Earth Science, General
3	Real Estate
4	Marketing, Other
5	Drama and Dramatics I Theatre Arts, General
6	Business / Managerial Economics
7	Computer Engineering, General
8	Chemical Engineering
9	Chemistry, General
10	Philosophy

Source: Mississippi Office of the State Auditor Report (White, Piazza, & Reeves, 2022)

Discussion

There are many issues which influence the extent and impact of Brain Drain at the state and local levels. Some of those issues include the availability of economic opportunity and advancement ("Jobs"); the presence of desirable "quality of life" factors such as affordable housing, low crime rates, ample entertainment options; prevailing cultural trends; and inclusive political and social environments (Joint Economic Committee, 2019; Miller and Collins, 2022; Florida, 2002). As mentioned in the Miller and Collins (2022) report, Mississippi does not have many thriving urban centers that serve to attract recent highly educated graduates associated with the Brain Drain phenomenon. Shrinking cities such as Jackson are often fraught with issues surrounding race, political division, and poor "quality of life" indicators. While many of Mississippi's largest core cities such as Jackson are experiencing population losses and other negative indicators, there are several emerging urban areas that are experiencing population and economic growth such as Oxford, Southaven, Flowood, Petal, and the Golden triangle areas of Columbus, Starkville, and West Point (U.S. Census Bureau, 2024). As listed earlier in the data findings regarding "in-state / out-of-state" university graduates, those growing urban areas are not enough to positively reverse the out-migration trend of highly educated graduates. In a state like Mississippi with a complex history, policy and programmatic options need to consider both economic and social/cultural options shaping the rate and extent of Brain Drain occurring among a younger generation of state residents (Florida, 2002; JEC, 2019).

Indeed, the Joint Economic Committee (2019) report observed that Brain Drain can deepen political and cultural divides among the remaining population which tends to be less progressive on social and political issues. These deepening political and cultural divides often surface around issues of race, political affiliation, and gender-related issues. While there is considerable debate surrounding the use of Diversity, Equity, and Inclusion (DEI) initiatives to help foster economic and social advancements, there is evidence that the lack, absence, and/or removal of such initiatives is impacting employment and residency decisions of young college graduates and existing professionals (Florida, 2002; JEC, 2019). For example, in a 2023 hearing of the Florida State Senate's Appropriations Committee on Education, Senator Shervin D. Jones (committee vice-chair) said that in response to anti-DEI legislation, an HR director at one local university had seen "over 300 applicants reconsider" their job offers in the previous month (Appropriations Committee on Education, 2023). Similar negative impacts are also surfacing

among physicans and other health care professionals. A 2023 survey of more than over 2,000 practicing and training physicians found that 82.3% of respondants preferred to work in states without restricted healthcare access measures, and 76.4% would not even apply in states that imposed legal consequences on doctors who performed certain reproductive-related services (Bernstein, Levy, & NcNeilly, 2023). The previous two examples have wide-spread future implications for Mississippi's healthcare and educational sectors as related to the sufficient availability of those services. The items listed in Table 5 regarding academic programs least likely to lead to employment 3 years after graduation in Mississippi generally include future-oriented occupations representing technology and science-related areas. The continued loss of graduates in those areas to other states seriously impedes Mississippi's (and shrinking cities') ability to compete for the "jobs-of-the-future." If current in-state and out-of-state migration patterns continue, along with an actual or perceived lack of economic and social opportunity, it is not extreme to anticipate a continuance of the Brain Drain phenomenon in Mississippi with long-term negative economic and social consequences similar to those described in the JEC (2019) and the Miller and Collins (2022) reports (e.g., population losses, limited jobs created, declining economic output, and lost of social cohesion). As such, enacting policy and programmatic efforts to minimize and/or reverse the effects of Brain Drain becomes a mission of survival for Mississippi in the competition to attract and retain those individuals.

Conclusion

The push to address the Brain Drain phenomenon in the south began as early as 1991 when states like Arkansas and Georgia began implementing policy approaches (e.g., merit scholarships) to retain university students in their home states (Rogers & Heller, 2003). The passage of time saw more policy refinements addressing the Brain Drain issue such as using "business analytic theory" to identify current and future employment trends (Gottlieb, 2011); creating various types of loan repayment assistance programs (H.B 396, 2017; Tong, 2024); and state government-based employment initiatives such as the Mississippi State Auditor's Office fellowship program designed to help develop a set of high-skill accountants to stay and work in Mississippi for a minimum of two years (White, Piazza, & Reeves, 2022).

One of the main contributors to a state's continued economic viability and quality of life is retaining the human capital necessary to effectively operate and improve its administrative

functions. While mobility is a constant factor of life in many societies, when population changes begin to take on the patterns seen in the state of Mississippi and its shrinking cities, it becomes necessary to adjust policies and programs needed to mitigate and/or reverse those negative patterns and outcomes. The opportunity costs of not adequately adjusting state and local initiatives designed to retain an educated population with advance workplace skills is far too great when considering Mississippi is far behind many neighboring states in terms of quality of life indicators. Current policy and programmatic measures being implemented to reverse the negative Brain Drain in Mississippi and its shrinking cities are not producing, on scale, the needed results.

The following story helps summarize the feelings of many current Brain Drain participants leaving their home states and cities . . . . When meeting a fellow countryman practicing medicine in the U.K., United Arab Emirates Vice President and Prime Minister Mohammed Bin Rashid Al Maktoum asked the young man if he ever planned on returning home. The doctor's response was – "my home is where I can eat." That response captures the attitudes of many highly educated young, middle-age, and/or senior participants. In today's society, a person's loyalty to a state or city where that person grew up is no longer likely to keep them there. Reducing the Brain Drain phenomenon heavily depends on making sure that those who are highly educated and skilled can easily envision themselves with a thriving future in Mississippi – and that vision inevitably begins with policymakers (. . . whether at the state, county, or city level . . .) demonstrating a willingness to implement policies addressing the economic, social, and cultural needs of this very mobile population. While most of the responsibility for creating those favorable environments rests with state policymakers, local elected officials representing "shrinking cities" must also increase their efforts to improve the quality of life in their cities and thus make them more attractive to the Brain Drain population looking elsewhere. Shrinking cities often have a basic economic, social, and cultural infrastructure needed to launch initiatives designed to attract and retain this highly educated talent pool. As the old marketing adage so eloquently states . . . if you won't provide those items, somebody else will. This adage applies to "shrinking states" as well as "shrinking cities."

Recommendations

Based upon this study's findings and the research literature reviewed, the following is a list of recommendations for addressing the Brain Drain issue at both the state and local levels:

- **Provide higher wages and other financial incentives.** Mississippi's median household income is $45,928, nearly $20,000 lower than the national figure ($65,712) (Boyce, Kim, Smith, & Barefield, 2023). Boosting salaries and offering other competitive financial incentives is the most obvious and important means of attracting and retaining those talented residents who could easily earn more in another state. Referring back to Maktoum's anecdote, competitive wages help ensure that Mississippians "can eat" here.
- **Increase transparency in governance and inclusiveness measures.** As referenced in the Joint Economic Committee (2019) report, due to changing demographic profiles and social and cultural norms, issues like open governance, evidence-based decision making, and inclusiveness are now just as important to younger generations as traditional principles. Policy decisions made by state and local officials play a major role in determining whether young educated adults choose to stay or move away.
- **Prioritize investment in public education.** Investing in improving local public education not only better equips the youth population to earn merit-based aid and be successful in their college careers, it also creates more of an appeal for young professionals to remain in the state to raise families that have good educational systems. This is especially important for "shrinking cities" where perceptions regarding the quality of the local school system are often raised.
- **Create more "Inter-Regional Collaborations" designed to increase the socio-economic attractiveness of the "shrinking cities" and surrounding areas.** Towns, cities, counties, and even rural communities can use these regional collaborations to pool resources and jointly market amenities that will attract and retain residents to those areas.
- **Implement a specific campaign to attract more professionals in emerging fields presenting opportunities for city growth and/or revitalization.** According to the Bloomberg report, capacity-building to compete with larger cities could potentially create access "up to $2.2 trillion that can be leveraged for climate, (green) infrastructure, and water investments" (Sisson, 2024). This capacity building offers openings such as

increasing the number of skilled technical writers who can complete grant applications for such funding.

- **Create incentive programs across multiple industries to train and entice highly-educated and skilled workers.** Programs mentioned earlier in this report such as the "Stay in the Sip" fellowship and the LRAP program for teachers can serve as models for other businesses and industries to emulate. Just as with communities, corporations and small companies can work together in finding ways to offer college grads and other skilled workers guaranteed placements and other benefits for maintaining residency in Mississippi.
- **Utilize sustainability and green infrastructure to "right-size" the Capitol City.** Authors Schilling & Logan (2008) recommend a model of using green infrastructure planning and improvements to revitalize vacant properties and add attractive, useful green spaces. This approach would have multiple benefits, including attracting and employing STEM-field professionals, beautifying the city itself, and "building community consensus through collaborative neighborhood planning" (Schilling & Logan, 2008).
- **Offer additional financial and nonfinancial incentives to attract and retain targeted workers and their families.** Examples include offering home down payment assistance; childcare assistance; improved transportation systems; relocation support assistance; and marketing and attraction guides.

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