

Assessment of the Employability of Young University Graduates in the Agricultural Sector in the City of Mocuba (2019–2023)

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Abstract: This study, entitled "Evaluation of the Employability of Young University Graduates in the Agricultural Sector in the City of Mocuba (2019–2023)," analyzes the level of professional integration of graduates from Zambeze University, identifies the main challenges faced, and characterizes the sociodemographic profile of young graduates during this period. The study began with the recognition that, although the agricultural sector is strategic for the economic development of Mozambique, its capacity to absorb qualified labor, especially young people, remains limited. Methodologically, a mixed-methods approach of an applied nature was adopted, with quantitative and qualitative methods and descriptive-exploratory objectives. This study was a case study conducted in the city of Mocuba, involving 220 graduates from the Agronomic Engineering, Agricultural Economics, Forestry Engineering, and Animal Science Engineering programs, out of a total of 475 graduates from UniZambeze between 2019 and 2023. Data were collected through structured surveys and semi-structured interviews, and analyzed using statistical techniques and thematic interpretation. The results revealed that, of the 475 graduates from that period, 63% are unemployed, 30% have formal employment, and 6% are involved in alternative activities such as internships, informal work, and self-employment. The main obstacles identified were the scarcity of job opportunities (26.1%), the requirement for prior experience (16.5%), and corruption in recruitment processes (14.6%). A statistically significant, albeit weak, relationship was also found between the course of study and employability, with Agronomic Engineering standing out as the area with the highest placement rate. It is concluded that the employability of young graduates in the agricultural sector in Mocuba is affected by structural limitations, a disconnect between training and the market, and the absence of effective university-to-work transition policies. Strengthening internship programs, encouraging agricultural entrepreneurship, and creating institutional mechanisms that bring academic training closer to local productive dynamics are recommended.

Keywords : *Employability. Youth. Agricultural Sector. Labor Market.*

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I. INTRODUCTION

➤ Contextualization

Success in finding employment for young people in Mozambique goes beyond individual merit, as access to opportunities is unequal, with many facing structural barriers that hinder their advancement. In this context, the employability of university graduates has been a central theme in discussions about the country's economic and social development, especially with the growing number of professionals in technical and academic fields.

In Mozambique, family farming plays a crucial role in the economy, combating poverty, and generating rural employment (Oram & Rosa, 2010). However, the agricultural sector faces specific challenges in absorbing skilled labor, particularly young graduates in agricultural fields. Therefore, understanding the professional integration

of these young people is essential to assessing the impact of educational and development policies on harnessing human potential in the rural sector.

In recent years, the agricultural sector in Mozambique has undergone transformations that include changes in agricultural development policies, increased foreign investment, and efforts to modernize agriculture. However, despite various initiatives, youth unemployment remains a structural problem. According to data from Mozambique's National Institute of Statistics (INE), the unemployment rate among young people with university degrees remains high, and many of them face difficulties finding employment that matches their qualifications (INE, 2021). These difficulties are even more evident in areas like Mocuba, where access to formal labor markets and professional development opportunities is limited.

In particular, the city of Mocuba, located in the Zambézia province, faces additional challenges regarding its ability to integrate young graduates in the agricultural sector into the labor market. The local labor market is characterized by a strong dependence on informal economic activities, and many of the opportunities in the agricultural sector involve small-scale farming and work on family farms, which do not always require high levels of qualification (Meyer et al., 2020). This creates a gap between the skills acquired in universities and the needs of the market, resulting in a high rate of underemployment or even unemployment.

The issue of employability for young university graduates in the agricultural sector in Mocuba is therefore a multifaceted challenge involving educational, economic, and structural aspects. Furthermore, these young people face significant obstacles to entering the job market, such as a lack of professional experience, a scarcity of opportunities, and a disconnect between their academic training and market demands. These factors make it essential to analyze the dynamics of these young people's integration into the job market.

➤ *Problem Statement*

The agricultural sector in Mozambique plays a crucial role in the national economy, contributing approximately 24% to the Gross Domestic Product (GDP) and employing a large portion of the active population, especially in rural areas. In the city of Mocuba, Zambeze University admits an average of 150 students annually for training in the agricultural sector. However, despite the importance of this sector for local economic development, many young graduates face significant challenges in entering the job market.

The youth unemployment rate in the country is alarming, with approximately 33.4% of the young population unemployed, lacking education or training (Government of Mozambique, 2024). This reflects a disconnect between the academic training offered in universities and the demands of the labor market, especially in the agricultural sector. Furthermore, the lack of practical experience and the scarcity of opportunities in the agricultural sector further hinder the integration of young people into the local labor market.

The lack of specific data on the employability of young graduates in the agricultural sector in Mocuba also represents a significant gap in the formulation of public policies that can better meet the needs of this youth group. Therefore, it is essential to understand the factors that influence the employability of these young people and to identify the main barriers that hinder their professional integration.

Given this, the following initial question arises: What is the employability level of young university graduates in the agricultural sector in the city of Mocuba between 2019 and 2023, and how do the challenges of the local labor market influence their professional integration?

➤ *Objectives*

• *General Objective*

- ✓ To evaluate the professional placement of young university graduates in the agricultural sector in the city of Mocuba from 2019 to 2023.

• *Specific Objectives*

- ✓ Describe the profile of young graduates in the agricultural sector in the city of Mocuba.
- ✓ To identify the main challenges faced by young graduates in the agricultural sector in the city of Mocuba in entering the job market.
- ✓ To measure the level of professional integration into the labor market of young graduates in the agricultural sector in the city of Mocuba.

• *Research Questions*

- ✓ What is the demographic and academic profile of young people graduating in the agricultural sector in the city of Mocuba between 2019 and 2023?
- ✓ What are the main challenges faced by young graduates in the agricultural sector in Mocuba when entering the job market, and how do these challenges impact their career prospects?
- ✓ What is the job placement rate for young graduates in the agricultural sector in the city of Mocuba between 2019 and 2023, and in which sectors or types of jobs do these young people occupy?

II. THEORETICAL FRAMEWORK

Youth employability is a widely discussed topic in both national and international contexts. In the national context, the study by Macassa (2020), entitled "*Professional Experience and the Entry of Recent Graduates into the Labor Market: a look at the actions of the main stakeholders in the city of Quelimane*," stands out. This work examines the strategies adopted and the paths followed to ensure the insertion of recent graduates into the labor market.

At the international level, Botelho's (2016) research, "*The insertion of young people into the labor market: the case of young people with secondary education*," deserves highlighting, as it identifies the main obstacles faced by young people in the transition process to the world of work, as well as the ways in which they seek to overcome them.

➤ *Employability in Mozambique*

Employability can be understood as the set of knowledge, skills, attitudes, and support networks that enable an individual to obtain and maintain employment, as well as adapt to changes in the labor market over time. According to Yorke (2006), *employability* refers to an individual's ability to find and maintain employment, as well as to move within the labor market, based not only on formal qualifications but also on interpersonal skills,

practical experience, and the capacity for continuous learning. For Fugate *et al.* (2004), it is a multidimensional construct, influenced by individual factors (such as personal attributes and motivation), contextual factors (such as public policies), and organizational factors (such as the demand for specific skills).

In Mozambique, the concept of employability takes on specific contours due to the country's economic structure, where informality predominates and formal job opportunities are scarce. Employment, therefore, is broadly defined as any income-generating activity, whether monetary or in kind, formal or informal (Lachler & Walker, 2018). Most of the economically active population is involved in self-employment, family farming, or informal micro-enterprises, without legal or social security guarantees.

The lack of decent jobs and the low quality of available jobs are cited as central factors for the persistence of poverty and inequality. Data from the National Institute of Statistics (INE, 2023) reveal that, although 71.4% of the working-age population is employed, many of these workers are in unstable and low-paying occupations, which compromises their economic and social security (Castel-Branco, 2024).

The Government's Five-Year Plan (PQG 2015–2019) recognizes job creation as a priority axis for the country's development, focusing on promoting employability and improving workforce productivity. The proposed strategies include professional training, stimulating entrepreneurship, and creating decent jobs with rights and social protection (Floriano, 2018). However, the impacts of these policies are still limited, partly due to weak coordination between training systems and the productive sector.

Youth unemployment rates have increased significantly in recent decades. The Household Budget Survey (2014/2015) indicated a general unemployment rate of 25.3%, reaching 47.7% among young people aged 15 to 19. In urban areas, young women face even greater difficulties entering the labor market (Floriano, 2018). In 2022, according to CEIC, the general unemployment rate was 3.91%, a slight reduction compared to the previous year, although this number may mask the prevailing underemployment and informality (CEIC, 2022).

Floriano (2018) highlights that the absence of data disaggregated by region, such as Mocuba, hinders the formulation of effective public policies. However, empirical evidence indicates that young graduates, especially in the agricultural sector, face a double vulnerability: on the one hand, there is a shortage of formal jobs in the sector, and on the other hand, there are barriers to entry into agricultural entrepreneurship, such as lack of access to credit, inputs, and technologies.

Alexandre (2024) argues that micro, small and medium-sized enterprises (MSMEs) play a fundamental role in absorbing young workers. These companies, if supported

by training and financing programs, can become local drivers of job creation and economic dynamism. In Mocuba, where many of these initiatives are still in their early stages, investing in strengthening MSMEs could represent a strategic alternative to improve youth employability.

➤ *Youth in Mozambique*

Youth constitutes one of the most significant layers of Mozambique's demographic structure, not only in quantitative terms, but also for its potential as a driving force for the country's socioeconomic development. The concept of youth, however, is variable, depending on the political, social, and institutional context. According to the National Institute of Statistics (INE) and the United Nations Population Fund (UNFPA), the age limits for defining youth vary from country to country and between different international institutions (INE & UNFPA, 2023).

In Mozambique, the National Youth Policy, approved in 2013, defines a young person as any individual aged between 15 and 35 years (Republic of Mozambique, 2013). This definition is aligned with the parameters established by the African Charter on Youth, ratified by the country in 2008 (Assembly of the Republic, 2008). According to recent data, the Mozambican youth population comprises approximately 9.4 million individuals, representing about one-third of the total population (INE & UNFPA, 2023).

Youth represents essential human capital for the transformation of Mozambique. However, they face structural challenges that hinder their full development and active participation in society. According to the Young Leaders Platform (2017), approximately 33.4% of the Mozambican population is composed of young people, of whom 56.8% are unemployed. This reality is exacerbated when considering young women, who are frequently subjected to social and cultural restrictions that limit access to education, health, and employment, perpetuating gender inequalities and socioeconomic vulnerabilities.

Young people are not only affected by a scarcity of jobs, but also by an education disconnected from the real needs of the labor market, by digital exclusion, and by weak representation in decision-making spaces. Cau and Arnaldo (2014), in analyzing the situation of adolescents and young people in Mozambique, highlight that the provinces of Nampula and Zambézia, the latter being where Mocuba is located, the focus of this study, concentrates the majority of the country's youth. In these regions, the challenges faced by young people are aggravated by factors such as structural poverty, limited access to quality public services, and scarce opportunities for technical and vocational training.

In Mocuba, the scenario reflects the provincial reality. Young people face a combination of low levels of education, scarce formal employment opportunities, and limited access to entrepreneurial projects. The agricultural sector, the main source of local livelihood, has not effectively absorbed young labor, either due to a lack of investment or the absence of integrated public policies to encourage rural youth. As reported by Floriano (2018), the

lack of decent employment is one of the main causes of instability and social exclusion in urban and peri-urban areas of the country, as is the case in Mocuba.

Furthermore, studies such as that of Castel-Branco (2024) point to the impact of precarious employment on young Mozambicans, especially in urban and extractive contexts, where youth, particularly the poorest, are frequently pushed into informal work without guarantees of social protection. This precariousness affects not only their income, but also their aspirations, autonomy, and civic participation.

➤ *Agricultural Sector*

Employability in the agricultural sector is deeply linked to the economic and social dynamics of Mozambique, especially because this sector constitutes the main source of livelihood for most of the population. The agricultural sector comprises agricultural, livestock, forestry, silvicultural, wildlife and fishing activities, and is responsible for providing food, raw materials, fuel and employment for a large part of the Mozambican population (Republic of Mozambique, 2022).

According to data from the National Institute of Statistics (INE), based on the 2017 General Population and Housing Census (RGPH), approximately 66% of the country's population resides in rural areas and depends directly on the agricultural sector for survival and income (INE, 2021). Furthermore, according to the 2020 Household Budget Survey (IOF), 65.9% of heads of households are directly linked to the agricultural sector, highlighting its strategic importance for the socioeconomic well-being of the population (INE, 2021).

Mozambican agriculture accounts for approximately 23% of the Gross Domestic Product (GDP) and employs over 80% of the national workforce, with a particular emphasis on small family farmers who practice subsistence farming using traditional methods (Siteo, 2014; Chihanhe, Mananze, & Machava, 2022). It is estimated that 95% of agricultural production is carried out by family farmers on small-scale farms, often without access to technology, credit, or improved agricultural inputs, which compromises the sector's productivity and competitiveness (Chihanhe et al., 2022).

Although Mozambique has approximately 36 million hectares of arable land, less than 10% is currently used for agricultural purposes (Chihanhe et al., 2022). This underutilization is associated with structural challenges such as limited access to irrigation, transport infrastructure, markets, and the low technical capacity of producers.

According to the Strategic Plan for the Development of the Agricultural Sector (PEDSA 2030), the north-central region of the country, where Mocuba is located, has significant potential for agricultural growth, provided that effective public policies to support family farming are implemented (Republic of Mozambique, 2022).

Furthermore, studies indicate that agriculture plays a key role in creating jobs for recent graduates, especially in rural areas where formal employment options are limited (Chihanhe et al., 2022). However, the attractiveness of the agricultural sector for young people remains low, partly due to informal work, low incomes, and the absence of consistent policies to encourage innovation and rural entrepreneurship.

Youth employability in the agricultural sector in Mozambique is of great socio-economic importance, given the weight of youth in the population structure and the relevance of the agricultural sector to the country's development. The agricultural sector continues to be the main source of employment for Mozambicans, especially for those living in rural areas. However, the challenge of youth employability persists, due to factors such as the low quality of training, the weak link between educational institutions and the labor market, and the limited capacity of the traditional agricultural sector to absorb labor (Republic of Mozambique, 2022).

According to the *National Agricultural Sector Investment Plan II (PNISA II)*, despite the growing presence of young graduates in agricultural fields from higher education institutions and technical institutes, their job placement rates are low. Mozambique has 53 higher education institutions, 22 public and 31 private, as well as several agricultural institutes that teach courses in agriculture, animal husbandry, forestry, and fisheries. However, most graduates do not find employment in the productive sector, either through formal employment or self-employment (Republic of Mozambique, 2022).

The marginalization of young people is further aggravated by structural inequalities, particularly in rural areas, where they face increased obstacles to economic inclusion. Women and young people, despite representing a substantial part of the workforce in the agricultural sector, remain underrepresented in agricultural value chains. The PNISA II recognizes this situation and proposes specific inclusive integration measures to address these challenges (Republic of Mozambique, 2022).

The commitment to youth employability in the agricultural sector is also reflected in the goals of the Malabo Declaration, which foresaw the creation of employment opportunities for at least 30% of young people between 2015 and 2025. However, the biennial evaluation of the declaration's implementation revealed that, in 2016, 76.8% of young people were economically active in the agricultural sector, although investments did not reach the expected targets (MASA, 2018).

Within this perspective, the SUSTENTA program, implemented by the Government of Mozambique through the Ministry of Agriculture and Rural Development (MADER), stands out. Using the PACE (Emerging Small Commercial Farmer) approach, the program aims to promote the inclusion of young people as protagonists of rural development. SUSTENTA sets a target of including

38% young people among its beneficiaries, encouraging them to act as integrated producers, managers of agricultural enterprises, and logistics intermediaries (MADER, 2020).

Analysis of youth employability in the agricultural sector reveals a disconnect between academic training and the real demands of the agricultural labor market. Despite the existence of ambitious policies and programs such as SUSTENTA and PNISA II, effective implementation remains limited by institutional shortcomings, lack of sustained funding, and poor coordination among the various stakeholders.

III. METHODOLOGY

➤ Research Paradigm

This study adopted an integrated methodological approach, combining positivist and interpretative paradigms to analyze the phenomenon of employability among young graduates in the agricultural sector in Mocuba.

The positivist paradigm, which emphasizes objectivity and quantification, will be used to examine broader and more generalizable aspects of the reality of young university students. In contrast, the interpretative paradigm allows for a deeper analysis of the individual and contextual experiences of these young people, seeking to understand the meanings and subjective experiences that influence their professional integration.

According to Huberman and Miles (2002), alternating between qualitative and quantitative analyses allows for a more complete exploration of the phenomenon, enabling both the acquisition of representative empirical data and the consideration of subjective and contextual dimensions. In the case of this study, exploratory interviews will serve as a starting point for the collection of qualitative data, which will later be complemented by a quantitative analysis.

➤ Search Classification

- *Regarding the Approach*

Regarding the approach, the present study is mixed (quantitative and qualitative) to fully understand the employability of young people in the city of Mocuba. Creswell (2007) emphasizes that the mixed approach employs aspects of both quantitative and qualitative procedures. He highlights that, in these procedures, researchers must convey the intention of mixed methods

research and its applications in the social sciences and humanities.

- *Regarding Nature*

Regarding its nature, this study is classified as applied research, as it seeks to solve practical problems related to the professional integration of young university graduates in the agricultural sector in Mocuba. Applied research aims to generate knowledge that can be used to solve concrete and specific problems, promoting improvements in real and delimited contexts. According to Gil (2008), applied research “has as its fundamental characteristic its motivation by concrete problems, whose solution is sought based on scientific knowledge” (p. 43).

- *Regarding the Method*

Regarding the reasoning method, this study adopts a predominantly deductive approach, complemented by elements of the dialectical method, in accordance with its mixed nature and its anchoring in positivist and interpretative paradigms.

Lakatos and Marconi (2017) state that “the deductive method starts from a general principle accepted as true and, through logical reasoning, arrives at particular conclusions” (p. 86). As in this research this deductive method is supported by the dialectical method, Severino (2007) refers to the dialectical method as that which understands phenomena in their totality and movement, valuing conflicts, transformations, and the multiple determinants of social reality.

- *Regarding the Objectives*

This research, in terms of its objectives, is classified as descriptive and exploratory. According to Gil (2008), exploratory research is carried out when the research topic or problem is still little known, seeking to provide greater understanding of it, while according to Vergara (2016), descriptive research exposes the characteristics of a given population or phenomenon and establishes relationships between variables.

- *Regarding Technical Procedures*

Regarding the technical procedures adopted, this research is configured as a case study, where Yin (2005) prefers to say that a case study is a research strategy that “investigates a contemporary phenomenon within its real-life context, especially when the boundaries between the phenomenon and the context are not clearly defined” (p. 32).

Table 1 Ranking of the Research on the Professional Integration of Young University Students in Mocuba

| Search Type | Classification | Justification for the Choice |
|------------------------|--------------------------------------|---|
| Paradigm | Positivist and Interpretative | The positivist approach allows for the measurement and generalization of objective data; the interpretative approach captures perceptions and meanings. |
| Regarding the approach | Mixed (Quantitative and Qualitative) | The combination broadens understanding, allowing for statistical analyses and contextual interpretations. |
| Regarding nature | Applied | It focuses on solving a concrete problem: the employability of young graduates in Mocuba. |

| | | |
|--------------------------|-----------------------------|--|
| Regarding the method | Deductive-Dialectical | It draws from existing theories, but engages with reality, taking into account contradictions and multiple dimensions. |
| Regarding the objectives | Exploratory and Descriptive | It explores a little-studied phenomenon in Mocuba and describes its characteristics based on evidence. |
| Technical procedures | Case Study | It investigates in depth professional integration in a specific and real context: Mocuba (2019–2023). |

Source: Prepared by the Author (2025)

• *Population and Sample*

UniZambeze, at its Mocuba campus, admits approximately 150 students annually in the agricultural sector. Considering the total for the last five years (2019–2023) based on data collected at UniZambeze, 475 students graduated during that period. This number constitutes the population of interest for this research.

• *Sample*

Due to the infeasibility of collecting data from the entire target population, sampling was chosen. The population of interest consisted of 475 young graduates in the agricultural sector from 2019–2023 at the Mocuba campus of Zambeze University. This population served as the basis for calculating the minimum sample size, using the formula proposed by Yamane (1967), with a 95% confidence level and a 5% margin of error, establishing a statistical benchmark for the validity of the results.

The sampling method adopted was non-probabilistic convenience sampling, due to the accessibility and availability of participants to respond to the research instruments. According to Marconi and Lakatos (2017), this type of sampling is widely used in exploratory research, allowing for effective data collection even without a complete list of the population.

The minimum sample size was calculated using the formula for finite populations:

$$n = N / (1 + N \times e^2)$$

Where:

- n = sample size
- N = population size (475)
- e = margin of error (0.05)

Replacing the values:

$$n = 475 / (1 + 475 \times 0.05^2)$$

$$n = 475 / (1 + 475 \times 0.0025)$$

$$n = 475 / (1 + 1.1875)$$

$$n = 475 / 2.1875 \approx 217.2$$

Therefore, the minimum sample size would be 218 individuals. The sample actually collected in the field consisted of 220 graduates, ensuring adequate representativeness for the study's objectives.

To ensure temporal representativeness, participants were distributed proportionally across the five years of the

study (2019–2023), respecting the temporal heterogeneity of the population and possible variations in labor market conditions and academic background throughout the analyzed period.

➤ *Data Collection Techniques and Instruments*

This research adopted a mixed methodological approach, using both qualitative and quantitative techniques for data collection, in order to accurately meet the specific objectives previously defined. To describe the profile of young graduates in the agricultural sector, documentary research was used, based on the analysis of the database provided by Zambeze University, of all graduates/pharmacists in the period from 2019 to 2023. These records include variables such as age, gender, course attended and year of graduation, allowing the construction of a detailed sociodemographic overview of the graduates.

To identify the main challenges faced by young graduates in the agricultural sector in the city of Mocuba in entering the job market, a mixed-methods research approach was used, combining quantitative and qualitative approaches. Initially, a structured digital survey, developed using the KoboToolbox platform, was applied. This survey consisted of closed and objective questions, aiming to collect direct information about the difficulties experienced by graduates. The link to the survey was shared and answered by 220 individuals, ensuring a sufficiently large and representative sample.

To more thoroughly identify the main challenges faced by recent graduates, semi-structured interviews were also used as the primary technique. This qualitative instrument was applied in person to 12 individuals, intentionally selected from different years and courses. Initially, the interview group followed the recommendation of 4 to 8 participants, based on the criterion of theoretical saturation, which refers to the point in the data collection process where the information obtained begins to repeat itself.

Table 2 Techniques and Instruments for Data Collection in the Research

| Object of Study | Technique/Instrument | Purpose of Data Collection |
|--|--|---|
| Sociodemographic profile of recent graduates (age, gender, course, year, etc.) | Documentary research (UniZambeze database) | Data was collected on graduates between 2019 and 2023 to characterize the target population. |
| Level of professional integration of young people | Structured survey (via KoboToolbox) | Quantitative data was collected from recent graduates to measure their current situation. |
| Challenges faced in professional integration | Semi-structured interviews | To explore the perceptions and experiences of graduates based on the criterion of theoretical saturation. |

Source: Prepared by the author (2025)

➤ *Data Analysis*

Considering the mixed methodological approach adopted, the data analysis was structured in a way that allowed for the integration of quantitative and qualitative methods. Thus, the analytical process encompassed two main dimensions: (i) statistical analysis of quantitative data and (ii) content analysis of qualitative data (Microsoft Excel , SPSS (Statistical Package for the Social Sciences) , Chi-square test , and Cramer's V).

➤ *Presentation and Analysis of Results*

• *Profile of Young Graduates in the Agricultural Sector in Mocuba*

The following table presents a summary of the main characteristics observed:

Table 3 Main Sociodemographic Characteristics of Young Graduates in the Agricultural Sector from UniZambeze (2019–2023)

| Sociodemographic characteristics | Value |
|----------------------------------|--------------|
| Total number of graduates | 475 |
| Number of female graduates | 300 |
| Minimum age on record | 21 years old |
| Maximum age recorded | 50 years |

Source: Own elaboration based on data provided by UniZambeze (2025)

Between 2019 and 2023, UniZambeze graduated a total of 475 young people in agricultural sector courses in Mocuba (Table 3). Initial analysis reveals a male predominance (63.2%) compared to women (36.8%). Despite this, a significant presence of female graduates is observed, indicating progress in women's access to and participation in agricultural sciences.

On the other hand, Figure 1 presents the distributions of graduates by gender, course, age group, and year of graduation, summarized in a graph that allows for a clearer visual understanding of the trends.

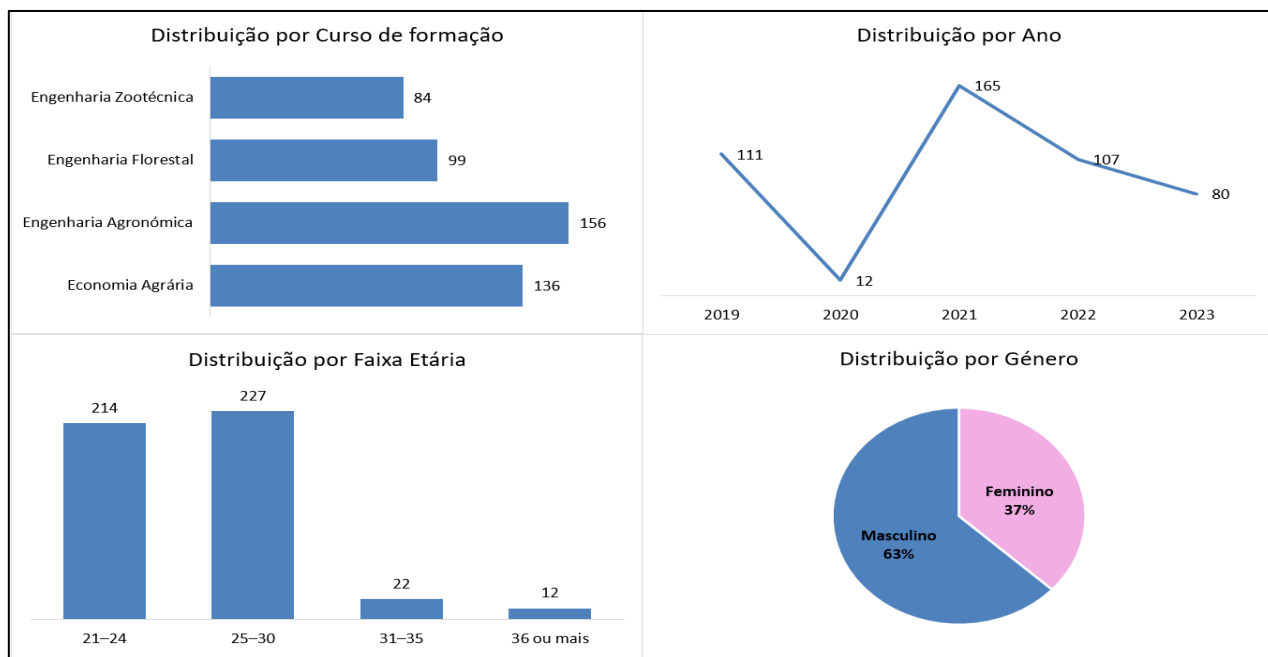


Fig 1 Distribution of the 475 Graduates by Gender, Course, Age Group and Year of Graduation (2019–2023)

Source : Prepared by the Author Based on Data from UniZambeze (2025).

Analysis of the graphs in Figure 1 allows us to highlight some relevant trends:

- *Gender*

There is a male predominance among graduates, representing about two-thirds of the total. Even so, female participation, corresponding to 36.8%, demonstrates significant progress towards gender equality in agricultural higher education. This result reflects sociocultural transformations that have been encouraging the presence of women in areas traditionally dominated by men, such as agricultural sciences.

- *Course*

Regarding the distribution by course, Agronomic Engineering stands out as the most popular (32.8%), followed by Agricultural Economics (28.6%), Forestry Engineering (20.8%), and Animal Science Engineering (17.7%). Therefore, there is a greater preference for generalist training programs linked to agricultural production and resource management, which together account for more than 60% of graduates. The lower enrollment in Animal Science Engineering may be associated with its more specialized nature and reduced demand in the local job market.

- *Age Range*

Age data shows that the majority of graduates are between 25 and 30 years old (47.8%), followed by the 21 to 24 age group (45.1%), an interval considered typical for completing higher education. Ages ranged from 21 to 50 years, highlighting not only the presence of young people in initial training, but also adults who sought professional retraining or skills development in the agricultural sector.

- *Year of Graduation*

The temporal distribution reveals that 2021 saw the highest number of graduations (34.7%), marking the

resumption of the academic pace after the restrictions imposed by the COVID-19 pandemic. In contrast, 2020 had the lowest percentage (2.5%), a direct reflection of the temporary closure of educational institutions and the postponement of thesis defenses. In the following years (2022 and 2023), the number of graduations stabilized, demonstrating the adaptability of the university and students in the face of external challenges.

In summary, the profile of graduates in the agricultural sector at UniZambeze, Mocuba campus, between 2019 and 2023, is characterized by a male predominance, a concentration in young age groups, and a greater demand for generalist courses focused on agricultural production and management. The variation in the number of graduations over the years highlights the influence of external factors, especially the COVID-19 pandemic, which limited training in 2020 and boosted recovery in 2021.

➤ *Main Challenges Faced by Young Graduates in the Agricultural Sector for Entry into the Job Market.*

Students were able to indicate up to three difficulties, totaling 376 choices from a pool of 10 or more possible problems. The main challenges reported included lack of job opportunities (26.1%), lack of experience (16.5%), and corruption or bribery to obtain employment (14.6%). Other obstacles cited were the absence of a network of contacts, lack of capital to undertake a project, insufficient institutional support, the requirement for additional training, and lack of awareness of support programs.

The prevailing lack of opportunities highlights a local labor market with low absorption capacity. The private sector exhibits limited dynamism, while public sector job creation is intermittent. The seasonality of agricultural activities and the concentration of businesses in a few centers further limit the creation of formal jobs.

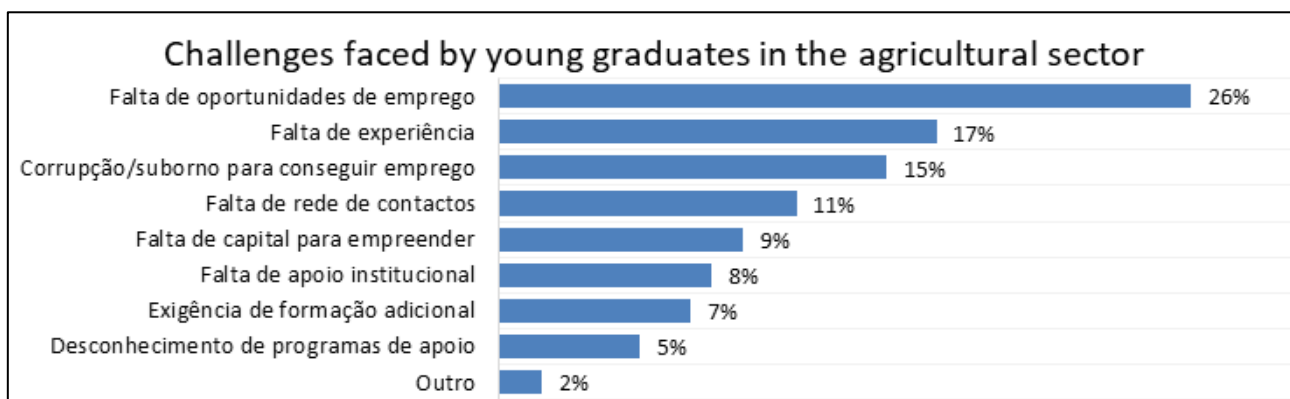


Fig 2 Main Challenges Faced by Young Graduates in the Agricultural Sector for Insertion into the Labor Market (2019–2023)
Source: Prepared by the Author Based on Data from a Survey Applied to UniZambeze Graduates (2025)

Among the challenges reported, the difficulty of accessing opportunities compatible with academic training was mentioned repeatedly. One graduate emphasized:

"Everything is difficult. They demand experience that we don't have, the selection processes are confusing or they

don't even respond, and the job openings that appear have nothing to do with what I studied."

Other responses reinforce the requirement for prior experience, often between four and five years, as a prerequisite for entering the formal job market. This

unfortunate reality creates a cycle in which young people cannot obtain jobs due to a lack of experience and do not gain experience because they cannot get hired.

Lack of practical experience, combined with opaque selection processes such as corruption, limits the ability of recent graduates to demonstrate their skills. A scarcity of networks, initial capital, and institutional support further reinforces these barriers, making the job market even more challenging for recent graduates.

Qualitative and quantitative analysis shows that overcoming these barriers requires a combination of practical experience, institutional support, and entrepreneurship. Participation in internships and trainee programs has proven to be an effective strategy for bridging the gap between academic training and market demands, serving as a bridge between theory and practice.

Entrepreneurship emerges as a strategic alternative in the face of a scarcity of formal jobs. Many young people choose to start their own businesses, applying their acquired knowledge and seeking to generate income independently. Furthermore, continuous training programs, access to microcredit, and targeted public policies can expand opportunities for inclusion, reinforcing practical experience

and creating conditions for the development of local productive initiatives.

"Yes, I participated in an internship program before being formally hired. This step was very important, as it served as a bridge between theoretical training and the work environment."

It is noteworthy that many complementary actions can facilitate the transition to the job market, including promoting networking, career guidance, support for entrepreneurship projects, and encouraging participation in practical experiences from an early age. These strategies help reduce the impact of lack of experience, scarcity of formal opportunities, and structural limitations in the agricultural sector, offering young people concrete means of professional integration and development.

➤ *Level of Professional Integration of Young Graduates in the Agricultural Sector in the City of Mocuba.*

The following figure summarizes the current state of professional integration among young graduates. It is noted that the percentages reveal significant differences between unemployment and the various forms of employment in the agricultural sector.

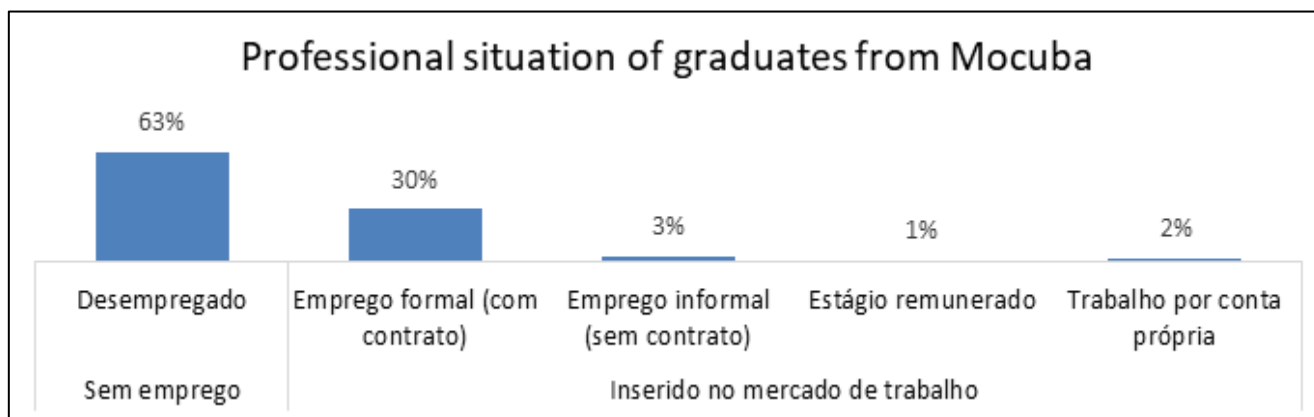


Fig 3 Level of Professional Insertion of Young Graduates in the Agricultural Sector in the City of Mocuba (2019–2023)
 Source : Prepared by the Author Based on Data from a Survey Applied to UniZambeze Graduates (2025)

Figure 3 presents the current situation of young graduates in the agricultural sector in Mocuba from 2019 to 2023. It can be observed that 63% are unemployed, while 36% are employed in different ways: formal employment (30%), informal employment (3%), paid internships (1%), and self-employment (2%). The results highlight the high level of unemployment and the limited absorption capacity of the local market.

The most striking statistic refers to the 63% of unemployed young people, representing an absolute majority. This result confirms the difficulty already pointed out in the previous section, regarding the scarcity of job opportunities in the local agricultural sector. Furthermore, it highlights that a university degree, by itself, has not been sufficient to guarantee the immediate entry of graduates into the job market.

Among the young people who have found employment, 30% are formally employed with contractual ties. This group represents the main form of absorption of the trained human capital, indicating that, although limited, there is a demand for qualified professionals in private companies, non-governmental organizations, or public institutions related to the agricultural sector.

Another 6% are in alternative forms of employment. The majority are in informal employment (3%), characterized by the absence of a contract and social security guarantees, which demonstrates job fragility and instability. Paid internships, although not very significant (1%), appear as a bridge to the formal market, but their availability is still scarce. Self-employment (2%) shows entrepreneurial initiatives, although in a small proportion,

indicating that few graduates have the resources or support to become entrepreneurs.

• *Relationship between Employability and the Course Attended*

Analyzing the relationship between the course of study and employability is an essential step in understanding the extent to which academic training influences the professional integration of young graduates. The results

obtained show that there are important differences in employability depending on the course of study, which reveals the need to analyze the relevance of training in the context of the labor market.

Figure 4 shows the percentage distribution of employability by course, allowing for a clearer visualization of the differences between graduates.

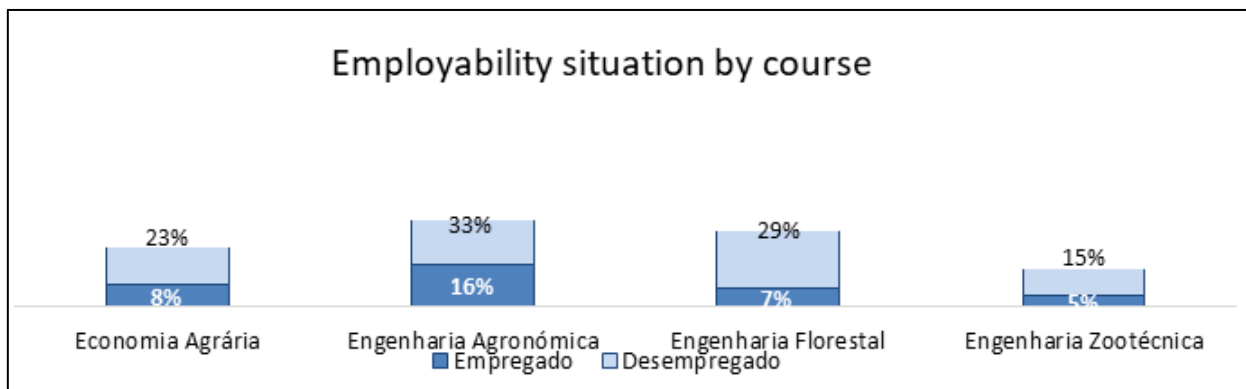


Fig 4 Relationship between Employability and Course Attended

Source : Prepared by the author based on data from a survey applied to UniZambeze graduates (2025)

Figure 4 shows that Agronomic Engineering has the highest employability rate (16.4%), standing out as the course most aligned with the demands of the agricultural sector job market. In contrast, Forestry Engineering has the lowest insertion rate (7.4%), indicating that graduates in this area face greater difficulties in obtaining formal employment. Agricultural Economics (8.2%) and Animal Science Engineering (4.5%) are in intermediate positions, suggesting that, despite contributing to employability, they still face challenges in terms of market absorption.

The Chi-square test confirmed that this difference is statistically significant ($\chi^2 = 8.55$; $df = 3$; $p = 0.036$). The Cramer's V calculation (0.197) demonstrated that the association between the course and employability is weak, although significant.

The results indicate that the course of study influences the employability of young people, but the intensity of this relationship is limited, which shows that other factors also

play an important role. Among these factors, we can highlight the conditions of the local labor market, the professional network of graduates, the regional economic dynamism, and public policies aimed at youth.

Overall, the findings reinforce that, while academic background is relevant for entering the job market, it does not, by itself, guarantee high employability. Therefore, collaboration between universities, the private sector, and entrepreneurship support programs becomes essential to transforming received education into concrete job opportunities.

• *Time to Obtain the First Job*

The time it takes for young people to enter the job market after completing their studies varies considerably, reflecting different levels of access to opportunities and the influence of factors such as practical experience, networks, and local demands.

Table 4 Time Elapsed Until First Job Among Young Graduates in Mocuba (2019–2023)

| Time for your First Job | % of Young People |
|-------------------------|-------------------|
| Less than 6 months | 36% |
| 6 to 12 months | 37% |
| 1 to 2 years | 16% |
| More than 2 years | 11% |

Source : Prepared by the Author Based on Data from a Survey Applied to UniZambeze Graduates (2025)

The table shows the distribution of employed young people according to the time elapsed between graduation and obtaining their first job. It can be observed that the majority (37%) found employment within 6 to 12 months, while 36% entered the workforce in less than six months. A

smaller percentage needed more time, indicating structural challenges in the local labor market.

The graph shows that, although some graduates find employment quickly, a significant portion faces prolonged waiting times, demonstrating that academic training does

not guarantee immediate job placement. These results reinforce the importance of strategies such as internships, trainee programs, and support for entrepreneurship to reduce the transition time between education and the job market.

In summary, the analysis carried out throughout this section allows us to conclude that the employability of young graduates in the agricultural sector in Mocuba is characterized by structural weaknesses and marked inequalities. Firstly, it was found that the majority of graduates remain unemployed (63%), revealing limited and below-expectations integration in relation to higher education. Even among those who manage to find employment, the waiting time for the first job is long, which demonstrates a difficult transition process between academic training and the labor market.

Secondly, it was found that formal employment absorbs only a minority (30%), while other forms of occupation, such as informal work or self-employment initiatives, are poorly diversified and have limited reach. This scenario reinforces the vulnerability of young people in a market that offers few stable and sustainable alternatives.

On the other hand, the analysis of the relationship between employability and course of study revealed that, although some areas show greater job placement potential, such as Agronomic Engineering, others, such as Forestry Engineering, face greater difficulties. Even though the association between course of study and employability is statistically significant, its intensity proved weak, indicating that external factors, such as the structural conditions of the local market and the opportunities created by public policies, have a decisive weight in the process.

Overall, the results confirm that academic training alone does not guarantee the professional integration of young people. The absence of effective linkage mechanisms between universities, the productive sector, and employability policies exacerbates the situation, leaving a large portion of educated youth outside the job market.

Therefore, the final considerations of this analysis point to the need for more consistent policies aimed at youth professional integration, including structured internship programs, promotion of agricultural entrepreneurship, support for self-employment initiatives, and greater coordination between training and employing institutions. Only with such measures will it be possible to transform training in the agricultural sector into effective job opportunities and socioeconomic development.

IV. DISCUSSION OF RESULTS

➤ *Profile of Young Graduates in the Agricultural Sector*

The results revealed that, between 2019 and 2023, UniZambeze graduated 475 young people in agricultural sector courses, with a male predominance (63.2%) and an average age range between 25 and 30 years. This male predominance confirms what Floriano (2018) observes about the persistence of gender asymmetries in agricultural

technical and higher education, although the presence of 36.8% women demonstrates significant progress towards equity.

The higher concentration of graduates in Agronomic Engineering and Agricultural Economics courses (61.4% of the total) reflects the attractiveness of areas with greater practical applicability and employability potential. This result aligns with the argument of Siteo (2014) and Chihanhe et al. (2022), according to whom training related to agricultural production and management is considered strategic for rural development and attracts greater youth demand.

The fact that most graduates are between 25 and 30 years old suggests that young people follow a regular educational path, but the presence of graduates up to 50 years old highlights the search for professional retraining and continuous learning, which is consistent with Yorke (2006), who defines employability as the ability to adapt and learn throughout life.

The year-on-year variation in graduations, with a drop in 2020 and a peak in 2021, demonstrates the impact of the COVID-19 pandemic on higher education, interrupting academic activities and delaying course completion. This fluctuation reflects trends observed throughout the country, where the pandemic exacerbated the structural difficulties of education and youth employment (INE, 2023).

➤ *Challenges in Professional Integration*

The main challenges identified by young graduates in Mocuba were the lack of job opportunities (26.1%), the requirement for prior experience (16.5%), and the existence of corruption or bribery in recruitment processes (14.6%). These factors reveal the existence of a restricted, unmeritocratic labor market that is ill-suited to the reality of recent graduates.

The prevalence of a lack of opportunities reinforces what Floriano (2018) and Castel-Branco (2024) point out as a structural characteristic of the Mozambican market, where the formal sector is limited and self-employment emerges as the main alternative for subsistence. In Mocuba, the reduced dynamism of the private sector and the weak presence of agricultural industries hinder the absorption of graduates, as Macassa (2020) already pointed out for the city of Quelimane.

The requirement for prior experience, in turn, constitutes a recurring paradox. Young people are excluded because they lack experience, but they have no means of acquiring it. This barrier confirms the analysis of Fugate et al. (2004), who emphasize the importance of practical learning and exposure to the work environment as essential components of employability. The lack of structured internship programs or school-to-work transition mechanisms exacerbates the problem, especially in peripheral contexts like Mocuba.

The reference to corruption and bribery in employment opportunities, mentioned by 14.6% of respondents, reflects an ethical and institutional obstacle that compromises labor justice. This finding reinforces Alexandre's observation (2024), which calls attention to the need to strengthen governance and transparency in public and private institutions, in order to ensure that merit and competence prevail over personal influence.

The absence of contact networks and poor access to initial capital also emerged as significant obstacles. These elements show that employability depends not only on academic training, but also on social and relational factors, as argued by Yorke (2006). Young people who lack institutional or family connections face greater barriers to entering the formal market, which deepens inequalities and encourages underemployment.

➤ *Level of Professional Insertion*

Quantitative results indicate that 63% of young people trained in the agricultural sector in Mocuba remain unemployed, while 30% are formally employed and only 6% work in alternative modalities (informal work, internships, or self-employment). These data reflect a worrying scenario of underutilization of qualified human capital, in line with the findings of the PNISA II (Republic of Mozambique, 2022), which acknowledges the low absorption rate of young graduates by the productive sector.

The formal employment rate (30%) highlights the existence of employability niches, especially in public institutions, NGOs, and rural development projects. However, the limited proportion of young entrepreneurs (2%) demonstrates the fragility of policies promoting youth entrepreneurship, also pointed out by Floriano (2018) and Chihanhe et al. (2022). Lack of access to credit, land, and technical assistance are concrete barriers that hinder the creation of sustainable agricultural businesses.

The relationship between course of study and employability shows that Agronomic Engineering has the highest placement rates (16.4%), while Forestry Engineering has the lowest (7.4%). This difference reveals that the market values more generalist training that is directly applicable to agricultural production, while more technical and niche areas find fewer opportunities, which confirms Siteo's (2014) analysis of the segmented structure of labor demand in the sector.

The prevalence of unemployment and informality suggests that a diploma, while necessary, is not sufficient to guarantee employability, validating the argument of Fugate et al. (2004) regarding the multidimensional nature of the concept. The Mozambican market requires not only technical training, but also behavioral skills, initiative, and the ability to adapt to local demands.

In an integrated manner, the results show that young graduates in the agricultural sector face a triple challenge: (i) a training system that is still far removed from the practical demands of the market; (ii) an economic context with

limited employment opportunities; and (iii) the absence of consistent policies that facilitate the transition between university and the world of work. This finding reinforces Macassa's (2020) observations on the lack of coordination between the education system and the productive sector.

Despite these limitations, difficulties in entering the workforce do not signify a lack of potential. Many young people show a willingness to undertake and innovate, although they face structural and institutional deficiencies that restrict the realization of these initiatives.

Thus, the employability of young graduates in the agricultural sector in Mocuba is a phenomenon conditioned by structural, economic, and institutional factors. Although university education has contributed to raising the technical level of graduates, the weak link between universities and the labor market, coupled with the limited capacity of the private sector, keeps youth unemployment at high levels.

These findings corroborate Yorke's (2006) theoretical argument that employability is a social construct, not just an individual attribute. It requires a favorable ecosystem, supported by incentive policies, internship opportunities, financing mechanisms, and partnerships between the public and private sectors acting in a coordinated manner.

V. CONCLUSIONS

This study aimed to analyze the professional integration of young graduates in the agricultural sector from Zambeze University (Mocuba campus) between 2019 and 2023, seeking to understand the graduates' profile, the main challenges faced, and the level of employability achieved. The research combined quantitative and qualitative methods, using document analysis and a structured survey, in order to ensure a comprehensive understanding of the phenomenon.

The results allowed us to conclude that the profile of graduates in the agricultural sector is predominantly male, although a gradual increase in female participation is observed, signaling progress towards gender equality in higher education. Most graduates are between 25 and 30 years old, reflecting a regular academic trajectory, but with a significant presence of adults who sought training later in life, demonstrating an interest in professional retraining and the strengthening of technical skills.

It was found that the most sought-after courses were Agricultural Engineering and Agricultural Economics, representing more than 60% of the total graduates. This trend highlights the preference for generalist training linked to agricultural production, considered more relevant to the local economic reality and the job market. The temporal analysis also showed that 2021 registered the highest number of graduations, reflecting the post-pandemic recovery and the institutional resilience of UniZambeze.

Regarding employability, it was found that the majority of young graduates remain outside the formal job

market, with approximately 63% unemployed. Only 30% hold stable professional positions, mainly in public institutions and agricultural projects, while 6% work in informal or self-employed occupations. This scenario confirms the limitations of the agricultural labor market in Mocuba and the lack of effective mechanisms for transitioning between university and the world of work.

The main challenges identified by respondents were the lack of job opportunities, the requirement for prior experience, and the existence of corrupt practices in recruitment processes. These obstacles reinforce the idea that youth unemployment in the agricultural sector results from structural factors, such as weak local economic dynamism, the absence of integrated employment policies, and the gap between academic training and the practical needs of the market.

In general, it can be concluded that the employability of young graduates in the agricultural sector in Mocuba is conditioned by a combination of individual, institutional, and contextual factors. University education, although relevant and technical, is not sufficient on its own to guarantee job placement, requiring the strengthening of public policies, partnerships between the productive sector and academia, and encouragement of youth entrepreneurship.

Thus, the study confirms that improving youth employability depends on the articulation between three main axes: market-oriented training, effective public policies, and inclusive local development.

➤ *Suggestions*

Based on the evidence and conclusions of the study, the following suggestions are presented:

- Strengthen the link between academic training and the job market through partnerships with public and private institutions and active agricultural projects in the region.
- Introduce mandatory curricular and extracurricular internship programs that allow students to gain practical experience before graduation.
- Periodically update the curricula of agricultural courses, aligning them with the emerging needs of the agricultural sector and with national rural development policies.
- To promote mentoring and career guidance activities for finalists, including job fairs and incubation of entrepreneurial ideas.

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