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Felicia M. Bowens

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HUMAN CAPITAL FLIGHT: DETERMINANTS OF OUT-MIGRATION DECISIONS  
AMONG MISSISSIPPI'S COLLEGE GRADUATES

by

Felicia Mae Bowens

A Dissertation  
Submitted to the Graduate School,  
the College of Business and Economic Development  
and the School of Leadership  
at The University of Southern Mississippi  
in Partial Fulfillment of the Requirements  
for the Degree of Doctor of Philosophy

Approved by:

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## ABSTRACT

In today's knowledge economy, the retention of skilled and college-educated workers is vital to the economic stability and long-term competitiveness of any region (Bernhard, 2007; Ehrke, 2014; He et al., 2016; Khaomin et al., 2022; Miller & Collins, 2022; Moretti, 2012; White et al., 2022; Winters, 2011). As the global economy evolves, Mississippi must continue accumulating and cultivating a workforce ready to meet the demands of today's labor markets. However, with the out-migration of Mississippi's college graduates post-graduation, the state continues to lose a valuable resource, its human capital (Miller & Collins, 2023; Miller & Collins, 2022; Mississippi Economic Council, 2022; White et al., 2022). The present study sought to examine the factors that influence the out-migration decisions of Mississippi's college graduates.

Using a descriptive, comparative research design, the researcher surveyed alums of The University of Southern Mississippi ( $n = 27$ ). The results of the study revealed four key findings: (a) factors influencing Mississippi's college graduates' out-migration decisions are related to both economic and non-economic determinants; (b) specific personal characteristics (educational attainment, college major, child status, and migration history) play a role in influencing migration decisions; (c) quality work-life balance, obtaining a higher paying job, obtaining a job with opportunities for advancement and being closer to relatives are essential factors influencing migration decisions; and (d) participants indicated suitable housing and neighborhoods, affordable housing, job security, available job opportunities, and work-life balance as a significant community and life factors influencing migration decisions.

With the out-migration of Mississippi's college-educated workers, the state's stock and distribution of human capital will continue to change. Retaining human capital affects the region's long-term economic growth and attractiveness (Miller & Collins, 2023; Miller & Collins, 2022; Mississippi Economic Council, 2022; White et al., 2022). Why Mississippi's college graduates choose to stay or leave the state after graduation has policy and economic implications. The ability to understand which factors are most influential in the migration decisions of Mississippi's college graduates is necessary to preserve the long-term economic development and sustainability of the region.

*Keywords:* College Graduates, Human Capital, Migration Decisions

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## DEDICATION

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## LIST OF ABBREVIATIONS

<i>IHL</i>	Institutions of Higher Learning
<i>IRB</i>	Institutional Review Board
<i>ROI</i>	Return on Investment
<i>Southern Miss</i>	The University of Southern Mississippi
<i>SPSS</i>	Statistical Package for the Social Sciences
<i>USM</i>	The University of Southern Mississippi

## CHAPTER I – INTRODUCTION

As labor markets continue to evolve worldwide, the state of Mississippi must continually prepare to meet the demands of today's global economy (Griffin & Annulis, 2013). Nevertheless, a key component of economic growth and prosperity is the strategic utilization and retention of human capital (Abel & Deitz, 2012; Griffin et al., 2011; Stephens, 2019; Tyndorf & Martin, 2018). Considered a valuable resource, the accumulation of human capital is essential to the economic stability and overall competitiveness of any state, region, or nation (Ehrke, 2014; Fan et al., 2016a; Garmise, 2009; Griffin et al., 2011; Guohua et al., 2021; He et al., 2016; Khaomin et al., 2022; Miller & Collins, 2022; Rao, 2004; Smith, 2016; Ward, 2016; White et al., 2022, Winters, 2011). This statement especially applies to college graduates, who serve as important contributors to regional and local economic growth (He et al., 2016; Winters, 2017). According to Abel and Deitz (2012), increased levels of human capital associate with positive outcomes, including increasing wages and income and population growth. Khaomin et al. (2022) assert that a nation or region's ability to meet today's challenges regarding retaining and attracting human capital is essential for economic development and growth. When Mississippi's stock of human capital strengthens, it produces undeniable gains for the state's economy (Miller & Collins, 2023). However, with the out-migration of Mississippi's college graduates through human capital flight (i.e., brain drain), the state's efforts to strengthen its stock of human capital weakens, which can produce negative implications for the state's economy (Miller & Collins, 2023; Miller & Collins, 2022; White et al., 2022).

Despite a record number of college students enrolled in Mississippi's eight public universities (76,510) and an estimated 19,681 degrees awarded in 2021-2022 (Office of Strategic Research, 2022), the retention of these college graduates' post-graduation remains important to Mississippi's economic future (White et al., 2022). A report released by Mississippi's Office of the Auditor in 2022 notes that only 50% of the state's college graduates who earned a degree at one of Mississippi's eight public universities in 2020 remain working in the state 3 years post-graduation (White et al., 2022). Examining the data, the steady outflow of Mississippi's college graduates post-graduation is a subject of the utmost importance and necessitates further investigation (Austin, 2017). According to Miller and Collins (2023), Mississippi's population of college graduates with at least a bachelor's degree totals 22.8%, which signifies that the state's proportion of college graduates is much smaller than most states. U.S. Census Bureau figures show that the state of Mississippi lost a considerable number of residents with bachelor's and advanced degrees between 2015 and 2016 (U.S. Census Bureau, n.d.a.; U.S. Census Bureau, n.d.b.). Moreover, the state experienced a steady decline in its young-adult population, especially among millennials (individuals born between 1981 and 2000) at 3.9 % (Austin, 2017; Campbell & Ganucheau, 2018). This sentiment echoes in the 2022 State Auditor's report, which indicates that over 60,000 millennials have migrated out of the state, nearly 10%, since the 2010 census (White et al., 2022). Overwhelmingly, statistics show the state of Mississippi continues to face two dilemmas, a steady decline in its overall population and the retention of its college-educated population (Miller & Collins, 2023; Miller & Collins, 2022; Smith, 2016; White et al., 2022). Therefore, the retention of skilled and knowledgeable workers should remain a policy focus for



Mississippi's policymakers (e.g., elected officials, government officials, school boards) and other key stakeholders (e.g., employers, colleges and universities, community leaders, business leaders, researchers), especially as future policy decisions are created to enhance economic development and seek to mitigate the effects of brain drain, the loss of talent, particularly skilled or college-educated workers (Miller & Collins, 2022; Miller & Collins, 2023; White et al., 2022).

The focus of the present study is to identify the determinants that influence the out-migration decisions among Mississippi's college graduates. The study examines a range of factors, economic and non-economic, including personal characteristics, which research shows influence migration decisions (Ehrke, 2014; Kodrzycki, 2001; Waldorf & Do Yun, 2016; Winters, 2017). According to Duca (2022) and Ishitani (2011b), economic factors remain determinants such as per capita income, employment growth or jobs growth rate, population, inflation, median household prices, and unemployment rate. At the same time, non-economic factors are described as quality-of-life factors consisting of access to public goods, climate, geographic location, and amenities (Duca, 2022; Ishitani, 2011b). With an enhanced understanding of how these factors influence out-migration decisions, Mississippi public policymakers and other key stakeholders can evaluate the potential implications of the steady out-migration of Mississippi's college graduates. Furthermore, the results of this study may offer insights to Mississippi policymakers and other key stakeholders in understanding how the out-migration of college graduates may not only impact economic opportunities and diminish economic outcomes but present challenges in strengthening the state's workforce.

Chapter I discusses the background of the study, the problem statement, and the purpose and describes the conceptual framework undergirding the study. The chapter presents the research question and objectives guiding the study. Additionally, the chapter discusses the study's significance, delimitations, and assumptions. Chapter I also describes the organization of the study and provides definitions of key terms integrated throughout the research study.

### Background of the Study

According to Parisi (2018), between 2016 and 2017, Mississippi's net domestic migration was -9,885. Among those deciding to leave the state, college-educated millennials represented approximately 10%. Moreover, statistics reported by Mississippi Lifetrack (n.d.), a Statewide Longitudinal Data System (SLDS) Reporting Service, indicate that among Mississippi's 2015-2016 college graduates, a little over half (58.8%) were employed in the state one year after graduation. With a record number of students enrolling in Mississippi's eight public universities, further investigation is necessary to understand the factors influencing Mississippi's college graduates' migration decisions post-graduation. In examining the effects of out-migration from a local and regional perspective, research suggests that the out-migration of skilled and college-educated workers leads to deficiencies in different skills and knowledge essential to the economic growth and development within a region (Chimoza, 2012; Moretti, 2012; Winters, 2011). With the out-migration of critical human capital, communities experience a decline of resources, including skilled and college-educated workers, which impedes regional advancement (Ijim-Agbor, 2009; Tano, 2014). Research shows that the out-migration of trained and well-educated workers hinders a region's ability to strengthen its stock of

human capital, which also diminishes the region's ability to have an advantage over other regions (Garmise, 2009; Ijim-Agbor, 2009). Nevertheless, investments in human capital remain essential to thrive in today's evolving knowledge economy (Khaomin et al., 2022).

### *Workforce and Economic Development*

When studying the consequences of out-migration in the context of workforce and economic development, Ishitani (2011a) asserts that with the out-migration of college graduates, any justification for continued public investment in higher education becomes undermined or damaged. According to Ishitani, on average, \$6,773 is allocated per full-time college student. However, once a student graduates, if that student decides to leave the state where the investment occurred, that state loses its anticipated return.

Subsequently, (Ishitani, 2011a) and McKenzie (2013) suggest that out-migration hampers the future returns on investment (ROI). This decline in ROI, over time, can influence the apportionment of federal and state funds, which typically are allocated to institutions of higher learning as a form of human capital investment (Ishitani, 2011a).

Research commissioned by the Mississippi Office of the State Auditor in April 2022 underscores Ishitani's argument as the state spent an estimated \$1.5 billion of its general funds to support students attending the state's public universities between 2015-2018; however, only roughly 50% of those students, maintained employment in the state by 2020 (White et al., 2022). Thus, the out-migration of Mississippi's college graduates can produce a trickle-down effect whereby out-migration not only affects the composition of the state's current and future labor force but also influences Mississippi

policymakers and other key stakeholders' willingness to support human capital investments through education in the future.

### *Factors Influencing Out-Migration*

Consequently, several authors contend that two competing dynamics influence the out-migration decisions of college-educated residents. These dynamics are the push-pull factors of migration (Conner, 2021; He et al., 2016; Ijim-Agbor, 2009; Kodrzycki, 2001; Kumpikaite & Zickute, 2012; Soydan, 1998). These authors assert that the push factors of migration are those internal factors driving individuals to out-migrate (e.g., decreased or limited job opportunities). In contrast, the pull factors of migration consist of external factors that attract out-migration (e.g., increased job opportunities, improved living wages, and housing). Likewise, research shows that in addition to the push and pull factors of migration, other factors such as community-based and life and personal characteristics (e.g., age, race/ethnicity, gender, marital status, child status, educational attainment, and migration history) may also affect migration decisions (DeJong, 2000; Ehrke, 2014; Faggian & Franklin, 2014; Fan et al., 2016a; Feiock et al., 2008; Garasky, 2002; He et al., 2016; Heinemann & Hadler, 2015; Ishitani, 2011a; Ishitani, 2011b; Krishnakumar & Indumathi, 2014; Kodrzycki, 2001; Mellander et al., 2011; Stephens, 2019; Waldolf & Do Yun, 2016; Winters, 2017; Xu et al., 2015).

### *Rationale for the Study*

With the outflow of Mississippi's college graduates and the steady retirement of baby boomers (workers born between 1946 and 1964), the state of Mississippi, along with other Delta Region states, according to the Delta Regional Authority (2021), must consider new ways to retain and attract younger talent to prevent future workforce

shortages (Delta Regional Authority, 2021). With a decline in the state's college-educated and skilled labor force and a population loss of 0.2% in 2020, Mississippi is lagging behind other states with respect to retaining and attracting highly educated and skilled talent (Miller & Collins, 2022, Mississippi Economic Council, 2022). Hence, the retention of Mississippi's college graduates remains of great importance to the economic future of the state (White et al., 2022).

Consequently, Ward (2016) asserts that the out-migration of skilled and college-educated workers has the potential to produce long-term consequences, which could affect the economic stability of any region. Moreover, Garmise (2009) and Crawford-Lee and Hunter (2009) emphasize that a skilled and college-educated workforce, combined with an equally strong workforce development system, is fundamental to attracting and retaining industries within a region. With the out-migration of college graduates, the quantity and quality of skills possessed within a workforce may diminish the state's ability to successfully attract certain industries and other economic development opportunities, such as the development of an innovation cluster (Ward, 2016; Moretti, 2012). According to Sowl et al. (2022), it is important to understand why college graduates may choose to leave or stay, as there are consequences that not only affect the individual but also impact economic and social development within the community they reside in. Therefore, understanding the factors influencing the out-migration of Mississippi's college graduates is vital for mitigating adverse workforce and economic development outcomes.

Garmise (2009) contends that retaining skilled and college-educated workers would enhance the composition, capacity, and quality of a state's workforce. Moreover,

the reduction of college-educated workers in the state could affect the accumulation of human capital skills (Smith, 2016; Winters, 2011). Accordingly, Di Maria and Lazarova (2011) assert that any decreases in the stock of human capital diminish economic growth within a region. Buchholz and Bathelt (2021) maintain that the accumulation of college-educated workers associates with regional economic development. The authors assert that through strong economic development, regions can enhance economic outcomes, which include the creation of new jobs and innovation. However, Guohua et al. (2021) contend that the steady outflow of human capital can produce negative consequences, including shifting the distribution of human capital within a region. Consequently, the out-migration of Mississippi's vital human capital could alter the composition of the state's workforce and thereby leave the current workforce inadequately prepared to meet the increasing demands of today's evolving economy and labor markets.

Previous studies suggest further research is central to understanding the range of factors influencing out-migration decisions (Ishitani, 2011a; Kodrzycki, 2001; Waldorf & Do Yun, 2016). Kodrzycki (2001) asserts that limited research exists on the determinants influencing college graduates to migrate post-graduation. Moreover, Ishitani (2011a) contends that additional research studies should explore aspects of migration patterns in relation to college graduates. Similarly, Waldorf and Do Yun (2016) assert that research examining the effects of out-migration compared to labor market outcomes still needs to be made available. Waldorf and Do Yun contend that varied factors, including employment opportunities and wage earnings, may influence the migration choices of college graduates. Likewise, Winters (2017) suggests additional research is needed to understand the linkage between college majors, income, and migration decisions. He also

emphasized that additional research should examine how college majors play a role in the migration decisions for couples. To fully understand the impact of out-migration on the state of Mississippi, more scholarly research focused on Mississippi is needed to determine the factors particularly influencing Mississippi's college graduates' migration decisions.

### Statement of the Problem

Mississippi is home to approximately 2,949,965 residents and 58,897 businesses, which employ 949,927 employees (U. S. Census Bureau, n. d. c.). The state comprises eight 4-year public universities, 12 private, not-for-profit colleges and universities, one public academic health science center, and 15 2-year institutions (Mississippi Commission on College Accreditation, 2022). Despite having a substantial number of higher education institutions across the state, Mississippi continues to face the dilemma of retaining college graduates post-graduation (Miller & Collins, 2023; Miller & Collins, 2022, Mississippi Economic Council, 2022; Smith, 2018; White et al., 2022). Research shows that less than 50% of graduates of Mississippi's eight public universities between 2008 and 2010 remained employed in the state by 2020, which decreased from the 57% of those graduates who worked in Mississippi 3 years following graduation (Miller & Collins, 2023; Miller & Collins, 2022; White et al., 2022). As a result, the out-migration of Mississippi's college graduates post-graduation continues as a problem for the state (Miller & Collins, 2023; Miller & Collins, 2022; Smith, 2018; White et al., 2022). Research indicates that the ability to retain college-educated and skilled workers is not only necessary for economic growth and prosperity of a region but its overall long-term

competitiveness (Fan et al., 2016a; Guohua et al., 2021; Miller & Collins, 2023; Miller & Collins, 2022; Mississippi Economic Council, 2022; Smith, 2018; White et al., 2022).

While research shows that economic, non-economic, and personal factors influence the migration decisions of college graduates (e.g., heightened job opportunities, improved living conditions, enhanced quality of life), the specific factors influencing the migration decisions of Mississippi's college graduates remain not fully understood. Abel and Deitz (2021) maintain that when recent college graduates remain in a community post-graduation, they enhance the level of human capital within a region. However, the authors also assert that because college graduates are mobile, there can be no guarantees that regions producing large numbers of human capital in the form of college graduates will automatically produce increased levels of human capital. Nevertheless, by understanding the factors influencing out-migration decisions, policymakers and other key stakeholders can more effectively implement strategies to curtail the out-migration of Mississippi's college graduates. For the state of Mississippi, the retention of skilled and college-educated workers is an ingredient of economic growth and overall attractiveness of the state (Miller & Collins, 2023; Miller & Collins, 2022; White et al., 2022).

Moreover, the retention of human capital is a component of the long-term success and sustainability of industries across Mississippi. As Khaomin et al. (2022) argue, human capital increases productivity, and such investment helps to spawn development. Moreover, Khaomin et al. assert that "human capital is a driver of economic growth of any entity, enterprise, and the state as a whole" (p. 220). As Garmise (2009) and Crawford-Lee and Hunter (2009) state, a skilled and college-educated workforce, combined with an equally strong workforce development system, is fundamental to



appealing to new industries and keeping existing industries within a region. Nonetheless, Griffin and Annulis (2011) maintain that college graduates acquiring employability skills are needed to ensure employers can meet the demands of today's economy, which is central to longstanding human capital and economic development. Therefore, to remain competitive, the state of Mississippi's workforce must include both skilled and college-educated workers to enhance performance and productivity as well as reinforce economic development (White et al., 2022); nevertheless, with the out-migration of Mississippi's skilled and college-educated workers, Mississippi trails behind other states in the retention of college graduates (Miller & Collins, 2022; Miller & Collins, 2023; Smith, 2016; Smith, 2018). With the out-migration of college graduates, Mississippi is losing one of its most valuable assets, human capital.

Accordingly, research shows that the out-migration of skilled and college-educated workers has the potential to yield long-term consequences, including altering a state's workforce composition (Tano, 2014; Ward, 2016; Winters, 2011). Research indicates that without strong investments in human capital, the degree of skills accumulation within a labor force will diminish (Rao, 2004; Winters, 2011). Therefore, the composition of any state's workforce relies on retaining highly educated and skilled talent, including recent college graduates (Rao, 2004; Tano, 2014). Therefore, the research presented applies to any state, including Mississippi, which seeks to address and mitigate potential adverse outcomes related to the out-migration of college graduates.

#### Purpose Statement

The purpose of this study is to determine the factors most influential to the out-migration decisions of Mississippi's recent college graduates. The study identifies

economic and non-economic factors influencing out-migration decisions. The study will assess if differences exist between these factors, i.e., economic, non-economic, and personal characteristics.

### Research Questions

The present study seeks to identify the determinants influencing the out-migration decisions of recent Mississippi college graduates' post-college graduation. Based on the purpose of the study, the primary research question for this study is what determinants are most influential in the out-migration decisions of Mississippi's college graduates?

The study addresses the following research objectives (RO):

*RO1* – Describe the demographic characteristics of the sample in terms of age, gender, race/ethnicity, marital status, child status, educational attainment, college major, and migration history.

*RO2* – Describe the factors that influence the out-migration decisions of Mississippi's college graduates who graduated within the past five academic calendar years.

*RO3* – Describe the most influential factors (economic and/or non-economic) that influence the out-migration decisions of Mississippi college graduates who graduated within the past five academic years.

*RO4* – Compare the factors influencing the out-migration decisions among Mississippi college graduates with personal characteristics (age, gender, race/ethnicity, marital status, child status, educational attainment, and college major).

RO5 – Compare the factors influencing the out-migration decisions among Mississippi college graduates with migration history.

### Conceptual Framework

Roberts (2010) states that a conceptual framework is a visual or descriptive representation of the variables, constructs, and theories undergirding a study. For this research study, the researcher developed a conceptual framework to theorize the key components of this study. The framework integrates the concepts of migration, migration decision-making, the push-pull factors of migration, human capital, educational attainment, and workforce and economic development. The (a) push and pull theory of migration, (b) motivational theory of migration decision making, (c) endogenous growth theory, and (d) human capital theory will serve as the theoretical underpinnings of the study. Figure 1 illustrates the key concepts and theories relevant to this study.

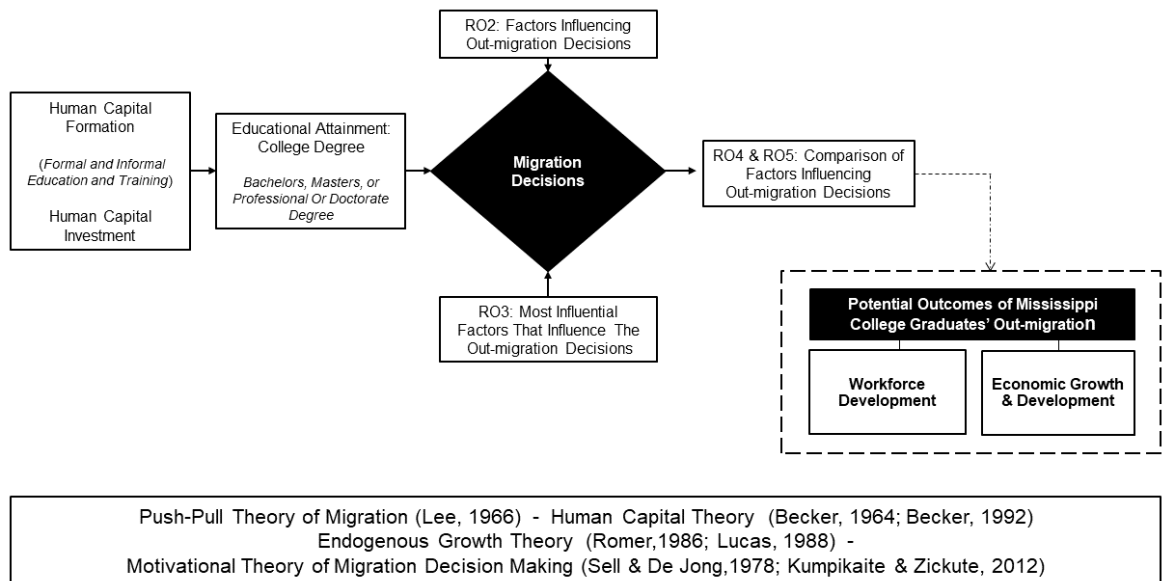


Figure 1. Conceptual Framework

In the context of this research study, an understanding of the constructs of migration and migration decision-making is fundamental to exploring migration and its

impact on workforce and economic development. Krishnakumar and Indumathi (2014) assert that migration is the relocation of individuals from one location or city to a different locale. They contend that two distinct types of migration exist: (a) internal and (b) international. For this study, internal migration, which consists of the relocation of individuals from one state to another state within the United States, is the focus (Krishnakumar & Indumathi, 2014).

Nevertheless, various theories exist on migration and migration decision-making (Kumpikaite & Zickute, 2012). However, to exemplify the determinants influencing out-migration decisions in this study, this study applies the push and pull theory of migration and the motivational theory of migration decision making (Ijim-Agbor, 2009; Kodrzycki, 2001; Kumpikaite & Zickute, 2012; Sell & DeJong, 1978). The push and pull theory of migration contends that two distinct factors influence migration choices (Ijim-Agbor, 2009; Kodrzycki, 2001; Kumpikaite & Zickute, 2012). The first factor, push, consists of internal factors within the state driving individuals to leave the state, such as a decrease in or limited job opportunities (Ijim-Agbor, 2009; Kodrzycki, 2001; Kumpikaite & Zickute, 2012). The second factor, pull, consists of the external factors outside of the state which draw people (e.g., increase job opportunities) and influence individuals to migrate out of the state (Ijim-Agbor, 2009; Kodrzycki, 2001; Kumpikaite & Zickute, 2012).

Similarly, Kumpikaite and Zickute (2012) and Sell and DeJong (1978) assert the motivational theory of migration decision-making, which consists of four rudiments: (a) possibility, (b) motive, (c) expectations, and (d) incentive, influence an individual's migration decisions. The authors suggest the first element, possibility, focuses on whether migration will induce significance, albeit tangible or mental. The second element, motive,

centers on what aspects of quality-of-life influence migration decisions. The third element, expectations, refers to an individual's belief that migration will result in specific enhanced opportunities. Lastly, the fourth element, incentive, focuses on what attractions or pulls influence migration decisions, such as education and culture (Kumpikaite & Zickute, 2012; Sell & DeJong, 1978). These two migration theories support the researcher's investigation of the factors influencing out-migration decisions among Mississippi's college graduates.

Moreover, the conceptual framework integrates the human capital theory, which Swanson and Holton (2009) assert relates to humans' knowledge and capabilities, which individuals and organizations use in a labor market to produce products and services. The authors assert human capital comprises the knowledge and skills an individual acquires, which are valuable to an individual, community, organization, and society. In the context of migration, the human capital theory undergirds many theories on migration (Kumpikaite & Zickute, 2012; Xu et al., 2015). Interwoven into the examination of out-migration and migration decisions is the concept of human capital, which is central to understanding the relationship between human capital and economic growth (Winters, 2011). The accumulation and retention of human capital within a region is a significant element differentiating thriving versus declining communities (Fan et al., 2016a; Winters, 2011). Thus, examining the out-migration of Mississippi's college graduates necessitates integrating human capital to fully understand the impact of out-migration on the State of Mississippi.

Furthermore, the conceptual framework incorporates the endogenous growth theory, one of several foundational theories. According to Chenard and Shearmur (2012),

economic growth within a region is strongly associated with human capital. The authors assert that the endogenous growth theory applies to any discussion of labor mobility, internal migration, and human capital. The endogenous growth theory reinforces discussions on economic growth and development. The theory postulates three factors that affect economic growth: (a) human capital, (b) knowledge, and (c) the advancement of innovation (Popa, 2016).

In addition to applying these various theories, the conceptual framework also graphically illustrates the potential implications of out-migration. Interwoven throughout the discussion of out-migration are the concepts of workforce development and economic development. The framework illustrates the potential implications of out-migration associated with workforce and economic development. Accordingly, the push-pull theory of migration, the motivational theory of migration decisions making, the human capital theory, and the endogenous growth theory will serve as the theoretical underpinnings for this research study.

### Significance of the Study

The significance of the present study focuses on advancing knowledge and understanding of the determinants central to Mississippi's college graduates deciding to stay or leave the state post-college graduation. Furthermore, the study may offer insights into how out-migration could affect the state's long-term workforce and economic development. With the out-migration of college graduates, Mississippi must understand which factors are most influential. The present study offers information to enhance awareness and understanding of the most influential factors which influence the out-migration decisions of Mississippi's college graduates. The results of this study may

enlighten Mississippi's public policymakers and other key stakeholders about the most relevant factors stimulating the out-migration of the state's college graduates. By identifying these factors, policymakers and key stakeholders can effectively assess and address the effects of out-migration, including its potential impact on the composition of Mississippi's workforce and economic growth. Policymakers and stakeholders can develop and refine strategies to mitigate current out-migration challenges.

Nonetheless, research demonstrates that without robust investments in human capital, the degree of accumulation and distribution of human capital skills will diminish within today's labor forces over time (Rao, 2004; Winters, 2011); as several authors pointed out, the greater the number of skilled and college-educated workers in a workforce, the larger the return to economic growth and prosperity (Fan et al., 2016a; Guohua et al., 2021; He et al., 2016; Moretti, 2012; Rao, 2004; Tano, 2014; Winters, 2011). Moreover, investments in human capital strengthen organizational performance and efficiency and cultivate knowledge spillover within the workforce (Abel & Deitz, 2012; Fan et al., 2016a; Moretti, 2012; Tano, 2014; Winters, 2011).

Through a deeper understanding of the determinants driving or influencing the out-migration of Mississippi's college graduates, public policymakers and other key stakeholders across the state can cultivate and implement strategies designed to foster economic growth and lessen the out-migration of Mississippi's valuable talent pool (Miller & Collins, 2022; Miller & Collins, 2023; White et al., 2022). The execution of this study may present evidence to support the advancement of workforce and economic development programs and initiatives designed to encourage Mississippi's college graduates to remain in the state. Correspondingly, the study may offer preliminary data to

support efforts designed to lessen the effects of out-migration, which research indicates can influence short- and long-term workforce and economic development outcomes.

### Delimitations

For this research study, the researcher outlines specific boundaries and delimitations. The delimitations delineate the study's limits, which the researcher controls (Lunenburg & Irby, 2008). Hence, the following delimitations: (a) the location of the study will be within the state of Mississippi, and (b) the researcher will only recruit college graduates who received bachelor's, master's, and professional or doctorate degrees from the University of Southern Mississippi within the last five academic calendar years. Individuals meeting these requirements will be eligible to take part in the study. The delimitation parameters set may affect study outcomes because the survey population is restricted, which may hinder the generalizability of the study.

### Assumptions

Lunenburg and Irby (2008) stress that assumptions are active throughout the development of each phase of a study. Assumptions are critical to aligning the research question, objectives, data collection, and analysis. Assumptions for this study are:

1. Responses received by study participants will be accurate and accurately reflected in the analysis.
2. Survey respondents will answer questions freely without coercion.
3. Data analyzed and interpreted will reflect the aggregate responses of study participants.



## Definition of Terms

To enhance understanding and remove the vagueness of key terms central to this research study, the researcher has formulated a list of words, phrases, and theories relevant to this study. The following outlines the key definitions integrated throughout the research study.

1. *Brain Drain* – is the out-migration of talented, skilled, or college-educated workers who decide to leave their hometown or state in the pursuit of better opportunities and an enhanced quality of life (Ijim-Agbor, 2009; Lieberman & Capaldi, 2019; McKenzie et al., 2013; Miller & Collins, 2022).
2. *College Graduate* – anyone completing four or more years of college with an award of a bachelor's or graduate-level degree (Kodrzycki, 2001).
3. *Economic Development* – is the creation of financial prosperity within a community, state, or region to enhance individuals living within the community (Salmon Valley Business and Innovation Center, n. d.).
4. *Economic Factors* – consist of per capita income, employment growth rates, population, inflation, median household prices, gross state product, and unemployment rate (Duca, 2022; Ishitani, 2011a; Ishitani, 2011b).
5. *Educational Attainment* – the highest level of education an individual obtains through formal education, training, certifications, or licensure (US Census Bureau, 2021).
6. *Endogenous Growth Theory* – postulates three key factors that influence economic growth, (a) human capital, (b) knowledge, and (c) the advancement of innovation (Popa, 2016).

7. *Human Capital* – the knowledge and skills an individual acquires which are valuable to an individual, community, organization, and society (Swanson & Holton, 2009).
8. *Human Capital Accumulation* – the build-up of specific skills and knowledge amassed within a state or region (Di Maria & Lazarova, 2011).
9. *Human Capital Flight* – is the out-migration of human capital, skilled or college graduates from one state to other states across the United States (Heinemann & Hadler, 2015).
10. *Human Capital Investment* – skills and knowledge an individual possesses that support productivity, including formal and informal investments in education (e.g., Pre-K through High School and higher education), job-related training, and other training (Abraham & Mallatt, 2022).
11. *Human Capital Theory* – suggests that individuals or groups/teams with increased knowledge and capabilities tend to produce higher performance results (Martin et al., 2013).
12. *Internal Migration* – the moving of individuals from one state to another state within the United States (Krishnakumar & Indumathi, 2014).
13. *Motivational theory of migration decision making* – postulates four elements that influence the migration decisions of an individual are (a) possibility, (b) motive, (c) expectations; and (d) incentive (Kumpikaite & Zickute, 2012; Sell & DeJong, 1978).

14. *Non-Economic Factors* – are described as quality-of-life factors consisting of access to public goods, including climate, geographic location, and amenities (Duca, 2022; Ishitani, 2011a; Ishitani, 2011b).
15. *Out-Migration* – the loss of a college graduate who leaves one state and moves to a different state within the United States (Ishitani, 2011a).
16. *Push-Pull Theory of Migration* – theorizes two distinct types of factors influencing migration choices (a) push and (b) pull factors. These factors thrust or attract individuals to Migration (Ijim-Agbor, 2009; Kodrzycki, 2001; Kumpikaite & Zickute, 2012).
17. *Recent College Graduate* – consists of college graduates (undergraduate and graduate) awarded a degree from a college or university within the last five academic calendar years (Kodrzycki, 2001).
18. *Stock of Human Capital* – consists of a large pool of talented, educated people with at least a bachelor's degree (Garmise, 2009).
19. *Workforce Development* – a system of public and private policies and initiatives designed to support the advancement of individual and organizational goals. The system also enhances society as a whole (Jacobs, 2013).

#### Summary

The out-migration of college graduates is a challenge many states, including Mississippi, must tackle. The college-educated are among the most mobile group within today's labor market (He et al., 2016; Ishitani, 2011b; Kodrzycki, 2001; Tano, 2014; Winters, 2011; Winters, 2017). Research indicates that the attraction and retention of human capital influence the long-term economic vitality and prosperity of a state or

region (Abel & Deitz, 2012; He et al., 2016; Ishitani, 2011b; Kodrzycki, 2001; Tano, 2014; Winters, 2011; Winters 2017). With the out-migration of Mississippi's college graduates' post-college graduation, the composition of the state's workforce is continuing to shift and transform (Miller & Collins, 2022; Miller & Collins, 2023; White et al., 2022). The present study seeks to advance knowledge and understanding of factors influencing out-migration decisions.

In summary, this chapter outlined the study's background and provided the problem statement. The chapter also described the primary research question and the research objectives. Additionally, the chapter delineated the significance of the study and presented a conceptual framework to illustrate which constructs and theories served as the underpinning of this study. The chapter also discussed the delimitations controlled by the researcher, the assumptions of the study, and the keywords and phrases central to the study.

For this study, the push-pull theory of migration, human capital theory, motivational theory of migration decisions making, and the endogenous growth theory undergirded various aspects of the study. Using the conceptual framework as a guide, the researcher sought to gather data to answer the central research question: What determinants are most influential in the out-migration decisions of Mississippi college graduates? The study's objectives served as a distinctive roadmap for examining and addressing the research question. The remaining four chapters of this study encompass a review of the literature (Chapter II), which includes a discussion of the concept of human capital, an overview of migration, the implications of out-migration, and a discussion of the theories undergirding the study. Chapter III presents the research design and

methodology of the study. In this chapter, the researcher discusses the research design, including the population and sampling technique used. The chapter also outlines the data collection procedures, instrumentation, and strategies for analyzing the research data. Chapter IV presents a presentation of the study results. This chapter details participant demographics and presents the results associated with each research objective. The concluding chapter, Chapter V, describes the key findings, conclusions, and recommendations related to the result of the study, limitations, and implications for practice, offers recommendations for future research, and closes with a discussion.

## CHAPTER II – REVIEW OF RELATED LITERATURE

This chapter presents the underpinnings serving as the foundation for researching the determinants that influence the out-migration decisions of Mississippi's college graduates. While prior research on migration decisions has often investigated migration through a broader lens, a more focused research approach is essential to understanding the specific factors influencing the migration decisions of college graduates across Mississippi. The present study examines economic factors (e.g., per capita income, employment growth or jobs growth rate, population, inflation, median household prices, and unemployment rate) and non-economic factors (e.g., quality-of-life factors such as access to public goods, climate, geographic location, and amenities), which may influence the migration decisions of Mississippi's college graduates and determines which factors are most influential. The literature review in this chapter supports and strengthens the rationale for conducting a research study on the migration decisions of Mississippi's college graduates.

The sections and subsections of this review examine relevant literature on human capital, including the formation of human capital, investments in human capital, and educational attainment. Moreover, the review studies the relevance of human capital in migration decisions from an economic and workforce development perspective. The literature review explores out-migration, including the distinct types of migration and the factors (push and pull) influencing migration decisions. Furthermore, this chapter examines how personal characteristics such as level of education, gender, race/ethnicity, marital status, child status, college major, and migration history may also influence out-migration decisions.

Additionally, this chapter reviews the mobility of college graduates and considers the potential implications of out-migration at the individual, community, organizational, and societal levels. Lastly, the literature review describes the theoretical foundations undergirding the research study. Using these key concepts and theories as contextual information, the researcher designed a study to determine which factors are most influential in the migration decisions of Mississippi's college graduates.

### The Concept of Human Capital

First postulated in economic literature, the concept of human capital has evolved since the seminal works of pioneer economists such as Theodore Schultz (1961), Larry Sjaastad (1962), and Gary Becker (1964). At the core of human capital is the recognition that individuals acquire knowledge and skills, which directly and indirectly contribute to workforce productivity and economic growth, considered a form of capital (Becker, 1964; Khaomin et al., 2022; Schultz, 1961; Sjaastad, 1962). Martin (1963) defines human capital as a combination of informal and formal educational experiences developed through investments. McFadden (2008) asserts that human capital is the "stock of skills and knowledge accumulated by workers through education, on-the-job training, and self-improvement" (p. 380).

Human capital offers a meaningful way to examine how an individual's knowledge and skills, experiences, health, and values influence work productivity (McFadden, 2008). Moreover, scholarly literature denotes human capital (the knowledge, skills, and health a person possesses) as interdependent or inter-reliant, meaning once an individual obtains such knowledge, it cannot be separate or operate independently from the individual (Becker, 1964; Becker, 1992; Schultz, 1961). As Martin (1963) observed

long ago, human capital is portable, meaning it is mobile and transfers or moves with an individual. Therefore, individuals play an integral, active role in the formation of human capital (McFadden, 2008).

Correspondingly, the topic of human capital also draws attention to other interwoven concepts relevant to the larger discussion of out-migration and migration decisions. These concepts include human capital formation, human capital investment, and educational attainment. Each concept is essential to understanding the larger discussion of human capital and offers insights beneficial for comprehending human capital in the context of migration. The proceeding sub-sections offer an enhanced understanding of these pertinent concepts and demonstrate how human capital is relevant and interwoven in discussing out-migration.

#### *Human Capital Formation*

In reviewing the seminal literature on the topic of human capital, the concept of human capital formation is germane. Benneworth and Herbst (2015) assert the cultivation of human capital is a direct result of education. The authors argue education fosters human capital formation, which advances economic growth. Likewise, economist Hassan Habib (1963) asserts education is an investment, a prerequisite, a key component for economic development. Habib argues human capital formation leads to creativity and skills that an individual possesses, which can only be gained through education. Furthermore, Wykstra (1969) asserts, "human capital formation is affected primarily by investment in formal education, improved health, on-the-job training, manpower rehabilitation, and migration" (p. 530). Wykstra concurs with Benneworth and Herbst



(2015) and Habib (1963) that the formation of human capital is an essential element of economic development.

Moreover, Becker (1992) found to fully understand human capital, it is necessary to acknowledge the role or part family units play in influencing the development of knowledge and skills, which form the basis of the formation of human capital. Becker asserts a child's upbringing (including their environment, background, and experiences) also affects the formation of human capital. Therefore, he contends an informal education obtained through family connections also influences a person's development of human capital as an adult, especially as an individual enters the workforce (Becker, 1992; Weisbrod, 1962). Therefore, human capital formation is pertinent to understanding human capital in relation to migration and migration decisions.

#### *Human Capital Investment*

Another concept intertwined in the discussion of human capital is human capital investment. According to Abraham and Mallatt (2022), "the development of human capital is central to modern theories of economic growth" (p. 104). Many studies have shown that investments in human capital through training and education are vital to economic growth and development (Becker, 1992; Habib, 1963). According to Khaomin et al. (2022), human capital investment is any knowledge or skills gained that a person uses to improve or enhance their capabilities, leading to potential economic opportunities. Therefore, any efforts to advance an individual's knowledge and skills can represent an investment in human capital (Becker, 1992; Habib, 1963; Khaomin et al., 2022). Schultz (1961) articulated human capital investment as five distinct categories: (a) health, (b) on-the-job training, (c) formal education, (d) informal training programs, and (e) migration,

which Khaomin et al. (2022) concur is still applicable today. Moreover, Abbas and Nasir (2001) perceived that any financial disbursements used to support education, health, and migration, specifically internal migration, signify investments in human capital. Similarly, Winters (2011) emphasizes that migration is a form of human capital investment. Abraham and Mallatt (2022) argue that these distinct types of investments in human capital are connected to the skills and knowledge individuals possess, which support productivity.

Accordingly, many key stakeholders (e.g., legislators, community leaders, departments of education, workforce development agencies) have come to understand the value of investing in education and training (Abraham & Mallatt, 2022). Research shows that investments in human capital can lead to an interconnected system of benefits that benefit an individual not only directly but also indirectly benefits others (Moretti, 2012). Hence, human capital investment benefits (a) the individual and their family, (b) the community where an individual lives, (c) the organization for which the individual works and can be productive, and (d) benefits society (Moretti, 2012). For this reason, human capital produces tangible and intangible benefits (Abbas & Nasir, 2001; Habib, 1963).

Similarly, in examining the literature on human capital, the relationship between investments in human capital and economic growth is well documented (Abbas & Nasir, 2001; Becker, 1992; DiMaria & Stryzowski, 2009; Fan et al., 2016a; Garmise, 2009; Habib, 1963; Martin, 1963; Rao, 2004; Shultz, 1961; Weisbrod, 1962; Winters, 2011; Wykstra, 1969). As Abbas and Nasir (2001) explained, investments in human capital bring about earnings gains and influence the distribution of per capita income. Therefore,

investments in human capital are fundamental to understanding the factors potentially affecting migration and out-migration decisions.

### *Educational Attainment*

An additional aspect of human capital is educational attainment. Education attainment is the highest level of education an individual obtains through formal education, training, certifications, or licensure (US Census Bureau, 2021). Tyndorf and Martin (2018) observed a positive link between education and economic growth, leading policymakers to embrace and promote investment in education. However, Ishitani (2011b) asserts that when policymakers direct investments toward education, the expectation is that there will be a return on investment (ROI). Wykstra (1969) contends that educational attainment via formal education is at the core of understanding economic growth and human capital formation. Likewise, Abbas and Nasir (2001) assert that education is a fundamental component of human capital.

Additionally, Moretti (2012) and Rao (2004) found that educational attainment is associated with the accumulation of human capital. Winters (2011) and Winters (2017) assert that when a region or community has a large populace of college graduates, the area's wages rise as a direct result of its stock of human capital. Moreover, Winters emphasizes the enhancement of quality of life (e.g., amenities in a region) and is associated with the number of college-educated workers in a region. Educational attainment produces a value that benefits the college graduate and their family but also enhances the lives of others (Abbas & Nasir, 2001; Burke et al., 2018; Winters, 2017).

Accordingly, Abbas and Nasir (2001) contend that educational attainment enriches the local community where the learner resides. The authors assert that

educational attainment benefits the organization where the college graduate works or will work, as their knowledge and training contribute to the workforce. Abbas and Nasir maintain that educational attainment also benefits society by cultivating a well-informed voting constituency. Hence, investments in human capital yield many benefits, which signifies why policymakers and other key stakeholders support and invest in education (Moretti, 2012; Tyndorf & Martin, 2018; Winters, 2011; Winters, 2017).

Another benefit of educational attainment is fostering knowledge spillover (Burke et al., 2018; Moretti, 2012). Moretti (2012) asserts that when the college-educated, skilled, and unskilled interact daily, this generates an opportunity for knowledge spillover. As stated by Moretti, knowledge spillover generates (a) "complementarity," (b) "better technology," and (c) "human capital externality" (p. 100). Moretti suggests that when college graduates and other skilled labor increase, unskilled workers' productivity also increases. Correspondingly, as the number of educated workers increases, Moretti asserts that the use of modern technology by local businesses also advances. Moreover, as the stock of human capital within a region increases, the degree of human capital externalities (e.g., social and private returns) also elevates (Moretti, 2012; Winters, 2017). As Fan et al. (2016a) explain, knowledge spillover is an ancillary effect of human capital. Literature has shown that knowledge spillover enriches economic growth and development (Fan et al., 2016a; Moretti, 2012; Wykstra, 1969).

In the context of the present study, Waldolf and Do Yun (2016) and Winters (2011) show a connection between the out-migration of college graduates and human capital investments. As college students achieve educational attainment and prepare to enter the workforce, they begin to search for opportunities corresponding to investments in education (Waldolf & Do Yun, 2016; Winters, 2011). Thus, educational attainment is pertinent to the discussion of migration and out-migration decisions.

#### *The Relevance of Human Capital in the Context of Out-Migration*

A comprehensive review of relevant literature on human capital shows that the concept of human capital is fundamental to the discussion of out-migration. Human capital is interwoven into discussing out-migration and migration decisions, which is central to understanding the relationship between human capital and economic growth (Winters, 2011). As Khaomin et al. (2022) assert, "human capital is a driver of economic growth of any entity, enterprise, and the state as a whole" (p. 220). According to the authors, competition is the engine that propels the creation of an economic system, and human capital is a vital component of its development. Therefore, the accumulation and retention of human capital within a region significantly differentiates thriving versus declining communities (Fan et al., 2016a; Winters, 2011).

Research shows retaining and attracting college graduates to a region allows the area to remain competitive and enhance its economic growth (Winters, 2011; Winters, 2017). Nevertheless, Buchholz and Bathelt (2021) assert "that differences in industry composition are associated with different levels of regional economic growth" (p.29). The authors contend the number of workers with college degrees is a common indicator of economic development. Thus, a positive relationship between the level of economic

growth and college graduates (i.e., human capital) aligns with existing literature. Furthermore, in the book *The New Geography of Jobs*, Moretti (2012) asserts that the larger the pool of college graduates located within a city or state, the greater the salaries of workers in a region. In cities with more college graduates, skilled and college-educated workers see increased earnings potential and unskilled workers also experience salary increases (Moretti, 2012). Buchholz and Bathelt (2021) concur with Moretti's argument; however, the authors note that when college-educated workers live in communities with other college-educated workers, there is enhanced work output and an increase in salaries.

Accordingly, research has shown that human capital accumulation is necessary for economic growth (Fan et al., 2016a). Similarly, Labor (1973) asserts that total and per-capita human capital gains and losses within a region influence future earnings and returns. Rao (2004) and Abel and Deitz (2012) argue that the larger the percentage of human capital in a workforce, the greater the returns are to economic growth within a state or region. Rao suggests that with increases or decreases in the distribution of human capital, economic development, and workforce productivity can either strengthen or diminish.

More specifically, research indicates the degree of educational achievement links directly to the distribution of human capital (Moretti, 2012; Rao, 2004). Research shows that workforce productivity increases over time with adequate investments in human capital and the distribution of skills (Rao, 2004). Nevertheless, with the out-migration of college graduates, there is disruption or imbalance in the distribution of human capital, resulting in changes in the composition of the workforce (Rao, 2004). Investigating this

in the context of this study, human capital formation, investment, and educational attainment are relevant to the discussion of human capital and the out-migration of Mississippi's college graduates.

From the perspective of out-migration, Kodrzycki (2001) asserts policymakers are interested in identifying a range of factors influencing the migration decisions of the skilled and college-educated in a region. Winters (2017) and Kodrzycki (2001) underscore the importance of college graduates for policymakers as legislators strive to develop strategies to retain and attract college graduates. Consequently, Ishitani (2011b) maintains that by retaining college graduates, communities can strengthen local economic growth. However, Lieberman & Capaldi (2019) assert there needs to be a change in thinking where key stakeholders (i.e., community leaders, policymakers, and colleges and universities) focus attention on brain remain (whereby policies and strategies focus on skilled, unskilled, and educated workers choosing to stay within a region) instead of on brain drain. Nevertheless, while many states have succeeded in retaining and attracting college graduates, Mississippi continues to trail behind as the state's college graduates continue to migrate post-college graduation.

#### Overview of Migration

Throughout the United States and abroad, skilled and college-educated workers continue to migrate. Hence, migration (internal or international) has become an area of interest for many public policymakers and other key stakeholders worldwide (Krishnakumar & Indumathi, 2014; Kumpikaite & Zickute, 2012; Moretti, 2012; Soydan, 1998). Often identified as out-migration, human capital flight (i.e., brain drain), in the literature has shown as skilled and college-educated labor out-migrate, the economic

stability of a state, region, or nation can shift (Clifton, 2011; Moretti, 2012). The following sub-sections examine the concept of out-migration and the determinants influencing out-migration, as well as explore out-migration at the national and state level. This section also reviews the literature on out-migration in the context of college graduates. The literature presented strengthens and underscores the reasons for examining out-migration among Mississippi's college graduates.

### *History of Migration*

According to Soydan (1998), migration is the movement of an individual or family from one location to another. Migration can occur (a) within a national territory, (b) across national borders, and (c) internationally and can be either temporary or long-term. Soydan asserts that migration is not a new concept; it is a concept that has continued to evolve since the beginning of human civilization. In modern times, research literature often examines migration through the lens of international and internal migration (Krishnakumar & Indumathi, 2014).

Marxa et al. (2015) contend that scholars seeking to understand the various determinants that influence out-migration explore the works of such researchers as Ravenstein to gain greater understanding. Voth et al. (1996) and Kumpikaite and Zickute (2012) assert that the pivotal research of Ravenstein (1889) and Lee (1966) provides an understanding of the factors that push or pull an individual to migrate. Kumpikaite and Zickute (2012) argue that Ravenstein's migration theory is one of the earliest works to describe the push-pull factors. Ravenstein's theory suggests that push factors are those determinates that characterize disadvantageous conditions for staying in a location. At the same time, pull factors represent the advantageous conditions that pull an individual from



their current location. Kumpikaite and Zickute (2012) emphasize Lee's theory which postulates four distinct factors that influence migration decisions. These factors consist of (a) place of origin (e.g., economic and non-economic features), (b) place of destination (e.g., economic and non-economic features), (c) intervention obstacles (things hindering migration), and (d) personal or family factors. Nevertheless, both demonstrate how push and pull factors can influence migration decisions. Likewise, numerous studies have cited the seminal work of Sjaastad (1962) with expanding scholarly understanding of the cost and returns associated with human migration (Ehrke, 2014; Faggian & Franklin, 2014; Kumpikaite & Zickute, 2012; Weber et al., 2007, Winters, 2011; Winters, 2017; Waldorf & Do Yun, 2016). Sjaastad (1962) postulates that there are both public and private costs and returns of migration. Sjaastad asserts that productivity is a result of human capital investment.

Building upon this pivotal research, Krishnakumar and Indumathi (2014) examines the push or pull factors of migration through the perspective of (a) internal and (b) international migration. Krishnakumar and Indumathi define internal migration as a person's movement from one state to another, while international migration is an individual's movement from one country to another. This study focuses on internal migration, which consists of college graduates relocating from the state of Mississippi post-college graduation to other states within the United States.

Moreover, Kumpikaite and Zickute (2012) argue that various theories contribute to understanding migration and decision-making. To fully understand the determinants influencing the out-migration decisions of college graduates in this study, the researcher examined and applied the push and pull theory of migration and the motivational theory

of migration decision making (Kodrzycki, 2001; Kumpikaite & Zickute, 2012; Sell & DeJong, 1978; Soydan, 1998). Numerous studies examining the push and pull theory of migration assert that there are two distinct types of factors influencing migration choices (Ijim-Agbor, 2009; Kodrzycki, 2001; Kumpikaite & Zickute, 2012; Soydan, 1998). The first factor, push, consists of internal factors within the state that drive individuals to leave the state (e.g., decreased or limited job opportunities) (Ijim-Agbor, 2009; Kodrzycki, 2001; Kumpikaite & Zickute, 2012; Soydan, 1998). The second factor, pull, entails the external factors outside of the state that draws people (e.g., increase job opportunities) and influence college graduates to migrate out of the state (Ijim-Agbor, 2009; Kodrzycki, 2001; Kumpikaite & Zickute, 2012).

Conversely, Sell and DeJong (1978) and Kumpikaite and Zickute (2012) assert that four rudiments influence an individual's migration decisions: (a) possibility, (b) motive, (c) expectations; and (e) incentive. The authors note that these elements form the theoretical basis of the motivational theory of migration decisions making. With the first element, possibility, the authors argue that the focus is on whether migration will induce significance (tangible or mental). The authors assert the second element, motive, focuses on what aspects of quality-of-life influence migration decisions. The authors contend that the third element, expectations, focuses on an individual's beliefs about how migration will result in specific enhanced opportunities. Lastly, the authors argue that the fourth element, incentive, focuses on what attractions influence migration decisions, such as education and culture.

#### *Determinants Influencing Out-Migration*

The decision to migrate from one location to another, whether international or internal, is difficult. Nevertheless, the factors influencing migration decisions remain the same. Individuals must consider economic, non-economic including, community-based, and life factors when deciding whether to migrate (Ehrke, 2014; Faggian & Franklin, 2014; Fan et al., 2016a; Feiock et al., 2008; Garasky, 2002; Heinemann & Hadler, 2015; Ishitani, 2011a; Ishitani, 2011b; Kodrzycki, 2001; Krishnakumar & Indumathi, 2014; Marxa et al., 2015; Mellander et al., 2011; Soydan, 1998; Waldolf & Do Yun, 2016; Winters, 2017; Xu et al., 2015). The following subsections draw attention to this range of factors.

*Push and Pull Factors of Migration: Economic and Non-Economic.* As previously stated, research studies on migration emphasize that many factors influence out-migration. Kodrzycki (2001) indicates labor market, non-labor market, and personal characteristics affect migration decisions. Moreover, literature has shown that among these factors are migration's push and pull factors, which influence migration decisions (Kodrzycki, 2001; Soydan, 1998). Marxa et al. (2015) assert that economic constraints influence migration decisions, especially for highly skilled and educated workers. According to Soydan (1998) and Krishnakumar and Indumathi (2014), push factors are those factors that push individuals to leave or migrate out of a community or region. They assert that push factors are those factors that push a person to relocate, including financial and labor aspects of relocation, such as unemployment. Moreover, Soydan, along with Krishnakumar and Indumathi, assert that the pull factors of migration consist of factors that make a community or region more attractive or appealing. They describe pulling

factors as heightened job opportunities, improved living conditions, enhanced quality of life, and advanced economic growth.

Heinemann and Hadler (2015) contend that the migration of skilled and educated workers embodies the basis of human capital flight, i.e., brain drain. The authors argue that skilled or educated individuals will choose to migrate when the decision to relocate enhances economic stability and quality of life. McKenzie et al. (2013) assert that this can produce brain drain for the place of origin and brain gain for the place of destination. However, Heinemann and Hadler (2015) emphasize that researchers should also examine other forces that influence a person's decision to stay or leave to assess migration patterns effectively. They infer that the push-pull theory of migration only offers the basis for a detailed examination of migration.

Conversely, Heinemann and Hadler (2015) argue that the pull factors rather than the push factors of migration are the most important to an individual's decision. Nonetheless, the literature consensus is that economic and non-economic factors influence the migration decisions of college graduates (Fan et al., 2016a). Heinemann and Hadler (2015) suggest that the push-pull theory concentrates more on the drivers of migration instead of perceptions and expectations of out-migration. The authors contend that incentives, including economic benefits, affect migration decisions. Furthermore, Heinemann and Hadler emphasize that non-economic factors, such as attachment to a city or state and social capital in conjunction with economic factors, influence a person's decision to migrate.

*Community-Based and Life Factors.* In examining other auxiliary factors that may influence out-migration decisions, Krishnakumar and Indumathi (2014) emphasize that

multiple factors, including demographic and sociocultural factors, influence migration. Among these factors are community-based and life factors (Ehrke, 2014). When examining community-based factors, individuals consider affordable housing, crime rates, taxes (local, state, and property), policing, environment, and educational opportunities (Ehrke, 2014). Waldolf and Do Yun (2016) assert that besides the factors that push or pull college graduates to migrate, amenities such as access to knowledge clusters, leisure, and cultural activities motivate college graduates to stay or move post-graduation. Moreover, Fan et al. (2016a) and Duca (2022) contend that public goods (e.g., environment, climate, and other natural amenities) also influence migration decisions. Fan et al. (2016b) assert that there is a plethora of amenity-driven research on migration to support the association between amenities and the attraction of human capital, which helps to spawn economic growth.

Similarly, Feiock et al. (2008), in their appraisal of Richard Florida's concept of "the world is spiky," assert that an individual's environment, where they live, and the amenities surrounding them also influence migration decisions (p. 25). The authors argue that the retention and attraction of workers within a region depend on the region's ability to be open, which includes being diverse and all-encompassing. However, Mellander et al. (2011) found that when cultural and leisure amenities exist within a community or region, the desire to migrate decreases, especially among young adults and college graduates. Fan et al. (2016b) assert that extreme climate conditions hinder the positive inflow of human capital and instead increase the outflow of human capital, especially among the college-educated. Nevertheless, Kodrzycki (2001) maintains that while such amenities as climate may affect migration decisions, they are not as influential as

economic factors, especially labor market conditions. Accordingly, community-based and quality-of-life factors also play a role in influencing the retention of college graduates post-college graduation.

*Personal Characteristics.* Along with economic and non-economic factors, research has shown that personal characteristics can also impact migration decisions (Ishitani, 2011a). Results from several studies indicate characteristics including age, race/ethnicity, gender, marital status, child status, level of educational attainment, college major, and migration history may influence out-migration (Ehrke, 2014; Faggian & Franklin, 2014; Garasky, 2002; Heinemann & Hadler, 2015; Kodrzycki, 2001; Ishitani, 2011a; Ishitani, 2011b; Waldorf & Do Yun, 2016; Winters, 2017; Xu et al., 2015). Xu et al. (2015) argue that personal characteristics such as age, educational attainment, and an individual's skill set factor into a person's decision to migrate. Xu et al. agreed with Heinemann and Hadler (2015) that other factors, such as personal or cultural characteristics, influence migration decisions. However, of these factors, Xu et al. contend that an individual's age and skill level are significant factors that influence one's decision to stay or migrate. In the context of skilled and educated workers, Xu et al. assert that the more knowledge and skills a person possesses, the greater the prospect that an individual will migrate due to pull factors. Nevertheless, research shows that these personal characteristics influence college graduates differently. Sowl et al. (2022) argue that many factors influence economic and non-economic migration decisions. They argue that by understanding this range of factors, leaders can more effectively develop strategies to address the retention and return of college graduates.

### *Age*

According to Winters (2017), maintaining an accumulation of college graduates is challenging because this group is highly mobile. Kodrzycki (2001) and Garasky (2002) assert that geographic mobility is highest amongst college-educated and young adults (ages 18-29). Xu et al. (2015) argue that age is pivotal in migration decisions. Likewise, Ehrke (2014) suggests that young adults (ages 25 to 35) typically consider economic or labor market factors when contemplating whether to migrate, while older adults often consider amenities such as climate, culture, and leisure activities when considering moving. Carree and Kronenberg (2014) also note that older adults with more significant connections to their current communities are less likely to migrate because of the cost associated with moving.

### *Race/Ethnicity*

Moreover, in addition to age, the race and ethnic background of an individual may also influence migration decisions (Garasky, 2002). While some research studies do not indicate a significant difference, Kodrzycki (2001) and Waldorf and Do Yun (2016) assert that compared to any other racial or ethnic group, white non-Hispanic males are more likely to migrate than any other group. Thus, examining the racial and ethnic backgrounds of study participants in relation to out-migration is logical.

### *Gender*

Another factor research shows that influences migration decisions is gender (Carree & Kronenberg, 2014; Garasky, 2002; Ishitani, 2011a; Waldorf & Do Yun, 2016). Waldorf and Do Yun (2016) assert that women are less likely to migrate than men. Moreover, Ishitani (2011) found that men were more likely than women to migrate post-

graduation among college graduates. So, research has shown that gender can influence migration decisions. In contrast, Carree and Kronenberg (2014) contend that women are more mobile as they try to counter gender bias in the workforce.

#### *Marital Status*

Moreover, in addition to gender, research has found that marital status also influences migration decisions (Geist & McManus, 2012). Ishitani (2011a) notes that single college graduates with bachelor's degrees are more likely to relocate to other regions post-graduation than married graduates. Waldorf and Do Yun (2016) found that single job movers were more likely than married individuals to migrate. Cai et al. (2019) assert that migration patterns for married couples are often linked to the employment opportunities of the male spouse, who typically are college educated. They contend that married women often experience negative labor market consequences of a couple migrating to a new location. The authors emphasize that employment opportunities for married women are often less weighty factors in a couple's migration decisions.

#### *Child Status*

According to the literature, the child status of college graduates plays a role in migration decisions. Fan et al. (2016). assert that college-educated parents are concerned about the cleanliness and safety in the community in which they live with their children. They are also particularly interested in their children's formation of human capital. Geist and McManus (2012) suggest that families migrate for access to better housing and safer schools. Moreover, Carree and Kronenberg (2014) argue that family ties of family members, including children, may influence out-migration decisions.



### *Educational Attainment*

Another aspect influencing migration decisions is educational attainment.

Numerous studies have demonstrated the significant role educational attainment plays in migration decisions. Kodrzycki (2001) and Garasky (2002) found that geographic out-migration is highest among the college-educated. Research has shown that individuals with more education (bachelor's, master's, and professional degrees) are more likely to be mobile (Abel & Deitz, 2012; Garasky, 2002).

### *College Major*

Moreover, according to Winters (2017), an individual's college major may influence migration decisions. Winters asserts that as individuals obtain more specialized skills through education and training, college graduates become more mobile.

Furthermore, the demands of local labor markets and the ability of the college-educated to utilize the skills obtained through education also factor into a college graduate's decision to migrate. As stated by Schultz (1961), Abbas and Nasir (2001), and Winters (2011), migration is a form of human capital investment. Therefore, when deciding whether to stay or leave, college graduates consider the utilization of skills and their earning potential relative to their college major (Winters, 2017).

Nevertheless, if college graduates cannot find employment opportunities that utilize their specialized skills and increase pay potential by major, it will result in brain waste (McKenzie et al., 2013). An individual will either acquire a position requiring fewer skills with reduced pay or out-migrate for better job opportunities relative to their college major (McKenzie et al., 2013; Winters, 2017). Winters (2017) asserts that the

availability of economic opportunities depends on the college majors and is an essential factor in the migration decision of college graduates.

### *Migration History*

In addition to education, the migration history of individuals may also influence an individual's future migration decision. Research conducted by Kodrzycki (2001) indicates that among the skilled and college-educated, those individuals who had previously moved were more likely to migrate in the future. Kodrzycki contends this is also true for persons whose family has previously moved. Likewise, Faggian and Franklin (2014) argue that migration patterns are highest among college graduates who previously migrated to attend college out-of-state. However, Faggian and Franklin assert that individuals are likelier to remain in the region where they received their most current degree. Moreover, Faggian and Franklin contend that enrolling in college in-state does increase the likelihood of an individual staying in-state post-college graduation.

Considering the range of factors (economic and non-economic, including community, life, and personal characteristics), the present study will examine whether these factors contribute to the out-migration decisions of Mississippi College graduates. While the data of this study may show that some factors are more influential than others, understanding the extent to which each factor influences out-migration is essential. The findings of this study may provide supplementary information to support the development of specific strategies by Mississippi policymakers and key stakeholders to reduce human capital flight.

### *Out-Migration in the Context of College Graduates*

In reviewing numerous studies on out-migration concerning college graduates, Kodrzycki (2001) examines the migration decisions of college graduates nationally. Kodrzycki asserts that many states continuously examine ways to retain and attract college graduates post-graduation. The author asserts that beyond examining the strengths and weaknesses of a city, state, or region, policymakers and key stakeholders should understand the factors influencing college graduates to migrate. Kodrzycki notes that the migration patterns of college graduates often occur within the first five years post-graduation. That, combined with labor market and non-labor markets factors, as well as individual preferences, affect the migration decisions of college graduates. Kodrzycki contends that migration patterns of college graduates typically center around earnings potential. Most migration research examines the push and pull factors, including the non-economic factors such as amenities that influence the migration decisions of college graduates. Kodrzycki emphasizes that examining college graduates' migration choices should encompass economic and labor market conditions.

In related research, Ishitani (2011b) argues that various conditions (economic and non-economic) underpin the research examining migration behaviors. Ishitani asserts that earlier research on the migration patterns of college graduates underscores the relevance of economic and non-economic conditions on labor mobility. Ishitani concurs with other research on migration in that amenities available within a state also influence the migration decisions of the college educated.

### *Out-Migration in Mississippi*

According to a 2018 report by Mississippi Today, Mississippi is losing young millennials faster than any other state (Campbell & Ganucheau, 2018). The report attributed the decrease in Mississippi millennials to data published by the U. S. Census Bureau, which suggests that between 2010-2016, the number of millennials in the state decreased by 35,013 (Campbell & Ganucheau, 2018). However, the authors note conflicting research published by Mississippi State University's National Strategic Planning and Analysis Research Center (nSPARC) indicates that the decline in millennials is comparable to the nation.

Nevertheless, another report published by USA Today (Comen, 2018) on the fastest growing and shrinking states ranks Mississippi seventh among the eight states with shrinking populations. Comen (2018) attributes this decrease to out-migration and maintains that in 2016, 7,500 more people out-migrated than in-migrated into Mississippi. Likewise, an article issued by U. S. News (Amy, 2017) indicates Mississippi's population has continued to decrease over three years. Amy (2017) suggests that Mississippi and West Virginia are the only states in the southern region of the United States to experience issues with out-migration. Amy suggests that this steady out-migration may be attributed to the Great Recession between 2007-2009 and may have influenced college-educated residents' migration decision to leave the state.

### *Out-Migration of Mississippi's College Graduates*

Despite these statistics, more research is necessary to fully understand the determinants influencing out-migration among Mississippi's college graduates. Amy (2017) found that in a report published by the Mississippi College Board, only a little

over 50% of Mississippi's public university graduates continue to work in the state five years post-graduation. This statistic is comparable to the findings of Kodrzycki (2001), which suggest that nationwide the percentage of college graduates migrating five years post-college graduation is 30%. Nevertheless, peer-reviewed studies on migration patterns and the factors influencing Mississippians, especially college graduates, could be more extensive. While there are peer-reviewed research studies that discuss the concept of human capital concerning the South, additional studies are necessary to understand out-migration and what factors influence out-migration. The present study seeks to contribute to the body of knowledge by providing preliminary data on the factors influencing the out-migration decision of Mississippi college graduates.

#### Implications of Out-Migration

In examining the migration decisions of Mississippi's college graduates, applying a systems-thinking approach offers a more holistic lens through which to examine the potential implications of out-migration. Yawson (2012) asserts that systems thinking studies the totality of a system (how the system is perceived, how the system fits, and how interrelationships within the system function). Characterized as interdependent (Yawson, 2012), the systems-thinking approach applied to this study centers on the relationships (a) the individual, (b) the community, (c) the organization, and (d) societal in relation to the out-migration of human capital (Moretti, 2012).

According to Moretti (2012), research shows that human capital fosters the development of an interconnected system of benefits. At the individual level, human capital benefits an individual directly and others. Moreover, Moretti suggests that human capital investments extend beyond the individual and their family and support the

community where an individual resides. Additionally, human capital adds value to the local and regional businesses where people work. The accumulation of human capital within a region enhances productivity within the region (Abel & Deitz, 2012). Moretti (2012) asserts that human capital enhances worker productivity and benefits society through enhanced economic growth (Moretti, 2012). Winters (2011) and Winters (2017) assert that when a region or community has a large population of college graduates, the earnings of the area increase, which is an outcome of the region's stock of human capital. Moreover, Winters (2011) emphasizes that the number of college-educated workers also increases with the enhancement of quality of life (e.g., regional amenities).

Nevertheless, the opposite occurs specifically with the out-migration of vital human capital. With the out-migration of college graduates, skilled and educated labor retention decreases (Crawford-Lee & Hunter, 2009; Garmise, 2009). This decrease affects the three areas Moretti (2012) asserts contributes to a knowledge economy. The out-migration of college graduates impeded knowledge spillover, which diminishes complementarity, technological advances, and human capital externality, vital to a region's long-term economic stability and competitiveness (Moretti, 2012).

Conversely, a discussion on migration would only be sufficient to acknowledge the influence that migration has on workforce and economic development. Through an enhanced understanding of how out-migration affects workforce and economic outcomes, policymakers and key stakeholders can also rigorously evaluate connections and develop potential strategies for addressing the out-migration of college graduates across Mississippi. Research has shown that the accumulation of human capital is a vital ingredient to the long-term competitiveness and economic sustainability of any region,

state, or nation (Di Maria & Lazarova, 2011; Garmise, 2009; Khaomin et al., 2022). Consequently, the out-migration of college graduates can result in unfavorable outcomes, hindering economic growth and development and affecting workforce development efforts across Mississippi.

Winters (2011) asserts that across various regions, a growing population is indicative of an area where people want to live. At the same time, Waldolf and Do Yun (2016) emphasize that local labor market conditions influence the migration of college-educated workers. Nevertheless, Winters (2011) suggests that out-migration affects local labor markets. Di Maria and Lazarova (2011) assert that the composition of a labor force influences economic growth. The authors argue that the out-migration of skilled and educated workers affects a region's stock of human capital skills. Furthermore, from a workforce development perspective, Garmise (2009) asserts that the degree of economic growth relates directly to the composition of a workforce. Garmise suggests that skilled and educated workers enhance a state or region's workforce, reinforcing economic growth.

Moreover, Garmise (2009) argues that workforce composition, quantity, and quality are necessary for workforce and economic stability. At the same time, Di Maria and Lazarova (2011) suggest that any decrease in the stock of human capital diminishes economic progress within a region. Hence, the ability of a region to retain and attract a skilled and college-educated workforce not only depends on labor market conditions but is also subject to the stock of human capital in the region (Di Maria & Lazarova, 2011; Garmise, 2009; Waldolf & Do Yun, 2016; Winters, 2011). According to Marxa et al.

(2015), preventing brain drain and losing vital talent is essential to strengthening any region's economy.

Ishitani (2011b) asserts that negative net migration rates are alarming to policymakers, business leaders, and other key stakeholders. Numerous research has shown that the out-migration of college-educated workers impedes economic development and growth (Crawford-Lee & Hunter, 2009; Di Maria & Lazarova, 2011; Waldolf & Do Yun, 2016; Winters, 2011). Crawford-Lee and Hunter (2009) assert that developing and cultivating a skilled and educated labor force is fundamental to a region's economic expansion. Ishitani (2011b) suggests that the out-migration of college graduates produces adverse effects, including influencing policymakers' human capital investment decisions. Ishitani asserts that a one-percentage point increase in net out-migration produces a 100-dollar decrease in funds allocated by states to students. This illustrates how out-migration can affect other aspects of a system.

Furthermore, prior research has shown that economic conditions (e.g., job growth rates and per-capita income) play a substantial role in thrusting college graduates to migrate (Ishitani, 2011a; Ishitani, 2011b; Kodrzycki, 2001; Soydan, 1998). Crawford-Lee and Hunter (2009) contend that developing and retaining skilled and educated workers is a prerequisite for economic development. Furthermore, Garmise (2009) and Crawford-Lee and Hunter (2009) argue that a skilled and college-educated workforce, in conjunction with an equally strong workforce development system, is vital to attracting and retaining industry within the region. This argument is echoed by Tyndorf and Martin (2018), who contend that key stakeholders, such as policymakers, recognize the association between economic growth and having a highly skilled and educated



workforce. Garmise (2009) and Crawford-Lee and Hunter (2009) assert that the retention of a skilled and educated workforce is the key to the long-term economic competitiveness of the region as well as companies seeking to maintain a competitive edge at the local, state, regional, national, and global level. Moreover, Garmise (2009) found that regions with a high degree of skilled and college-educated workers had a competitive advantage over regions where the stock of human capital had diminished. Therefore, human capital and educational attainment investments are essential to advancing workforce development systems.

In investigating the migrations decisions and migration patterns of college graduates, as previously stated, numerous studies indicate that various factors (economic, non-economic, including community-based, life, and personal characteristics) influence individual migration decisions (Ehrke, 2014; Faggian & Franklin, 2014; Fan et al., 2016a; Feiock et al., 2008; Garasky, 2002; Heinemann & Hadler, 2015; Ishitani, 2011a; Ishitani, 2011b; Kodrzycki, 2001; Krishnakumar & Indumathi, 2014; Mellander et al., 2011; Soydan, 1998; Waldolf & Do Yun, 2016; Winters, 2017; Xu et al., 2015). However, contrary to existing research, Garmise (2009) argues that developing and cultivating talent through workforce development is equally as important as the push and pull factors of migration. Garmise purports that human capital formation is fundamental to integrating workforce and economic development strategies. Likewise, Garmise notes that with the increasing mobility of today's workforce, the configuration of workforce systems and economic development in a region are equally important to advancing a region's economic success and competitiveness. Nevertheless, Waldolf and Do Yun

(2016) assert that there is a need for additional research to fully comprehend how the out-migration of skilled and college-educated affects labor market outcomes.

### Theoretical Framework

In considering the various theories that are relevant to the discussion of migration and the migration decisions of Mississippi's college graduates, the underlying theoretical perspectives undergirding this study consist of the (a) human capital theory, (b) endogenous growth theory, (c) push-pull theory of migration, and (d) the motivational theory of migration decisions making. Each theory presents a purposeful function essential to fully understanding the dynamics involved with out-migration, including how out-migration affects the workforce and economic development. Each theory serves as a theoretical anchor. Therefore, it is necessary to examine the components of each theory and its relevance to out-migration.

#### *Human Capital Theory*

In the context of migration, many studies have used the human capital theory to strengthen various theories of migration (Kumpikaite & Zickute, 2012; Xu et al., 2015). The human capital theory supplies the necessary theoretical underpinning for discussing human capital from an economic and workforce perspective (Becker, 1964). The theory asserts that investments in education and training are equally essential expenditures related to capital (Swanson & Holton, 2009). Becker argues that investments in human capital can yield ROI for individuals, the community, organizations, and society (Becker, 1992; Swanson & Holton, 2009). For individuals receiving college degrees, investments in education yield multiple returns, including financial and other personal gains (Becker,

1992; Moretti, 2012). As a result, individuals with college degrees can strengthen their personal and professional outcomes (Martin et al., 2013).

Swanson and Holton (2009) emphasize that human capital theory relates to humans' knowledge and capabilities, which individuals and organizations use in a labor market to produce products and services. Swanson and Holton argue that the human capital theory encompasses four assumptions: (a) labor markets are aggressive, (b) businesses seek to increase their profitability, (c) employees are driven by the desire to maximize earnings, and (d) the workforce possess the knowledge and flexibility to take advantage of many growth opportunities. Moreover, the authors contend that human capital refers to an individual's accrual of knowledge and skills gained through education and training.

Likewise, Fan et al. (2016a) assert that human capital has direct and indirect effects. The authors suggest that a direct effect of human capital is improved labor productivity, while knowledge spillover is a by-product of human capital. Fan et al. maintain that human capital is vital to economic development. The authors assert that accumulating knowledge and skills enhances the labor force and strengthens economic growth. Thus, societal investments in human capital produce returns in the accumulation of human capital, knowledge spillover, population growth, economic development, and advancement (Moretti, 2012; Tano, 2014; Winters, 2011). Therefore, examining the out-migration of the human capital theory is relevant to the present study.

### *Endogenous Growth Theory*

In reviewing various theories relevant to economic development, the theory of endogenous growth closely aligns with the focus of this research study. Research has

shown that earlier economic growth models needed to account for human capital's role in economic growth (Abbas & Nasir, 2001). Mathur (1999) argued that the foundations of the endogenous growth theory are based on the works of Theodore Schultz (1961) and Gary Becker (1962). Mathur also notes that the later works of Lucas (1986) and Romer (1988), which focus on "human capital-based theories," advance the understanding of the modern endogenous growth theory (p. 206). The endogenous growth theory posits that three key factors influence economic growth, (a) human capital, (b) knowledge, and (c) the advancement of innovation (Popa, 2016). Applying the endogenous growth model, Feiock et al. (2008) contend with increases in the levels of human capital and increases in technological advancement through innovation expansion.

For this study, economic development centers on the region's economic prosperity. Economic development supports economic growth and congruently enhances residents' quality of life within the state (Salmon Valley Business and Innovation Center, n. d.). Accordingly, Mathur (1999) asserts that investments in human capital and knowledge directly influence economic growth. Several authors assert that economic development and growth affect the composition and level of human capital within a state or region (Di Maria & Lazarova, 2012; Fan et al., 2016a; He et al., 2016; Rao, 2004; Tano, 2014).

In the context of out-migration, numerous migration studies mention the application of the endogenous growth model in helping to understand better labor mobility (Benneworth & Herbst, 2015; Chenard & Shearmur, 2012; Di Maria & Lazarova, 2011; Feiock et al., 2008; Son & Noja, 2013). According to Chenard and Shearmur (2012), economic growth within a region is strongly associated with human

capital. The authors assert that the endogenous growth theory is relevant to any discussion of labor mobility, internal migration, and human capital. Moreover, Benneworth and Herbst (2015) assert that endogenous growth factors have increased influence over time. Consequently, exploring out-migration through the lens of endogenous growth theory is pertinent to understanding the role human capital plays in migration.

### *Push-Pull Theory of Migration*

In examining the push and pull factors of migration, numerous studies have cited the seminal works of Ravenstein (1889) and Lee (1966) as vital to the development and evolution of the push-pull theory of migration (Kumpikaite & Zickute, 2012; Voth et al., 1996). Voth et al. (1996) argue that the push-pull migration theory offers the most wide-ranging appraisal of migration. Krishnakumar and Indumathi (2014) suggest that the push factors of migration encompass the financial and labor aspects. At the same time, the pull factors consist of factors that lure individuals to migrate, such as job opportunities and quality of life. However, Krishnakumar and Indumathi contend that the push-pull theory, while it does put importance on the push and pull factors that influence migration, the theory also investigates the various obstacles that generate barriers to migration. Conversely, Heinemann and Hadler (2015) argue that the pull factors relative to the push factors are the most influential in an individual's migration decision. Consequently, the push-pull theory of migration is relevant to the present study.

### *Motivational Theory of Migration Decision Making*

In the seminal research of Sell and DeJong (1978), the researchers apply the motivational theory of migration decision making to examine migration decision making. Grounded in the theory of decision making, Sell and DeJong use the theory as a foundation for examining why people choose to migrate. Comprised of four components, (a) availability, (b) motive, (c) expectancy, and (d) incentives, the theory is concerned with the factors that motivate migration versus actual migration locations (Sell & DeJong, 1978).

Kumpikaite and Zickute (2012) and Sell and DeJong (1978) describe the motivational theory of migration decision making as a concept that suggests four rudiments influence an individual's migration decisions. Kumpikaite and Zickute (2012) argue that possibility focuses on whether migration will induce significance, albeit tangible or mental, for an individual. The second element, motive, they assert, focuses on what aspects of quality of life influence an individual's migration choices. The third element, expectations, Kumpikaite and Zickute argue, represents an individual's attitudes and perceptions about how migration will result in specific enhanced opportunities that influence out-migration. Lastly, the fourth element, incentive, they contend, focuses on what attractions influence migration decisions, such as education and culture. Like the other theories, the motivational theory of migration decision making applies to the current research study.

### Chapter Summary

As discussed in this chapter, the out-migration of skilled and educated workers, especially the college-educated, is an issue that many states are dealing with in today's

labor markets. Research has shown that the push and pull factors of migration and other non-economic factors, such as amenities, influence the migration patterns of college graduates. With an increased emphasis on regional, national, and global competitiveness (Khaomin et al., 2022), Mississippi needs to explore how the out-migration decisions of the state's college graduates could affect the workforce and economic development outcomes.

The research described in this literature review emphasizes the relevance of skilled and educated workers in association with a region's economic prosperity. Moreover, the review of the relevant literature reveals that without a more extensive stock of human capital, states such as Mississippi may experience a diminished workforce incapable of producing, which can affect the region's economic stability. The out-migration of Mississippi's college graduates is an issue that requires investigation to reduce the negative consequences of out-migration, which may include undesirable implications for the workforce and economic development.

This chapter summarizes the theories that undergird the current research study. Moreover, the literature review presents an overview of migration and the specific migration patterns of college graduates. This chapter also offers insights into earlier research on the migration decisions of college graduates and how changes in the stock of human capital within a region may hinder economic growth. The chapter also describes the potential implications of out-migration with respect to workforce and economic development.

The next chapter outlines the proposed methodology for conducting a research study on the factors that influence the out-migration decisions of Mississippi's college

graduates. Chapter III will describe the research objectives, design, population, and sample. The chapter also presents an overview of the data collection, instrumentation, and data analysis procedure.



## CHAPTER III – RESEARCH DESIGN AND METHODOLOGY

Salkind (2006) defines research as a process whereby fresh knowledge is gained through exploration. Research is the practice of generating innovative ideas through knowledge and data. Similarly, Creswell (2013) asserts research involves the use of research approaches, which offer a roadmap or blueprint for conducting research. The present study sought to determine which factors (economic and non-economic) were most influential in the out-migration decisions of Mississippi college graduates post-graduation. Chapter III outlines and explains the research design and research methods the researcher employed. Organized into six sections, Chapter III describes the research design, population and sample, sampling procedures, instrumentation, data collection, and data analysis. The chapter describes the data collection instrument and the methods used to measure the validity and reliability of the instrument. The chapter concludes with a summary of the research design and methods applied to the study.

### Research Objectives

The present study sought to identify the determinants that influence the out-migration decisions of recent Mississippi college graduates post-graduation. The primary research question for this study was: What determinants are most influential in the out-migration decisions of Mississippi college graduates? The study addressed the following research objectives (RO):

*ROI* – Describe the demographic characteristics of the sample in terms of age, gender, race/ethnicity, marital status, child status, educational attainment, college major, and migration history.

*RO2* – Describe the factors that influence the out-migration decisions of Mississippi college graduates who graduated within the past five academic calendar years.

*RO3* – Describe the most influential factors (economic and/or non-economic) that influence the out-migration decisions of Mississippi college graduates who graduated within the past five academic years.

*RO4* – Compare the factors influencing the out-migration decisions among Mississippi college graduates with personal characteristics (age, gender, race/ethnicity, marital status, child status, educational attainment, and college major).

*RO5* – Compare the factors influencing the out-migration decisions among Mississippi college graduates with migration history.

### Research Design

The researcher explored the advantages and disadvantages of applying quantitative or qualitative research methods for this study. Creswell (2013) maintains quantitative research focuses on experimental observations and measurement as well as verifying theories, while qualitative research explores the experiences of individuals through words and themes. The present study exercised a non-experimental, quantitative research design. The study employed a non-experimental, descriptive, comparative research design. According to Salkind (2006), the purpose of descriptive research is to "describe the characteristics of an existing phenomenon" (p. 11). This design method allowed the investigator to understand the attributes of the target population, Mississippi college graduates. Descriptive research focuses on generating an accurate depiction of the

phenomenon under study (Salkind, 2006). The comparative aspect of the study focused on examining if significant differences exist between two or more groups (Cantrell, 2011). For this study, the researcher examined whether significant differences existed between the personal characteristics of the study population and the factors (economic and non-economic) that influence the out-migration decisions among Mississippi college graduates. This study's cross-sectional data collection occurred only once at a fixed time (Phillips et al., 2013).

Using a descriptive, comparative design allowed the researcher to pose relevant questions about the out-migration decisions of Mississippi college graduates without interjecting a distinct treatment or program (Phillips et al., 2013). The decision to use this research design allowed for gathering information on Mississippi's college graduates and provided a mechanism for exploring the phenomena of out-migration within the target population as it currently exists (Fink, 2003). Moreover, this design approach allowed for the examination of differences based on respondents' personal characteristics without manipulating variables (Cantrell, 2011).

Using a survey instrument, the researcher surveyed Mississippi college graduates about their migration decisions and assessed which factors were most influential. The data analysis phase of the study focused on examining a range of factors and how those factors influence migration decisions. However, while this research design allowed the researcher to examine comparisons related to out-migration, it did not allow for examining relationships or causation (Phillips et al., 2013). This study strictly focused on identifying factors that influence out-migration. The factors examined included economic, non-economic, community-based, and personal factors. Moreover, the study

determined which factors were most influential and then compared those factors to personal characteristics (age, gender, race/ethnicity, marital status, child status, educational attainment, college major, and migration history.).

Within the context of this research study, the epistemology undergirding this study was objectivism. Crotty (1998) asserts that with objectivism, truth occurs independently of mindfulness and knowledge. Crotty acknowledges that positivism and post-positivism are associated with objectivism, which is the theoretical perspective. Crotty asserts that with post-positivism, human actions make it difficult for researchers to proclaim anything as absolute truth. Therefore, in the context of this study, the methodology applied was descriptive, comparative research, and the methods employed consisted of (a) a self-administered survey and (b) statistical analysis.

#### Population and Sample

The population for this study consists of college graduates who attended The University of Southern Mississippi (USM). The research population was selected due to the Southern Miss Alumni Association's willingness to grant the researcher permission to survey the study population. However, the researcher did attempt to conduct the study with other alumni associations connected to Mississippi's eight public universities. Nevertheless, the researcher was granted permission to survey Southern Miss alumni.

According to the Mississippi Institution of Higher Learning (IHL), the total estimated number of degrees awarded at the University of Southern Mississippi between 2017-2022 was 16,545 (Office of Strategic Research, 2022). The university awarded 12,291 bachelor's, 3,423 master's, 46 specialists, and 865 doctoral degrees (Office of

Strategic Research, 2022). For this study, the population comprised graduates awarded bachelor's, master's, or doctoral degrees at Southern Miss.

### Sampling Procedures

For this study, the researcher used nonprobability sampling. More specifically, the researcher applied convenience sampling. This sampling approach allowed survey accessibility to anyone who met the parameters of the inclusion criteria (Salkind, 2006). The researcher sampled Mississippi college graduates awarded (a) bachelor's, (b) master's, and (c) professional or doctorate degrees from The University of Southern Mississippi. All Southern Miss alumni meeting the inclusion criteria with emails on file who receive the Alumni Association's Newsletter (which is distributed to all Southern Miss alumni, approximately 53,696) and/or follow the Alumni Association's primary Facebook page (consisting of 10,000 followers) and/or participant in one of 20 Southern Miss Alumni Facebook HUBs (with an estimated 4,895 members) were notified about the study and were allowed to voluntarily complete the survey. The Facebooks HUBs consisted of alumni chapters nationwide (including Jackson, Mississippi, New Orleans, Louisiana, the DC metro, Atlanta, Georgia, and Houston and Dallas, Texas)

Using data published by the Mississippi IHL, the total number of bachelor, master, and doctoral degrees awarded at Southern Miss within the last five years consists of 16,545 (Office of Strategic Research, 2022). The academic calendar years associated with this data were 2017-2018 through 2021-2022 (Office of Strategic Research, 2022). This study's minimum sample size required to achieve a statistical sample was 376, with a 5% margin of error, 95% confidence level, and a 50% response distribution (Raosoft, n.d.). Accordingly, to ensure the achievement of the statistical sample, the researcher, in

conjunction with the Alumni Association, distributed the surveys to more than 1,880 (response rate of 20%) Southern Miss college graduates. The researcher invited Southern Miss graduates with bachelor's, master's, and doctorate degrees graduating between the 2017-2018 and 2021-2022 academic calendar years to complete the survey.

The researcher obtained permission for this study to recruit graduates through the Southern Miss Alumni Association (Appendix A). Upon receiving approval from the Alumni Association, the researcher submitted a formal research application to The University of Southern Mississippi's Institutional Review Board (IRB), which serves as the governing body at USM to monitor all research conducted and ensure compliance with all federal, state, and local regulations related to the conduct of human subject's research. Once approved, the researcher submitted a copy of the approved IRB research protocol to the Southern Miss Alumni Association. Upon IRB approval, the recruitment phase of the research commenced. However, due to the Southern Miss Alumni Association's policies on the privacy of alumni data, the researcher did not have direct access to the research population's contact information. Instead, the researcher collaborated with the Alumni Association to invite Southern Miss graduates to voluntarily participate in the research study through the association's Alumni newsletter and Facebook pages.

To participate in the study, graduates were required to meet the following inclusion criteria: (a) individuals must be an adult, age 18 years of age or older, (b) graduated from the University of Southern Mississippi, (c) awarded a bachelor, masters, and/or doctorate or professional degree, and (d) degree granted within the last five academic calendar years (2017-2018 to 2021-2022). The rationale for the inclusion

criteria is based on the study's objectives. Individuals had to meet the outlined inclusion criterion and provide informed consent to participate in the study.

However, exclusion from the study occurred if individuals did not meet all elements of the inclusion criterion. The exclusion criteria consisted of (a) individuals under the age of eighteen, (b) individuals awarded only an associate degree, (c) individuals who did not graduate from the University of Southern Mississippi, and (e) individuals who graduated from Southern Miss outside of the targeted academic calendar years of 2017-2018 through 2021-2022.

#### Institutional Review Board Approval

Following the USM protocols for all faculty, staff, and students conducting research on human subjects, the researcher submitted a research protocol for the study to the USM IRB for review and approval (USM, 2022). The USM IRB ensures that the researcher's study meets all relevant federal and institutional standards and guidelines to conduct research involving human subjects (USM, 2022). The IRB application consisted of the research proposal, a copy of the survey instrument, an email granting permission to use the survey, an external permission letter from the Southern Mississippi Alumni Association, copies of plan communication to Southern Miss alumni, and a copy of informed consent (Appendices A-H). Upon USM's IRB approval, the data collection phase of the study began.

#### Data Collection

For this study, a data collection plan outlined in Table 1 was implemented once the researcher received IRB approval. Collaborating with the Southern Miss Alumni Association, the researcher determined a sample frame (Phillips et al., 2013). Using

convenience sampling, the researcher, in collaboration with the alumni association, provided every recent graduate that met the inclusion criteria an opportunity to participate in the study. Through the assistance of the Alumni Association, the researcher notified all Southern Miss graduates through the Southern Miss Alumni Newsletter and Facebook HUBs about the survey. Southern Miss graduates who were interested in the study were invited to click on a designated URL to learn more about the research, voluntarily complete consent, and complete the survey.

#### *Dissemination of Survey Instrument*

Upon the IRB approval of the survey instrument, the researcher proceeded with the administration of the survey to the study sample. The survey needed to be distributed to at least 1,880 recent USM graduates to reach a statistical sample of 376 participants. However, all Southern Miss alumni who met the inclusion criteria were invited to voluntarily complete the survey. Through the Alumni Association, the investigator disseminated an informational notice in the Alumni Newsletter and Facebook HUBs to publicize the study and invite Southern Miss alumni meeting the inclusion criteria to voluntarily participate in the study. An exclusive URL link was provided for alumni to learn more about the study, voluntarily consent to participation, and complete the survey. Once potential participants click on the survey URL link, details about the study, including the IRB protocol number, the purpose of the study, benefits/risks, incentives, and informed consent, appear. Before collecting any data, eligible Southern Miss alumni were required to read and provide informed consent to verify their willingness to voluntarily participate in the study. Participants who completed informed consent were then directed to the online survey in Qualtrics. However, alumni electing not to provide



informed consent were directed to the thank you message at the end of the survey. Using Qualtrics, consenting respondents could complete the survey instrument online via a computer or mobile device. The survey instrument consisted of a 20-item and was estimated to take 15 minutes to complete.

After disseminating the notifications via the Southern Miss Alumni Newsletter and Facebook page and Facebook HUBs, two follow-up notifications were posted online in the Facebook HUBs at weeks two and four after the initial notification was distributed (Stokes et al., 2019). The researcher applied a modified Dillman approach, which utilized a five-week modified multipronged method to recruit participants online, especially through Facebook (Stokes et al., 2019). After the final invitation was posted, the online survey was closed within a week. All data collected was then imported into the Statistical Package for the Social Sciences (SPSS) for analysis.

Employing strategies suggested by Dillman et al. (2014), the researcher sought to improve response rates by applying a multi-prong approach to enhance survey administration. The researcher used the Southern Miss Alumni Association's email newsletter, Facebook page, and HUBs to publicize the survey and invite alumni participation in the study. Furthermore, the researcher used a drawing for token incentives to increase the survey response rates for the study, which is common with the administration of surveys (Millar & Dillman, 2011). For this study, incentives were offered in the form of three gift cards (valued at \$50.00 each). Upon completing the survey, respondents could click on a unique URL not linked to the study to submit their names and contact information for the drawing. A total of 13 survey participants entered the drawing. A drawing to select the winners of the three gift cards was conducted with

the researcher's advisor to randomly select three winners. Three respondents were selected, contacted, and the gift cards were distributed.

*Data Collection Plan*

To capture the systematic process employed during the data collection phase of the study, the researcher developed a data collection plan. The plan outlines the activities executed throughout the data collection phase. Table 1 offers a complete summary of the research activities and the estimated time for completion.

Table 1 *Data Collection Plan*

Week(s)	Activity
0	<ul style="list-style-type: none"> <li>• Receive approval from The University of Southern Mississippi Institutional Review Board (IRB)</li> <li>• Submit copy of IRB approval letter to Southern Miss Alumni Association for review and begin collaborating with the Alumni Association’s designated representative to prepare electronic communications for dissemination to Southern Miss alumni through the Alumni Association email newsletter and Facebook HUBs.</li> </ul>
1	<ul style="list-style-type: none"> <li>• Dissemination of the first notifications through the Southern Miss Alumni Association email newsletter and main Facebook page HUBs inviting Southern Miss Alumni to voluntary participate in the study, complete informed consent, and fill-out the survey</li> </ul>
2	<ul style="list-style-type: none"> <li>• Post first reminder notificaiton to the Alumni Association’s Facebook HUBs inviting eligible Southern Miss graduates to voluntary participate in the study, complete informed consent, and fill-out the survey</li> </ul>
4	<ul style="list-style-type: none"> <li>• Post second and final reminder notificaiton to the Alumni Association’s Facebook HUBs inviting eligible Southern Miss graduates to voluntary participate in the study, complete informed consent, and fill-out the survey</li> </ul>
5	<ul style="list-style-type: none"> <li>• Close survey and import data for statistical analysis</li> <li>• Perform data analysis</li> </ul>

## Table 1 Continued

- 6-8
  - Conduct drawing for gift card incentives
  - Prepare results and conclusions
  - Finalize research report

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*Note.* Data collection plan for this descriptive, comparative research study. The plan outlines the weekly activities planned throughout the duration of the study.

### Instrumentation

The instrumentation used for this research study is a survey. The survey instrument captured demographic and collected data to help evaluate the determinants that influence the out-migration decisions of Mississippi's college graduates. The demographic data captured includes respondents' gender, age, racial/ethnic group, marital status, child status, education attainment, academic area, and migration history (current and pre-college) (Ehrke, 2014). Building on the earlier migration research of Jack Ehrke (2014), the survey instrument for this study used key elements of Ehrke's migration survey. Ehrke's survey instrument, which consists of 24 items, collected data on the factors influencing migration decisions, including economic and non-economic factors, which is consistent with the objectives of the present study. Ehrke used content and construct validity to validate his survey instrument. The researcher for the current study contacted and received Ehrke's permission and approval to use and/or modify the survey instrument (Appendix C). In the study conducted by Ehrke (2014), the survey instrument consists of 24 items, including questions regarding demographics, migration, and economic and non-economic factors. The core survey questions about the potential factors influencing out-migration decisions were Likert-type with a five-point scale (1 = *Not at all Important* to 5 = *Extremely Important*). For this study, the researcher adapted

the survey instrument to ensure all components of the instrument applied to the current research and study population. For the core survey questions related to a range of factors influencing out-migration decisions, the five-point scale consists of 1= *Very Unimportant* to 5 = *Very Important*. The adapted survey instrument consists of 20 items (Appendix D). The researcher removed four items consisting of questions related to the population size of community graduates lived in before and after graduation and a question related to income, which the researcher, after reviewing the literature did not find relevant for the current study, The following survey map (Table 2) outlines the alignment of the survey questions to the research objectives:

Table 2

*Survey Map*

	Research Objectives	Survey Questions
<i>RO1</i>	Describe the demographic characteristics of the sample in terms of age, gender, race/ethnicity, marital status, child status, educational attainment, college major, and migration history.	Q1, Q2, Q3, Q4, Q5, Q6, Q7, Q8, Q9, Q10, Q11, Q12, Q13, Q14, Q15, Q16, Q17
<i>RO2</i>	Describe the factors that influence the out-migration decisions of Mississippi college graduates that have graduated within the past five academic calendar years.	Q18, Q20
<i>RO3</i>	Describe the most influential factors (economic and/or non-economic) that influence the out-migration decisions of Mississippi college graduates that have graduated within the past five academic years.	Q19
<i>RO4</i>	Compare the factors (economic and non-economic) that influence out-migration decisions among Mississippi college graduates with personal characteristics (age, gender, race/ethnicity, marital status, child status, educational attainment, and college major).	Q2, Q3, Q4, Q5, Q6, Q7, Q10, Q18, Q20

Table 2 Continued

<i>RO5</i>	Compare the factors influencing the out-migration decisions among Mississippi college graduates with migration history.	Q10, Q16, Q18, Q20
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*Note.* The survey map outlines the connection between the research objectives to the survey questions.

### Threats to Validity

While implementing this research study, the researcher remained cognizant of potential threats to validity. For this study, several factors could have jeopardized the study's overall validity. These factors included (a) statistical conclusion validity and (b) external validity. Statistical conclusion validity, low statistical power, violated assumptions of statistical tests, and inaccurate effect size estimation are all potential threats to validity. To mitigate these issues, the researcher ensured the most appropriate statistical tests were used, their assumptions were met, and sought to improve measurement. For external validity, selection interaction was a potential threat to the study's validity, which can affect the reliability of the study findings and the ability for the study to be replicated. To mitigate external validity, the researcher applied a sampling model approach to support the study results being generalizable.

### Instrument Validity and Reliability

In the study by Ehrke (2014), the researcher received permission to use and modify a survey instrument called the "Buffalo Commons." The original instrument was developed by the University of Nebraska-Lincoln (UNL) Department of Agricultural Economics, the University of Nebraska Rural Initiative, and the Center for Applied Rural Innovation at UNL (Cantrell et al., 2008; Ehrke, 2014). Modified by Ehrke to ensure its relevance to individuals ages 21-28, Ehrke enlisted a panel of experts to examine the

construct validity of the modified instrument. The panel of experts examined the survey questions to ensure the instrument addressed the study's objectives and the alignment of the questions. Moreover, Ehrke conducted a pilot study to ascertain the face validity and content of the survey instrument (Ehrke, 2014).

For the present study, the researcher adapted the instrument to ensure that the survey captures the personal characteristics of all college graduates (ages eighteen and older) receiving bachelor's or graduate degrees. To evaluate the validity and reliability of the survey instrument, the researcher used (a) construct validity, (b) face validity, and (c) content validity. To assess construct validity, the researcher convened a panel of experts to review the survey and ensure the questions aligned with the research objectives. The panel addressed whether the survey instrument applied to the study. The expert panel assessed face validity and how the survey appeared. To evaluate content validity and how well the instrument measures elements of the research objectives, the researcher created a survey map (Table 2) to outline the alignment of each question to the research objectives.

#### Data Analysis

The researcher used the Statistical Package for Social Science (SPSS) to analyze research data for this study. The researcher developed a data analysis plan to outline the data analysis methods employed to evaluate each research objective. The data analysis plan describes each research objective and outlines the use of corresponding statistical tests to analyze data. The plan defined variables and described the process for interpreting research findings (Field, 2013). The data analysis plan focused on the four research objectives (ROs). For research objective one, frequency distributions ( $n$ ) and percentages (%) will be computed for all variables. The variables associated with research objective

two will be computed using frequency distribution ( $n$ ), median ( $Mdn$ ), and mode ( $Mo$ ) for Likert-type data (Boone & Boone, 2012). Cross-tabulations and case summaries will be used for research objective three to compute the results. Lastly, for research objective four, the Chi-square test of association will be used to compute  $p$ -value (Laerd, 2023). The Pearson Chi-square  $p$ -values will be used if all test assumptions are met. However, the Fisher's Exact Test will be used if the assumptions are violated, and the expected counts are less than 5 (Laerd, 2023). For statistically significant results, the  $p$ -value must be  $\leq 0.05$  (Field, 2013; Laerd, 2023). Table 3 outlines the data analysis plan for this study.

Table 3

*Data Analysis Plan*

RO	Variable(s)	Scale	Statistical Test
ROI	Calendar Year of Completion	Ordinal	Frequency
	Educational Attainment	Ordinal	Frequency
	Academic Area	Nominal	Frequency
	Gender	Nominal	Frequency
	Age	Ordinal	Frequency
	Race/Ethnicity	Nominal	Frequency
	Marital Status	Nominal	Frequency
	Child status	Nominal	Frequency
	Work Industry	Nominal	Frequency
	Current Residence	Nominal	Frequency
	Community Information Source	Nominal	Frequency
	Location Options	Nominal	Frequency
	Visiting Community Before	Nominal	Frequency
	Contact with Community Before	Nominal	Frequency
	Years in Pre-College Community	Ordinal	Frequency
	Moved to Difference Community Before College	Ordinal	Frequency

Table 3 Continued

	Applied to Out of State Colleges	Nominal	Frequency
RO2	Economic and Non-Economic Factors	Ordinal	Frequency Median Mode
	Community-Based and Life Factors	Ordinal	Frequency Median Mode
RO3	Top Five Most Important Factors	Ordinal	Cross Tabulations Case Summaries
RO4	Educational Attainment	Ordinal	Chi-Square Test of Association - Fisher Exact Test
	Academic Area	Nominal	Chi-Square Test of Association - Fisher Exact Test
	Gender	Nominal	Chi-Square Test of Association - Fisher Exact Test
	Age	Nominal	Chi-Square Test of Association - Fisher Exact Test
	Race/Ethnicity	Nominal	Chi-Square Test of Association - Fisher Exact Test
	Marital Status	Nominal	Chi-Square Test of Association - Fisher Exact Test
	Child Status	Nominal	Chi-Square Test of Association - Fisher Exact Test
RO5	Current Residence	Nominal	Chi-Square Test of Association - Fisher Exact Test
	Migration History	Nominal	Chi-Square Test of Association - Fisher Exact Test

*Note.* The plan outlines the research objectives along with corresponding survey items, scale, and planned statistical tests. RO= Research objectives.

### Chapter Summary

This chapter discussed the research design and methodology supporting the study. The researcher restated the purpose of this study and presented the research questions. This chapter described the rationale for using a descriptive, comparative research design to address the central research question: What determinants are most influential in the



out-migration decisions of Mississippi college graduates? Additionally, the researcher described the population, sample, and sampling procedures. For this study, recent college graduates awarded bachelor's and graduate degrees from The University of Southern Mississippi were recruited for participation. Using convenience sampling, Southern Miss alums were targeted through the Southern Miss Alumni Association. The researcher obtained formal IRB approval through the USM IRB. The instrumentation, data collection process, threats to validity, instrument validity and reliability, and the data analysis plan were also discussed. Finally, the researcher described the limitations of the study. Results of the data analysis are presented in Chapter IV (Lunenburg & Irby, 2008; Roberts, 2010).

## CHAPTER IV – RESULTS

This study aimed to identify the determinants that influence the out-migration decisions of recent Mississippi college graduates post-graduation. The primary research question for this study was: What determinants are most influential in the out-migration decisions of Mississippi college graduates? Chapter IV presents the results of the study. The chapter is organized according to the research objectives (RO1 - RO4) presented in Chapter I. The chapter presents the data analysis results using descriptive and inferential statistics. Using both descriptive and inferential statistics enabled the researcher to analyze the data and inform the researcher about the characteristics of the participants (Salkind, 2006). Chapter IV starts with a description of the study population and a report of the demographic characteristics of study participants.

### Research Objective 1 – Participant Demographics

*Describe the demographic characteristics of the sample in terms of age, gender, race/ethnicity, marital status, child status, educational attainment, college major, and migration history.*

The first research objective (RO1) examined survey participants' demographic and personal characteristics. For each of the 20 questions, participants indicated their responses to the questions presented. Of the recent graduates invited to complete the survey, 44 completed informed consent. However, of those completing informed consent, 17 respondents were excluded from the final analysis due to incomplete surveys. Anyone completing less than 65% of the survey was excluded. Of the 44 respondents, 27 completed 65% or more of the study questions, including answering some or all questions about factors influencing migration decisions. A completion threshold of 65% was

selected to keep respondents. Any respondent data under the 65% threshold was removed as the participants only completed the first section of the demographic questions and did not answer any questions related to current location, migration history or the other factors influencing migration decisions. Of the respondents meeting the 65% threshold, all respondents answered the demographic questions, indicated current location, and answer at minimum a few questions related to migration decisions. The response rate for the survey was 0.002%.

All 20 questions were analyzed using descriptive and inferential statistics. The Chi-square test of association with the Fisher Exact Test was used to identify whether any statistically significant associations existed between variables. The personal demographics of the study participants are presented in Tables 4 through 18.

*Gender and Age*

For this study, the gender categories were male and female. Most participants reported being female. The study included 17 females (63%) and 10 males (37%). Of the 27 study participants, the majority were aged 24-35 (40.7%). The other age ranges reported were 18-24 (14.8%), 35-44 (22.2%), 45-54 (11.1%), 55-64 (7.4%), and 65 and older (3.7%). Tables 4 and 5 display the frequency distribution for gender and age.

Table 4

*Demographic Characteristics of Respondents by Gender*

Descriptive variable	<i>n</i>	%
Gender		
Male	10	37.0
Female	17	63.0

Table 5

*Demographic Characteristics of Respondents by Age*

Descriptive variable	<i>n</i>	%	Cumulative Percent
Age (years)			
18-24	4	14.8	14.8
25-34	11	40.7	55.6
35-44	6	22.2	77.8
45-54	3	11.1	88.9
55-64	2	7.4	96.3
65 and older	1	3.7	100.0

*Education Attainment*

For educational attainment, 48.1% of survey participants indicated their highest level of education received at Southern Miss was a bachelor's degree. While 40.7% of respondents indicated obtaining a master's degree, and 11.1% reported receiving a doctorate or professional degree from Southern Miss. Table 6 presents the frequency distribution for educational attainment.

Table 6

*Demographic Characteristics of Respondents by Educational Attainment*

Descriptive variable	<i>n</i>	%	Cumulative Percent
Educational Attainment			
Bachelor's degree	13	48.1	48.1
Master's degree	11	40.7	88.9
Doctorate or Professional degree	3	11.1	100.0

*Academic Area (College Major)*

For this study, 11.3% of survey participants reported their most recent degree from Southern Miss was in Education and Human Services, 14.8% in Business Administration, 25.9% in Arts and Sciences, 3.7% in Journalism and Mass Communications, 7.4% in Public Affairs and Community Service. No survey participants indicated receiving their most recent degree for USM in Agricultural Sciences and Natural Resources, Engineering, Architecture, and Performing Arts. However, 10 participants reported that their most recent degree from Southern Miss was considered to be in the others category. These categories were Health Professions, including Nursing and Public Health (14.8%), Human Capital Development (14.8%), and Library Sciences and Information (7.4%). The demographics presented in the academic area indicate that the degrees obtained from the most recent graduates of Southern Miss were diverse. Table 7 shows the frequency distribution for participants' academic areas of study.

Table 7

*Demographic Characteristics of Respondents by Academic Area*

Descriptive variable	<i>n</i>	%
Academic Area		
Education and Human Services	3	11.1
Business Administration	4	14.8
Arts and Sciences	7	25.9
Journalism and Mass Communications	1	3.7
Public Affairs and Community Service	2	7.4
Other		
Health professions	4	14.8
Human Capital Development	4	14.8
Library and Information Sciences	2	7.4

*Note: Participants could check more than one area, if applicable.*

### *Semester of Degree Completion*

The semester of degree completion was wide-ranging for the study respondents, with 8% of participants reporting they completed their most recent degree from USM in Fall 2022, 16% in Spring 2022, 8% in Fall 2021, 4% in Summer 2021, 12% in Spring 2021. Moreover, 12% indicated receiving their recent USM degree in Spring 2020, 8% in Fall 2019, 12% in Spring 2019, 4% in Summer 2018, 4% in Spring 2018, and 12% in Fall 2017. The data shows that alum participants represented different academic calendar years across 5 years. Table 8 displays the frequency distribution for participants' semesters of completion.

Table 8

### *Demographic Characteristics of Respondents by Semester of Completion*

Descriptive variable	<i>n</i>	%	Cumulative Percent
<b>Semester of Degree Completion</b>			
Fall 2022	2	8.0	8.0
Spring 2022	4	16.0	24.0
Fall 2021	2	8.0	32.0
Summer 2021	1	4.0	36.0
Spring 2021	3	12.0	48.0
Spring 2020	3	12.0	60.0
Fall 2019	2	8.0	68.0
Spring 2019	3	12.0	80.0
Summer 2018	1	4.0	84.0
Spring 2018	1	4.0	88.0
Fall 2017	3	12.0	100.0

### *Race/Ethnicity*

Of the 27 survey participants, 84.6% were White, 3.8% Black or African American, 7.7% Asian, and 3.8% Hispanic or Latino. No survey participants indicated their race or ethnicity were American Indian or Alaska Native, Native Hawaiian or

Pacific Islander, or Other. Table 9 presents the frequency distribution for race and ethnicity.

Table 9

*Demographic Characteristics of Respondents by Race/Ethnicity*

Descriptive variable	<i>n</i>	%	Cumulative Percent
<b>Race/Ethnicity</b>			
White	22	84.6	84.6
Black or African American	1	3.8	88.5
Asian	2	7.7	96.2
Hispanic or Latino	1	3.8	100.0

*Marital and Child status*

For this study, 59.3% of survey participants reported they were married. While 40.7% indicated they were not married. Additionally, of the 27 participants, 37% reported they had children, and 63% indicated they did not have children. Tables 10 and 11 show the frequency distributions for marital and child status.

Table 10

*Demographic Characteristics of Respondents by Marital Status*

Descriptive variable	<i>n</i>	%
<b>Marital Status</b>		
Yes	16	59.3
No	11	40.7

Table 11

*Demographic Characteristics of Respondents by Child Status*

Descriptive variable	<i>n</i>	%
Child status		
Yes	10	37.0
No	17	63.0

*Work Industry*

Of the 27 study participants, the majority of participants reported having work experience in education services (33.3%) and health care, social assistance (33.3%), and management of companies and enterprises (25.9%). Additionally, 3.7% indicated they had work experience in the utilities industry, 3.7% construction industry, 3.7% manufacturing industry, 7.4% retail trade industry, 11.1% information industry, 14.8% finance and insurance industry, 7.4% in the real estate and rental and leasing industry, 11.1% professional, scientific and technical services industry, 7.4% arts, entertainment, and recreations, 3.7% accommodations and food services, 11.1% federal, state, and local government. Of the participants indicating other industries, 3.7% indicated higher education student affairs, 3.7% indicated library, and 3.7% indicated military. Table 12 displays the frequency distribution for the work industries.

Table 12

*Demographic Characteristics of Respondents by Work Industry*

Descriptive variable**	<i>n</i>	%
Work Industry		
Utilities	1	3.7
Construction	1	3.7
Manufacturing	1	3.7
Retail Trade	2	7.4



Table 12 Continued

Information	3	11.1
Finance and Insurance	4	14.8
Real Estate and Rental and Leasing	2	7.4
Professional, Scientific, and Technical Services	3	11.1
Management of Companies and Enterprises	7	25.9
Educational Services (including private, state, and local government schools)	9	33.3
Health Care and Social Assistance (Including private, state, and local government hospitals)	9	33.3
Art, Entertainment, and Recreation	2	7.4
Accommodation and Food Services	1	3.7
Federal, State, and Local Government, excluding state and local schools and hospitals, and the US Postal Service	3	11.1
Other Services		
Higher Education Student Affairs	1	3.7
Library	1	3.7
Military	1	3.7

Note: For work industry, participants could check all industries related to work experience.

### *Current Residency and Factors Influencing Migration Decisions*

For this survey section, participants answered questions about their current residency location and any factors influencing their migration decisions. Most participants indicated they live out of state at 55.6%, with 44.4% living in Mississippi. Of the 27 participants, 44.4% indicated currently living in Mississippi, 14.8% live in Alabama, 3.7% live in California, 7.4% live in Florida, 3.7% live in Georgia, 7.4 % live in Louisiana, 3.7% live in Oklahoma, 7.4% live in Texas, and 7.4% live in Virginia. Overall, participants indicated they currently lived in 9 different states. Table 13 presents the frequency distribution for the current residence.

Table 13

*Respondents by Current Residence*

Descriptive variable	<i>n</i>	%
In-State MS	12	44.4
Out-of-State MS (California, Florida, Georgia, Louisiana, Oklahoma, Texas, and Virginia)	15	55.6

*Note.* MS = Mississippi.

When asked whether they used any information sources when choosing a community as a college graduate, 12.4% of participants indicated they obtained information from the internet, 7.4% from tv, magazines, newspapers, and business publications, 37% from current residents, 37% from employer or co-workers, 37% from friends and acquaintances, and 37% for family. Additionally, 22.2% indicated obtaining information because of travel or vacation to a new location, 18.5% indicated attending school or college in a new location, 3.7% indicated obtaining recruitment information from the community, 3.7% indicated obtaining recruitment information from the high school alumni association, and 14.8% indicated obtaining recruitment information from the employer. Table 14 describes the frequency distribution of community information sources.

Table 14

*Respondents Community Information Source*

Descriptive variable	<i>n</i>	%
Community information source		
Internet	12	44.4
TV, magazine, newspaper, business publication	2	7.4
Current resident	10	37.0
Employee or co-worker	10	37.0
Friend or acquaintances	10	37.0
Family	10	37.0

Table 14 Continued

Travel or vacation to new location	6	22.2
Attended school or college in new location	5	18.5
Recruitment information - community	1	3.7
Recruitment information - high school alumni assoc.	1	3.7
Recruitment information - employer	4	14.8

Note: Respondents could select all that applied

When asked about other locations respondents considered when choosing a community as a college graduate, 33.3% indicated they only considered one location, 7.4% indicated they considered other locations in the same state, 14.8% indicated they only considered other locations in other states, and 44.4% indicated they considered other locations both in Mississippi and other states. Similarly, when asked about whether they had previous contact with a community before choosing it as a college graduate, 59.3% indicated they had previously visited the community, and 40.7% indicated they had not previously visited the community before choosing the community as a college graduate. For participants indicating yes, 18.8% indicated they lived there previously, 12.5% indicated they vacationed in the community or traveled through the community during vacation, 18.8% indicated they visited family that lived in the community, 12.5% indicated they visited the community during work-related travel, 12.5% indicated they visited a friend that lived in the community, 18.8% indicated they attended college in the community, and 6.3% under other, indicated they toured the community for graduate school. Table 15 presents the frequency distributions for location options and contact with a community as factors influencing migration decisions to live in a community as a college graduate.

Table 15

*Respondents Migration History*

Descriptive variable	<i>n</i>	%	Cumulative Percent
Location options			
Only that location	9	33.3	33.3
Other locations in the same state	2	7.4	40.7
Other locations in other states	4	14.8	55.6
Other locations both in this state and other states	12	44.4	100.0
Visit community before choosing			
Yes	16	59.3	
No	11	40.7	
Contact with community before choosing			
Lived previously	3	18.8	18.8
Vacationed or traveled	2	12.5	31.3
Visited family that lived there	3	18.8	50.0
Visited during work-related travel	2	12.5	62.5
Visited friends that lived there	2	12.5	75.0
Attended college there	3	11.1	93.8
Other (Toured for Grad School)	1	6.3	100.0

*Pre-College Migration History*

For this block of survey questions, participants indicated the years they lived in a community before attending college. Of those responding, 24% indicated they lived in their pre-college community 0 to 3 years, 4% indicated 4 to 7 years, 8% indicated 8 to 11 years, 12% indicated 12 to 15 years and 52% indicated they lived in their pre-college community 16 years or more. Table 16 displays the frequency distribution for the years participants lived in their pre-college community.

Table 16

*Number of Years Lived in Pre-College Community*

Descriptive variable	<i>n</i>	%	Cumulative Percent
0 to 3 years	6	24.0	24.0
4 to 7 years	1	4.0	28.0
8 to 11 years	2	8.0	36.0
12 to 15 years	3	12.0	48.0
16 years or more	13	52.0	100.0

When answering questions about their pre-college migration history, 24 participants responded, while 3 did not indicate their migration history. Of those participants who responded, 37.5% indicated they lived in the same community their whole life before college, 41.7% indicated they changed communities one time before going to college, 4.2% indicated changing communities three times before going to college, and 16.7% indicated they change communities more than three times before going to college. Table 17 presents the frequency distribution for pre-college migration history.

Table 17

*Pre-College Migration History*

Descriptive variable	<i>n</i>	%	Cumulative Percent
Moved to different community before college			
No, live in same community	9	37.5	24.0
Yes, changed one time	10	41.7	28.0
Yes, changed two times	0	0.0	36.0
Yes, changed three times	1	4.2	48.0
Yes, changed more than three times	4	16.7	100.0

When asked whether participants applied to colleges out-of-state, 75% indicated they applied to colleges outside their home state, and 25% indicated they only applied to colleges in their home state. Three participants did not indicate whether they applied to out-of-state institutions or only applied to in-state institutions. Table 18 displays the frequency distributions of participants' application submissions to in-state and out-of-state institutions of higher education.

Table 18

*Respondents Applications to College Out-of-State Institutions of Higher Education*

Descriptive variable	<i>n</i>	%
Applied to colleges out-of-state		
Yes, applied outside state	18	75.0
No, only applied in home state	6	25.0

Research Objective 2 – Description of Factors

*Describe the factors that influence the out-migration decisions of Mississippi college graduates who graduated within the past five academic calendar years.*

Descriptive statistics were generated to examine the factors that influence the migration decisions of Mississippi college graduates. Appendix I presents the frequency distributions. The top five factors (economic and non-economic) influencing migration based on median and mode were (a) to obtain a higher paying job (*Mdn* = 5, *Mo* = 5); (b) to obtain a job with opportunities for advancement (*Mdn* = 5, *Mo* = 5); (c) to obtain a job that allows for a quality work-life balance (*Mdn* = 5, *Mo* = 5); (d) to be closer to relatives (*Mdn* = 4, *Mo* = 5); and (e) to be nearer to friend and acquaintances (*Mdn* = 4, *Mo* = 5). The top five most important factors, to obtain a higher paying job, to obtain a job with

opportunities for advancement, to obtain a job that allows for a quality work-life balance, and to be closer to relatives were measured to be *Very Important*. Whereas to be nearer to friend and acquaintances was considered *Important*. Table 19 depicts the number of participants (*n*), median (*Mdn*), and the mode (*Mo*) associated with each factor influencing migration decisions.

Table 19

*Factors Influencing Migration of Participants*

Factors	<i>n</i>	<i>Mdn</i>	<i>Mo</i>
To obtain a higher paying job	19	5.00	5
To obtain a job with opportunities for advancement	20	5.00	5
To obtain a job that allows for a quality work-life balance	20	5.00	5
To be closer to relatives	21	4.00	5
To be nearer to friend and acquaintances	21	4.00	4
To find a safer place to live	20	4.00	4
To live in a desirable natural environment	20	4.00	4
To find more outdoor recreational activities	20	4.00	4
To find arts, entertainment, and cultural activities	20	4.00	5
This community shares my attitudes/values	20	4.00	4
To have a more desirable climate	20	4.00	4
To obtain a job with a nurturing and social work environment	20	4.00	4
To obtain a job where I can make a difference	20	4.00	4
To obtain a job that allows me to pay off student loans	20	4.00	5
To secure a better job for my spouse/partner	19	4.00	4
To lower the cost of living	20	3.50	4
A better environment for raising children	21	3.00	3

Table 19 Continued

To find a less congested place to live	20	3.00	3
To lower the cost of housing	20	3.00	4
To have lower taxes	20	3.00	4
To find a simpler pace of life	20	3.00	3
To have more ethnic diversity	20	3.00	3
To get more affordable health care	20	3.00	3
To find higher quality housing	20	3.00	3
To obtain a graduate degree	19	3.00	5
Other	16	3.00	3
To have less ethnic diversity	20	2.50	3
To be farther from family and relatives	21	2.00	2

---

*Note:* The factors were ranked on a scale from 1 to five, with “1” being “*Very Unimportant*,” “2” being “*Unimportant*,” “3” being “*Neither Unimportant or Important*,” “4” being “*Important*,” and “5” being “*Very Important*.”

The top five community and life factors influencing migration according to the mean were (a) suitable housing and neighborhoods (*Mdn* = 5, *Mo* = 5); (b) affordable housing (*Mdn* = 5, *Mo* = 5); (c) job security (*Mdn* = 5, *Mo* = 5); (d) available job opportunities (*Mdn* = 5, *Mo* = 5); and (e) work-life balance (*Mdn* = 5, *Mo* = 5). Of the top five most important community and life-based factors, job security, all five factors were measured as *Very Important*. Table 20 presents the number of participants (*n*), median (*Mdn*), and the mode (*Mo*) associated with each factor influencing migration decisions. See Appendix J for the frequency distributions.



Table 20

*Community and Life Factors Influencing Migration of Participants*

Factors	<i>n</i>	<i>Mdn</i>	<i>Mo</i>
Suitable housing and neighborhoods	21	5.00	5
Affordable housing	20	5.00	5
Job security	20	5.00	5
Available job opportunities	21	5.00	5
Work-life balance	21	5.00	5
Feeling of "belonging" in the community	21	4.00	4
Clean environment	21	4.00	4
Leadership opportunities	21	4.00	5
Opportunities to join local organizations	21	4.00	4
Crime rate	21	4.00	5
Police protection	21	4.00	5
Fire protection	21	4.00	5
Health care services	21	4.00	4
School system	21	4.00	4
Living near family and relatives	21	4.00	4
Living near friends and acquaintances	20	4.00	4
Educational opportunities	21	4.00	4
Entertainment	21	4.00	5
Retail shopping	21	4.00	4
Internet services	21	4.00	5
Standard of living	20	4.00	4
Environment for children	21	4.00	4
Local government	21	4.00	4
Natural, scenic or recreational amenities	21	4.00	5
Community appearance	21	4.00	4

Table 20 Continued

Household income	21	4.00	5
Property and other local taxes	20	3.50	3
State taxes	20	3.00	3

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*Note:* The factors were ranked by participants on a scale from one to five, with “1” being “*Very Unimportant*,” “2” being “*Unimportant*,” “3” being “*Neither Unimportant or Important*,” “4” being “*Important*,” and “5” being “*Very Important*”

### Research Objective 3 – Most Important Factors

*Describe the most influential factors (economic and/or non-economic) that influence the out-migration decisions of Mississippi college graduates who graduated within the past five academic years.*

Research Objective Three (RO3) focused on the most important factors influencing out-migration decisions. To better understand the most influential factors for Southern Miss alumni living in the state of Mississippi and alumni living outside of Mississippi, participants were asked to rank from one to five which factors were the most important. With “1” being the most important, “2” being the second most important, “3” being the third most important, “4” being the fourth most important, and “5” being the fifth most important, participants provided their top five factors. Using the cross-tabulations and the case summary function in SPSS, the researcher determined the number of cases each factor received. Table 22 presents the top five important factors by current residency location. Participants living in Mississippi and outside Mississippi ranked being closer to relatives as the most important factor.

Table 21

*Top Five Most Important Factors Influencing Out-Migration Decisions by Current*

*Location*

Living in MS		Living Outside MS	
Factors	<i>n</i>	Factors	<i>n</i>
To be closer to relatives	8	To be closer to relatives	5
To be closer to friends and acquaintances	6	To find outdoor recreational activities	5
To obtain a higher paying job	5	To be closer to friends and acquaintances	5
To obtain a job that allows for quality work-life balance	4	To find arts, entertainment, and cultural activities	5
To lower the cost of living	3	To obtain a higher paying job	

*Note.* MS = Mississippi; *n* = number of college graduates.

Research Objective 4 – Comparing Factors

*Compare the factors that influence the out-migration decisions among Mississippi’s college graduates with personal characteristics (age, gender, race/ethnicity, marital status, child status, educational attainment, and college major).*

Research Objective Four (RO4) focused on comparing the factors that influence out-migration decisions based on the personal characteristics that may influence Mississippi college graduates' migration decisions. The researcher used the nonparametric statistical test Chi-square test of association to examine associations. According to Laerd Statistics (2023), there are three assumptions to using the Chi-square test for association, the data must have (a) two variables that can be measured at the categorical level, (b) independence of observations, and (c) all cells must have expected counts greater than five. Because of the small sample size, the cell expected counts were less than 5 for this study. Therefore, the third assumption associated with Chi-square could not be met. Thus, the Pearson Chi-square output values could not be used. Instead,

the researcher, following the protocols outlined by Laerd, could interpret the results using the Fisher’s Exact Test to examine any associations (Laerd Statistics, 2023). For statistically significant results, the  $p$ -value must be  $\leq$  equal to 0.05. Tables 22 through 35 compare different factors including community and life factors influencing migrations.

*Different Factors Influencing Migration Decisions*

To compare the factors influencing the out-migration among Mississippi’s college graduates, the researcher conducted analysis using Chi-square test of associations and interpreted the results using the Fisher’s Exact Test. The results for RO4 are presented below.

*Educational Attainment.* A Fisher’s Exact test was conducted between educational attainment and the factor to find a simpler pace of life. There was a statistically significant association between education and the factor to find a simpler pace of life,  $p = .021$ . Table 22 exhibits the comparison of factors influencing out-migration decisions by educational attainment.

Table 22

*Comparing Factors Influencing Out-Migration Decisions by Educational Attainment*

Variable	Factor	$X^2$ (df)	Fishers Exact Test (p)
Educational Attainment	To be closer to relatives	3.968 (5)	.599
	To be nearer to friend and acquaintances	8.886 (5)	.096
	To be farther from family and relatives	3.334 (4)	.661
	A better environment for raising children	5.256 (5)	.422

Table 22 Continued

To find a less congested place to live	6.782 (5)	.236
To find a safer place to live	5.914 (4)	.268
To lower the cost of housing	3.978 (4)	.506
To have lower taxes	6.267 (4)	.221
To live in a desirable natural environment	4.188 (4)	.506
To find more outdoor recreational activities	4.913 (4)	.366
To find arts, entertainment, and cultural activities	5.180 (4)	.306
To find a simpler pace of life	10.520 (4)	.021**
To have more ethnic diversity	3.110 (4)	.570
To have less ethnic diversity	.907 (3)	.868
This community shares my attitudes/values	5.510 (5)	.423
To lower the cost of living	4.612 (4)	.414
To have a more desirable climate	7.316 (4)	.144
To get more affordable health care	2.220 (4)	.842
To find higher quality housing	5.447 (4)	.323
To obtain a higher paying job	3.468 (4)	.611
To obtain a job with a nurturing and social work environment	4.512 (4)	.322
To obtain a job where I can make a difference	1.198 (4)	1.000
To obtain a job with opportunities for advancement	5.113 (4)	.354
To obtain a job that allows me to pay off student loans	.551 (5)	1.000

Table 22 Continued

To obtain a job that allows for a quality work-life balance	2.343 (4)	1.000
To obtain a graduate degree	3.754 (5)	.756
To secure a better job for my spouse/partner	3.802 (5)	.711
Other	3.135 (3)	.562

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Note: \*\*  $p \leq$  equal to 0.05

*Academic Area (College Major).* A Fisher's Exact test was conducted between college major and the factor to be nearer to friend and acquaintances. There was a statistically significant association between college and the factor to be nearer to friend and acquaintances,  $p = .025$ .

A Fisher's Exact test was conducted between college major and the factor to find arts, entertainment, and cultural activities. There was a statistically significant association between college and the factor to find arts, entertainment, and cultural activities,  $p = .013$ .

A Fisher's Exact test was conducted between college major and the factor to find a simpler pace of life. There was a statistically significant association between college and the factor to find a simpler pace of life,  $p = .042$ .

A Fisher's Exact test was conducted between college major and the factor to have more ethnic diversity. There was a statistically significant association between college and the factor to have more ethnic diversity,  $p = .044$ .

A Fisher's Exact test was conducted between college major and the factor to have a more desirable climate. There was a statistically significant association between college and the factor to have a more desirable climate,  $p = .021$ .

A Fisher's Exact test was conducted between college major and the factor to get more affordable health care. There was a statistically significant association between college and the factor to get more affordable health care,  $p = .015$ .

A Fisher's Exact test was conducted between college major and the factor to find higher quality housing. There was a statistically significant association between college and the factor to find higher quality housing,  $p = .026$ . Table 23 displays the association of factors influencing out-migration decisions by college major.

Table 23

*Comparing Factors Influencing Out-Migration Decisions by College Major*

Variable	Factor	$X^2$ (df)	<i>Fishers Exact Test</i> ( $p$ )
College Major	To be closer to relatives	35.989 (25)	.113
	To be nearer to friend and acquaintances	32.876 (25)	.025**
	To be farther from family and relatives	21.521 (20)	.340
	A better environment for raising children	29.667 (25)	.073
	To find a less congested place to live	25.556 (25)	.350
	To find a safer place to live	20.103 (20)	.301
	To lower the cost of housing	22.224 (20)	.148
	To have lower taxes	22.264 (20)	.131
	To live in a desirable natural environment	14.028 (20)	.685
	To find more outdoor recreational activities	23.367 (20)	.165
	To find arts, entertainment, and cultural activities	29.182 (20)	.013**

Table 23 Continued

To find a simpler pace of life	25.106 (20)	.042**
To have more ethnic diversity	25.165 (20)	.044**
To have less ethnic diversity	17.636 (15)	.140
This community shares my attitudes/values	24.847 (25)	.186
To lower the cost of living	28.714 (20)	.069
To have a more desirable climate	27.962 (20)	.021**
To get more affordable health care	31.770 (20)	.015**
To find higher quality housing	30.748 (20)	.026**
To obtain a higher paying job	12.755 (20)	.856
To obtain a job with a nurturing and social work environment	20.156 (20)	.164
To obtain a job where I can make a difference	12.957 (20)	.670
To obtain a job with opportunities for advancement	13.166 (20)	.798
To obtain a job that allows me to pay off student loans	27.195 (25)	.635
To obtain a job that allows for a quality work-life balance	14.948 (20)	.485
To obtain a graduate degree	37.598 (25)	.786
To secure a better job for my spouse/partner	24.252 (25)	.507
Other	10.905 (15)	.875

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Note: \*\*  $p \leq$  equal to 0.05



*Gender.* A Fisher's Exact test was conducted between gender and the factor to find a safer place to live. There was a statistically significant association between gender and the factor to find a safer place to live,  $p = .003$ .

A Fisher's Exact test was conducted between gender and the factor to obtain a job that allows me to pay off student loans. There was a statistically significant association between gender and the factor to obtain a job that allows me to pay off student loans,  $p = .030$ . Table 24 shows the association of factors influencing out-migration decisions by gender.

Table 24

*Comparing Factors Influencing Out-Migration Decisions by Gender*

Variable	Factor	$X^2$ (df)	<i>Fishers Exact Test</i> (p)
Gender	To be closer to relatives	3.772 (5)	.712
	To be nearer to friend and acquaintances	6.035 (5)	.288
	To be farther from family and relatives	2.843 (4)	.682
	A better environment for raising children	5.278 (5)	.423
	To find a less congested place to live	5.627(5)	.397
	To find a safer place to live	13.155 (4)	.003**
	To lower the cost of housing	2.863 (4)	.630
	To have lower taxes	4.191 (4)	.390
	To live in a desirable natural environment	1.247 (4)	.957
	To find more outdoor recreational activities	2.149 (4)	.734
	To find arts, entertainment, and cultural activities	6.080 (4)	.208
	To find a simpler pace of life	2.435 (4)	.730
	To have more ethnic diversity	2.292 (4)	.789
	To have less ethnic diversity	5.007 (3)	.230
	This community shares my attitudes/values	6.852 (5)	.245
	To lower the cost of living	3.483 (4)	.492
	To have a more desirable climate	5.901 (4)	.209
	To get more affordable health care	3.483 (4)	.528

Table 24 Continued

To find higher quality housing	4.078 (4)	.513
To obtain a higher paying job	1.628 (4)	.886
To obtain a job with a nurturing and social work environment	1.148 (4)	.965
To obtain a job where I can make a difference	5.085 (4)	.330
To obtain a job with opportunities for advancement	2.292 (4)	.739
To obtain a job that allows me to pay off student loans	12.297 (5)	.030**
To obtain a job that allows for a quality work-life balance	3.053 (4)	.699
To obtain a graduate degree	2.113 (5)	.961
To secure a better job for my spouse/partner	9.311 (5)	.117
Other	2.110 (3)	.821

Note: \*\* $p \leq$  equal to 0.05

*Age.* An analysis of the factors influencing out-migration decisions by age shows no statistically significant associations were found between age and the 28 different factors influencing migration decisions. Table 25 depicts the comparison of factors influencing out-migration decisions by age.

Table 25

*Comparing Factors Influencing Out-Migration Decisions by Age*

Variable	Factor	$X^2$ (df)	Fishers Exact Test (p)
Age	To be closer to relatives	27.656 (30)	.732
	To be nearer to friend and acquaintances	40.410 (30)	.133
	To be farther from family and relatives	34.665 (24)	.092
	A better environment for raising children	36.702 (30)	.196
	To find a less congested place to live	27.879 (30)	.583
	To find a safer place to live	20.651 (24)	.490
	To lower the cost of housing	20.664 (24)	.734
	To have lower taxes	19.731 (24)	.698
	To live in a desirable natural environment	30.192 (24)	.255
	To find more outdoor recreational activities	24.676 (24)	.626
	To find arts, entertainment, and cultural activities	25.261 (24)	.273
	To find a simpler pace of life	46.186 (24)	.093
	To have more ethnic diversity	17.666 (24)	.874

Table 25 Continued

To have less ethnic diversity	15.204 (18)	.658
This community shares my attitudes/values	30.793 (30)	.590
To lower the cost of living	19.685 (24)	.795
To have a more desirable climate	28.332 (24)	.308
To get more affordable health care	22.179 (24)	.582
To find higher quality housing	27.129 (24)	.331
To obtain a higher paying job	28.237 (24)	.101
To obtain a job with a nurturing and social work environment	26.521 (24)	.339
To obtain a job where I can make a difference	23.038 (24)	.548
To obtain a job with opportunities for advancement	33.204 (24)	.061
To obtain a job that allows me to pay off student loans	34.441 (24)	.267
To obtain a job that allows for a quality work-life balance	31.605 (24)	.395
To obtain a graduate degree	23.368 (30)	.595
To secure a better job for my spouse/partner	22.763 (30)	.954

Table 25 Continued

Other 14.007 (18) .574

Note: \*\*  $p \leq$  equal to 0.05

*Race and Ethnicity.* An evaluation of the factors influencing out-migration decisions by race and ethnicity shows no statistically significant associations were found between race and ethnicity and the 28 different factors influencing migration decisions. Table 26 displays the association of factors influencing out-migration decisions by race and ethnicity.

Table 26

*Comparing Factors Influencing Out-Migration Decisions by Race and Ethnicity*

Variable	Factor	$X^2$ (df)	Fishers Exact Test (p)
Race/Ethnicity	To be closer to relatives	16.312 (20)	.518
	To be nearer to friend and acquaintances	18.123 (20)	.630
	To be farther from family and relatives	13.623 (16)	.787
	A better environment for raising children	11.447 (20)	.897
	To find a less congested place to live	33.623 (20)	.419
	To find a safer place to live	21.746 (16)	.383
	To lower the cost of housing	16.919 (16)	.690
	To have lower taxes	21.273 (16)	.442

Table 26 Continued

To live in a desirable natural environment	8.564 (16)	.715
To find more outdoor recreational activities	10.660 (16)	.991
To find arts, entertainment, and cultural activities	15.078 (16)	.770
To find a simpler pace of life	10.537 (16)	.899
To have more ethnic diversity	11.805 (16)	.709
To have less ethnic diversity	11.764 (12)	.518
This community shares my attitudes/values	20.951 (20)	.426
To lower the cost of living	8.925 (16)	.872
To have a more desirable climate	17.246 (16)	.652
To get more affordable health care	9.351 (16)	.952
To find higher quality housing	11.192 (16)	.785
To obtain a higher paying job	6.085 (16)	.980
To obtain a job with a nurturing and social work environment	11.948 (16)	.830
To obtain a job where I can make a difference	11.508 (16)	.638

Table 26 Continued

To obtain a job with opportunities for advancement	6.896 (16)	.983
To obtain a job that allows me to pay off student loans	16.578 (20)	.696
To obtain a job that allows for a quality work-life balance	7.491 (16)	.907
To obtain a graduate degree	15.319 (20)	.629
To secure a better job for my spouse/partner	15.597 (20)	.861
Other	4.034 (12)	1.000

Note: \*\*  $p \leq$  equal to 0.05

*Marital Status* An examination of the factors influencing out-migration decisions by marital status shows no statistically significant associations were found between marital status and the different 28 factors influencing migration decisions. Table 27 presents the comparison of factors influencing out-migration decisions by marital status.

Table 27

*Comparing Factors Influencing Out-Migration Decisions by Marital Status*

Variable	Factor	$\chi^2$ (df)	Fishers Exact Test (p)
Marital Status	To be closer to relatives	5.082 (5)	.432
	To be nearer to friend and acquaintances	1.780 (5)	.983
	To be farther from family and relatives	2.527 (4)	.789



Table 27 Continued

A better environment for raising children	6.093 (5)	.418
To find a less congested place to live	4.515 (5)	.614
To find a safer place to live	2.651 (4)	.628
To lower the cost of housing	1.615 (4)	.862
To have lower taxes	3.489 (4)	.607
To live in a desirable natural environment	4.594 (4)	.436
To find more outdoor recreational activities	7.828 (4)	.113
To find arts, entertainment, and cultural activities	6.862 (4)	.164
To find a simpler pace of life	3.272 (4)	.543
To have more ethnic diversity	1.523 (4)	.915
To have less ethnic diversity	.787 (3)	.944
This community shares my attitudes/values	2.707 (5)	.913
To lower the cost of living	2.041 (4)	.828
To have a more desirable climate	1.443 (4)	.859

Table 27 Continued

To get more affordable health care	3.249 (4)	.628
To find higher quality housing	2.444 (4)	.768
To obtain a higher paying job	1.975 (4)	.862
To obtain a job with a nurturing and social work environment	2.651 (4)	.694
To obtain a job where I can make a difference	2.193 (4)	.820
To obtain a job with opportunities for advancement	3.134 (4)	.551
To obtain a job that allows me to pay off student loans	.833 (5)	.968
To obtain a job that allows for a quality work-life balance	4.622 (4)	.373
To obtain a graduate degree	2.444 (5)	.871
To secure a better job for my spouse/partner	10.087 (5)	.077
Other	1.004 (3)	.909

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Note: \*\* $p \leq$  equal to 0.05

*Child Status.* A Fisher's Exact test was conducted between child status and the factor to find a simpler pace of life. There was a statistically significant association between child status and the factor to find a simpler pace of life,  $p = .008$ . Table 28 displays the association of factors influencing out-migration decisions by marital status.

Table 28

*Comparing Factors Influencing Out-Migration Decisions by Child Status*

Variable	Factor	$X^2$ (df)	<i>Fishers Exact Test</i> (p)
Child Status	To be closer to relatives	3.057 (5)	.768
	To be nearer to friend and acquaintances	3.034 (5)	.769
	To be farther from family and relatives	5.523 (4)	.222
	A better environment for raising children	7.320 (5)	.182
	To find a less congested place to live	9.405 (5)	.077
	To find a safer place to live	4.545 (4)	.356
	To lower the cost of housing	3.353 (4)	.569
	To have lower taxes	5.293 (4)	.354
	To live in a desirable natural environment	2.413 (4)	.737
	To find more outdoor recreational activities	1.031 (4)	.947
	To find arts, entertainment, and cultural activities	3.639 (4)	.511

Table 28 Continued

To find a simpler pace of life	12.788 (4)	.008**
To have more ethnic diversity	1.424 (4)	.909
To have less ethnic diversity	.352 (3)	.948
This community shares my attitudes/values	2.802 (5)	.913
To lower the cost of living	3.687 (4)	.566
To have a more desirable climate	4.783 (4)	.370
To get more affordable health care	2.138 (4)	.831
To find higher quality housing	1.781 (4)	.853
To obtain a higher paying job	3.236 (4)	.632
To obtain a job with a nurturing and social work environment	3.353 (4)	.546
To obtain a job where I can make a difference	2.431 (4)	.737
To obtain a job with opportunities for advancement	3.925 (4)	.527
To obtain a job that allows me to pay off student loans	2.853 (5)	.850
To obtain a job that allows for a quality work-life balance	4.167 (4)	.514

Table 28 Continued

To obtain a graduate degree	7.397 (5)	.226
To secure a better job for my spouse/partner	3.415 (5)	.720
Other	6.189 (3)	.108

Note: \*\* $p \leq$  equal to 0.05

*Community and Life Factors*

To assess the community and life factors influencing the out-migration among Mississippi’s college graduates, the researcher analyzed the data using the Chi-square test of associations and interpreted the results using the Fisher’s Exact Test. The results are presented below.

*Educational Attainment.* An analysis of the factors influencing out-migration decisions by marital status shows no statistically significant associations were found between educational attainment and the 28 community and life factors influencing migration decisions. Table 29 shows the comparison of community and life factors influencing out-migration decisions by educational attainment.

Table 29

*Comparing Community and Life Factors Influencing Out-Migration Decisions by*

*Educational Attainment*

Variable	Factor	$X^2$ (df)	Fishers Exact Test (p)
Educational Attainment	Suitable housing and neighborhoods	1.184 (3)	1.000
	Affordable housing	.531 (3)	1.000
	Feeling of "belonging" in the community	3.577 (5)	.738

Table 29 Continued

State taxes	5.024 (5)	.465
Property and other local taxes	1.775 (4)	.839
Clean environment	4.788 (4)	.307
Job security	1.250 (3)	1.000
Available job opportunities	1.184 (3)	1.000
Leadership opportunities	1.465 (4)	.971
Opportunities to join local organizations	1.450 (3)	.763
Crime rate	1.365 (4)	.965
Police protection	2.967 (4)	.640
Fire protection	4.555 (4)	.379
Health care services	.475 (3)	.937
School system	2.077 (5)	.955
Living near family and relatives	3.698 (5)	.676
Living near friends and acquaintances	3.043 (5)	.868
Educational opportunities	1.441 (5)	1.000
Entertainment	2.466 (4)	.774
Retail shopping	.608 (5)	1.000
Internet services	.964 (4)	1.000
Standard of living	.308 (2)	1.000
Environment for children	4.569 (5)	.512
Local government	1.799 (4)	.812

Table 29 Continued

Natural, scenic, or recreational amenities	1.465 (4)	.868
Community appearance	4.713 (3)	.222
Household income	.449 (4)	1.000
Work-life balance	.964 (3)	1.000

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Note: \*\*  $p \leq$  equal to 0.05

*Academic Area (College Major).* A Fisher’s Exact test was conducted between college major and the community and life factor affordable housing. There was a statistically significant association between college major and the factor affordable housing,  $p = .045$ .

A Fisher’s Exact test was conducted between college major and the community and life factor leadership opportunities. There was a statistically significant association between college major and the factor leadership opportunities,  $p = .046$ .

A Fisher’s Exact test was conducted between college major and the community and life factor police protection. There was a statistically significant association between college major and the factor police protection,  $p = .018$ .

A Fisher’s Exact test was conducted between college major and the community and life factor fire protection. There was a statistically significant association between college major and the factor fire protection,  $p = .013$ .

A Fisher’s Exact test was conducted between college major and the community and life factor local government. There was a statistically significant association between college major and the factor local government,  $p = .026$ .

A Fisher's Exact test was conducted between college major and the community and life factor community appearance. There was a statistically significant association between college major and the factor community appearance,  $p = .008$ . Table 30 depicts the association of community and life factors influencing out-migration decisions by college major.

Table 30

*Comparing Community and Life Factors Influencing Out-Migration Decisions by College Major*

Variable	Factor	$X^2$ (df)	Fishers Exact Test (p)
College Major	Suitable housing and neighborhoods	13.697 (15)	.354
	Affordable housing	20.547 (15)	.045**
	Feeling of "belonging" in the community	33.735 (25)	.095
	State taxes	25.967 (25)	.241
	Property and other local taxes	19.705 (20)	.272
	Clean environment	19.339 (20)	.210
	Job security	15.876 (15)	.134
	Available job opportunities	12.807 (15)	.354
	Leadership opportunities	42.080 (20)	.046**
	Opportunities to join local organizations	16.580 (15)	.292
	Crime rate	37.315 (20)	.248
	Police protection	44.330 (20)	.018**
	Fire protection	24.884 (20)	.013**



Table 30 Continued

Health care services	13.964 (15)	.278
School system	24.021 (25)	.141
Living near family and relatives	34.240 (25)	.171
Living near friends and acquaintances	34.900 (25)	.120
Educational opportunities	18.192 (25)	.590
Entertainment	14.462 (20)	.591
Retail shopping	21.889 (25)	.579
Internet services	20.276 (20)	.131
Standard of living	12.412 (10)	.127
Environment for children	16.933 (25)	.856
Local government	29.561 (20)	.026**
Natural, scenic, or recreational amenities	14.599 (20)	.566
Community appearance	25.935 (15)	.008**
Household income	17.362 (20)	.333
Work-life balance	12.335 (15)	.452

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Note: \*\*  $p \leq$  equal to 0.05

*Gender.* An analysis of the factors influencing out-migration decisions by gender shows no statistically significant associations were found between gender and the 28 community and life factors influencing migration decisions. Table 31 presents the association of community and life factors influencing out-migration decisions by gender.

Table 31

*Comparing Community and Life Factors Influencing Out-Migration Decisions by Gender*

Variable	Factor	$X^2$ (df)	<i>Fishers Exact Test</i> (p)
Gender	Suitable housing and neighborhoods	.737 (3)	1.000
	Affordable housing	2.746 (3)	.487
	Feeling of "belonging" in the community	4.068 (5)	.688
	State taxes	2.982 (5)	.868
	Property and other local taxes	2.292 (4)	.672
	Clean environment	2.326 (4)	.869
	Job security	1.015 (3)	.928
	Available job opportunities	3.752 (3)	.299
	Leadership opportunities	1.449 (4)	.937
	Opportunities to join local organizations	.361 (3)	1.000
	Crime rate	.806 (4)	1.000
	Police protection	3.593 (4)	.583
	Fire protection	6.136 (4)	.222
	Health care services	.270 (3)	1.000
	School system	3.891 (5)	.589
	Living near family and relatives	2.768 (5)	.874
	Living near friends and acquaintances	5.436 (5)	.446
	Educational opportunities	2.113 (5)	.906

Table 31 Continued

Retail shopping	9.037 (5)	.082
Internet services	2.093 (4)	.764
Standard of living	.602 (2)	.781
Environment for children	2.521 (5)	.890
Local government	2.700 (4)	.693
Natural, scenic, or recreational amenities	4.129 (4)	.503
Community appearance	4.514 (3)	.267
Household income	4.374 (4)	.457
Work-life balance	.735 (3)	1.000

Note: \*\*  $p \leq$  equal to 0.05

*Age.* An examination of the factors influencing out-migration decisions by age shows no statistically significant associations were found between age and the 28 community and life factors influencing migration decisions. Table 32 shows the association of community and life factors influencing out-migration decisions by age.

Table 32

*Comparing Community and Life Factors Influencing Out-Migration Decisions by Age*

Variable	Factor	$X^2$ (df)	Fishers Exact Test (p)
Age	Suitable housing and neighborhoods	26.751 (18)	.221
	Affordable housing	15.790 (18)	.661
	Feeling of "belonging" in the community	32.192 (30)	.662
	State taxes	33.219 (30)	.524

Table 32 Continued

Property and other local taxes	24.785 (24)	.585
Clean environment	28.522 (24)	.298
Job security	21.820 (18)	.701
Available job opportunities	24.021 (18)	.473
Leadership opportunities	20.156 (24)	.862
Opportunities to join local organizations	20.032 (18)	.595
Crime rate	18.368 (24)	.911
Police protection	24.713 (24)	.198
Fire protection	22.914 (24)	.598
Health care services	21.995 (18)	.348
School system	33.075 (30)	.521
Living near family and relatives	21.321 (30)	.923
Living near friends and acquaintances	22.774 (30)	.754
Educational opportunities	50.162 (30)	.100
Entertainment	31.125 (24)	.250
Retail shopping	40.535 (30)	.170
Internet services	23.205 (24)	.445
Standard of living	12.787 (12)	.556
Environment for children	44.400 (30)	.214
Local government	24.731 (24)	.187
Natural, scenic, or recreational amenities	23.831 (24)	.650

Table 32 Continued

Community appearance	23.908 (18)	.140
Household income	18.531 (24)	.896
Work-life balance	23.381 (18)	.520

Note: \*\*  $p \leq$  equal to 0.05

*Race and Ethnicity.* An analysis of the factors influencing out-migration decisions by race and ethnicity shows no statistically significant associations were found between race and ethnicity and the 28 community and life factors influencing migration decisions. Table 33 presents the comparison of community and life factors influencing out-migration decisions by race and ethnicity.

Table 33

*Comparing Community and Life Factors Influencing Out-Migration Decisions by Race and Ethnicity*

Variable	Factor	$X^2$ (df)	Fishers Exact Test (p)
Race/Ethnicity	Suitable housing and neighborhoods	7.474 (12)	.752
	Affordable housing	8.161 (12)	.875
	Feeling of "belonging" in the community	15.218 (20)	.624
	State taxes	13.769 (20)	.712
	Property and other local taxes	17.532 (16)	.291
	Clean environment	9.088 (16)	.693
	Job security	6.896 (12)	.872
	Available job opportunities	8.067 (12)	.516

Table 33 Continued

Leadership opportunities	11.250 (16)	.629
Opportunities to join local organizations	10.264 (12)	.782
Crime rate	9.286 (16)	.817
Police protection	11.250 (16)	.629
Fire protection	11.250 (16)	.785
Health care services	9.300 (12)	.607
School system	14.182 (20)	.630
Living near family and relatives	35.328 (20)	.275
Living near friends and acquaintances	35.696 (20)	.300
Educational opportunities	11.140 (20)	.936
Entertainment	13.858 (16)	.542
Retail shopping	22.827 (20)	.530
Internet services	9.286 (16)	.817
Standard of living	9.078 (8)	.209
Environment for children	16.159 (20)	.523
Local government	16.824 (16)	.594
Natural, scenic, or recreational amenities	9.818 (16)	.838
Community appearance	9.629 (12)	.679
Household income	12.653 (16)	.711
Work-life balance	7.977 (12)	.652

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Note: \*\*  $p \leq$  equal to 0.05

*Marital Status.* An examination of the factors influencing out-migration decisions by marital status shows no statistically significant associations were found between marital status and the 28 community and life factors influencing migration decisions. Table 34 displays the comparison of community and life factors influencing out-migration decisions by marital status.

Table 34

*Comparing Community and Life Factors Influencing Out-Migration Decisions by Marital Status*

Variable	Factor	$X^2$ (df)	Fishers Exact Test (p)
Marital Status	Suitable housing and neighborhoods	1.632 (3)	.807
	Affordable housing	1.502 (3)	.767
	Feeling of "belonging" in the community	3.883 (5)	.698
	State taxes	3.801 (5)	.706
	Property and other local taxes	4.169 (4)	.483
	Clean environment	2.414 (4)	.888
	Job security	1.556 (3)	.926
	Available job opportunities	2.178 (3)	.703
	Leadership opportunities	1.803 (4)	.846
	Opportunities to join local organizations	.516 (3)	1.000
	Crime rate	5.013 (4)	.341
	Police protection	1.803 (4)	.846
	Fire protection	2.823 (4)	.660

Table 34 Continued

Health care services	2.332 (3)	.646
School system	3.989 (5)	.657
Living near family and relatives	3.331 (5)	.801
Living near friends and acquaintances	3.410 (5)	.846
Educational opportunities	8.164 (5)	.159
Entertainment	1.803 (4)	.869
Retail shopping	5.461 (5)	.507
Internet services	1.699 (4)	.898
Standard of living	.582 (2)	.784
Environment for children	7.809 (5)	.136
Local government	2.838 (4)	.681
Natural, scenic, or recreational amenities	4.909 (4)	.300
Community appearance	1.882 (3)	.778
Household income	1.418 (4)	.889
Work-life balance	1.285 (3)	.868

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Note: \*\*  $p \leq$  equal to 0.05

*Child Status* A Fisher's Exact test was conducted between child status and the community and life factor environment for children. There was a statistically significant association between child status and the factor environment for children,  $p = .046$ . Table 35 presents the association of community and life factors influencing out-migration decisions by child status.



Table 35

*Comparing Community and Life Factors Influencing Out-Migration Decisions by Child**Status*

Variable	Factor	$X^2$ (df)	Fishers Exact Test (p)
Child Status	Suitable housing and neighborhoods	1.247 (3)	.920
	Affordable housing	.157 (3)	1.000
	Feeling of "belonging" in the community	2.435 (5)	.879
	State taxes	2.710 (5)	.924
	Property and other local taxes	1.602 (4)	.807
	Clean environment	2.635 (4)	.773
	Job security	2.087 (3)	.742
	Available job opportunities	1.341 (3)	.792
	Leadership opportunities	3.951 (4)	.483
	Opportunities to join local organizations	1.206 (3)	.804
	Crime rate	1.699 (4)	.896
	Police protection	6.095 (4)	.192
	Fire protection	8.009 (4)	.090
	Health care services	3.891 (3)	.236
	School system	8.179 (5)	.115
	Living near family and relatives	6.546 (5)	.227
	Living near friends and acquaintances	7.785 (5)	.113

Table 35 Continued

Educational opportunities	3.006 (5)	.881
Entertainment	2.879 (4)	.668
Retail shopping	1.842 (5)	.942
Internet services	2.235 (4)	.896
Standard of living	1.716 (2)	.530
Environment for children	10.705 (5)	.046**
Local government	2.343 (4)	.764
Natural, scenic, or recreational amenities	1.271 (4)	.891
Community appearance	1.655 (3)	.830
Household income	1.516 (4)	.883
Work-life balance	1.092 (3)	.921

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*Note: \*\* p ≤ equal to 0.05*

#### Research Objective 5 – Comparing Factors - Migration History

*Compare the factors influencing the out-migration decisions among Mississippi college graduates with migration history.*

Research Objective Five (RO5) focused on comparing the factors that influence out-migration decisions based on migration history. The researcher used the nonparametric statistical test Chi-square test of association to examine associations. Due to the small sample size, the cell expected counts were less than 5 for this study. Therefore, the third assumption associated with Chi-square could not be met. The researcher, following the protocols outlined by Laerd Statistics (2023) used the Fisher's Exact Test to examine any associations to interpret the results. For statistically significant

results, the  $p$ -value must be  $\leq$  equal to 0.05. Tables 36 through 39 compare different factors including community and life factors influencing migrations.

*Different Factors Influencing Migration Decisions*

To compare the factors influencing the out-migration among Mississippi’s college graduates, the researcher conducted analysis using Chi-square test of associations and interpreted the results using the Fisher’s Exact Test. The results for RO5 are presented below. An analysis of the factors influencing out-migration decisions by current location shows no statistically significant associations were found between participants’ current location and the 28 different factors influencing migration decisions. Table 36 shows the association of factors influencing out-migration decisions by child status.

Table 36

*Comparing Factors Influencing Out-Migration Decisions by Current Location*

Variable	Factor	$X^2$ (df)	Fishers Exact Test (p)
Current Location	To be closer to relatives	3.038 (5)	.781
	To be nearer to friend and acquaintances	3.960 (5)	.677
	To be farther from family and relatives	8.100 (4)	.084
	A better environment for raising children	.988 (5)	.965
	To find a less congested place to live	2.957 (5)	.924
	To find a safer place to live	1.135 (4)	.970
	To lower the cost of housing	.347 (4)	1.000
	To have lower taxes	1.986 (4)	.770

Table 36 Continued

To live in a desirable natural environment	2.533 (4)	.764
To find more outdoor recreational activities	3.992 (4)	.460
To find arts, entertainment, and cultural activities	3.925 (4)	.475
To find a simpler pace of life	1.022 (4)	1.000
To have more ethnic diversity	1.832 (4)	.901
To have less ethnic diversity	5.477 (3)	.149
This community shares my attitudes/values	2.989 (5)	.911
To lower the cost of living	.932 (4)	1.000
To have a more desirable climate	2.980 (4)	.644
To get more affordable health care	1.607 (4)	.970
To find higher quality housing	4.870 (4)	.410
To obtain a higher paying job	1.519 (4)	.926
To obtain a job with a nurturing and social work environment	2.035 (4)	.893
To obtain a job where I can make a difference	1.648 (4)	.879
To obtain a job with opportunities for advancement	2.507 (4)	.773
To obtain a job that allows me to pay off student loans	4.195 (5)	.651

Table 36 Continued

To obtain a job that allows for a quality work-life balance	2.069 (4)	1.000
To obtain a graduate degree	2.121 (5)	.933
To secure a better job for my spouse/partner	2.700 (5)	.806
Other	3.493 (3)	.467

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Note: \*\*  $p \leq$  equal to 0.05

*Migration History.* A Fisher's Exact test was conducted between migration history and the factor to be farther from family and relatives. There was a statistically significant association between migration history and the factor to be farther from family and relatives,  $p = .016$ .

A Fisher's Exact test was conducted between migration history and the factor a better environment for raising children. There was a statistically significant association between migration history and the factor a better environment for raising children,  $p = .021$ .

A Fisher's Exact test was conducted between migration history and the factor to find a less congested place to live. There was a statistically significant association between migration history and the factor to find a less congested place to live,  $p = .032$ .

A Fisher's Exact test was conducted between migration history and the factor to lower the cost of housing. There was a statistically significant association between migration history and the factor to lower the cost of housing,  $p = .021$ .

A Fisher's Exact test was conducted between migration history and the factor to find a simpler pace of life. There was a statistically significant association between migration history and the factor to find a simpler pace of life,  $p < .001$ .

A Fisher's Exact test was conducted between migration history and the factor to have less ethnic diversity. There was a statistically significant association between migration history and the factor to have less ethnic diversity,  $p = .038$ .

A Fisher's Exact test was conducted between migration history and the factor to lower the cost of living. There was a statistically significant association between migration history and the factor to lower the cost of living,  $p = .002$ .

A Fisher's Exact test was conducted between migration history and the factor to find higher quality housing. There was a statistically significant association between migration history and the factor to find higher quality housing,  $p = .040$ . Table 37 displays the association of factors influencing out-migration decisions by migration history.

Table 37

*Comparing Factors Influencing Out-Migration Decisions by Migration History*

Variable	Factor	$X^2$ (df)	Fishers Exact Test (p)
Migration History	To be closer to relatives	18.200 (10)	.066
	To be nearer to friend and acquaintances	14.973 (10)	.243
	To be farther from family and relatives	20.360 (8)	.016**
	A better environment for raising children	21.343 (10)	.021**
	To find a less congested place to live	18.419 (10)	.032**

Table 37 Continued

To find a safer place to live	12.926 (8)	.147
To lower the cost of housing	18.526 (8)	.021**
To have lower taxes	15.097 (8)	.086
To live in a desirable natural environment	12.778 (8)	.097
To find more outdoor recreational activities	14.046 (8)	.119
To find arts, entertainment, and cultural activities	15.086 (8)	.093
To find a simpler pace of life	23.966 (8)	<.001**
To have more ethnic diversity	13.619 (8)	.104
To have less ethnic diversity	14.366 (6)	.038**
This community shares my attitudes/values	14.190 (10)	.130
To lower the cost of living	22.219 (8)	.002**
To have a more desirable climate	13.926 (8)	.134
To get more affordable health care	15.086 (8)	.063
To find higher quality housing	15.486 (8)	.040**
To obtain a higher paying job	13.300 (8)	.105

Table 37 Continued

To obtain a job with a nurturing and social work environment	12.926 (8)	.136
To obtain a job where I can make a difference	14.468 (8)	.056
To obtain a job with opportunities for advancement	13.086 (8)	.103
To obtain a job that allows me to pay off student loans	15.486 (10)	.124
To obtain a job that allows for a quality work-life balance	14.166 (8)	.054
To obtain a graduate degree	14.893 (10)	.095
To secure a better job for my spouse/partner	15.750 (10)	.109
Other	9.038 (6)	.151

Note: \*\*  $p \leq$  equal to 0.05

### *Community and Life Factors*

To ascertain the community and life factors influencing the out-migration among Mississippi's college graduates, the researcher analyzed the data using the Chi-square test of associations and interpreted the results using the Fisher's Exact Test. The results are presented below.

*Current Location.* A Fisher's Exact test was conducted between current location and the community and life factor state taxes. There was a statistically significant association between current location and the factor state taxes,  $p = .041$ . Table 38 depicts



the association of community and life factors influencing out-migration decisions by current location.

Table 38

*Comparing Community and Life Factors Influencing Out-Migration Decisions by Current Location*

Variable	Factor	$X^2$ (df)	<i>Fishers Exact Test</i> (p)
Current Location	Suitable housing and neighborhoods	4.599 (3)	.198
	Affordable housing	.973 (3)	.819
	Feeling of "belonging" in the community	2.372 (5)	.892
	State taxes	10.517 (5)	.041**
	Property and other local taxes	2.001 (4)	.833
	Clean environment	4.480 (4)	.405
	Job security	5.159 (3)	.147
	Available job opportunities	4.599 (3)	.198
	Leadership opportunities	2.869 (4)	.691
	Opportunities to join local organizations	2.178 (3)	.594
	Crime rate	1.350 (4)	.934
	Police protection	2.869 (4)	.691
	Fire protection	2.203 (4)	.841
	Health care services	4.770 (3)	.180
	School system	1.800 (5)	.983
	Living near family and relatives	6.557 (5)	.269

Table 38 Continued

Living near friends and acquaintances	6.769 (5)	.224
Educational opportunities	7.329 (5)	.163
Entertainment	2.363 (4)	.783
Retail shopping	7.740 (5)	.228
Internet services	2.261 (4)	.826
Standard of living	2.805 (2)	.377
Environment for children	3.881 (5)	.673
Local government	2.194 (4)	.779
Natural, scenic, or recreational amenities	3.375 (4)	.593
Community appearance	5.140 (3)	.214
Household income	7.946 (4)	.109
Work-life balance	1.688 (3)	.770

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Note: \*\*  $p \leq$  equal to 0.05

*Migration History.* A Fisher's Exact test was conducted between migration history and the community and life factor suitable housing and neighborhoods. There was a statistically significant association between migration history and the factor suitable housing and neighborhoods,  $p = .032$ .

A Fisher's Exact test was conducted between migration history and the community and life factor state taxes. There was a statistically significant association between migration history and the factor state taxes,  $p = .026$ .

A Fisher's Exact test was conducted between migration history and the community and life factor clean environment. There was a statistically significant association between migration history and the factor clean environment,  $p = .043$ .

A Fisher's Exact test was conducted between migration history and the community and life factor job security. There was a statistically significant association between migration history and the factor job security,  $p = .010$ .

A Fisher's Exact test was conducted between migration history and the community and life factor available job opportunities. There was a statistically significant association between migration history and the factor available job opportunities,  $p = .045$ .

A Fisher's Exact test was conducted between migration history and the community and life factor crime rate. There was a statistically significant association between migration history and the factor crime rate,  $p = .050$ .

A Fisher's Exact test was conducted between migration history and the community and life factor health care services. There was a statistically significant association between migration history and the factor health care services,  $p = .036$ .

A Fisher's Exact test was conducted between migration history and the community and life factor living near family and relatives. There was a statistically significant association between migration history and the factor living near family and relatives,  $p = .025$ .

A Fisher's Exact test was conducted between migration history and the community and life factor retail shopping. There was a statistically significant association between migration history and the factor retail shopping,  $p = .015$ .

A Fisher's Exact test was conducted between migration history and the community and life factor standard of living. There was a statistically significant association between migration history and the factor to find a standard of living,  $p = .029$ .

A Fisher's Exact test was conducted between migration history and the community and life factor environment for children. There was a statistically significant association between migration history and the factor environment for children,  $p = .010$ .

A Fisher's Exact test was conducted between migration history and the community and life factor community appearance. There was a statistically significant association between migration history and the factor community appearance,  $p = .012$ .

A Fisher's Exact test was conducted between migration history and the community and life factor work-life balance. There was a statistically significant association between migration history and the factor work-life balance,  $p = .025$ . Table 39 presents the association of community and life factors influencing out-migration decisions by migration history.

Table 39

*Comparing Community and Life Factors Influencing Out-Migration Decisions by Migration History*

Variable	Factor	$X^2$ (df)	Fishers Exact Test (p)
Migration History	Suitable housing and neighborhoods	14.802 (6)	.032**
	Affordable housing	11.995 (6)	.086
	Feeling of "belonging" in the community	15.011 (10)	.224
	State taxes	18.659 (10)	.026**

Table 39 Continued

Property and other local taxes	12.086 (8)	.209
Clean environment	15.982 (8)	.043**
Job security	15.829 (6)	.010**
Available job opportunities	14.064 (6)	.045**
Leadership opportunities	16.200 (8)	.061
Opportunities to join local organizations	13.509 (6)	.087
Crime rate	15.720 (8)	.050
Police protection	15.000 (8)	.107
Fire protection	16.183 (8)	.071
Health care services	14.653 (6)	.036**
School system	18.333 (10)	.061
Living near family and relatives	19.819 (10)	.025**
Living near friends and acquaintances	14.526 (10)	.141
Educational opportunities	14.971 (10)	.205
Entertainment	14.400 (8)	.128
Retail shopping	21.533 (10)	.015**
Internet services	14.880 (8)	.078
Standard of living	11.728 (4)	.029**
Environment for children	22.440 (10)	.010**
Local government	17.400 (8)	.056
Natural, scenic, or recreational amenities	15.733 (8)	.079

Table 39 Continued

Community appearance	17.308 (6)	.012**
Household income	15.583 (8)	.113
Work-life balance	14.400 (6)	.036**

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Note: \*\*  $p \leq$  equal to 0.05

### Summary

In this chapter, the researcher presented the result of the data analyzed. The results of this study address the research question, *what determinants are most influential in the out-migration decisions of Mississippi college graduates?* The chapter presented a summary of the participant demographics. Additionally, the analysis explored each research objective. Chapter V presents the key findings, conclusions, and recommendations. The chapter describes the implications for practice, and the limitations the researcher experienced as a result of the study and offers recommendations for future research. The next chapter concludes with a discussion and summary of the study.

## CHAPTER V – CONCLUSIONS

Research shows that a critical component of economic growth and prosperity is the strategic utilization and retention of human capital (Abel & Deitz, 2012; Griffin et al., 2011; Stephens, 2019; Tyndorf & Martin, 2018). Recognized as a valuable resource, human capital accumulation is a key component for any state, region, or nation to experience long-term economic vitality and overall competitiveness (Ehrke, 2014; Fan et al., 2016a; Garmise, 2009; Griffin et al., 2011; Guohua et al., 2021; He et al., 2016; Khaomin et al., 2022; Miller & Collins, 2022; Rao, 2004; Smith, 2016; Ward, 2016; White et al., 2022, Winters, 2011). Research indicates that college graduates are contributors to the economic success of any region (He et al., 2016; Winters, 2017).

However, for the state of Mississippi, with less than 50% of its 2008-2010 public university graduates remaining employed in the state by 2020 and data trends indicating less than 50% of 2015-2017 graduates being employed in the state by 2027, the state is facing a real dilemma, the steady outflow of vital human capital (Miller & Collins, 2023; Miller & Collins, 2022; White et al., 2022). Accordingly, the out-migration of Mississippi's college graduates post-graduation continues to be problematic (Miller & Collins, 2023; Miller & Collins, 2022; Smith, 2018; White et al., 2022).

This study aimed to determine the factors most influential to the out-migration decisions of Mississippi's recent college graduates. Chapters I - IV sought to offer a greater understanding of the research problem, research objectives, a review of the literature, the research design, and the research results. Chapter V presents the key findings, conclusion, and recommendation. The chapter also discusses the implications for practice and details the study's limitations. The chapter offers recommendations for

future research and concludes with a discussion of the study results and provides a closing summary.

### Findings, Conclusion, and Recommendations

In this section, the findings, conclusions, and recommendations are presented. The results generated in Chapter IV provided information on the migration decisions of Mississippi college graduates. The following are the key findings of the study.

*Finding 1 – The factors influencing Mississippi’s college graduates out-migration decisions are related to both economic and non-economic determinants.*

In assessing the weight of economic and non-economic factors and their influence on migration decisions, this study’s data reveals that both economic and non-economic factors were important to Mississippi graduates who participated in the study. However, economic factors, such as (a) lowering the cost of housing; (b) lowering taxes, (c) lowering the cost of living, (d) obtaining a higher paying job, (e) obtaining a higher paying job with opportunities for advancement, (f) paying off student loans, and (g), securing a better job for my spouse/partner were overwhelmingly regarded as important or very important factors influencing graduates decisions to stay or leave the state of Mississippi after graduation. The findings suggest that economic factors weigh more heavily when college graduates make migration decisions than non-economic factors.

*Conclusions* The findings of the study align with previous research literature. Krishnakumar and Indumathi (2014) found that migration was driven by economic factors, which often focus on improved economic opportunities. This study’s results confirm that migration's push and pull factors affect Mississippi’s college graduates migration decisions. As numerous researchers suggest, the push factors, which consist of



internal factors within the state that drive individuals to leave the state (e.g., decrease or limited job opportunities), and the pull factors, which involve external factors outside of the state that draws people (e.g., increase job opportunities) impact migration decisions (Ijim-Agbor, 2009; Kodrzycki, 2001; Kumpikaite & Zickute, 2012). Moreover, the results of this study also indicate the four rudiments of the motivation decisions theory (a) possibility, (b) motive, (c) expectations; and (e) incentive also affect the migration decisions of Mississippi's college graduates (Kumpikaite & Zickute, 2012; Sell & DeJong, 1978).

*Recommendations.* Focused efforts to address human capital flight, i.e., brain drain in Mississippi, should integrate continuous targeted discussions and interactions with Mississippi's recent college graduates. Gleaning information from graduates deciding to remain in the state post-graduation and those graduates choosing to leave the state of Mississippi after graduation could present policymakers (e.g., elected officials, state leaders) and other key stakeholders (e.g., colleges and universities, employers) with valuable insights. These engagements could include gathering data through targeted longitudinal studies and conducting focus groups and interviews. Furthermore, I recommend the formation of a taskforce or advisory group comprised of recent Mississippi public and private university graduates (Generation X, Millennials, and Generation Z), policymakers, and other key stakeholders to address the issue of brain drain in Mississippi. The state should examine the best practices applied in other states, especially southern states such as Georgia, Louisiana, or Texas, which have high college graduate retention rates. Information gleaned from these different data points could help policymakers understand which economic and non-economic factors remain salient,

which factors may have lost prominence, and which factors emerge as essential factors for policymakers and other key stakeholders to stay abreast of and target for future policy initiatives for attracting college graduates to remain in the state and contribute to improved economic status.

*Finding 2 – Specific personal characteristics (educational attainment, college major, child status, current location, and migration history) play a role in influencing migration decisions.*

In exploring potential associations between economic and non-economic factors, including community and life factors, the study's findings suggest that educational attainment, college major, child status, current location, and migration history influence Mississippi college graduates' migration decisions. However, of these specific characteristics, migration history had the most significant associations among the different factors. Therefore, results indicate that previous migration history plays a significant role in the migration decisions of college graduates who participated in the study.

*Conclusions.* Previous research shows that personal characteristics can impact migration decisions (Ishitani, 2011a; Ehrke, 2014; Faggian & Franklin, 2014; Garasky, 2002; Heinemann & Hadler, 2015; Kodrzycki, 2001; Ishitani, 2011a; Ishitani, 2011b; Waldorf & Do Yun, 2016; Winters, 2017; Xu et al., 2015). For this specific study, educational attainment, college major, child status, current location, and migration history regarded as personal characteristics that influence the out-migration decisions of Mississippi's college graduates who participated in the study. Nevertheless, of these five personal characteristics, migration history had the most significant associations with

various factors. This finding concurs with existing literature. According to Kodrzycki (2001), skilled and college-educated individuals with previous migration histories were more likely to migrate in the future, especially among those whose families had previously moved. The second personal characteristic with multiple associations was college major, which also aligns with literature. According to Betz et al. (2016) and Winters (2017), the migration decisions of college graduates can be attributed to the availability of job opportunities and location-specific amenities, which attract college graduates. The findings of this study reveal that when comparing college majors to the various factors influencing migration decisions, factors such as climate, access to arts, entertainment, and cultural activities, and affordable housing are important factors to college graduates.

*Recommendations.* As policymakers and key stakeholders continue to look for new strategies to curb brain drain in Mississippi, they must consider how the personal characteristics of college graduates also influence migration decisions. Accordingly, policies and initiatives designed to address brain drain cannot result in a one size fits all approach. These policies and initiatives must be tailored and consider personal characteristics such as level of educational attainment, child status, current location, and migration history. By taking these personal characteristics into consideration, policymakers and key stakeholders can more effectively (a) confront the issue of brain drain in Mississippi, (b) develop targeted strategies and initiatives to mitigate the effects of brain drain, and (c) work to diminish the impact of human capital flight on Mississippi's overall economy.

*Finding 3 – Quality work-life balance, obtaining a higher paying job, obtaining a job with opportunities for advancement, and being closer to relatives are considered particularly important factors influencing migration decisions among college graduates.*

The results of the study indicate three factors (a) quality work-life balance, (b) obtaining a higher paying job, (c) obtaining a job with opportunities for advancement, and (d) being closer to relatives were very important factors to Mississippi college graduates completing the survey. Of these factors, the two factors focused on jobs were considered economic factors, and the one factor focused on the quality of work-life balance represented non-economic factors. The finding suggests that the push and pull factors of migration were influential in the migration decisions of survey respondents.

*Conclusions.* Studies on the push and pull factors of migration suggest factors, internal and external such as economic and non-economic factors, do influence the migration decisions of college graduates (Ijim-Agbor, 2009; Kodrzycki, 2001; Kumpikaite & Zickute, 2012). Nevertheless, the findings of this study suggest that the decision to stay or leave the state of Mississippi post-graduation is primarily influenced by economic factors which push graduates to leave the state. Likewise, the elements that form the motivational theory of migration decisions making, (a) possibility, (b) motive, (c) expectations; and (e) incentive, also contribute to the migration decisions of Mississippi college graduates (Kumpikaite & Zickute, 2012; Sell & DeJong, 1978).

*Recommendations.* Efforts to effectively address the out-migration of college graduates must focus on what motivates graduates to stay or leave the state of Mississippi post-graduation. Without a clear understanding of the range of factors that influence migration decisions among Mississippi college graduates, including the push and pull

factors of migration and those motivational factors that influence migration decisions, policymakers (e.g., elected officials, state agency leaders) and other key stakeholders (colleges and universities, employers, etc.) will remain ineffective in addressing and curbing brain drain in the state of Mississippi. As research shows, to maintain and strengthen human capital accumulation, the state of Mississippi must understand the forces influencing and driving out-migration.

*Finding 4 – Participants indicated suitable housing and neighborhoods, affordable housing, job security, available job opportunities, and work-life balance as very important community and life factors influencing migration decisions.*

The study's findings indicate that five community and life factors were influential in the migration decisions of college graduates who completed the survey. These results suggest that participants examine a wide range of economic and non-economic factors when deciding to stay or leave the state of Mississippi post-graduation. However, of these factors' quality-of-life factors were most important to Mississippi college graduates when considering community and life factors.

*Conclusions.* According to respondents, quality-of-life factors are the most influential community and life factors influencing their migration decisions. Previous research literature shows that college graduates, when making migration decisions take into account both economic, non-economic, community-based, and life factors when deciding whether to stay or leave post-graduation (Ehrke, 2014; Faggian & Franklin, 2014; Fan et al., 2016a; Feiock et al., 2008; Garasky, 2002; Heinemann & Hadler, 2015; Ishitani, 2011a; Ishitani, 2011b; Kodrzycki, 2001; Krishnakumar & Indumathi, 2014; Marxa et al, 2015; Mellander et al., 2011; Soydan, 1998; Waldolf & Do Yun, 2016;

Winters, 2017; Xu et al., 2015). The findings of this study support previous literature. The decision to migrate from one location to another location is difficult. Therefore, as the findings of this study show, college graduates contemplate many factors before deciding to leave the state of Mississippi or stay post-graduation.

*Recommendations.* As policymakers and key stakeholders continue to look for new strategies to tackle brain drain in Mississippi, they must first understand the factors influencing the migration decisions of Mississippi college graduates. The gathering of research data, such as the findings of this study, can offer insights for leaders seeking evidence-based data to support the implementation of new policies and initiatives to combat brain drain. By understanding which economic and non-economic factors, including community and life factors, influence the migration decisions of college graduates, policymakers and other stakeholders can cultivate evidence-based solutions to address the current outflow of Mississippi's vital human capital. Accordingly, to support the retention of Mississippi's brightest college-educated talent and to stay abreast of topics such as brain drain, the researcher recommends the state develop a post-doctoral fellowship program. The fellowship program could encompass a number of academic disciplines from across Mississippi's eight public university graduates and assign graduates to work in various state agencies. This would create a win-win situation, whereby the state retains talented, Mississippi college-educated workers, as well as allows the state to benefit from the human capital (knowledge, skills, capabilities) these Mississippi college-educated workers possess to enhance the future of the state.

## Implications for Practice

In today's knowledge economy, college graduates possess vital human capital obtained through education and training. This accumulation of human capital is not only beneficial to the individual but also benefits the community, employers, and the state as a whole. Tyndorf and Martin (2018) find a positive association between education and economic growth, leading policymakers to embrace and promote investments in education. Nevertheless, Ishitani (2011b) contends that when policymakers' direct investments toward education, the expectation is that there will be a future ROI. Even with the out-migration of Mississippi's college graduates, the state can only partially receive some of its return on such an investment.

Hence, identifying the factors that influence the out-migration of Mississippi's college graduates generates beneficial information for policymakers, researchers, and other key stakeholders across the state. Why Mississippi college graduates choose to stay or leave the state has policy and economic implications. The ability to determine which factors are most influential in the migration decisions of Mississippi's college graduates is a positive step forward, which is necessary to safeguard the long-term economic sustainability of the region.

## Limitations

According to Lunenburg and Irby (2008) and Roberts (2010), limitations are any features of a study that may negatively impact the results of a study. These limitations are out of the researcher's control. Study limitations may impact the researcher's ability to effectively interpret the data as well as the generalizability of the study. For this study,

limitations such as sample size, response rate, and other constraints are discussed. The study had the following limitations:

1. The population sample selected for this study was limited to graduates affiliated with the Southern Miss Alumni Association. While the target sample was 376, only data from 27 participants were included in the final data analysis. Therefore, the results of this study may not be generalizable.
2. The low participation rate was also a limitation of the study. The low participation rate affected the researcher's ability to conduct more robust inferential statistical tests to examine associations.
3. For this study, respondents self-reported views on the factors influencing their migration decisions post-college graduation.
4. Variables outside the researcher's control may have influenced the study's results. These variables include the quality of the instructional programs and the diversity of course offerings and degree programs participants completed at USM.
5. With descriptive research, only aspects of an existing phenomenon can be described. Consequently, causal relationships between variables were not examined.
6. The researcher's ability to collect data was contingent on the Southern Miss Alumni Association's willingness to provide access to the study population. Therefore, the data collected is limited to alums affiliated with the Southern Miss Alumni Association and their willingness to provide the researcher access to the study population.
7. The researcher was required to follow the privacy and security protocols of the alumni association to access the study population. The researcher did not have



direct access to the contact information for Southern Miss alumni. Access to contact information was restricted. Thus, the Southern Miss Alumni Association, not the researcher, communicated with alumni and disseminated information regarding the study, including providing reminders about the survey or any other communications directly to Southern Miss alumni. These parameters may have affected the survey response rate.

8. For this study, the researcher examined Mississippi's college graduates migration decisions regardless of graduates state of origin prior to graduation. Therefore, the researcher did not examine native Mississippians versus non-Mississippians who graduated from Southern Miss. Thus, there may be push and pull factors that align more closely to Mississippians or non-Mississippians who graduated from Southern Miss.

#### Recommendations for Future Research

In light of the research findings of this study, the researcher offers the following recommendations for future research. The first recommendation is to expand research on the factors influencing the out-migration of Mississippi's college graduates to include all of Mississippi's eight 4-year public universities, 12 private, not-for-profit colleges and universities, and the one public academic health science center. The current study was limited to only one public university. The replication of this study with a larger sample size would allow for more college graduates' views to be captured and would allow for generalizability.

The second recommendation is that research be conducted to explore and understand Mississippi's high school graduates' decision-making process when

considering attending colleges and universities in-state and out-of-state. Insights from such a study may offer further insights into how policymakers and other key stakeholders can work to lessen the impact of brain drain over time. Data from this type of study may help expand policymakers' and other key stakeholders' understanding of what factors starting in a student's last year of high school might influence future migration decisions. The gathering of such data may support the development of programs and initiatives designed to keep vital human capital in Mississippi before students matriculate to the collegiate level.

The final recommendation is to develop a robust longitudinal study to track Mississippi's high school seniors over time. This type of study would allow researchers to assess pre-college and post-college migration decisions, track employment in-state and out-of-state post-graduation, and assess remittance rates for college graduates who leave the state but return over time. The longitudinal research could be an expansion of the existing Mississippi Lifetrack, which is a longitudinal data system already in place to track data from early childhood to workforce. The current system does not capture and report any data on high school or public university graduates' migration decisions or patterns.

## Discussion

For this study, the researcher employed a non-experimental, quantitative research design to examine the most influential factors influencing the migration decision of Mississippi's college graduates. Utilizing a conceptual framework, the researcher theorized vital components of the study. The researcher applied the push and pull theory of migration, the motivation decisions theory, the endogenous growth theory, and the

human capital theory as the theoretical underpinnings of the study. Furthermore, the researcher integrated the concepts of migration, migration decision-making, the push-pull factors of migration, human capital, and educational attainment and fused the discussion of workforce development and economic development into the study.

Using a 20-item online survey, the researcher assessed a range of factors, both economic and non-economic, including community and life factors, which research has shown influence the migration decisions of college graduates (Ehrke, 2014; Faggian & Franklin, 2014; Fan et al., 2016a; Feiock et al., 2008; Garasky, 2002; Heinemann & Hadler, 2015; Ishitani, 2011a; Ishitani, 2011b; Kodrzycki, 2001; Krishnakumar & Indumathi, 2014; Marxa et al., 2015; Mellander et al., 2011; Soydan, 1998; Waldolf & Do Yun, 2016; Winters, 2017; Xu et al., 2015). The study's results suggest that economic and non-economic factors influence the migration decisions of Mississippi's college graduates. More specifically, results reveal that economic factors such as job security, obtaining a job that allows me to pay off student loans, available job opportunities, lowering the cost of housing, and lowering the cost of living emerged as statistically significant findings against specific personal characteristics. Likewise, data from participants showed non-economic factors such as work-life balance, suitable housing and neighborhoods, standard of life, finding a simpler pace of life, finding a safer place to live, moving farther from family and relatives, having a better environment for raising children, finding less congested places to live, getting more affordable health care, and finding higher quality housing were equally influential in the migration decisions of Mississippi college graduates participating in the study.

The results generated enabled the researcher to answer the primary research question: What determinants are most influential in the out-migration decisions of Mississippi college graduates? The study allowed the researcher to address each research objective. The study results identified the factors that influenced the out-migration decisions of Mississippi college graduates who graduated within the past five academic calendar years. Moreover, the study identified the most influential factors (economic and non-economic) that influence the out-migration decisions of Mississippi college graduates. Using the Chi-square test of association, and the Fisher Exact Test, the researcher was able to compare the factors that influence the out-migration decisions among Mississippi college graduates to personal characteristics (age, gender, race and ethnicity, marital status, child status, educational attainment, college major, and migration history).

The study's key findings align with the literature on human capital development, migration, migration decisions, and the mobility of college graduates. However, due to the small sample size, the present study offers only preliminary data for further investigation. The results of this study offer policymakers and other key stakeholders' insights into the thoughts and opinions of one of the state's most valuable resources, college graduates. The literature review indicates that college graduates are vital contributors to economic growth. According to Buchholz and Bathelt (2021), the number of workers with college degrees is a standard indicator of economic development. In reviewing the literature, college graduates possess enormous human capital. As Khaomin et al. (2022) assert, "human capital is a driver of economic growth of any entity, enterprise, and the state as a whole" (p. 220). According to the authors, competition is the

engine that propels the creation of an economic system, and human capital is vital to its development.

### Summary of the Study

The present study sought to identify factors influencing the out-migration decisions of Mississippi's college graduates. The primary research question was what determinants are most influential in the out-migration decisions of Mississippi college graduates? The study employed a non-experimental, descriptive, comparative research design. Using a 20-item online survey instrument, the researcher surveyed Mississippi college graduates who attended the University of Southern Mississippi between Fall 2017 and Fall 2022. Participants were recruited through the Southern Miss Alumni Association. The study included 27 participants, of which 13 received bachelor's, 11 master's degrees, and 3 doctoral degrees from USM.

The data analysis phase of the study focused on exploring a range of factors and assessed if any of those factors influenced Mississippi's college graduates' migration decisions. The factors examined included economic and non-economic factors, including community and life factors. Moreover, the study determined which factors were most influential and compared those factors to the personal characteristics of participants (including age, gender, race and ethnicity, marital status, child status, educational attainment, college major, and migration history). Using descriptive and inferential statistics, the researcher sought to address each research objective.

As labor markets continue to evolve worldwide, Mississippi must continually prepare to meet the demands of today's global economy (Griffin & Annulis, 2013). Research shows that college graduates are contributors to local and regional economies

(He et al., 2016; Winters, 2017). For the state of Mississippi, the retention of skilled and college-educated workers is an essential ingredient to the state's long-term economic future. Mississippi depends on skilled and college-educated workers, who possess high levels of human capital, to retain existing employers, attract new industries, and generate innovation through entrepreneurship.

Looking at the retention of Mississippi's college graduates post-graduation from a human capital perspective, the retention of college graduates produces systems outcomes that not only benefit the graduate, but also benefits the Mississippi communities in which the college graduates live, the Mississippi employers for whom college graduates work, and for the state of Mississippi as a whole. For the individual, the knowledge and skills gained through education allows college graduates to seek better job opportunities and enhance their overall quality of life. For the Mississippi communities in which college graduates reside, the presence of college graduates enhances the community's tax-base revenue, results in a knowledgeable electorate, and often leads to increased salaries of other workers within the same community. For employers, college graduates contribute significantly to the overall productivity and performance of organizations. Furthermore, when Mississippi's stock of human capital strengthens, it produces undeniable gains for the state's economy (Miller & Collins, 2023). Why Mississippi's college graduates choose to stay or leave the state after graduation has policy and economic implications. The ability to understand which factors are most influential in the migration decisions of Mississippi's college graduates is necessary to preserve the long-term economic development and sustainability of the region.

APPENDIX A – External Approval to Survey Southern Miss Alumni



March 9, 2023

Dear USM IRB:

On behalf of The Southern Miss Alumni Association, I hereby agree to allow Felicia Bowens, a student in the Human Capital Development Ph.D. program at USM, to conduct her research study entitled “Human Capital Flight: Determinants of Out-Migration Decisions Among Mississippi’s College Graduates” with alumni of the University.

The Southern Miss Alumni Association complies with the requirements of the Family Education Rights and Privacy Act (FERPA) and will ensure that this and other pertinent requirements are followed in this research.

SMTTTT

Nicole Ruhnke  
Associate Director for External Affairs  
Southern Miss Alumni Association  
[Nicole.Ruhnke@usm.edu](mailto:Nicole.Ruhnke@usm.edu) | 601.266.4095

118 College Drive #5013  
Hattiesburg, MS 39406  
601.266.5013  
[SouthernMissAlumni.com](http://SouthernMissAlumni.com)

## APPENDIX B – Institutional Review Board Approval Letter

### Office of Research Integrity



118 COLLEGE DRIVE #5116 • HATTIESBURG, MS | 601.266.6756 | WWW.USM.EDU/ORI

#### NOTICE OF INSTITUTIONAL REVIEW BOARD ACTION

The project below has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services regulations (45 CFR Part 46), and University Policy to ensure:

- The risks to subjects are minimized and reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered involving risks to subjects must be reported immediately. Problems should be reported to ORI using the Incident form available in InfoEd.
- The period of approval is twelve months. If a project will exceed twelve months, a request should be submitted to ORI using the Renewal form available in InfoEd prior to the expiration date.

PROTOCOL NUMBER: 22-594  
PROJECT TITLE: Human Capital Flight: Determinants of Out-Migration Decisions Among Mississippi's College Graduates  
SCHOOL/PROGRAM: School of Leadership  
RESEARCHERS: PI: Felicia Bowens  
Investigators: Bowens, Felicia~Brown, Hamett Q.~  
IRB COMMITTEE ACTION: Approved  
CATEGORY: Expedited Category  
PERIOD OF APPROVAL: 27-Mar-2023 to 26-Mar-2024

Lisa Wright, Ph.D., MPH  
Senior Institutional Review Board Analyst



## APPENDIX C – Consent to Use Migration Survey

### Re: Permission to Use Survey/Questionnaire Instrument

Felicia Bowens <Felicia.Bowens@usm.edu>

Wed 6/21/2017 8:57 AM

To: Jack Ehrke <jack.ehrke@gmail.com>

Hi Jack,

Thank you for granting permission to use your survey instrument for my upcoming study.

Sincerely,

Felicia

Get [Outlook for iOS](#)

---

From: Jack Ehrke <jack.ehrke@gmail.com>

Sent: Wednesday, June 21, 2017 8:51 AM

Subject: Re: Permission to Use Survey/Questionnaire Instrument

To: Felicia Bowens <felicia.bowens@usm.edu>

Felicia,

That sounds like a fair proposition. You have permission to use it and I wish you luck in conducting your study.

Best,  
Jack

On Jun 20, 2017, at 11:19 AM, Felicia Bowens <Felicia.Bowens@usm.edu> wrote:

Hi Mr. Ehrke,

My name is Felicia Bowens, I am graduate student in the Human Capital Development Ph.D. program at The University of Southern Mississippi. I am currently developing my dissertation proposal, which will focus on examining the migration patterns among Mississippi's college graduates.

In conducting my literature review, I read your publication "Identifying Determinants of Migration for Alumni of the Nebraska Human Resource Institute." In searching for a survey instrument to use, your instrument aligned closely to what I would like to measure among my research population. I would like to seek your permission to use and modify your survey/questionnaire instrument for my research study. I will to

provide full acknowledgement of the use of your survey instrument in my upcoming study.

Thank you for your time and consideration.

Sincerely,

Felicia Bowens, Ph.D. (c)

USM Human Capital Development

APPENDIX D – Southern Miss Alumni Association Newsletter Communications to  
Southern Miss Alumni

## RECENT GRAD SURVEY

A current doctoral student in the Human Capital Development program is seeking participants in her research to examine migration decisions among Mississippi's recent college graduates. The online study will examine factors that influence Mississippi college graduates' decisions to stay or leave the state. (Approved IRB Protocol: 22-594)

Please click the link below to complete the survey if you graduated from Southern Miss within the last five years.

[CLICK HERE TO COMPLETE SURVEY](#)

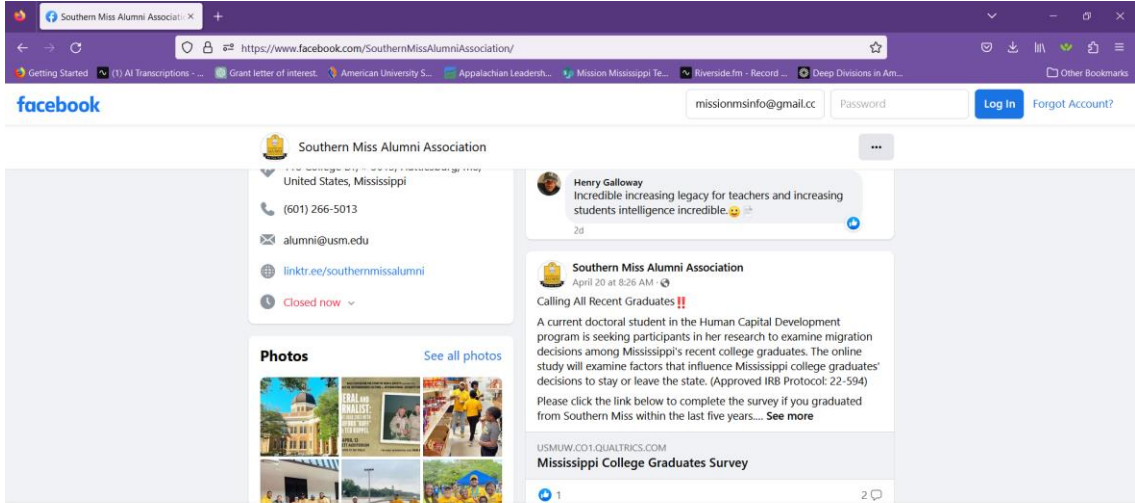
Click here for the latest  
**NEWS · EVENTS · CHATTER**  
in your  
**ALUMNI HUB**



USM Alumni Association | 118 College Drive #5013 | Hattiesburg, MS  
39406  
[Unsubscribe](#)



# APPENDIX E – Southern Miss Alumni Association Facebook Post to Alumni on Main Facebook Page



Connect with Southern Miss Alumni Association on Facebook

[Log In](#) or [Create new account](#)

## Greetings Southern Miss Alumni

**Did you graduate from USM between Fall 2017 and Fall 2022?**

I am looking for volunteers to participate in a study examining factors that influence Mississippi college graduates decisions to stay or leave the state after graduation.

If you are interested, to learn more about the study [CLICK HERE](#)

Upon completing the survey, you can enter a drawing for a chance to win one of three \$50.00 gift cards.



If you have any questions, email [Felicia.Bowens@usm.edu](mailto:Felicia.Bowens@usm.edu) or call (601) 212-6351



**LOOKING FOR  
VOLUNTEERS!**

Approved IRB Protocol: 22-594

# REMINDER

## Greetings Southern Miss Alumni

**Did you graduate from USM between  
Fall 2017 and Fall 2022?**

I am looking for volunteers to participate in a study examining factors that influence Mississippi college graduates decisions to stay or leave the state after graduation.

If you are interested, to learn more about the study [CLICK HERE](#)

Upon completing the survey, you can enter a drawing for a chance to win one of three \$50.00 gift cards.



**LOOKING FOR  
VOLUNTEERS!**

If you have any questions, email [Felicia.Bowens@usm.edu](mailto:Felicia.Bowens@usm.edu) or call (601) 212-6351



Approved IRB Protocol: 22-594

## APPENDIX H – Survey Instrument

### Mississippi College Graduates

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Start of Block: SURVEY INSTRUCTION

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Start of Block: Informed Consent

#### **Welcome to the research study!**

**Project Title:** Human Capital Flight: Determinants of Out-Migration Decisions Among Mississippi's College Graduates

**Protocol Number:** 22-594

**Principal Investigator:** Felicia Bowens

**Phone:** (601) 212-6351 **Email:** felicia.bowens@usm.edu

**College:** Business and Economic Development **Department:** School of Leadership

#### **Purpose:**

The purpose of this research study is to determine the factors that influence the out-migration decisions of Mississippi college graduates' post-college graduation.

#### **Description of Study:**

We are interested in understanding the factors that influence Mississippi college graduates out-migration decisions. You will be presented with information relevant to college graduate out-migration decisions and asked to answer some questions about the topic.

The survey should take you around 15 minutes to complete. After completing the full

survey, you will have an opportunity to enter a drawing to win one of three gift cards (each valued at \$50.00) for your participation. Your participation in this research is voluntary. You have the right to withdraw at any point during the study, for any reason, and without any prejudice.

If you would like to contact the Principal Investigator in the study to discuss this research, please e-mail [felicia.bowens@usm.edu](mailto:felicia.bowens@usm.edu)

**Benefits:**

For this study, the only direct benefit associated with individual participation is an opportunity to enter a drawing and possibly win one of three token incentives consisting of a \$50.00 gift card. The indirect benefits of participation are that the information will support an understanding of factors that influence the out-migration decisions of Mississippi college graduates. The data collected will provide insight to public policymakers and other stakeholders on the critical factors influencing out-migration decisions in Mississippi among college graduates.

**Risks:**

There are no potential risks, inconveniences, or discomforts associated with this study.

**Confidentiality:**

Your identity as a research participant will not be disclosed and will be kept confidential.

All information that would be used to identify participants will be stored securely and password protected.

**Alternative Procedures:**

There are no alternative procedures for this study.

**Participant Assurance:**



This project and this consent form have been reviewed by the Institutional Review Board, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research participant should be directed to the Chair of the Institutional Review Board, The University of Southern Mississippi, 118 College Drive #5125, Hattiesburg, MS 39406-0001, 601-266-5997.

Any questions about this research project should be directed to the Principal Investigator using the contact information provided above.

### **Consent to Participate in Research**

I understand that participation in this project is completely voluntary, and I may withdraw at any time without penalty, prejudice, or loss of benefits. Unless described above, all personal information will be kept strictly confidential, including my name and other identifying information. All procedures to be followed and their purposes were explained to me. Information was given about all the benefits, risks, inconveniences, or discomforts that might be expected. Any new information that develops during the project will be provided to me if that information may affect my willingness to continue participation in the project.

### **CONSENT TO PARTICIPATE IN RESEARCH**

By clicking the box below, I give my consent to participate in this research project. If you do not wish to participate in this study, please close your browser now.

- Yes, I consent to participate. (1)
- No, I do not consent. I do not wish to participate. (2)

*Skip To: End of Survey If Welcome to the research study! Project Title: Human Capital Flight: Determinants of Out-M. . . = No, I do not consent. I do not wish to participate.*

**End of Block: Informed Consent**

---

**Start of Block: Block 2**

Q1 In what academic semester did you complete your most recent degree from USM?

- Fall 2022 (1)
- Summer 2022 (2)
- Spring 2022 (3)
- Fall 2021 (4)
- Summer 2021 (5)
- Spring 2021 (6)
- Fall 2020 (7)
- Summer 2020 (8)
- Spring 2020 (9)
- Fall 2019 (10)
- Summer 2019 (11)
- Spring 2019 (12)
- Fall 2018 (13)
- Summer 2018 (14)
- Spring 2018 (15)
- Fall 2017 (16)

Q2 What is the highest level of education you have completed or the highest degree you have received at USM?

- Bachelor's degree in college (4-year) (1)
- Master's degree (2)
- Doctorate or Professional degree (PhD, JD, MD) (3)

Q3 In what academic area is your most recent degree from USM? Check more than one area, if applicable.

- Education and Human Services (1)
  - Business Administration (2)
  - Arts and Sciences (3)
  - Agricultural Sciences and Natural Resources (4)
  - Engineering (5)
  - Architecture (6)
  - Fine and Performing Arts (7)
  - Journalism and Mass Communication (8)
  - Public Affairs and Community Service (9)
  - Other (please specify) (10)
-

Q4 What is your gender?

- Male (1)
- Female (2)

Q5 What is your age?

- 18 - 24 (1)
- 25 - 34 (2)
- 35 - 44 (3)
- 45 - 54 (4)
- 55 -64 (5)
- 65 and older (6)

Q6 Please specify your race/ethnicity:

- White (1)
- Black or African American (2)
- American Indian or Alaska Native (3)
- Asian (4)
- Native Hawaiian or Pacific Islander (5)
- Two or More Races (6)
- Hispanic or Latino (7)

Q7 Are you married?

Yes (1)

No (2)

Q8 Do you have children?

Yes (1)

No (2)

Q9 In what industry or industries do you have work experience? Check all that apply

- Agricultural, Forestry, Fishing, and Hunting (1)
- Utilities (2)
- Construction (3)
- Manufacturing (4)
- Wholesale Trade (5)
- Retail Trade (6)
- Transportation and Warehousing (7)
- Information (8)
- Finance and Insurance (9)
- Real Estate and Rental and Leasing (10)
- Professional, Scientific, and Technical Services (11)
- Management of Companies and Enterprises (12)
- Administrative and Support and Waste Management and Remediation Services (13)
- Educational Services (including private, state, and local government schools) (14)
- Health Care and Social Assistance (including private, state, and local government hospitals) (15)
- Art, Entertainment, and Recreation (16)

Accommodation and Food Services (17)

Federal, State, and Local Government, excluding state and local schools and hospitals, and the US Postal Service (18)

Other Services (please specify) (19)

---

End of Block: Block 2

---

Start of Block: Block 3

Q10 In which state do you currently reside? If you are a 2022 graduate, in what state do you plan to live after graduation?

- Alabama (1)
- Alaska (2)
- Arizona (3)
- Arkansas (4)
- California (5)
- Colorado (6)
- Connecticut (7)
- Delaware (8)
- District of Columbia (9)
- Florida (10)
- Georgia (11)
- Hawaii (12)
- Idaho (13)
- Illinois (14)
- Indiana (15)
- Iowa (16)
- Kansas (17)
- Kentucky (18)
- Louisiana (19)



- Maine (20)
- Maryland (21)
- Massachusetts (22)
- Michigan (23)
- Minnesota (24)
- Mississippi (25)
- Missouri (26)
- Montana (27)
- Nebraska (28)
- Nevada (29)
- New Hampshire (30)
- New Jersey (31)
- New Mexico (32)
- New York (33)
- North Carolina (34)
- North Dakota (35)
- Ohio (36)
- Oklahoma (37)
- Oregon (38)
- Pennsylvania (39)
- Puerto Rico (40)

- Rhode Island (41)
- South Carolina (42)
- South Dakota (43)
- Tennessee (44)
- Texas (45)
- Utah (46)
- Vermont (47)
- Virginia (48)
- Washington (49)
- West Virginia (50)
- Wisconsin (51)
- Wyoming (52)
- I do not reside in the United States (53)

**Q11 In the following section, please indicate whether any factors influenced your migration decision**

When choosing a community as a college graduate, did you obtain information from any of the following sources? Check all that apply

- Internet (1)
  - TV, magazines, newspapers, business publications (2)
  - Current community resident (3)
  - Employer or co-workers (4)
  - Friends and acquaintances (5)
  - Family (6)
  - Travel or vacation to new location (7)
  - Attended school or college in new location (8)
  - Recruitment information from community (9)
  - Recruitment information from high school alumni association (10)
  - Recruitment information from employer (11)
  - Other (specify) (12)
-

Q12 When choosing a community as a college graduate, what other locations did you consider?

- Only that location (1)
  - Other locations in the same state (2)
  - Other locations in other state (3)
  - Other locations both in this state and other states (4)
  - Other (please specify) (5)
- 

Q13 When choosing a community as a college graduate, had you ever been to the community you choose before?

- Yes (1)
- No (2)

*Skip To: Q14 If When choosing a community as a college graduate, had you ever been to the community you choose be. . .= Yes*

*Skip To: End of Block If When choosing a community as a college graduate, had you ever been to the community you choose be. . .= No*

---

Q14 If yes, which of the following describe your contact with this community before you moved there?

- Lived there previously (1)
- Vacated in a community or traveled through during vacation (2)
- Visited family that lived there (3)
- Visited community during work-related travel (4)
- Visited friends that lived there (5)
- Attended college there (6)
- Other (specify) (7) \_\_\_\_\_

End of Block: Block 3

---

Start of Block: Block 4

Q15 How many years did you live in your pre-college community?

- 0 to 3 years (1)
- 4 to 7 years (2)
- 8 to 11 years (3)
- 12 to 15 years (4)
- 16 years or more (5)

Q16 Had you ever moved to a different community before coming to college? If so, how many times?

- No, I lived in the same community my whole life before coming to college (1)
- Yes, I changed communities ONE time before coming to college (2)
- Yes, I changed communities TWO times before coming to college (3)
- Yes, I changed communities THREE times before coming to college (4)
- Yes, I changed communities MORE THAN THREE times before coming to college (5)

Q17 When applying to college as a high school student, did you apply to out-of-state institutions?

- Yes, I applied for college that were outside of my home state (1)
- No, I only applied to colleges that were in my home state (2)

End of Block: Block 4

---

Start of Block: Block 5

**Q18 In the following section, please indicate the importance of different factors influencing your decision to stay or leave the state of Mississippi after graduation.**

When choosing a community as a college graduate, how important are (or were) the following factors in that decision?

	Very Unimportant (1)	Unimportant (2)	Neither (3)	Important (4)	Very Important (5)
To be closer to relatives (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To be nearer to friend and acquaintances (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To be farther from family and relatives (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A better environment for raising children (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To find a less congested place to live (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To find a safer place to live (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To lower the cost of housing (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To have lower taxes (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To live in a desirable natural environment (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To find more outdoor recreational activities (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To find arts, entertainment, and cultural activities (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



To find a simpler pace of life (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To have more ethnic diversity (13)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To have less ethnic diversity (14)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This community shares my attitudes/values (15)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To lower the cost of living (16)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To have a more desirable climate (17)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To get more affordable health care (18)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To find higher quality housing (19)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To obtain a higher paying job (20)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To obtain a job with a nurturing and social work environment (21)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To obtain a job where I can make a difference (22)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To obtain a job with opportunities for advancement (23)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To obtain a job that allows me to pay off student loans (24)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To obtain a job that allows for a quality work-life balance (25)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To obtain a graduate degree (26)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To secure a better job for my spouse/partner (27)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (28)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q19 When choosing a community as a college graduate, rank the **FIVE** most important factors involved in the decision, with "1" being most important, "2" being second most important, etc.

- \_\_\_\_\_ To be closer to relatives (1)
- \_\_\_\_\_ To be nearer to friends and acquaintances (2)
- \_\_\_\_\_ To be farther from family and relatives (3)
- \_\_\_\_\_ To find better quality local schools (4)
- \_\_\_\_\_ A better environment for raising children (5)
- \_\_\_\_\_ To find a less congested place to live (6)
- \_\_\_\_\_ To find a safer place to live (7)
- \_\_\_\_\_ To lower the cost of housing (8)
- \_\_\_\_\_ To have lower taxes (9)
- \_\_\_\_\_ To live in a desirable natural environment (10)
- \_\_\_\_\_ To find more outdoor recreational activities (11)
- \_\_\_\_\_ To find arts, entertainment, and cultural activities (12)
- \_\_\_\_\_ To find a simpler pace of life (13)
- \_\_\_\_\_ To have more ethnic diversity (14)
- \_\_\_\_\_ To have less ethnic diversity (15)
- \_\_\_\_\_ This community shares my attitudes/values (16)
- \_\_\_\_\_ To lower the cost of living (17)
- \_\_\_\_\_ To have a more desirable climate (18)
- \_\_\_\_\_ To get more affordable health care (19)
- \_\_\_\_\_ To find higher quality housing (20)

- \_\_\_\_\_ To obtain a higher paying job (21)
  - \_\_\_\_\_ To obtain a job with a nurturing and social work environment (22)
  - \_\_\_\_\_ To obtain a job where I can make a difference (23)
  - \_\_\_\_\_ To obtain a job that allows me to pay off student loans (24)
  - \_\_\_\_\_ To obtain a job that allows for a quality work-life balance (25)
  - \_\_\_\_\_ To obtain a graduate degree (26)
  - \_\_\_\_\_ To secure a better job for my spouse/partner (27)
  - \_\_\_\_\_ Other (28)
-

Q20 Currently, what importance do you place on the following community and life factors?

	Very Unimportant (1)	Unimportant (2)	Neither (3)	Important (4)	Very Important (5)
Suitable housing and neighborhoods (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Affordable housing (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Feeling of "belonging" in the community (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
State taxes (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Property and other local taxes (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Clean environment (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Job security (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Available job opportunities (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Leadership opportunities (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Opportunities to join local organizations (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Crime rate (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Police protection (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fire protection (13)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Health care services (14)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
School system (15)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Living near family and relatives (16)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Living near friends and acquaintances (17)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Educational opportunities (18)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Entertainment (19)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Retail shopping (20)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Internet services (21)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Standard of living (22)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Environment for children (23)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Local government (24)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Natural, scenic or recreational amenities (25)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Community appearance (26)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Household income (27)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Work-life  
balance (28)



End of Block: Block 5

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Start of Block: Block 6

Q21

Thank you for completing the survey and providing your valuable input! If you would like to be entered into a drawing for a chance to win a \$50.00 gift card, please visit the following link: [https://usmuw.co1.qualtrics.com/jfe/form/SV\\_0wfFXmCmzt17dgp](https://usmuw.co1.qualtrics.com/jfe/form/SV_0wfFXmCmzt17dgp)

Please click on the next page to end the survey.

End of Block: Block 6

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APPENDIX I – Frequency of Importance Distribution of Factors (Economic and Non-Economic)

Factors	Very Unimportant	Unimportant	Neither	Important	Very Important
To be closer to relatives	1 (4.8%)	2 (9.5%)	4 (19%)	6 (28.6%)	8 (38.1%)
To be nearer to friend and acquaintances	1 (4.8%)	3 (14.3%)	5 (23.8%)	9 (42.9%)	3 (14.3%)
To be farther from family and relatives	6 (27.6 %)	8 (38.1%)	5 (23.8%)	2 (9.5%)	0 (0%)
A better environment for raising children	2 (9.5%)	2 (9.5%)	8 (38.1%)	7 (33.3%)	2 (9.5%)
To find a less congested place to live	1 (5%)	6 (30%)	9 (45%)	3 (15%)	1 (5%)
To find a safer place to live	0 (0%)	4 (5%)	5 (30%)	9 (45%)	2 (15%)
To lower the cost of housing	0 (0%)	5 (25%)	6 (30%)	6 (30%)	3 (15%)
To have lower taxes	0 (0%)	5 (25%)	6 (30%)	7 (35%)	2 (10%)
To live in a desirable natural environment	0 (0%)	1 (5%)	4 (20%)	13 (65%)	2 (10%)
To find more outdoor recreational activities	0 (0%)	4 (20%)	5 (25%)	8 (40%)	3 (15%)
To find arts, entertainment, and cultural activities	0 (0%)	4 (20%)	5 (25%)	5 (25%)	6 (30%)

To find a simpler pace of life	0 (0%)	4 (20%)	10 (50%)	5 (25%)	1 (5%)
To have more ethnic diversity	1 (5%)	4 (20%)	9 (45%)	6 (30%)	0 (0%)
To have less ethnic diversity	5 (25%)	5 (25%)	10 (25%)	0 (0%)	0 (0%)
This community shares my attitudes/values	1 (5%)	1 (5%)	7 (35%)	9 (45%)	2 (10%)
To lower the cost of living	0 (0%)	2 (10%)	8 (40%)	9 (45%)	1 (5%)
To have a more desirable climate	0 (0%)	4 (20%)	5 (25%)	8 (40%)	3 (10%)
To get more affordable health care	0 (0%)	4 (20%)	9 (45%)	6 (30%)	1 (15%)
To find higher quality housing	0 (0%)	2 (10%)	12 (60%)	4 (20%)	2 (10%)
To obtain a higher paying job	0 (0%)	1 (5.3%)	4 (21.1%)	2 (10.5%)	12 (63.2%)
To obtain a job with a nurturing and social work environment	0 (0%)	1 (5%)	4 (20%)	10 (50%)	5 (25%)
To obtain a job where I can make a difference	0 (0%)	1 (5%)	2 (10%)	11 (55%)	6 (30%)
To obtain a job with opportunities for advancement	0 (0%)	1 (5%)	4 (20%)	3 (15%)	12 (60%)
To obtain a job that allows me	2 (10%)	2 (10%)	3 (15%)	4 (20%)	9 (45%)

to pay off student loans					
To obtain a job that allows for a quality work-life balance	0 (0%)	1 (5%)	1 (5%)	7 (35%)	11 (55%)
To obtain a graduate degree	1 (5.3%)	7 (36.8%)	2 (10.5%)	2 (10.5%)	7 (36.8%)
To secure a better job for my spouse/partner	2 (10.5%)	4 (21.1%)	3 (15.8%)	6 (31.6%)	4 (21.1%)
Other	2 (12.5%)	0 (0%)	13 (81.3%)	1 (6.2%)	0 (0%)

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*Note.* *n* = number of college graduates; % = percentage of respondents.

APPENDIX J – Frequency of Importance Distribution of Community-Based and Life  
Factors

Factors	Very Unimportant	Unimportant	Neither	Important	Very Important
Suitable housing and neighborhoods	1 (4.8%)	0 (0%)	0(0%)	7 (33.3%)	13 (61.9%)
Affordable housing	0 (0%)	0 (0%)	3 (15%)	6 (30%)	11 (55%)
Feeling of "belonging" in the community	1 (4.8%)	2 (9.5%)	5 (23.8%)	7 (33.3%)	6 (28.6%)
State taxes	1 (5%)	1 (5%)	9 (45%)	4 (20%)	5 (25%)
Property and other local taxes	0 (0%)	2 (10%)	8 (40%)	6 (30%)	4 (20%)
Clean environment	1 (4.8%)	0 (0%)	2 (4.8%)	11 (52.4%)	8 (38.1%)
Job security	0 (0%)	0 (0%)	1 (5%)	7 (35%)	12 (60%)
Available job opportunities	0 (0%)	1 (4.8%)	0 (0%)	7 (33.3%)	13 (61.9%)
Leadership opportunities	0 (0%)	1 (4.8%)	4 (19%)	8 (38.1%)	9 (38.1%)
Opportunities to join local organizations	0 (0%)	4 (19%)	6 (28.6%)	11 (52.4%)	0 (0%)
Crime rate	0 (0%)	1 (4.8%)	2 (9.5%)	8 (38.1%)	10 (47.6%)
Police protection	0 (0%)	1 (4.8%)	4 (19%)	8 (38.1%)	8 (38.1%)
Fire protection	0 (0%)	1 (4.8%)	5 (23.8%)	7 (33.3%)	8 (38.1%)

Health care services	0 (0%)	0 (0%)	2 (9.5%)	10 (47.6%)	9 (42.9%)
School system	1 (4.8%)	2 (9.5%)	6 (28.6%)	9 (42.9%)	3 (14.3%)
Living near family and relatives	1 (4.8%)	3 (14.3%)	1 (4.8%)	9 (42.9%)	7 (33.3%)
Living near friends and acquaintances	1 (5%)	3 (15%)	1 (5%)	10 (50%)	5 (25%)
Educational opportunities	1 (4.8%)	3 (14.3%)	2 (9.5%)	8 (38.1%)	7 (33.3%)
Entertainment	1 (4.8%)	0 (0%)	4 (19%)	8 (38.1%)	8 (38.1%)
Retail shopping	2 (9.5%)	3 (14.3%)	5 (23.8%)	9 (42.9%)	2 (9.5%)
Internet services	0 (0%)	1 (4.8%)	2 (9.5%)	8 (38.1%)	10 (47.6%)
Standard of living	0 (0%)	0 (0%)	0 (0%)	11 (55%)	9 (45%)
Environment for children	1 (4.8%)	2 (9.5%)	3 (23.8%)	8 (38.1%)	5 (23.8%)
Local government	0 (0%)	4 (19%)	6 (28.6%)	8 (38.1%)	3 (14.3%)
Natural, scenic, or recreational amenities	0 (0%)	2 (9.5%)	2 (9.5%)	8 (38.1%)	9 (42.9%)
Community appearance	0 (0%)	0 (0%)	2 (9.5%)	13 (61.9%)	6 (28.6%)
Household income	0 (0%)	2 (9.5%)	5 (23.8%)	7 (33.3%)	7 (33.3%)
Work-life balance	0 (0%)	0 (0%)	1 (4.8%)	8 (38.1%)	12 (57.1%)

*Note.* *n* = number of college graduates; % = percentage of respondents.

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