

Higher education outlays and employment access

Arlene O. Borbon*

Guba National High School
Guba Cebu City, Philippines
Email: arleneborbon27@gmail.com

Regina P. Galigao

Cebu Technological University-Main Campus
M.J. Cuenco, Cebu City, Philippines
Email: reginpgaligao@gmail.com

Abstract: This study examines the impact of rising higher education costs on employability, access, and institutional sustainability across different countries. By analyzing data from academic studies, government reports, and economic analyses, this research identifies key trends in tuition fees, financial barriers, and labor market outcomes. Findings suggest that increasing tuition costs influence students' decisions regarding enrollment, career choices, and financial stability after graduation. While higher education remains a crucial driver of economic growth and social mobility, its rising costs pose significant challenges for lower-income students and financially strained institutions. This study underscores the need for sustainable financing models and policy interventions to ensure equitable access to education and long-term employability.

*Corresponding author**

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INTRODUCTION

Higher education has long been regarded as a pathway to better career prospects, higher earnings, and social mobility. However, the rising cost of tuition and associated expenses has become a global concern, influencing students' educational choices, financial well-being, and long-term employability (Delaney & Marcotte, 2023). In many countries, students must navigate increasing tuition fees, student loan burdens, and uncertain job markets, leading to difficult decisions about whether to pursue higher education, what institutions to attend, and how to finance their studies (Gajderowicz, Wincenciak, & Grotkowska, 2024).

The impact of higher education costs extends beyond individual students. Institutions struggle to balance affordability with quality education, and governments must devise strategies to maintain accessibility while ensuring financial sustainability (Tilak, 2017). Differences in financing models, such as government subsidies in East Asia versus tuition-based systems in the United States, illustrate the varied approaches to addressing this challenge (Jacob, Mok, Cheng, & Xiong, 2017). Despite these efforts, rising costs continue to pose barriers to access, particularly for lower-income students, and influence career trajectories and workforce readiness (Welch, 2024).

This study explores the relationship between higher education costs and employability, analyzing global trends, regional differences, and policy responses. By examining the advantages and disadvantages of various financing models, this research aims to contribute to the discourse on ensuring that higher education remains an accessible and valuable investment for individuals and societies.

Statement of the problem

This research examines the impact of rising higher education costs on students' access to education and employability. The study aims:

To analyze the relationship between tuition costs, student debt, and employability: This objective explores how financial constraints influence students' choices, career prospects, and long-term financial stability.

To investigate global differences in higher education financing models: This objective examines the role of government subsidies, tuition-based funding, and privatization in shaping accessibility and quality.

To evaluate the effectiveness of policies designed to mitigate the financial burden of higher education: This objective assesses government interventions, income-contingent loan systems, and alternative funding mechanisms to support equitable education access.

METHODOLOGY

Research design

This study utilizes data mining techniques to analyze information from government and institutional reports, labor market surveys, and economic studies. It draws from academic journals, policy reports, and global databases to uncover patterns and trends related to education costs, employability outcomes, and policy effectiveness. Additionally, qualitative insights are derived from the analysis of policy initiatives and student experiences to provide contextual understanding.

Data analyses procedure

The research follows a structured process, beginning with data collection on tuition trends, financial aid programs, and labor market indicators across different countries. Key variables, such as student debt levels, employment rates, and wage differentials, are analyzed quantitatively. Additionally, qualitative case studies provide insights into how policies shape education accessibility and employability. Findings are compared across regions to identify common challenges, successful interventions, and areas requiring policy improvements.

FINDINGS AND DISCUSSIONS

Rising education cost

The increasing cost of higher education has become a major issue worldwide, affecting students' access to education, institutional funding, and long-term employability. As tuition fees rise, students are forced to make difficult choices about whether to pursue higher education, which institutions to attend, and how to finance their studies. Governments and universities are also struggling to balance affordability with maintaining quality and sustainability. This section explores how different countries are experiencing and addressing the financial challenges of higher education, highlighting the broader implications for students, institutions, and the workforce.

There is a complex relationship between the cost of higher education and employability. Rising tuition fees can influence students' decisions on whether to pursue higher education, where to enroll, and what career paths to take. In the United States, for example, an increase in community college tuition led to a 5% drop in overall college enrollment, with some students skipping college entirely while others opted for four-year universities instead (Delaney & Marcotte, 2023). Similarly, in Poland, research found that the true cost of higher education includes not only tuition and lost wages but also the time students spend studying, which

students valued negatively, suggesting that financial and time-related costs both influence participation in higher education (Gajderowicz, Wincenciak, & Grotkowska, 2024).

Higher education costs also affect long-term employability and economic mobility. Countries that struggle to balance affordability and quality may see decreased access to education, which in turn affects workforce development. In East Asia, financial challenges, aging populations, and declining student numbers have put pressure on private universities, making it harder for them to maintain quality and competitiveness in the job market (Welch, 2024). Additionally, past policies in Asia and the Pacific, influenced by the World Bank, undervalued higher education's role in economic growth, leading to reduced government investment, which has negatively impacted both education quality and workforce preparedness (Tilak, 2017).

Despite differences in higher education financing models across countries, there are common trends. In some countries, such as China, Hong Kong, and Taiwan, government subsidies play a major role in keeping education costs manageable, while in others, like the United States, tuition-based funding dominates (Jacob, Mok, Cheng, & Xiong, 2017). However, rising education costs remain a global issue, with students often making education choices based on financial constraints, which in turn influences their career prospects. Higher education continues to offer advantages, such as better job opportunities, higher wages, and overall economic growth (Tilak, 2017). It also plays a crucial role in skill development, career specialization, and innovation (Gajderowicz, Wincenciak, & Grotkowska, 2024). However, the disadvantages of rising education costs include limited access for lower-income students, a growing burden of student debt, and financial strain on institutions trying to maintain quality (Welch, 2024). In response, governments and policymakers must seek sustainable solutions, such as innovative financing models and increased public investment, to ensure that higher education remains accessible and beneficial for both individuals and national economies.

In conclusion, the cost of higher education plays a crucial role in shaping students' decisions, access to education, and long-term employability. As seen in different countries, rising tuition fees can lead to shifts in enrollment patterns, financial burdens on students, and challenges in maintaining education quality (Delaney & Marcotte, 2023; Gajderowicz, Wincenciak, & Grotkowska, 2024). While higher education remains a key driver of economic growth, skill development, and career advancement, increasing costs pose a significant barrier, especially for lower-income students and financially strained institutions (Tilak, 2017; Welch, 2024). Although various financing models exist, including government subsidies and tuition-based systems, finding a balance between affordability and sustainability remains a challenge (Jacob, Mok, Cheng, & Xiong, 2017). To address these issues, governments and policymakers must explore innovative funding mechanisms and increase public investment to ensure that higher education remains accessible, financially viable, and beneficial to national economies.

Employability and the value of a degree

As higher education costs continue to rise, questions about its impact on employability have become more pressing. A university degree is traditionally seen as a pathway to better career prospects, higher earnings, and economic mobility. However, the increasing financial burden of tuition and student debt has led many to reassess whether the benefits of a degree outweigh its costs. While some studies highlight the strong link between higher education and employment opportunities, others point to challenges such as skill mismatches, underemployment, and the need for broader employability strategies beyond academic qualifications. This section examines how higher education shapes employability across different countries, shedding light on its long-term value in an evolving job market.

Employability is a crucial factor in determining the value of higher education, as students invest significant time and money in obtaining a degree with the expectation of securing better job opportunities and higher earnings. While higher education is generally linked to better employability and higher wages, the rising cost of obtaining a degree has created financial barriers and uncertainties about its return on investment. In the United Kingdom, students recognize that a degree can enhance job prospects, yet concerns over tuition fees and student debt make them question its long-term benefits (Donald, Ashleigh, & Baruch, 2018). Similarly, in East Asia, the mass expansion of higher education has not always translated into better job opportunities, with many graduates facing underemployment despite rising education costs (Mok & Jiang, 2017). In contrast, a study across nine low- and middle-income countries found that higher education significantly improves employment and earnings, regardless of socioeconomic background, suggesting that despite financial hurdles, a degree still provides economic advantages (Shafiq, Toutkoushian, & Valerio, 2019).

One key difference across regions is how higher education impacts productivity and wages. In Belgium, education increases productivity more than wages, meaning employers benefit more than employees, particularly for young and female workers (Kampelmann, Rycx, Saks, & Tojerow, 2018). However, in low-income countries, individuals from disadvantaged backgrounds who complete higher education experience significant wage growth, indicating that the financial rewards of a degree are substantial (Shafiq et al., 2019). A similarity across studies is that employability is not solely determined by having a degree but also by the skills acquired. Research from the UK highlights that universities must move beyond traditional teaching methods to better equip graduates with critical thinking and adaptability for the job market (Knight & Yorke, 2003). Additionally, long-term studies emphasize that employability is not just about securing an initial job but about building sustainable career success through skills and professional networks (Sulistiawan, 2025).

The advantage of higher education is its potential to increase earnings, productivity, and career opportunities. In some regions, it serves as a tool for social mobility, helping individuals from low-income backgrounds secure better-paying jobs (Shafiq et al., 2019). However, the disadvantages include rising education costs, skill mismatches, and the risk of underemployment, particularly in East Asia, where degree expansion has not always led to better job alignment (Mok & Jiang, 2017). Additionally, gender disparities persist, with women in Belgium facing a "glass ceiling" despite their qualifications (Kampelmann et al., 2018).

In conclusion, while higher education remains a critical factor in employability, its value depends on multiple factors, including cost, skill acquisition, and labor market demands. The rising financial burden of education requires a reassessment of funding models and employability strategies to ensure that degrees remain valuable investments for individuals and society. Governments and universities must focus on improving affordability, aligning education with workforce needs, and fostering lifelong career development to maximize the benefits of higher education.

The burden of student debt and employment choices

The rising cost of higher education has led to increasing concerns about the financial burden on students and its impact on their career choices. Many graduates enter the workforce with significant student loan debt, influencing their job search strategies, salary expectations, and long-term financial stability. In some cases, debt pressures force students to prioritize higher-paying jobs over personal interests or societal needs, while others struggle to find employment that provides a sufficient return on their educational investment. This section explores how student debt affects employability across different countries, highlighting both the challenges

and potential policy solutions that can help graduates navigate their career paths more effectively.

There is a significant impact of student debt on employment choices and financial stability for graduates. In the United States, student loan debt not only creates financial stress but also affects job searches and career decisions. Graduates with higher debt levels tend to experience greater difficulty in securing full-time employment due to the psychological strain of financial obligations (Froidevaux, Koopmann, Wang, & Bamberger, 2020). Additionally, debt influences long-term financial outcomes, affecting earnings, career paths, and major life decisions such as homeownership and marriage (Velez, Cominole, & Bentz, 2018). The rising cost of education, which has outpaced wage growth, has further fueled concerns about whether higher education remains a worthwhile investment, leading to an increased reliance on alternative credentialing and skills-based hiring (Morton, 2018).

The relationship between student debt and employability is also evident in Singapore, where the high cost of medical education influences career specialization choices. Medical students from lower-income backgrounds are more likely to choose high-paying specialties over fields driven by personal interest or societal need, potentially creating shortages in essential but lower-paying medical sectors (Fong et al., 2018). Similarly, debt burden can force graduates into accepting lower-paying jobs due to reduced job search efforts, as seen in the U.S., where income-based repayment plans have been shown to alleviate financial strain and improve job-matching outcomes (Ji, 2020).

A common theme across these studies is that rising tuition and debt obligations can distort employment decisions, forcing graduates to prioritize financial stability over career aspirations. However, policy measures like income-based repayment schemes can mitigate some of these effects by reducing financial strain and enabling better job choices. Overall, while higher education continues to offer employability benefits, the increasing cost and student debt burden present significant challenges that need to be addressed through better funding models and policy reforms.

The cost of higher education has a complex relationship with employability, influencing both job prospects and career choices. In the United Kingdom, students believe that obtaining a degree improves financial opportunities, but rising tuition fees and student debt create uncertainty about whether the benefits outweigh the costs (Donald, Ashleigh, & Baruch, 2018). Similarly, in the United States, student loan debt affects job search behavior, with some graduates struggling to secure full-time employment due to financial stress, while others take on more work during their final year to improve their chances (Froidevaux, Koopmann, Wang, & Bamberger, 2020). The burden of debt can also lead graduates to accept lower-paying jobs or make career decisions based on financial necessity rather than personal interest, as seen in Singapore, where medical students from lower-income backgrounds are more likely to choose high-paying specialties over public healthcare roles (Fong et al., 2018). Additionally, in East Asia, despite increasing higher education access, many graduates struggle with underemployment, raising concerns about whether rising tuition fees justify the economic returns of a degree (Mok & Jiang, 2017).

Across different countries, a key similarity is that higher education enhances job prospects and earning potential, but the financial burden can influence career trajectories. In Belgium, education increases productivity and wages, benefiting both individuals and employers (Kampelmann et al., 2018). In contrast, studies in the U.S. and Singapore show that financial strain forces graduates to prioritize income over job satisfaction, sometimes limiting their career options (Ji, 2020; Fong et al., 2018). One major advantage of higher education is its potential to reduce wage disparities, as seen in low- and middle-income countries, where graduates from disadvantaged backgrounds experience significant income gains regardless of their social status (Shafiq, Toutkoushian, & Valerio, 2019). However, a disadvantage is that

student debt can negatively impact long-term financial stability, delaying milestones such as homeownership and family formation (Velez, Cominole, & Bentz, 2018).

In conclusion, while higher education remains a crucial factor in employability and career success, its rising costs present challenges that affect students' financial well-being, job prospects, and career choices. The benefits of obtaining a degree vary based on economic and institutional factors, with some graduates securing high returns on investment while others struggle with debt and underemployment. To address these concerns, governments and universities must explore alternative funding models, improve financial aid programs, and enhance career development initiatives to ensure that the cost of education does not become a barrier to employability.

Government and institutional interventions in higher education financing

Governments and institutions play a crucial role in shaping higher education financing to balance affordability, accessibility, and sustainability. As public funding alone becomes insufficient to meet the growing demand for higher education, many countries have implemented alternative funding mechanisms such as income-contingent loan repayment systems, privatization of universities, and mixed public-private models. These interventions directly impact students' financial burdens, career choices, and overall employability. By examining various global financing strategies, this section explores how different approaches influence student debt, access to education, and workforce outcomes.

There is a significant role of government and institutional interventions in shaping the cost of higher education and its impact on employability. Across different regions, the increasing demand for higher education has led to shifts in financing models, with governments struggling to maintain public funding and increasingly relying on private contributions. In Europe, cost-sharing mechanisms between students, graduates, and taxpayers have been implemented to balance access and sustainability, with income-contingent loan repayment systems emerging as a more equitable approach compared to traditional fixed-time repayment models (Chevalier, 2007). Similarly, at an international level, public-private partnerships have become more common, reflecting a shift toward mixed financing models that incorporate both government and private funding sources to ensure financial stability in higher education institutions (Sanyal & Johnstone, 2011).

A key trend observed across various countries is the growing financial burden on students as governments reduce direct funding for universities. In India, public universities are increasingly privatized due to limited government resources, making higher education less accessible to students from low-income backgrounds (Panigrahi, 2018). A similar challenge is seen globally, where developing nations struggle to implement sustainable financial aid programs, often resulting in disparities in access to higher education (Van Antwerpen & Van Schalkwyk, 2024). The impact of these financing changes on employability is significant, as higher tuition fees and student debt influence career decisions. For example, in countries where demand-based models provide direct financial support to students, such as through grants or loans, individuals have greater flexibility in choosing institutions and career paths (Dmitrienko, 2023). However, in nations where funding is allocated primarily to institutions, students may face limited choices, affecting their ability to align education with labor market demands.

Ultimately, the effectiveness of higher education financing models plays a crucial role in determining the employability of graduates. Systems that reduce financial stress—such as income-based loan repayment or direct student support—can enable graduates to focus on securing jobs that match their skills and aspirations rather than being forced into less desirable roles due to debt repayment pressure. However, as seen during the COVID-19 pandemic, financial instability in universities and growing student debt highlight the need for more

resilient and adaptive funding structures (Chevalier, 2007). Governments must continue to refine their policies to ensure that higher education remains both accessible and aligned with workforce needs, thereby enhancing employability outcomes.

The rising cost of higher education significantly affects employability, often shaping students' career choices, job search behavior, and financial stability after graduation. In the United States, high student loan debt places a financial strain on graduates, influencing their employment prospects. Studies show that debt leads to financial stress, which can hinder job searches and lower the chances of securing full-time employment (Froidevaux, Koopmann, Wang, & Bamberger, 2020). Additionally, student debt influences long-term financial decisions, including salary expectations, career paths, and major life milestones such as marriage and homeownership (Velez, Cominole, & Bentz, 2018). Similarly, in Singapore, the high cost of medical education has been found to push students, particularly those from lower-income backgrounds, toward high-paying medical specialties rather than public healthcare roles, raising concerns about workforce imbalances (Fong et al., 2018). In both cases, financial pressure restricts graduates' ability to freely choose careers based on interest or societal needs.

Despite these similarities, different regions have varying approaches to financing higher education and mitigating its impact on employability. The United States relies heavily on student loans, which often result in significant debt burdens, leading to lower job search activity and the acceptance of lower-paying jobs due to financial strain (Ji, 2020). Additionally, with tuition fees rising over 1,000% since 1978 and wages failing to keep pace, many graduates struggle to find jobs that justify their educational expenses (Morton, 2018). In contrast, European countries have explored cost-sharing models where financial responsibility is divided among students, graduates, and taxpayers, reducing the direct burden on students (Chevalier, 2007). Many European nations have also adopted income-contingent loan repayment systems, where graduates repay based on their earnings, ensuring financial stability and better job-market alignment. Meanwhile, India has moved toward privatizing higher education due to limited government funding, shifting more financial responsibility to students (Panigrahi, 2018).

Each system presents advantages and disadvantages. The U.S. model allows broad access to higher education but results in high debt burdens that impact job choices and financial independence. The European income-contingent model is more equitable but depends on strong government funding. The privatization of higher education in India increases access but raises concerns about affordability and quality. A global challenge remains in balancing public and private funding sources while ensuring students can pursue careers aligned with their skills and aspirations without financial constraints (Sanyal & Johnstone, 2011; Van Antwerpen & Van Schalkwyk, 2024).

In conclusion, the cost of higher education plays a crucial role in determining employability, with student debt shaping career decisions, job search behavior, and long-term financial stability. While some nations attempt to mitigate these challenges through income-based repayment plans or government subsidies, others shift toward privatization, increasing financial burdens on students. Policymakers must balance financial sustainability with access and fairness, ensuring that the cost of higher education does not become a barrier to employability and economic mobility.

CONCLUSIONS AND RECOMMENDATIONS

The cost of higher education plays a crucial role in shaping students' access to education, financial stability, and long-term employability. As tuition fees continue to rise, students face difficult financial decisions, while institutions and governments struggle to maintain affordability and quality. The findings highlight the diverse approaches countries take to

finance higher education, revealing both successes and ongoing challenges (Delaney & Marcotte, 2023; Tilak, 2017). Despite regional differences, ensuring accessible and financially sustainable higher education remains a global priority. To address these concerns, policymakers must explore innovative funding models, enhance financial aid programs, and align education systems with labor market needs to maximize the value of higher education for individuals and society.

To address the challenges posed by rising education costs and their impact on employment access, several policy measures should be considered. Increasing government investment in higher education can alleviate students' financial burdens and ensure broader access to quality education. Implementing income-contingent loan repayment models can make higher education more affordable by adjusting loan payments based on graduates' earnings. Expanding scholarship and grant opportunities, particularly for lower-income students, can further enhance accessibility and reduce reliance on student loans. Strengthening collaboration between educational institutions and industries can improve employability by aligning curricula with labor market demands. Lastly, promoting financial literacy programs will help students make informed decisions about higher education funding, enabling them to manage debt effectively and maximize the value of their degrees.

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