

Analyse de la perception des étudiants sur la satisfaction et l'employabilité après l'introduction du système LMD en Guinée

Analysis of students' perceptions of satisfaction and employability after the introduction of the LMD system in Guinea.

Auteur 1 : ELMOCTAR Ibrahim Ag,
Auteur 2 : AMINOU Fawaz A. Adéchinan,
Auteur 3 : SAMAKE Amadou,
Auteur 4 : DIALLO Mamadou Diouldé

ELMOCTAR Ibrahim Ag, (<https://orcid.org/0009-0005-2443-9047>, PhD)
University of Labé / Faculty of Administrative Sciences and Management, Guinea

AMINOU Fawaz A. Adéchinan, (<https://orcid.org/0000-0002-8439-2085>, PhD)
University of Labé / Faculty of Administrative Sciences and Management, Guinea

SAMAKE Amadou, (<https://orcid.org/0009-0006-3587-237X>, PhD)
General Lansana Conté University / Faculty of Economics and Management, Guinea

DIALLO Mamadou Diouldé, (<https://orcid.org/0009-0008-4700-2739>, Msc)
University of Labé / Faculty of Administrative Sciences and Management, Guinea

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Résumé

Cette étude analyse la perception des étudiants guinéens sur la mise en œuvre de la réforme LMD du point de vue satisfaction et employabilité. Elle applique les statistiques descriptives et le modèle Logit sur les données provenant d'une enquête portant sur 465 étudiants issus de trois universités de la Guinée. Les résultats montrent une perception globalement positive du LMD, bien que certains facteurs, tels que la compréhension du système et la comparaison avec d'autres pays, influencent cette satisfaction. Les étudiants bien informés par les autorités et convaincus de l'adéquation du LMD avec le marché de l'emploi l'apprécient davantage. L'étude recommande aux autorités universitaires d'intensifier les campagnes d'information pour améliorer la compréhension du système. Elles doivent renforcer la capacité des acteurs à surmonter les obstacles structurels et financiers tout en garantissant une mise en œuvre effective et adaptée au contexte local.

Mots clés : LMD, perception des étudiants, analyse économétrique, satisfaction, réforme universitaire

Abstract

This study analyzes Guinean students' perceptions of the implementation of the LMD reform from the point of view of satisfaction and employability. It applies descriptive statistics and the Logit model to data from a survey of 465 students from three universities in Guinea. The results show an overall positive perception of the LMD, although certain factors, such as understanding of the system and comparison with other countries, influence this satisfaction. Students who are well informed by the authorities and convinced that the LMD is well suited to the job market appreciate it more. The study recommends that university authorities step up information campaigns to improve understanding of the system. They should reinforce the ability of players to overcome structural and financial obstacles, while ensuring effective implementation adapted to the local context.

Keywords : LMD, student perception, econometric analysis, satisfaction, university reform

Introduction

The Licence-Master-Doctorat (LMD) system is a higher education structure inspired by the Anglo-Saxon model, which organizes training into semesters and transferable, capitalizable teaching units. Each teaching unit is associated with a number of credits corresponding to the volume of work required of the student. In principle, a Bachelor's degree takes three years to complete, a Master's degree five years, and a Doctorate eight years.

The adoption of the LMD in French-speaking African countries began following a meeting of WAEMU member countries in Dakar in 2007, with the aim of harmonizing and improving the quality of higher education to European standards (Bauneli & Zawadi, 2023; Doumbouya, 2021). This reform was seen as a solution to the structural problems of the university system in West Africa, notably the imbalance between the growth in student numbers and the shortage of infrastructure and teaching staff.

Historically, higher education in Africa was designed to train the executives needed for post-independence public administrations. In the 1960s, it produced around 1,000 graduates per year, compared with over 80,000 in the 1990s (Bamba et al. 2023; Ondo, 2006). However, from the 1990s onwards, a deep crisis set in in several sub-Saharan African countries due to the decline in public funding allocated to higher education, decreasing by 19.1% on average between 1980 and 1990 (World Bank, 1995; Oketch, 2016). This reduction in resources, combined with the university demographic explosion, has led to a deterioration in teaching and learning conditions. The LMD reform was introduced in Guinea in 2007 to modernize higher education and adapt it to the demands of globalization. However, its implementation has encountered numerous difficulties, including a lack of qualified teachers, insufficient infrastructure and a lack of adequate teaching resources (Naparé, 2011; Diop, 2021). These challenges have a direct impact on the quality of skills acquired by students and, consequently, on their employability.

One of the major criticisms of the LMD is the gap between university training and the requirements of the job market. The logic of employability is no longer based solely on diploma qualifications, but also on the practical skills and adaptability of individuals (Monchatre, 2010; Marginson, 2019). It is therefore crucial that university reforms do not limit themselves to the administrative restructuring of curricula, but also integrate pedagogical approaches that promote the acquisition of transversal and professional skills.

This research, entitled “Analysis of student perceptions of satisfaction and employability after the introduction of the LMD system in Guinea”, aims to examine Guinean students' perceptions of the LMD system, focusing on their satisfaction and perceptions of employability. An analysis

of their experiences will provide a better understanding of the issues and challenges associated with this reform from the point of view of those primarily concerned. It is structured as follows: the first section presents the LMD system in Guinea, and the second is devoted to a literature review. Section 3 presents the methodology adopted, while the results and discussions are the subject of Section 4. Finally, the last section presents the conclusion, followed by bibliographical references.

1. The LMD system in Guinea

The challenges facing higher education vary according to national contexts. However, it is essential to look beyond generalities and examine how each system adapts to its specific environment. Today, as the Licence-Master-Doctorat (LMD) reform progresses in ECOWAS countries, it is becoming essential to assess its impact on the performance of higher education institutions, particularly in a context of internal crises and the internationalization of higher education (Teferra, 2020).

The LMD system is seen as a crucial reform for countries still experimenting with it, notably Mali and Guinea. Its objectives include improving the internal efficiency of training programs, developing lifelong learning, professionalizing curricula, and enhancing the attractiveness and internationalization of the training on offer (De Wit & Altbach, 2021). The Network for Excellence in Higher Education in West Africa (REESAO, 2008) has played an important role in supporting this transition.

In Guinea, the LMD reform was adopted in 2007 with the aim of harmonizing curricula with those of other African countries and enhancing the employability of graduates, whose unemployment rate is a major concern (Boughey & McKenna, 2021). Inspired by the Bologna process (1999), this reform is based on a credit system that facilitates international recognition of diplomas (Muller & Ravinet, 2008). However, recent studies show that the implementation of this model in sub-Saharan Africa still faces numerous obstacles, notably due to a lack of financial and human resources (Van Schalkwyk et al. 2022).

The evaluation of Guinea's old university systems revealed their inability to produce skills in line with the labor market. In addition, the non-convertibility of Guinean diplomas and the lack of infrastructure and research facilities are obstacles to reform (Diallo et al. 2011). In collaboration with private and international partners, the Guinean government has set up a steering committee, organized training for teachers and initiated a campaign to modernize curricula (MESRS, 2007; Teferra & Altbach, 2019).

To reinforce the professionalization of training, several partnerships have been established with institutions such as the Université du Québec à Montréal (UQAM) and the french cooperation. These collaborations have enabled the restructuring and creation of new programs, teacher training and the improvement of academic infrastructures (Doumbouya, 2021). In addition, the World Bank, via the Higher education development support project (HEDSP), financed an extensive self-evaluation campaign of higher education institutions (Diaouné et al. 2011).

With regard to the use of new information and communication technologies (NICT), 2,000 teachers and students have been trained in the use of digital resources and online documentary research (Diallo et al. 2011). However, recent research indicates that the effective integration of digital tools in teaching remains limited due to a lack of infrastructure and teacher training (Boahin & Hofman, 2013).

Despite these advances, a number of challenges remain. Student numbers far exceed university capacity, teaching staff are understaffed and insufficiently qualified, and funding remains limited (Tchamyou, 2021). The competency-based approach is struggling to take hold, teaching remains predominantly lecture-based, and assessment favors written exams at the expense of practical work and projects (Diaouné et al. 2011). To ensure the success of the reform, it is crucial to invest more in training teachers, improving infrastructure and matching training to the needs of the job market (World Bank, 2022).

So, although the LMD reform represents an opportunity to modernize Guinean higher education, its success depends on the ability of stakeholders to overcome structural and financial obstacles, while ensuring effective implementation adapted to the local context.

2. Literature review

We present this review in two sections, the theoretical review and the empirical review, which will discuss the state of knowledge on our subject.

2.1. Theoretical review

2.1.1. Educational reforms and IACR theory

The theoretical literature on educational reform is abundant. Its main aim is to guide the actors involved in order to maximize the chances of success of education systems (Huberman & Havelock, 1981). These authors are at the origin of the IACR (Infrastructures, Authorities, Consensus, Resources) theory, which analyzes the factors influencing the success of educational reforms.

The exogenous factors studied include the degree of integration of the educational institution, sensitivity to change and the level of competence of external agents. On the endogenous side, the authors highlight factors such as confusion of objectives, lack of reward for innovative agents and the monopoly of the school system. All these indicators are interconnected and grouped around the four pillars of IACR theory:

- Infrastructures (I): Refers to the structures and mechanisms put in place to ensure effective implementation of reforms.
- Authorities (A): Represent the political will and commitment of decision-makers in mobilizing resources and managing reform processes.
- Consensus (C): Expresses social support for reform and facilitates innovation by encouraging change.
- Resources (R): Include the availability of qualified human resources and the financing needed to achieve the objectives set.

These four factors are interdependent and operate in a systemic way. Any educational reform implemented without taking these elements into account is unlikely to be viable.

2.1.2. Environmentalist and constructivist theories

Two complementary theoretical approaches can be used to refine the analysis of educational reforms: Berbaum's environmentalist theory (1984) and Doré's constructivist theory (1983).

2.1.2.1. Berbaum's environmentalist theory

Berbaum (1984) develops an approach based on the influence of the environment on the learning process. According to him, the acquisition of new skills and behaviors is largely influenced by external stimuli, which means that the environment plays a decisive role in the implementation and success of school innovations. He identifies several key factors, including:

- The knowledge, attitudes and practices of teachers and learners, which directly influence the effectiveness of reforms.
- Behavioral automaticity, which suggests that certain changes in the school system can lead to unintended changes in educational practices.
- The impact of school innovations on learning dynamics, highlighting the importance of material and pedagogical conditions.

However, Berbaum (1984) acknowledges the existence of other factors that can influence educational reforms, although their impact is less global.

2.1.2.2. Doré's constructivist theory

Doré (1983) proposes an approach centered on the individual and the active construction of knowledge. Unlike the environmentalist approach, which emphasizes the influence of the environment, constructivism stresses the role of the learner in the learning process. According to Doré, learning is based on three fundamental principles:

- Constructed thinking: learners must organize and structure their knowledge to give meaning to what they learn.
- Motivation and active involvement: Effective learning depends heavily on the learner's personal commitment.
- Interaction with relevant elements: Learning is not passive, but is based on exchanges and situations that stimulate understanding.

This approach underlines the fact that the implementation of an educational reform cannot be limited to structural changes; it must also take into account the psycho-cognitive aspects of learners and teachers to ensure its effectiveness.

Analysis of educational reforms through IACR theory highlights the importance of infrastructure, authority, consensus and resources in ensuring their success. However, environmentalist and constructivist approaches show that the environment and individual dynamics also play an essential role in the effectiveness of school innovations. Thus, any educational reform must integrate these multiple dimensions in order to maximize its chances of success.

2.2. Empirical review

The LMD reform has been adopted in several African countries in order to bring their higher education systems into line with international standards. However, several researchers have highlighted the challenges associated with its implementation in these contexts (Charlier & Croché, 2010). Indeed, theoretical reflection on the LMD is based on pedagogical innovation and Crozier & Friedberg's (1977) theory of the strategic actor. This approach highlights the interdependence of system elements and their dynamic interaction. Despite this holistic vision, several studies have revealed difficulties in implementing the LMD in Africa.

A number of analyses have been carried out on the adoption of the LMD in different African countries. Goudiaby (2009) points out that implementation of the LMD in Senegal was rushed, necessitating local adaptation. Similarly, Benghabrit-Remaoun & Rabahi-Senouci (2009) show that the implementation process in Algeria was laborious and uncertain. This difficulty is also

observed in other developing countries such as Mali and Cameroon. Feudjio (2009) highlights the structural, pedagogical and administrative limits to the effective application of the LMD in some Cameroonian universities. Idiata (2006) comes to a similar conclusion in Gabon, where the conditions for the success of the reform remain insufficient. More recent studies confirm these findings. For example, Diallo (2021) examines the implementation of the LMD in Guinea and highlights the mismatch between available infrastructure and the requirements of the new system. Similarly, Mondain & Goudiaby (2022) analyze the situation in Senegal and stress the need for better preparation of teachers and adaptation of curricula.

One of the fundamental aims of the LMD is to improve the employability of graduates. Bouba (2014) analyzes its impact at the University of Maroua and notes that the reform has taken into account professionalization and student mobility. However, he stresses that the success of the LMD depends on the match between training and the needs of the labor market. Coniez (2008) notes that universities in France must meet the nation's needs by providing qualified executives. However, he observes a mismatch between university training and employers' expectations, a reality that is also true in several African countries. With this in mind, Walther & Filipiak (2007) propose strategies to strengthen the professionalization of higher education in developing countries. More recent studies enrich this line of thinking. According to Ramdé et al (2023), the adoption of the LMD in Burkina Faso has contributed to a better structuring of training courses, but still struggles to guarantee optimal professional integration of graduates. They stress the need for stronger partnerships between universities and companies.

Career guidance plays a key role in the effectiveness of the LMD. Guichard & Huteau (2005) emphasize that guidance assistance requires accurate information on training courses and professions. Fozing & Mboning (2013) highlight the importance of a good knowledge of the economic and social environment for guidance counselors in Cameroon. In the same vein, Minyono Nkodo (2008) considers that guidance counsellors must be the link between university training and the job market. Other studies confirm this need. In Côte d'Ivoire, Gbato (2008) highlights the ineffectiveness of university training in meeting economic and social needs, and calls for a strengthening of the guidance system. More recently, Traoré et al (2023) studied the impact of guidance services on the employability of graduates in Mali, highlighting the lack of resources for effective guidance.

A key point that remains little explored in the literature is students' perception of the LMD. Most research focuses on institutional constraints and the impact on employability, without really integrating the point of view of the students themselves. It would therefore be relevant to

analyze their perception of the system, particularly with regard to opportunities for internationalizing skills and professional integration.

Studies on the LMD in Africa show that it is a necessary reform, but one that remains difficult to implement due to a number of factors: insufficient infrastructure, lack of teacher training, mismatch between the training on offer and the needs of the job market. More recent research confirms these trends and stresses the need to better adapt the LMD to local realities. Lastly, it would be essential to take greater account of students' perceptions to better understand the real impact of the system and propose more effective adjustments.

3. Methodology

As the main objective of this study was to analyze students' views on the implementation of the LMD reform, we adopted the dichotomous method. This model belongs to the class of models with qualitative dependent variables, and the principle of these models is as follows: we want to understand or predict the effect of one or more explanatory variables on a qualitative variable. This qualitative variable may have two or more modalities, and the modalities (when their number is greater than two) may be ordered or unordered. Specifically, the binary probit model models the probability of an event occurring (in our case, satisfaction), given the values of a set of qualitative and/or quantitative explanatory variables.

3.1. Theoretical model

The theoretical model used in this study is that developed by McFadden (1981) in his econometric models of option realization probabilities. In these models, we assume that a student has a perception between two satisfaction levels j ($j = 1$ and 0), and that the perception observations reveal the student's preferences derived from several factors. If student i responds positively to a perception, this implies that the estimated utility of his response is greater than the other option $U_{i0} < U_{i1}$ where U_{i1} is the student's utility of being satisfied and U_{i0} the utility of not being satisfied.

The utility of student i with respect to the LMD is in fact composed of two parts: a systematic term characterized by a vector of attributes X_{ij} such as having researched the LMD, having received an awareness of the LMD, etc.; and another random one noted ε_{ij} . We have:

$$U_{ij} = X_{ij} + \varepsilon_{ij} \quad (1)$$

The utility U_{ij} is not observable. What is observed is the satisfaction decision Y_i , which takes the value 1 if the student is satisfied, noted 1 (yes), and the value 0 if the student is not satisfied,

noted 0 (no). Under the assumptions of rationality, the individual chooses the state that gives him the greatest utility, so we have the following probability entries:

$$Probability[Y = 1] = Probability(U_{i1} > U_{i0}) \quad (2)$$

$$Probability[Y = 0] = Probability(U_{i0} > U_{i1}) \quad (3)$$

McFadden proves in this case that the probability of student i choosing alternative 1 is as follows:

$$Pr[Y = 1] = \frac{e^{X_i\beta}}{1+e^{X_i\beta}} \quad (4)$$

This is the reduced form of the binomial logit model where the row vector X_i of explanatory variables for individual i contains the independent variables considered above by the attributes that could influence student satisfaction. This vector obviously contains a constant. It is assumed that the unobserved random terms ε_{ij} follow a logistic probability distribution.

3.2. Model spécification

Our endogenous variable is qualitative, with two modalities: whether the student is satisfied with the application of the LMD or not. Given this, dichotomous models; logit or probit are the most appropriate in such cases.

The data available does not allow the use of simple linear models in this case. The choice between logit and probit models is determined by the distribution function and the interpretability of the results. In this paper, the logit model is used. The logit model differs from the probit model in the distribution of the error term. This follows a normal distribution for the probit model and a logistic distribution for the logit model. In addition, the logit model offers a number of interpretation alternatives, such as the signs of the coefficients. The logit model has the advantage of greater numerical simplicity (Marpsat & Trognon, 1992). What's more, the logit model allows "extreme" events to be assigned a higher probability than the normal distribution.

We assume a binomial variable denoted Y . This random binomial variable is qualitative in nature and reflects the presence or absence of a probability event. An assumption of Gumbel distribution (logistic law) leads us to a Logit model.

Based on the theoretical model, we have defined the dependent variable "Student satisfaction", equal to 1 if the student is satisfied (with the application of the LMD, that the LMD meets the needs of the job market, that the LMD enables professionalization) and 0 if the student has no positive viewpoint.

$$Y_{ij} = \delta_m W + \varepsilon_{mj} \quad (5)$$

Y_{ij} = the point of view of student i (j = of the application of the LMD, that the LMD responds to the job market, that the LMD enables professionalization).

W = a vector of student characteristics ; these include : research carried out in advance of the LMD by the student, degree of satisfaction with the LMD process, satisfaction with information provided by university authorities to raise awareness of the LMD, positive view of access to employment in Guinea through the LMD, views on the professionalization of the LMD, whether the LMD provides practical experience, view of the LMD in Guinea versus the rest of the world. In the first model, we seek to determine the influence of these variables on students' positive view of the application of the LMD in Guinea; in the second model, the influence of these variables on students' positive view that the LMD promotes professionalization; finally, in the third model, we seek the effect of these variables on students' positive view that the LMD responds to the job market.

Our model is essentially based on the perceptions of 465 students interviewed through a survey in three universities in Guinea (UGANC, UGLCS, UL). Using SPSS18 software, we performed a descriptive analysis on the data collected, and Stata 15 software to carry out an econometric test to confirm or refute the hypotheses that the LMD reform :

- would be a source of satisfaction for students, provided that the research carried out and the information received are multiple,
- is more professionally oriented than the old conventional system,
- promotes student employability.

For this purpose, the probit estimation model has been chosen as it is better suited to our concerns.

3.3. Sampling and questionnaire

In Guinea, the introduction of the LMD system reform has given rise to many misunderstandings between political decision-makers and university stakeholders (students, teachers, administration). This is due to difficulties in managing the various university services (examinations, students' schooling, orientation, job opportunities, etc....). Given the need to raise awareness, we have taken students as the statistical unit. The sample size was set at 465 students, 66% men and 34% women.

As far as the questionnaire is concerned, we carried out direct interviews with respondents, i.e. in each university, faculty, level and stream, in order to gather representative and fairly reliable data. Indeed, the questionnaire must establish a climate of trust between the interviewer and the

respondent in order to better address the concerns of the survey. However, it is divided into two parts: the first part enables us to find out the students' point of view in terms of satisfaction with the reform of the LMD system. The second part is the most important part of the survey, as it enabled us to get a better idea of students' views on the capacity of the LMD reform to professionalize and even better meet the expectations of the job market.

Table N°1 : University samples

Universities	Frequency	Pourcentages
UGANC	221	47,5
UGLCS	167	35,8
UL	79	16,7
Total	465	100,0

Source : Authors

From this table, we can see that out of a total of 465 students surveyed, 221 are from Gamal Abdel Nasser University, Conakry (UGANC), 167 students are from General Lansana Conté University, Sonfonia (UGLCS) and 79 students are from University of Labé (UL). UGANC's weighting is 47.5%, followed by UGLCS with a percentage of 35.8%. UL's weighting is 16.7% lower than the other two, due to the higher enrolments in these universities.

Table N°2 : breakdown of respondents by gender

Gender	Frequency	Pourcentage
Male	312	67,1
Female	153	32,9
Total	465	100,0

Source : Authors

The sample is made up of 312 males and 153 females, i.e. 67.1% and 32.9% respectively. The sample is therefore predominantly male.

4. Results and discussion

The results obtained in this study are based both on a descriptive analysis of students' perceptions and on an econometric analysis to specify the significance of the results obtained.

4.1. Descriptive analysis

Through a series of questions put to students during our survey, this table retraces the opinions of the students in our sample.

Table N°3 : Questions about satisfaction with LMD system implementation

		Have youd one any research to understand the LMD system ?		Are you satisfied with the information you received about the LMD system at university ?		Have you tried at least once to go abroad to continue your studies ?		Do you think the LMD system meets job market expectations ?	
		No	Yes	No	Yes	No	Yes	No	Yes
Are you satisfied with the implementation of the LMD system at your university ?	No	64%	36%	67%	33%	71,3%	28,7%	65%	35%
	Yes	53%	47%	30%	70%	55,2%	44,8%	17%	83%

Source : Authors

A close look at Table 3 above reveals that the majority of students who are dissatisfied with the implementation of the LMD system are those who have not done any research to understand it (64%), have been misinformed by the relevant authorities (67%) and finally doubt the performance of the LMD system in terms of employability (65%). However, the Educational Research Network for West and Central Africa (ERNWACA) stresses that the success of the LMD reform depends on the involvement of all those involved in higher education, with priority given to students and teaching staff. In other words, the quintessence of the LMD reform lies in its strong contribution to the competitiveness and professional integration of learners. This quality assurance is the responsibility of the decision-makers who are supposed to ensure the proper management of the LMD system. However, despite the authorities' commitments, the degree of application of accompanying measures needs to be revised upwards (ERNWACA, 2014). Furthermore, we can also see that the proper dissemination of information to understand the LMD reform contributes greatly to satisfaction with the implementation of the said reform. As a result, our survey reveals 70% of satisfied students versus 30% of unsatisfied students.

And among those who are satisfied with the implementation of the LMD reform, 83% are convinced that it meets the expectations of the job market.

Table N°4 : Questions relating to the professionalization of LMD system

		Have youd one any research to understand the LMD system ?		Are you satisfied with the information you received about the LMD system at university ?		Do you think it's necessary to introduce a compulsory internship during your study ?		Did you have any professional experience during your studies ?	
		No	Yes	No	Yes	No	Yes	No	Yes
Do you find the LMD system more professional ?	No	84%	16%	89%	11%	6%	94%	82%	18%
	Yes	51%	49%	37%	63%	5%	95%	59%	41%

Source : Authors

Despite objectives, the LMD reform in Guinea does not seem to include a means of professionalizing students during their studies. In this respect, the survey reveals that over 94% of the students questioned believe it is necessary to introduce a compulsory work placement during their studies. However, a large majority said they had not received any work experience during their studies. Furthermore, over 84% of those who have not done any research to understand the reform, and 89% of those who are not satisfied with the information they have received, think that the LMD reform is not professionalizing. This aspect reveals even more clearly that there is a positive correlation between information on implementation and satisfaction with the implementation of the LMD reform.

Table N°5 : Employability issues in the LMD system

		Are you satisfied with the implementation of the LMD system at your university ?		Do you find the LMD system more professional?		Do you think it's necessary to introduce a compulsory internship during your studies ?		Do you think the LMD system will enable you to work in any country?	
		No	Yes	No	Yes	No	Yes	No	Yes
Do you think the LMD system meets job market expectations ?	No	82%	18%	47%	53%	7%	93%	55%	45%
	Yes	34%	66%	8%	92%	4%	96%	8%	92%

Source : Authors

Table 5 above shows students' views on the employability of the LMD reform. Here we can see that 82% of students who are not satisfied with the implementation are convinced that the LMD reform does not meet the expectations of the job market, compared with 66% of those who are satisfied with the implementation. On the other hand, 92% of those in favor of the employability of the LMD reform are those who believe that it is professionnalyzing and also enables employment in any country. Despite this perception on the part of students, the reality on the ground is alarming. According to ILO forecasts, the working population is growing by 2 to 3% a year, or around 150,000 people. In other words, the gross number of new entrants is of course much higher, estimated at 278,000 in 2010 and set to rise to 434,000 by 2031. These results show that the efforts made to remedy the unemployment problem have so far been insufficient.

4.2. Econometric analysis

Table N°6 : Results for the three models

Model explanatory variables NB : The reference is « No »	Model 1 Satisfaction with the LMD		Model 2 Professionalization of the LMD		Model 3 LMD responds to the job market	
	Coef	Prob	Coef	Prob	Coef	Prob
Pre-research on LMD (Yes)	-0.462**	0.020	0.661**	0.020	0.520**	0.013
Satisfaction with information received about LMD (Yes)	1.197***	0.000	2.116***	0.000	0.226	0.321
Satisfaction with LMD (Yes)	//	//	0.425	0.168	1.668***	0.000
LMD responds to employment (Yes)	1.667***	0.000	0.688**	0.021	//	//
LMD provides international employment (Yes)	0.737***	0.007	1.988***	0.000	1.740***	0.000
Guinean LMD idem other countries LMD (Yes)	0.009	0.960	-0.589**	0.027	-0.506**	0.017
LMD professionalizes (Yes)	0.649**	0.032	//	//	0.796***	0.007
LMD gives professional experience (Yes)	0.320	0.106	0.713**	0.013	0.527**	0.015
Constante	-2.88***	0.000	-1.321***	0.000	-2.506***	0.000
Number of observations	465		465		465	
LR chi2 (6)	241.50		341.33		310.98	
Probability Chi2	0.000		0.000		0.000	
Pseudo R2	0.25		0.44		0.33	

Source : Authors

4.2.1. Results on student satisfaction with LMD implementation (Model 1)

Results from model 1 explain the factors that most lead students to declare themselves satisfied with the introduction of the LMD system in Guinea. These results show that students who have done prior research (Pre-research on the LMD) are less likely to be satisfied with the implementation of the LMD in Guinea than their counterparts who have not. Indeed, a student who has done a lot of research himself will expect a higher level application than the LMD in his current situation, where not all conditions are met. In relation to the information that administrations provide to students on the LMD, the results show that this contributes very significantly to the positive appreciation of the application of the LMD in Guinean universities. We also note that the fact that students find that LMD programs can respond to the job market increases their satisfaction with the application of LMD in Guinea. Indeed, the LMD system in Guinea has brought with it a diversification of programs much more oriented towards market needs, which may well have a positive influence on their views. Similarly, a positive view of the LMD in terms of international job opportunities means that students' assessment of the application of the LMD in Guinea is significantly positive at the 1% level. Finally, students who think that the LMD enables them to become more professional have a significantly positive view of the application of the LMD in Guinea. Indeed, the fact that programs and diplomas are harmonized internationally can facilitate student mobility and, above all, develop the professionalization of higher education, which is much appreciated by students.

4.2.2. Results on students' perception of the employability of the LMD (Model 2)

However, the pressure of ever-increasing youth unemployment has led public authorities to embark on a veritable « race to professionalize » university degrees, in particular the application of the LMD in order to develop the employability of all students (Caillaud, 2013). The table above shows the results of an analysis of students' views on the employability of the LMD.

These results explain the factors that lead students to declare themselves satisfied with the employability of the LMD system in Guinea. Pre-research on the LMD, with a coefficient of (0.661) and a significance level of (0,02), shows that students who did pre-research on the LMD believe that the LMD system favors their employability, despite the difficulties encountered in its application. This can be justified by the fact that, after researching on the LMD, students found that, if properly applied, the LMD can lead to employability, since the LMD provides for the matching of training with employment.

As for the information received on the LMD, with a coefficient of (2.116) and a probability (0.000), students who are satisfied with the information received on the LMD system find that

the LMD employability in Guinea. This explained by the fact that the information received from the authorities and during information conferences at the start of the year, on the radio or television, etc., was very clear to them, enabling them to believe in the capacity of the LMD to lead them to employability. Speaking of students who find that the LMD enables them to obtain employment, both nationally and internationally, these students find significantly that the LMD programs are in favor their employability. They also find that the fact that LMD professionalizes increases the chances of employability. However, students who find a difference between the Guinean LMD and that applied in others countries think that the Guinean LMD does not promote employability.

4.2.3. Results on LMD responds to the job market

These results explain the factors that most motivate students to declare that the LMD system meets the needs of the Guinean job market. The coefficient associated with the student's pre-research on the LMD indicates a value of (0.520) at the 1% significance level. Thus, the students who did a pre-research on the LMD believe that the LMD system meets the needs of the job market, despite the difficulties encountered in its application. This can be justified by the fact that, after researching the LMD, students found that, if properly applied, the LMD can meet the needs of the job market every time.

As for satisfaction with the LMD, the coefficient of (1.668) is significant at the 1% level. This shows that students who are satisfied with the LMD system find it relevant to the job market in Guinea. This is explained by the fact that the LMD introduces into its programs the possible needs of companies, the needs of the State and communities, hence the diversity of specialties. Speaking of students who find that the LMD enables them to obtain both national and international employment, the latter find significantly that LMD programs go in favor of the international job market. They also find that the fact that LMD professionalizes increases the chances responding to the job market. However, students who find a difference between the Guinean LMD and that applied in other countries think that the Guinean LMD does not favor its suitability for the job market. As for students who say that LMD professionalizes and gives work experience, they find significantly that LMD programs are in favor of the job market every time. They also find the fact that LMD professionalizes increases the chances of responding to the job market.

Conclusion

The main objective of this study was to analyze students' views on the implementation of the LMD reform in Guinea, using an econometric approach based on the logit method. This method makes it possible to examine the effect of several explanatory variables on a qualitative variable, in order to better understand or predict the determinants of students' perceptions.

The results are based on a dual analysis: a descriptive analysis of students' opinions, and an econometric analysis. The data used come from a survey conducted in three Guinean universities. The results indicate that, overall, students have a positive perception of the implementation of the LMD in Guinea. However, this satisfaction is conditioned by a number of factors likely to attenuate it, notably students' personal efforts to better understand the system, and comparison of the Guinean LMD with that of other countries.

Our results also show that students who have received clear information on the LMD from the authorities, and those who are convinced of its relevance to job market requirements, perceive its implementation more favorably. In light of these observations, we recommend that university authorities step up information campaigns aimed at students to improve their understanding of the LMD system.

Despite our methodological efforts, we encountered certain difficulties in applying econometric techniques. These aspects require further study in order to strengthen the robustness of our results in future research. Furthermore, this study focused exclusively on students' perceptions, without taking into account those of teachers. Incorporating their points of view could enrich the analysis and provide more comprehensive recommendations, which we plan to explore in our future work.

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