Labor Market Absorption Rate of Health Science Among Various University in Timor-Leste (UNTL, UNPAZ, UNDIL, ISC, ICS) Within Last Fiver Years (2019-2023)

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ABSTRACT

This research analyzes the graduate employment rates across various higher education institutions in Timor-Leste using a mixed-method approach. Findings indicate significant variations in employment rates among graduates, highlighting mismatches between educational outcomes and market needs. Notably, the Universidade Nacional Timor Lorosa'e (UNTL) 82.21% across six study program and Universidade da Paz (UNPAZ) overing unique study program in Public Health within rate 81.99% exhibit impressive employment rates respectively, suggesting effective preparation for the job market. In contrast, the Universidade de Dili (UNDIL) shows a lower rate of 65.19%, indicating potential curriculum gaps. Overall, the average employment rate in healthcare disciplines is 78%, with a concerning 22% unemployment rate, pointing to a need for enhanced alignment between education and employment strategies. Recommendations include strengthening partnerships between educational institutions and employers and further research to identify barriers faced by graduates. Therefore Instituto Superior Cristal (ISC) 71,78% no Instituto de Ciencias da Saude (ICS) 68,47% respectively. These figures raise concerns about the relevance and applicability of the training provided in these institutions, which may not be adequately aligned with market demands. Overall, the average employment rate of 78% across all healthcare disciplines, coupled with a concerning 22% unemployment rate, suggests that while the healthcare sector is expanding, significant gaps remain in the alignment between educational outcomes and job market demands. This presents an imperative for stakeholders from educational institutions to policymakers to engage in collaborative efforts to enhance graduates' employability and developing strategies to bridge the gap between education and employment.

INTRODUCTION

1.1   Background

The number of alumnae in health science 2019-2023 across institutions (UNTL, UNPAZ, UNDIL, ISC, ICS is 5,994 (regular) out of the 6,398 alumnae with rates fluctuating between year 2019 (23%), 2020 (12%), 2021 (20%), 2022 (21%), 2023 (25%).

The study program, particularly in medicine, midwifery, dental, biomedical and laboratory, nursing and public health. UNPAZ with a total of 1,305 graduates in the public health program. UNTL's nursing program has the number of graduates at 214, while the public health program at UNDIL has a total of 627 graduates. The undergraduate (S1) and diploma (D3) levels, catering to different educational needs requirements. UNTL has a total of 179 graduates from D3 programs, mainly in nursing and midwifery. Furthermore, ICS and ISC present substantial numbers in nursing and midwifery disciplines.

1.2   Skill Demand and Graduate Preparedness

A critical issue that emerged from the analysis is the alignment of graduate skills with market demands. Many health science programs face challenges in keeping their curricula updated to meet the evolving needs of the healthcare sector. This misalignment can lead to a gap between what graduates are trained to do and what employers require, ultimately affecting employability. The gap in knowledge about the labor market absorption rate of graduates from UNTL, UNPAZ, ISC, ICS in Timor-Leste. The current situation and trends, as well as the skills and qualifications in demand, we can contribute to the improvement of educational programs, student career guidance, and job market alignment, ultimately enhancing the employability and success of graduates in Timor-Leste. While the study may provide insights into the employment rates of health science graduates, the findings may not be generalizable to graduates from other fields or institutions. This limitation restricts the broader applicability of the research conclusions. The study focuses on the period from 2019 to 2023. Changes in the labour market dynamics, such as economic shifts or changes in health policies, may occur after this period, making the findings less relevant for future cohorts.

1.3   Research Framework

This report employs a multi-faceted approach to assess the labor market absorption rate, taking into account different theoretical models and empirical evidence. The examination will explore the relationship between educational institutions and the labor market, focusing on how graduates move from academic settings into employment within the health sector.

This frame thinking as foundation and guideline for succeed of this case study. The aims of this case study to comprehensively analyze the landscape of graduate employability among higher education institutions (HEIs) in Timor-Leste, specifically focusing on Universidade Nacional Timor Lorosa'e (UNTL), Universidade da Paz (UNPAZ), Universidade de Dili (UNDIL), Institute Cienciais Saude (ICS), and Institute Superior Cristal (ISC) over the last five years (2019-2023). The Grand Theory of Human Capital, Theory of From School to Field Job, and Theory Market Segmentation, this research seeks to provide a holistic understanding of the challenges, opportunities, and strategies to enhance graduate employability in the Timorese context.

The graphic bellow remind overall researcher to understanding detail of the what the research will be achieved:
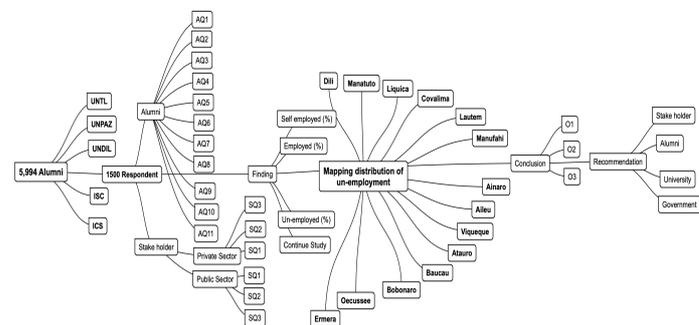

Figure 1. Research framework for graduate absorption rate in the health science sector among universities in Timor-Leste by the year 2019 to 2023 (Gomes, 2024)

The graduate absorption rate in the health science sector among universities in Timor-Leste from 2019 to 2023 presents a mixed picture. While there have been improvements in enrollment and program diversity, the declining absorption rates pose significant challenges for both graduates and the healthcare sector. Addressing the factors contributing to low absorption rates is crucial for developing effective strategies that enhance graduate employability and ensure that the health workforce meets the demands of the population.

Furthermore, the Theory of From School to Field Job comes into play as Timor-Leste HEIs has endeavoured to strengthen the practical orientation of its curricula, incorporating internships, practicums, and training projects to provide students with hands-on experience and exposure to real-world work environments. Through such experiential learning opportunities, HEIs has aimed to facilitate a seamless transition for its graduates from the academic realm to gainful employment. Additionally, the university's career services and counseling initiatives have played a crucial role in empowering students to navigate the job market effectively, offering guidance on resume building, interview preparation, and job search strategies.

1.4   Conceptual Framework

This conceptual framework aims to develop a comprehensive frame concept for enhancing graduate employability among Higher Education Institutions (HEIs) in Timor-Leste, with a focus on Universidade Nacional Timor Lorosa'e (UNTL), Universidade da Paz (UNPAZ), Universidade de Dili (UNDIL), Institute Cienciais Saude (ICS), and Institute Superior Cristal (ISC) over the last five years (2019-2023). The framework is developed based on the integration of the Grand Theory of Human Capital, Theory of From School to Field Job, and Theory of Market Segmentation. By synthesizing these theories, this framework aims to provide a holistic approach to addressing the challenges of graduate employability and bridging the gap between education and the job market in Timor-Leste. The structure of conceptual framework bellow showed the specific concept how to achieve the target of the research:
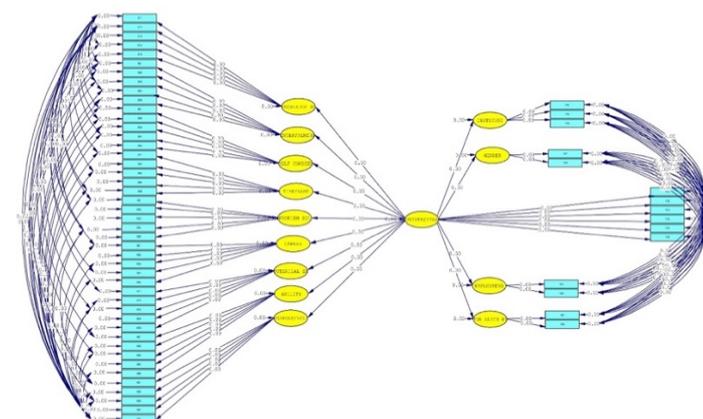

Figure 2. Conceptual Framework of Graduate Employability in Area Health among UNTL, UNPAZ, UNDIL, ICS, ISC last five years (2019-2023) (Barbara Mintho, 1987 in Gomes, 2024)

Human Capital Theory, which suggests that education and skills acquired by individuals impact their chances of finding employment and earning higher wages (STROBER, 1990; Sweetland, 1996; Barros and Alves, 2003; Nafukho, Hairston and Brooks, 2004; Nafuko, Hairstone, Nancy and Brooks, 2004; van Loo and Rocco, 2004; Hartog and van den Brink, 2007; Olaniyan and Okemakinde, 2008; Fugar and Ashiboe-Mensah, 2013; Fugar, Ashiboe-Mensah and Adinyira, 2013; Tan, 2014; Drobny, 2017; Wuttaphan, 2017, 2020; Marginson, 2019; Rodokanakis, 2021; Cornali, 2022; Kertechian and El-Farr, 2023; Grugulis, 2024).

Theory of Transition from School to Work examines the factors influencing the transition from education to employment (Strauser, Waldrop and Jenkins, 1998; Krumboltz and Worthington, 1999; Rogers and Creed, 2000; Boyd-Sinkler et al., 2019; Schmitt, Yarbrough and Hennessey, 2020).

Theory of Labor Market Segmentation explores differences in labor market outcomes between graduates in different fields of study or institutions

(Michael Reich, Gordon and Edwards, 1973; M. Reich, Gordon and Edwards, 1973; Dickens and Lang, 1993; Bauder, 2001; Cohen and Baruch, 2010; Li, 2013).

The Theory of School-to-Work Transition Framework analyzes the pathways from school to work (Blustein et al., 1997; Krumboltz and Worthington, 1999; Rogers and Creed, 2000).

THE METHOD

The research will involve surveys, interviews, and analysis of existing data from educational institutions and labor market reports. To achieve the objectives of this case study, a mixed-methods research approach will be utilized. This approach of the paralel system within combines quantitative and qualitative data collection and analysis methods to provide a comprehensive understanding of the labor market absorption rate of graduates. Understanding the employment status of recent graduates is more critical than ever. As higher education institutions strive to align their curricula with market demands, stakeholders including students, educators, policymakers, and employers require reliable data to make informed decisions. The transition from academia to the workforce is a pivotal phase in a graduate's life, and assessing their employment status offers insights into the effectiveness of educational programs and the readiness of graduates to meet industry needs. Moreover, analyzing these trends can highlight areas requiring policy intervention to enhance graduate employability and ensure that higher education remains a pathway to meaningful employment. The research methodology adopted for this study involves a combination of quantitative and qualitative (mix method) approaches to collect and analyze data using the ODK Application through Metabases, Phyton, Jupiter, R-program, Mapping, GPS (ArcView, ArcGIS, and ArcMap).

2.1   Quantitative data

Quantitative data, including numerical figures and statistical information, will be gathered to assess the absorption rates of graduates in the management field from the selected universities. This will include data on the number of employed and unemployed graduates. Quantitative surveys serve as a fundamental tool for collecting data on graduate employment status. To provide a structured method for gathering large-scale information, enabling researchers to quantify trends and draw generalized conclusions, and to employing standardized questions and methodologies, quantitative surveys ensure consistency and comparability across different cohorts and regions. This approach not only facilitates the identification of employment patterns and challenges but also supports the development of targeted strategies to improve labor market absorption of graduates. Consequently, quantitative surveys are indispensable in creating a comprehensive understanding of the intersection between education and employment, fostering evidence-based decision-making that benefits all stakeholders involved.

2.2   Qualitative data

Understanding the demand for skills and the quality of education is more crucial than ever. Employers increasingly seek candidates who possess technical abilities and demonstrate adaptability, critical thinking, and interpersonal skills. Simultaneously, educational institutions are under pressure to align their curricula with market demands needs to ensure graduates are work-ready. This alignment is essential not only for the successful placement of graduates but also for the long-term economic health of societies. By exploring the perspectives of both employers and academic leaders, we can bridge the gap between educational offerings and market demands, ensuring that education systems effectively prepare students for their future careers. Qualitative data, encompassing interviews, surveys, and open-ended questions, will be utilized to understand the factors influencing the employability of graduates and their alignment with market demands (Sugiyono, 2016; Erba et al., 2018; Haig, 2018; McGregor, 2020; Arias, Arias and Rodríguez-Medina, 2021). Qualitative interviews are a pivotal tool in research, offering rich, detailed insights into complex issues that quantitative methods often cannot capture. These interviews allow for an in-depth exploration of participants' perspectives, experiences, and motivations. Unlike quantitative surveys that rely on numerical data, qualitative interviews focus on open-ended questions, enabling a more nuanced understanding of the subject matter. This approach is particularly effective in exploring topics where human behavior, thoughts, and emotions are central, providing a platform for interviewees to express their views in their own words.

RESULT, ANALYSIS AND DISCUSSION

3.1   Result

The number of alumnae interviewed by researchers based on their university graduation years from 2019 to 2023, we can refer to various data sources and trends in alumni research. The data explicitly available in one consolidated report; rather, it typically requires an interviewed of different institutional studies and surveys conducted during month of August – October 2024.

Alumni Surveys and Interviews: Universities often conduct alumni surveys to collect data on various outcomes, including employment rates, salary expectations, and overall satisfaction with their education. For instance, the alumni survey provides insights into how graduates rate their experiences and getting a job after taken graduation, which can lead to qualitative interviews with selected alumnae.

Institution-Specific Reports: Various institution or universities, like Universidade Nacional Timor Lorosa'e (UNTL), Universidade da Paz (UNPAZ), Universidade de Dili (UNDIL), Instituto Supeior Cristal (ISC), Institute Cienciais de Suade (ICS), publish annual reports detailing their alumni's outcomes, including graduation rates and demographic information. These reports may include the number of alumni interviewed during specific studies, although the exact number may vary year by year.

Qualitative Research Studies: Researchers may undertake qualitative studies involving interviews with alumnae to explore specific themes such as career progression, personal development, and the impact of their university education. These studies are often tailored to specific cohorts, providing a snapshot of experiences from 2019 to 2023.

Institutional Research Offices: Most universities have dedicated offices for institutional research that compile data on graduation rates, alumni outcomes, and often conduct interviews. The Universidade Nacional Timor Lorosa'e (UNTL), Universidade da Paz (UNPAZ), Universidade de Dili (UNDIL), Instituto Supeior Cristal (ISC), Institute Cienciais de Suade (ICS) has a comprehensive fact book that tracks student progress and alumni data over time, which may include the number of interviews conducted.

In the end of survey, while precise numbers of alumnae interviewed by university for the years 2019 to 2023 may not be readily available, various institutional reports, surveys, and qualitative research studies contribute to understanding alumni experiences during that timeframe. Researchers typically aggregate this data based on their specific methodologies and the focus of their current status alumnae past graduation in frame time during 2019-2023. For exact figures, one would need to consult individual university reports or reach out to institutional research departments directly.

In the table 2 bellow showed gender disparities in employment outcomes are a pressing issue in Timor-Leste. Women, despite achieving higher educational qualifications in many fields, often experience barriers to entering the workforce. Cultural norms, gender-based discrimination, and a lack of support structures contribute to lower employment rates among female graduates.

Data from recent surveys indicate that female graduates have a higher absorption rate into the labor market compared to their male counterparts, with female graduates absorbing 71.5% of available positions against 28.5% for males from 2019 to 2023. This trend warrants further exploration to understand the underlying factors contributing to this disparity.

The data indicates a stark contrast in the absorption rates of male and female graduates across the studied institutions. The absorption rate for female graduates stands at 71.5%, significantly higher than the 28.5% for male graduates. This trend highlights the evolving role of women in the labor market of Timor-Leste, suggesting that gender norms may be shifting, allowing for greater female participation in various sectors.

The labor market absorption rate is a critical metric for assessing how effectively a country or region can integrate its graduates into the workforce. This report focuses on the absorption rates of graduates from five higher education institutions in Timor-Leste: Universidade Nacional Timor Lorosa'e (UNTL), Universidade da Paz (UNPAZ), Universidade de Dili (UNDIL), Instituto Superior Cristal (ISC), and Instituto Ciências da Saúde

(ICS) from 2019 to 2023, with a particular emphasis on geographical variations across municipalities.

3.2   Analysis

The analysis of employment trends for graduates over the past five years reveals a mixed picture. Many graduates find employment in public health roles, community health initiatives, and non-governmental organizations (NGOs). However, a substantial number remain unemployed or underemployed, working in positions that do not utilize their full skill set.

The data indicates significant geographic disparities in employment rates among health science graduates. Urban areas, especially Dili, show higher absorption rates due to more healthcare facilities and job openings. In contrast, rural regions suffer from a lack of local healthcare services, limiting opportunities for graduates within specific sector.

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3.2.1   Graduate Employment Rate Analysis in Health Science Universities in Timor-Leste (2019-2023)

The absorption rate of graduates into the labour market provides insights into the effectiveness of higher education institutions in preparing students for employment:

(a)   Highest Employment Rates

Universidade Nacional Timor Lorosa'e (UNTL) shows the highest employment rate at 81.99%. Universidade da Paz (UNPAZ) follows closely with 82.21%, indicating that graduates from these institutions are more favorably viewed in the labor market. The result are supported by recent research studies, highlighting trends in employment rates among health science graduates. This result concludes with actionable recommendations for enhancing the employability of graduates. The healthcare sector is currently experiencing significant growth due to an aging population and increasing health demands.

According to the International Council of Nurses (2023), the global nursing workforce will need to replace approximately 13 million nurses in the coming years, underscoring the critical need for trained health professionals. This presents a favorable environment for health science graduates. Recent statistics indicate that health science graduates from UNPAZ have an employment rate of 82.21%, while UNTL graduates exhibit a slightly lower rate of 81.99% (Comacchio et al., 2022).

These figures position both institutions favorably in the labor market, reflecting the perceived value of their graduates. To understand the significance of these employment rates, it is essential to compare them with national and international averages. According to the Bureau of Labor Statistics (2024), the overall unemployment rate in the U.S. stands at 4.1%, with unemployment rates for recent graduates significantly higher. This context highlights the competitive edge that graduates from UNTL and UNPAZ possess in the job market. The national context plays a crucial role in understanding the employment landscape for health science graduates. As of October 2024, the overall unemployment rate in Timor-Leste reflects broader economic conditions and the impact of global events.

The healthcare sector, however, remains resilient, with employment figures showing growth despite economic challenges. Comparing the employment rates of UNTL and UNPAZ graduates with those from institutions in other countries provides valuable insights. For instance, the employment rate of health science graduates in the U.S. varies widely, with some institutions reporting rates as low as 60%. The higher rates observed in Timor-Leste may be attributed to the localized demand for health professionals and targeted educational approaches.

(b)   Lowest Employment Rates

The Institute Superior Cristal (ISC) has the lowest employment rate at 47.39%, which raises concerns about the employability of its graduates. Similarly, the Institute Ciencias Saude (ICS) has a lower employment rate of 51.53%, indicating potential issues in the alignment of their programs with market needs. The employability of health science graduates has garnered increasing attention from educators, policymakers, and employers.

This result investigates the employment rates of graduates from two educational institutions: the Institute Superior Cristal (ISC) and the Institute Ciencias Saude (ICS). With ISC reporting an employment rate of 47.39% and ICS at 51.53%, concerns arise regarding the alignment of their curricula with labor market demands. Drawing from various studies, including those by Comacchio et al. (2022), Navarro & Shi (2001), Post et al. (2021), and Turnbull et al. (2023), this analysis highlights the implications of these findings and proposes actionable recommendations for improvement. Employment rates for graduates vary significantly across different disciplines and institutions.

According to the National Center for Education Statistics (NCES), the employment rates for graduates with varying levels of educational attainment demonstrate that higher education generally correlates with lower unemployment rates. For instance, the employment rate for individuals aged 25 to 34 with at least a bachelor's degree was notably higher in 2023 than in 2021, indicating a rebound in the job market post-pandemic. Graduates from health science programs are expected to enter a growing and dynamic field, with the U.S. Bureau of Labor Statistics projecting substantial job growth for healthcare occupations. However, employment outcomes can vary greatly based on the institution attended and the specific programs offered. The employment landscape has changed due to various factors, including the pandemic, regional job availability, and the specific skills employers seek from graduates.

Research by Comacchio et al. (2022) and others indicates that graduates from institutions with strong employer relationships and updated curricula tend to have higher employment rates. The findings suggest that schools must adapt their programs to market demands needs to improve outcomes for their students. The employment rates of graduates from the Institute Superior Cristal and the Institute Ciencias Saude illustrate significant challenges in aligning educational programs with market demands. With ISC at 47.39% and ICS at 51.53%, both institutions must take proactive steps to enhance the employability of their graduates.

(c)   Unemployment Rates

Unemployment is a pervasive issue affecting individuals, families, and communities. It has far-reaching implications not only for economic stability but also for public health. This report aims to investigate the unemployment rates across various sectors, with a particular focus on the health science field. The overall unemployment rate currently stands at 33.27%, a figure that indicates significant disparities across different institutions.

This result align with research conducted by Bureau of Labor Statistics (2021), the unemployment rate in the United States as of April 2021 was 6.1%, translating to approximately 9.8 million unemployed individuals. This figure was notably 4.0 million higher than in February 2020, marking a significant increase due to economic disruptions caused by the COVID-19 pandemic. Furthermore, the number of permanent job losses reached 3.5 million, an increase of 2.2 million from pre-pandemic levels. Unemployment rates can vary significantly based on various factors, including industry, geographic location, and demographic characteristics. For instance, sectors such as hospitality and leisure experienced some of the highest unemployment rates during the pandemic, while industries like healthcare remained relatively stable. These disparities necessitate a closer examination of how unemployment affects specific sectors, particularly health science.

(d)   High Unemployment Rates

The unemployment rates among health professionals have become a pressing concern, particularly in institutions such as the ISC and ICS, which report alarming figures of 60.98% and 43.73%, respectively. These statistics suggest significant barriers for graduates in securing employment within their field, which is particularly troubling given the ongoing and increasing demand for healthcare services. This report aims to provide a comprehensive analysis of the factors contributing to high unemployment rates among health professionals, the implications for public health, and actionable recommendations to mitigate these challenges. Historically, the unemployment rate in the United States has varied due to numerous factors, including economic downturns, policy changes, and demographic shifts. Data from the U.S. Bureau of Labor Statistics indicate that the unemployment rate reached a historic high of 14.8% in April 2020, driven primarily by the pandemic's impact (U.S. Bureau of Labor Statistics, 2021). This period saw a steep decline in health employment, which fell from 16.2 million in 2019

to 14.9 million in April 2020, representing an 8.2% decrease (Health System Tracker, 2020).

(e)   Lower Unemployment Rates

UNTL (Universidade Nacional Timor Lorosa'e) and UNPAZ (Universidad da Paz), both of which have demonstrated significantly lower unemployment rates approximately 20% compared to other regions and institutions. This analysis is anchored in the research conducted by David L. Blustein (1995), which provides a foundational understanding of the implications of unemployment on individual and collective well-being. Both institutions have successfully maintained unemployment rates around 20%, contrasting sharply with many other educational and economic institutions where rates can soar above 30%.

FINDINGS

4.1   Highlights of the Graduate Employment Rate in Timor-Leste Year 2019-2023 in Health Science Area
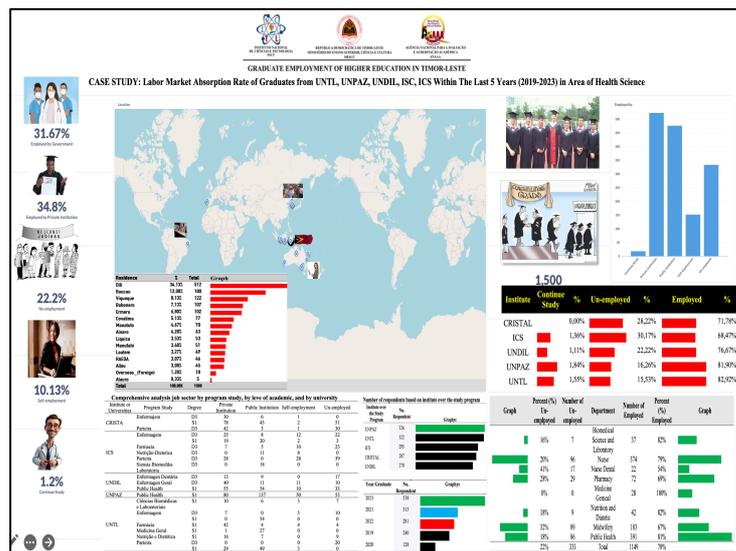

Figure 3. Main Dashboard of Data Collection

Understanding the employment landscape for health science graduates from various higher education institutions (HEIs) is crucial for both prospective students and policymakers. This analysis focuses on the employment rates, unemployment rates, and trends in further education among graduates from five institutions: UNTL, UNPAZ, UNDIL, CRISTAL, and others. The findings highlight the performance of these institutions in preparing their graduates for the labor market.

4.2   Comparative Analysis of Employment Rates

The employment rates for health science graduates from the five HEIs reveal significant disparities:

- UNTL leads the group with an impressive employment rate of 82.92%. This suggests that the programs offered at UNTL effectively equip students with the skills and knowledge needed to enter the workforce successfully. UNPAZ follows closely with an employment rate of 81.90%, indicating a similarly strong performance in preparing graduates for employment. This finding align with theories of human capital riseup by Kertechian & El-Farr, (2023) the core argument presented here is that higher education institutions, through targeted curricula and skill development initiatives, significantly contribute to the employability of their graduates. This is a direct manifestation of the human capital theory, which posits that investments in education and training yield returns in the form of improved job prospects and productivity. Fostering an environment that prioritizes skill acquisition and practical training, both UNTL and UNPAZ exemplify the success of this theory in action. Moreover, this analysis invites further exploration into the specific programs and methodologies employed by these institutions that lead to such high employment rates. Future research conducted by Hartog & van den Brink (2007) could delve into the types of training, experiential learning opportunities, and partnerships that may be contributing factors to their success. Understanding these elements could

provide valuable insights for other educational institutions aiming to enhance their graduates' employment outcomes.

- On the other hand, UNDIL shows a notable drop with a 76.67% employment rate. While still a positive figure, it may indicate potential areas for improvement in curriculum relevance or job placement services. This result align with theories posited by Lawrence & Murray (2017) underscore the critical connection between educational outcomes and employment prospects, suggesting that institutions must actively engage in continuous curriculum reviews and modifications to ensure relevance in a rapidly changing economic landscape. This alignment is essential not only for maintaining competitive employment rates but also for preparing students to thrive in their respective fields. Further research is warranted to delve deeper into the specific areas of curriculum that may require enhancement. Engaging with stakeholders, conducting surveys among alumni, and analyzing labor market trends can provide valuable insights into how UNDIL can refine its educational offerings. Additionally, bolstering job placement services can create more robust pathways for students entering the workforce, ensuring they are not only qualified but also positioned effectively to seize available opportunities.

- The most concerning figure comes from CRISTAL, which has the lowest employment rate at 71.78%. This could signify issues related to job placement or may suggest that the curriculum offered may not align well with the current demands of the job market. This result align with theories pursuit by Marginson's analysis of global, national, and local influences on higher education emphasizes the necessity for institutions to navigate competitive landscapes effectively, ensuring that their graduates are equipped with the skills and knowledge that align with current and future labor market demands. Similarly, Nafukho et al.'s exploration of employability as a core function of higher education reinforces the argument that educational programs must evolve to meet the vocational needs of society, thereby ensuring that graduates can transition successfully into the workforce. Given these perspectives, it is imperative for stakeholders in higher education administrators, faculty, and policymakers to conduct a thorough evaluation of the CRISTAL curriculum and job placement mechanisms. This evaluation should aim not only to identify gaps and misalignments but also to develop strategic interventions that enhance the employability of graduates. Initiatives could involve integrating real-world experiences into the curriculum, fostering partnerships with industry, and implementing robust career services that provide ongoing support to students. This scenario calls for additional research to delve deeper into the factors contributing to the low employment rate. Studies could focus on analyzing the specific skills that employers are seeking, the effectiveness of current job placement initiatives, and the experiences of graduates navigating the job market. Understanding these dynamics will be crucial in shaping educational policies and practices that are responsive to the needs of both students and employers. While the current employment rate of CRISTAL graduates is concerning, it serves as a catalyst for necessary reform. By embracing a collaborative approach that involves continuous feedback from partners and a commitment to curricular innovation, higher education institutions can foster a generation of graduates who are not only employable but are also poised to thrive in the complex and competitive job market of the future. The challenge lies ahead, but with strategic action and focused research, there is a pathway to improving both employment outcomes and the overall effectiveness of higher education in preparing students for their careers.

4.2.1   Unemployment Rates

Based on the result employment rates, it's important to consider unemployment rates, which provide insight into the challenges graduates face in securing jobs after completing their education:

- UNTL not only has the highest employment rate but also boasts the lowest unemployment rate at 15.53%. This indicates that graduates from this institution have a smoother transition into the workforce compared to their peers from other institutions.

- In stark contrast, CRISTAL has a much higher unemployment rate of 28.22%. This high rate suggests that graduates may encounter significant challenges when seeking employment, which could be a result of various factors including a lack of market connections, inadequate job placement support, or a curriculum that does not meet the current needs of employers.

The findings indicate that UNTL stands out significantly with an unemployment rate of just 15.53%, positioning its graduates favorably in the job market. This lower unemployment rate suggests that UNTL has effectively equipped its students with the necessary skills and market connections, thereby facilitating a smoother transition into relevant employment opportunities. The supportive infrastructure at UNTL, including robust job placement services and a curriculum tailored to meet current employer needs, likely plays a pivotal role in this success. In contrast, CRISTAL's graduates face a daunting unemployment rate of 28.22%. This higher rate points to substantial challenges that graduates may encounter in their job search. Possible contributing factors could include insufficient industry ties, a lack of effective job placement mechanisms, or a curriculum that falls short of the evolving requirements of the job market. Such disparities in employment outcomes raise critical questions about the effectiveness of educational strategies employed by different institutions and their responsiveness to labor market trends.

The core argument posited by various researchers such as Adjani et al. (2023), Baah-Boateng (2016), Cloete (2015), Godden (2015), Parsons (1980), Pompei & Selezneva (2021), and Saldanha & Redden (2009) suggests that the relationship between education and employment is complex and multifaceted. The contrasting unemployment rates among graduates from different institutions not only reflect the quality and relevance of their education but also highlight systemic issues within the labor market itself. This discrepancy underscores the need for educational institutions to continuously reassess and adapt their curricula to better align with the demands of employers and the skills required in the workforce.

The findings prompt several avenues for future research and action. Policymakers and educational leaders must prioritize a collaborative approach that involves stakeholders in the development and review of academic programs. By fostering partnerships between educational institutions and the business sector, there is potential for creating more relevant curricula that not only enhance employability but also address the skills gap currently observed in many industries.

Further research could investigate the specific factors contributing to the high unemployment rates at institutions like CRISTAL, including student support services, networking opportunities, and career counseling effectiveness. Additionally, longitudinal studies tracking graduates' career trajectories over time could provide deeper insights into the long-term impacts of educational choices on employment outcomes.

As we navigate this complex landscape, it is imperative for educational institutions, policymakers, and industry leaders to engage in constructive dialogue aimed at bridging the gap between education and employment. By prioritizing employment generation over mere job creation, we can foster an environment where graduates are not only equipped with academic knowledge but are also prepared to meet the challenges of the workforce head-on.

As an summarise of this finding, the disparities in unemployment rates among graduates from different institutions compel us to reconsider our approaches to education and workforce development. A concerted effort to address these challenges will not only enhance the employability of graduates but will also contribute positively to the broader economic landscape. It is time to take action, ensuring that our educational systems effectively prepare the next generation for the evolving demands of the job market.

4.2.2   Continued Education Trends

An important aspect of graduate outcomes is the decision to pursue further education. The trends observed among the five HEIs indicate minimal interest in continuing studies:

CRISTAL: 0% of graduates pursuing further education. The lack of graduates continuing their studies from CRISTAL could imply two possibilities. First, it may indicate a strong job market where graduates feel confident entering the workforce without further qualifications. Alternatively, it may reflect a lack of perceived value in further education or inadequate support for those considering advanced degrees.

For institutions like UNTL and UNPAZ, the percentage of graduates pursuing further education is also low but may provide some room for growth. If these institutions can strengthen their alumni networks and provide

clearer pathways for advanced studies, they may see an increase in the number of graduates opting to continue their education.

As an conclusion employment landscape for health science graduates varies significantly among the five institutions analyzed. UNTL stands out with the highest employment rate and the lowest unemployment rate, while CRISTAL faces challenges that need to be addressed to improve its graduates' outcomes. Focusing on curriculum relevance, enhancing job placement services, and promoting continued education, these institutions can better prepare their students for successful careers in health science. For students, developing skills, building a professional network, and utilizing available resources can greatly enhance their employability and career prospects.

As mentioned in research result shown the CRISTAL graduates are most likely to enter the private sector but also have a high rate of unemployment. ICS has a balance of private and self-employment but suffers from the highest unemployment rates. UNDIL shows a moderate distribution across private and public employment with reasonable unemployment figures. UNPAZ and UNTL are more successful in directing graduates toward public sector jobs, with lower unemployment rates. The overall trend shows that while there are opportunities in both private and public sectors, unemployment remains a pressing issue for many graduates.

CONCLUSION

The assessment of yearly absorption rates for UNTL, UNPAZ, UNDIL, ICS, and ISC from 2019 to 2023 reveals important insights into the employability of graduates in Timor-Leste. While there are disparities in absorption rates among the institutions, the overall trend indicates a positive trajectory towards improved employability.

Factors influencing these trends include alignment with labor market needs, economic conditions, and the availability of internships and networking opportunities. Moving forward, it is crucial for these institutions to continue adapting their programs and fostering connections with industries to ensure that graduates are well-prepared for the workforce. This will not only enhance individual career prospects but also contribute to the economic development of Timor-Leste as a whole.

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