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Are there any skills and/or qualifications mismatch in the agricultural labour market in Benin?

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Are there any skills and/or qualifications mismatch in the agricultural labour market in Benin?

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Abstract

This study investigates skills and qualifications mismatch associated with the agricultural sector in the Benin labour market. The study surveyed 336 agricultural employers using a stratified sampling method, and 654 agricultural employees randomly selected from the surveyed enterprises. Data were analysed using descriptive statistics (mean, relative frequency, median) and non-parametric tests (Mann-Whitney, Wilcoxon). The findings showed that regardless the education level, graduates were under-skilled for the soft, digital, and job search skills under review. The study further showed that even though there is a good match for most graduate employees, overeducation is more substantial than undereducation for DEAT holders (upper secondary level diploma for agricultural TVET) and agricultural tertiary education diplomas holders. In addition, only about 2% of agricultural high education diplomas holders and 6.38% of DEAT holders have an employment irrelevant to their field of study. The study suggested an update of curricula in agricultural training institutions, a settlement of a collaborative platform between employing organizations and training institutions, a prioritization of the selection of training programmes considering demand in terms of level and field of education, and an implementation of employment-oriented mentoring programmes integrating practical trainings on the process of accessing and securing an employment.

Keywords: agricultural training institutions, agricultural graduates, skills, qualification, mismatch, labour market.

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1. Introduction

Africa's youth unemployment rate was estimated to 10.7% in 2020, the lowest in the world (ILO, 2020). This positive but misleading record masks the real state of young people in labour market characterized by high informality and small jobs, and wherein young people suffer from under-employment and lack of decent working conditions. Most importantly, this already precarious working situation of young people in Africa is likely to be exacerbated in the foreseeable future, as young Africans are projected to make up 42% of the world's youth (UN-DESA, 2015).

Like other African countries, the Republic of Benin, has also a remarkably low youth unemployment rate estimated to 4 % in 2019 (World Bank, 2019), but with about 72% of the workforce underemployed, including 30.4% in terms of working hours and 63.2% in terms of remuneration (INSAE and BIT, 2013). As response to youth unemployment, the country has adopted a National Employment Policy in 2012. This policy promotes the youth employment through different schemes and initiatives with a focus on agriculture. In fact, agriculture remains a key sector of the country's economy, contributing about 26.9% of the GDP (Word Bank, 2019) and perceived of untapped opportunities to tackle the youth un(der)employment. There are opportunities for youth in the agricultural sector for the following reasons. The successful agribusinesses supported by existing entrepreneurship programs require a skilled labour force; and second, the economic growth (AfDB, 2018) and improvement of the business environment (World Bank, 2017) attract new private investments in the agricultural sector. For example, under the Grow Africa Initiative, since 2015, 26 companies have signed letters of intent in Benin totalling US$378 million of which US$64 million has been invested so far (Grow Africa, 2017).

Beyond the well-known factors underpinning the un(der)employment in Africa including the weak structure of most African economies (Fox et al., 2016; Ebaidalla, 2016) and the

overdependence on natural resources (Ebaidalla, 2016; Ackah-Baidoo, 2016), authors are increasingly evidencing the transition school-to-work as of high challenge on the debate of youth un(der)employment (Baba-Moussa, 2017; Dedehouanou et al, 2018; Awad, 2020). To this end, the quality of education obtained by African graduates has been questioned (Monga et al., 2019). In fact, despite allocating significant resources to enhance the quality of education (Devarajan et al., 2011), many African countries continue to have unsatisfactory educational results, and their graduates frequently lack the skills and qualifications needed by employers in a variety of industries and sectors. This has resulted in skill and qualification mismatches among African youth, with graduate skills and qualifications failing to meet job requirements (AfDB et al., 2012; Coovi and Noumon, 2020). Thus, with the availability of opportunities in the agricultural sector, the issue of mismatch between the supply and demand in the agricultural labour market is of high interest.

Skill mismatches have adverse implications at the individual, firm, and macro levels. At the individual level, high skill mismatches are capable of affecting salaries, decreasing job satisfaction, and increasing the probability of frequent job changes (Chevalier and Lindley, 2009; ILO, 2020). At the firm level, the failure to find skilled workers to perform required jobs has important implications for firm dynamism, productivity, and profit, as well as global competitiveness, growth, and—in some cases—firm survival (AfDB, 2019). At the macro level, structural skill deficits can erode a country's competitiveness and worsen unemployment issues (Boll et al., 2014). Closely related to skill mismatch is the phenomenon of qualification mismatch which include both mismatch by level of education that arise when the level of education does not correspond to the level of education required to perform a job, and mismatch by field of study

which occurs when the field of study of the person does not correspond to the field of study required to perform a job (Stoevska, 2018).

Whilst in developed countries there are huge literatures examining the mismatch between an employee' skills and qualification and that is required in the labour market, empirical evidences in developing countries, especially Africa, are limited (Battu and Bender, 2020). Only few African countries reported on job mismatch (Pitan and Adedeji, 2012; Handel et al., 2016; David and Nordman, 2017; Giotis, 2018). In addition, although agriculture is considered as a sector of opportunity for young Africans, little is known about agricultural labour market. Most of current research on youth employment in Africa only point to skill and/or qualification mismatches as a source of increased youth unemployment. Although these studies acknowledge that work mismatches are likely to be widespread and costly in African labour markets, they either lack empirical evidence or report only case study findings and anecdotal evidence (World Bank, 2015; Honorati and de Silva, 2016; McKenzie, 2017). Therefore, using the case study of the Republic of Benin, this paper aimed at filling this empirical gap by examining the skill and qualification mismatch in the agricultural labour market.
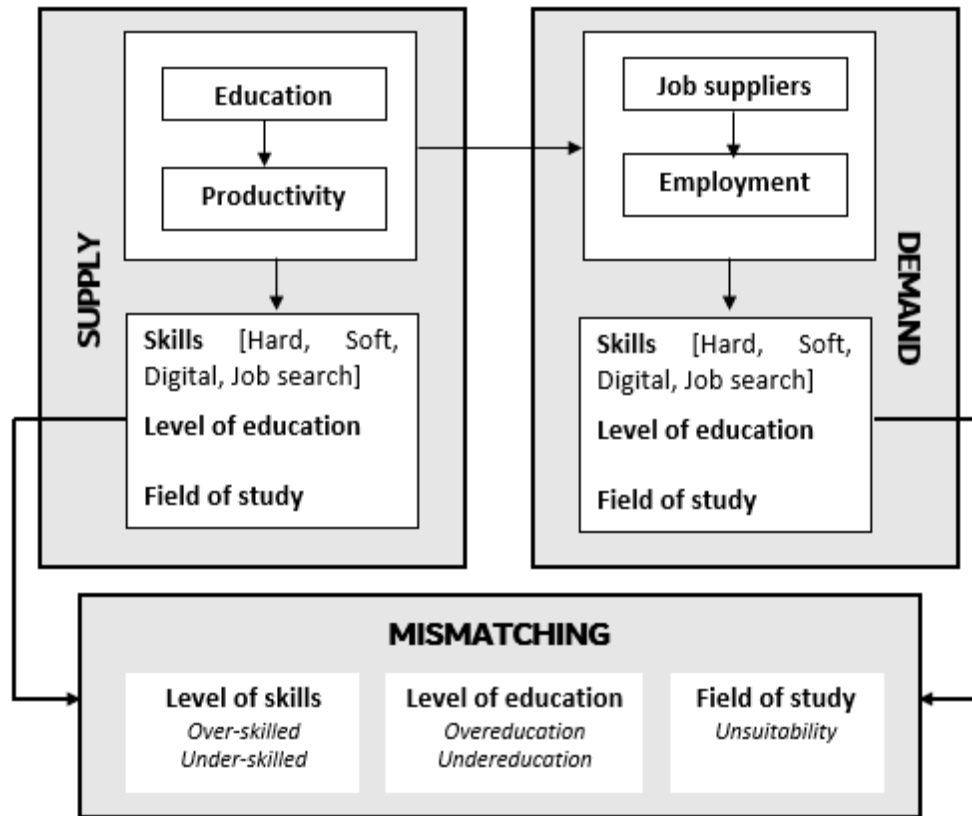
2. Conceptual framework

The theoretical framework is based on the assignment theory to understand the mismatch between the supply and demand of skills and qualifications. The assignment theory was developed by Sattinger (1993). This theory specifies that workers' income or utility maximisation guides workers to choose particular jobs over others, but, in equal importance, jobs or groups of occupations available to workers and the mechanism that assigns workers to jobs need to be considered. Thus, for a particular job, certain workers will have more advantages (as a result of their skills acquired in formal training) than others. This theory predicts that productivity (and

wages) will depend on the quality of the match between the job and the worker and that the likelihood of a skill match will depend on both the skill and qualification demand in a particular occupational group and the supply of workers from the corresponding field. Therefore, employment is not only allocated based on an employee's characteristics but also on the career's characteristics. Thus, the theory effectively predict that mismatched workers will suffer a wage penalty by virtue of their lower productivity (i.e., their lack field-specific skills) or higher costs (i.e., need to acquire field-specific skills) than their well-matched peers. A mismatched worker will not be able to use his/her field-specific skills on the job, and their employers will not reward these skills. Mismatched workers are thus expected (and do in general) earn lower salaries when compared to their well-matched peers (Wolbers, 2003; Robst, 2007; McGuinness and Sloane, 2011). Further, assignment theory suggests that the process of allocation of workers to jobs needs to consider both the supply and the demand of workers to understand skill and qualification mismatch. Under this theory, a natural equilibrium will be reached whereby either labour demand (firms) will adjust to available human capital stocks in order to make full use of skills, or alternatively, labour supply (employees) will refrain from investing in unnecessarily high levels of education, unnecessarily field of study or undesirable skills.

The literature available showed that mismatch is measured from three dimensions: skills, level of education, and field of education (Figure 1). In terms of skills mismatch, the skills are not simply technical or hard skills, but also non-technical skills that are peripheral to the destination occupation (Choteau et al., 2015). These non-technical skills include soft, digital and job search skills, necessary for both getting an employment and sustaining the employment (Bawden, 2001; Kechagias, 2011; Daud et al., 2012; Wanberg et al., 2020; Briscese et al., 2020). Skills mismatch can occur either as over-skilled or as under-skilled (Stoevska, 2018) (Figure 1). The level of

education mismatch referred to in literature as vertical mismatching (Teichler, 2009; Bol et al., 2019). This mismatch can occur either as overeducation or as undereducation (Figure 1). Overeducation occurs when an individual is recruited for a job that requires a lower level of education while undereducation exists when an individual possesses a lower level of education than that required for a job (Cedefop 2010). The field of study mismatch, known as horizontal mismatch occurs when a worker trained in a particular field of study works in another field (Figure 1) (Montt 2015; Bol et al., 2019). Individuals who experience intense competition for jobs within their field-of-study sector may be forced to accept jobs in other field-of-study sectors. Some research combines the three dimensions of mismatches (skills, educations, and/or field of study) to create a more 'genuine' (Farooq, 2011; Mavromaras et al., 2012) measure of mismatch. Based on the theoretical and conceptual considerations, this study hypothesised that the requirements of employers in the agricultural sector in terms of skills, level of education, and field of study are not in line with the supply by agricultural training institutions.

Source: Authors

Figure 1. Conceptual framework of the study

3. Methodology

3.1. Sampling

This study investigates two groups of stakeholders including the employers in the agricultural labour market (i.e., management staff or direct bosses of graduate employees) and the employees who graduated from agricultural training institutions. The stratified sampling method was used to select employers in the agricultural labour market. The strata were the status of employers including public organizations, private sector, civil society organisations and international organisations. For each stratum a minimum size of 30 employers was fixed, corresponding to the minimum statistically acceptable sample size for accurate estimation (Hogg and Tanis, 2005;

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Curran-Everett, 2017). Therefore, a total of 336 employers in the agricultural labour market was selected across the country and distributed in 53 districts over 77 (Figure 2) as following: 60 public organizations, 190 organizations in private sector, 76 civil society organizations, and 09[4] international organizations.

The sampling of agricultural graduate employees was aligned on the agricultural employers sampling structure as to cover the existing variation of employers. For each selected employer in the agricultural labour market, 1 to 3 employees were randomly selected covering whenever possible different study levels. As results, a total of 654 agricultural employees were selected including 228 from Agricultural Technical and Vocational Education and Training and 426 with agricultural high education background.

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[4] The expected number of 30 for the particular category of international organizations were not reached during data collection due to their limited number and the unavailability of some of them.
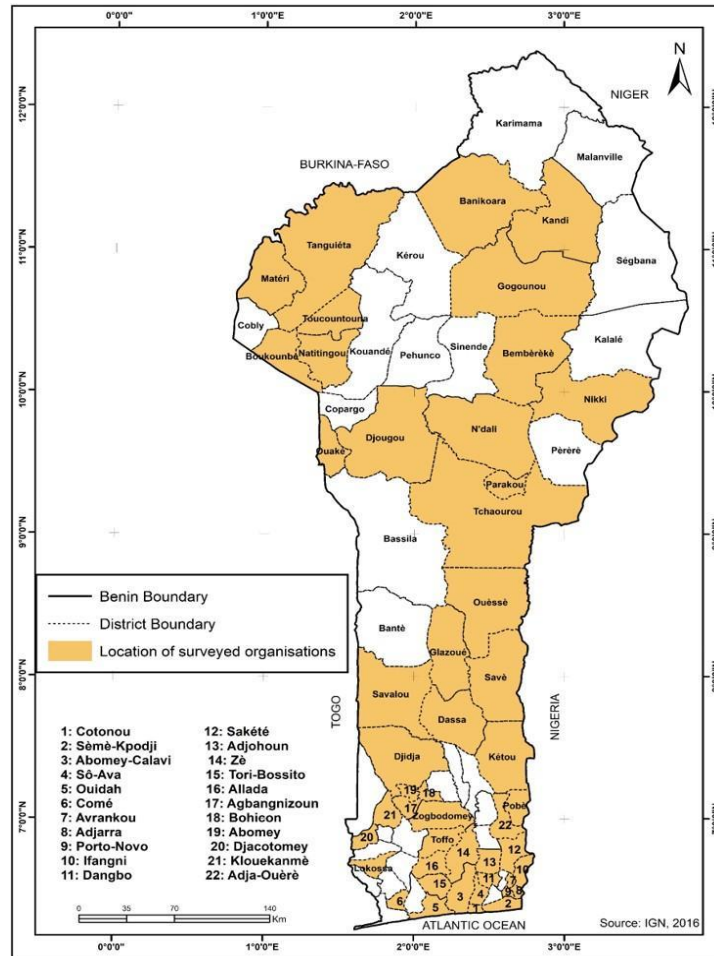
Figure 2. Map of Benin showing the location of the surveyed areas

3.2. Data collection

Given measuring the skill mismatches is not straightforward and remains controversial, this study relies on the subjective approach to analyse the mismatch between supply and demand of skills and qualifications in the agricultural labour market in Benin. Therefore, individual interviews were conducted with employees who graduated from agricultural training providers. The employees were invited to rate their skills acquired while getting out the agricultural training institutions using a five-point Likert scale [1= very poor, 2=poor, 3= average, 4= good, 5= very good] as instrument. These skills include hard, soft, digital and job search skills. Soft and job

search skills (Table 1) were generated from different studies (Pitan and Adedeji, 2012; Pereira, 2015; Rayner and Papakonstantinou, 2015; Gates et al, 2016; Siekmann and Korbel, 2016; McGunagle and Zizka, 2018; Miroro, 2019; Akdere et al., 2019; McGunagle and Zizka, 2020) and validated by key informants made up of employers and experienced employees. The Cronbach method was used to test the reliability of the instrument used. The instrument showed a good internal consistency reliability with Cronbach's Alpha of 0.87; 0.80; 0.82; 0.80 and 0.82 respectively for each level of study (BEAT[5], DEAT[6], BSc, MSc, and PhD). The values showed that the instrument was reliable according to Pallant (2001) recommendation of a minimum level of 0.70. Agricultural graduate employees were also asked to rate their perception on the matching of their job position with field of study [1= Inadequate; 2=Merely adequate; 3= Adequate, 4= Very adequate, 5= Excellent adequation] on this particular item. The last two categories [4= Very adequate, 5= Excellent adequation] were combined into the category of adequate field of study. Data were also collected on their highest level of education, and the required level for the employment.

Furthermore, individual interviews were carried out with employers in agricultural sector, collecting data on their perception of the importance of skills (hard, soft, and digital) needed from agricultural graduates using as instrument a five-point Likert Scale as follows: 1= (Not important), 2= (Less important), 3=(Neutral), 4=(Important), 5= (Very important). The reliability coefficient of the instrument was 0.95 (Cronbach's Alpha) which confirms that the instrument was reliable.

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[5] Tropical Agricultural Studies Certificate (*Brevet d'Etudes Agricoles Tropicales: BEAT*). It is the first diploma standing for the first level at the public agricultural technical high schools (TVETs) in Benin

[6] Diploma of Tropical Agricultural Studies (*Diplôme d'Etudes Agricoles Tropicales: DEAT*). It is the second diploma standing for the second level the at public agricultural technical high schools (TVETs) in Benin

Table 1. Skills and their meaning

Skills	Definitions
Hard skills	*Ability to perform tasks and functions particular to a job. Also called occupational skills, technical skills, or vocational skills*
Soft skills	
Communication and interpersonal skills	*Ability to articulate, transmit and effectively defend arguments, ideas, feelings or information through verbal and non-verbal messages*
Personal skills	*Self-confidence, positive attitude, strong work ethic, etc*
Intercultural skills	*Proficiency in more than one language, working in culturally diverse teams, etc.*
Learning skills	*Ability to learn independently; curiosity and desire for continuous learning, etc. Identify ways to learn from mistakes, for the benefit of the employer and self.*
Entrepreneurial skills	*Flexibility, looking for opportunities, taking risks, etc.*
Ability to think	*Critical, analytical, strategic thinking, etc.*
Teamwork	*Ability to work collaboratively with other people, both face to face and in an online environment.*
Creative thinking	*Ability to think differently in order to bring new ideas to solve problems or seek solutions to a particular situation.*
Efficiency	*Ability to achieve results with limited resources*
Problem solving skills	*Ability to understand a problem by breaking it down into small parts, and to identify key questions, implications and solutions*
Planning and organizational skills	*Be organized and methodical. Ability to plan work to meet deadlines and objectives. Monitor the progress of the work to ensure that you are on the right track to meet a deadline.*
Proactivity and flexibility	*Ability to anticipate situations, and respond easily to changing circumstances and expectations of the hierarchy*
Resilience to stress skills	*Ability not to succumb to stress. Manage stress related to deadlines and make sure to respect them*
Leadership	*Ability to influence others*

Conflict management	*Ability to manage conflicts in your professional environment*
Digital/ICT skills	*Ability to locate, organize, understand, evaluate, create and share information using digital technology*
Job search skills	
Identify employment opportunities	*Ability to recognize job opportunities*
Write a Curriculum Vitae	*Ability to write down personal data and professional experiences in a specific style*
Write a cover letter	*Ability to write to market oneself*
Pass a job interview	*Ability to react conveniently to questions during a job interview*

3.3. Data analysis

Data analysis included both skills and qualifications mismatches. Given that measuring such mismatches is not straightforward and remains controversial, this study followed the most useful approach. The mismatch between the supply of skills by agricultural training institutions and the requirements of the labour market was analysed by comparing the mean score of each of the skills demanded and supplied (hard, soft, digital) (Pitan and Adedeji, 2012) for different academic levels. The skill mismatch was appreciated for each academic level, based on the gap between the mean skill demand and the mean skill supply. For each specific skill (hard, soft and digital), the discrepancy between the mean skill supply and the mean skill demand represented the skill mismatch. To this end, agricultural graduates were considered as under-skilled when the level of skills supply by agricultural training institutions was lower than the requirement of the labour market, and over-skilled when the level of skills supply by agricultural training institutions was higher than the requirement of the labour market. The Mann-Whitney test was performed to check the differences in medians between both groups (supply and demand). In addition, the

mismatch of job search skills was captured using the mean score for different academic level. The level of each job search skill is acceptable when the mean score equals at least 3 which is the median of Likert Scale used. To this end, the one sample Wilcoxon test was performed for each job search skill.

Furthermore, relative frequency was used to analyse the qualification mismatch that include mismatch by level of education and mismatch by field of study. Mismatch by level of education arises when the level of education of the agricultural graduate employees does not correspond to the level of education required to perform their job. To this end, graduate employees were considered as overeducated when the level of education is higher than required to perform their job, and undereducated when the level of education is lower than that required to perform their job (Flisi et al., 2017; McGuinness, 2018). Mismatch by field of study occurs when the field of study of agricultural graduate employees does not correspond to the field of study required to perform their job. In this case, they are treated as persons in employment with a mismatched job (Flisi et al., 2017; McGuinness, 2018).

4. Results

4.1. Demand for skills and mismatch in the agricultural labour market

Regarding the demand for skills, agricultural employers across all types of organizations surveyed were in agreement that all skills under review (hard, soft and digital skills) are rather important (Mean Score ≥ 3) when recruiting agricultural graduates regardless of their education levels (Figure 3). The mean value of perception for each type of soft skills and digital skills were high and significant (one sample Wilcoxon test), revealing that all type employers were more looking for soft and digital skills. Among soft skills, team working appeared to be the most sought skills after in combination with hard and digital skills for all types of employers (Figure

3). Moreover, there was a slight significant difference (Kruskal-Wallis test) between the demand for hard skills, with a higher demand among international and public organizations (Figure 3).
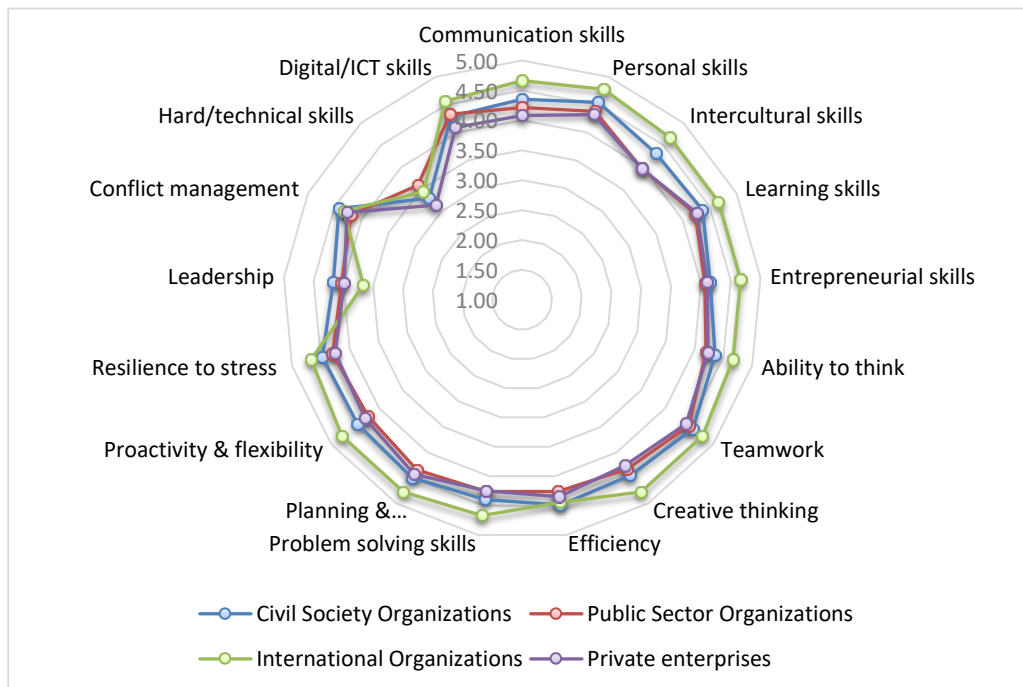
*Notes. Values in the figure are mean Likert Scales; X ≥ 3 is important; One Sample Wilcoxon Test: all skills are significant at 1%; Kruskal-Wallis Test: **Significant at 1%*

Figure 3. Level of skills required in the labour market and comparisons by type of employers in the agricultural sector

The measure of skills mismatch by level of education showed that the level of hard skills supplied by agricultural training institutions as perceived by each category of agricultural graduates was higher than the level of demand in the labour market (Table 2). This implies that there was an over-skilled for hard skills i.e., the level of hard skills supplied by agricultural training institutions is higher than the requirements by employers. Furthermore, even though graduates' employees, regardless of the level of education, acquired a good level for some soft skills and digital skills from agricultural training institutions (mean score ≥ 3), it appeared that the demand for all soft skills and digital skills in the labour market was higher than those provided by agricultural training institutions (Table 2). This implies a mismatch between supply

and demand for soft skills and digital skills in the agricultural sector, reflecting that agricultural graduate are under-skilled for these skills. The top three major weaknesses in the supply of soft skills included successively personal skills, learning skills, proactivity and flexibility, and resilience to stress for BEAT, DEAT, Bachelor, and Master holders; and conflict management, planning and organizational skills, and resilience to stress for PhD holders (Table 2). The weaknesses in the supply of digital skills include email management, online search, online collaboration, request management, and the use of microsoft office package.

Table 2. Mismatch between supply and demand of skills in agricultural sector

Skills	MSD	Mean Skill Supply (MSS) and Mean Difference (MD=MSD-MSS) per education level									
		BEAT		DEAT		Bachelor		Master		PhD	
		MSS	MD	MSS	MD	MSS	MD	MSS	MD	MSS	MD
Hard skills	3.26(3)	3.43(3.5)	-0.17	3.74(4)	-0.48**	3.75(4)	-0.49**	3.85(4)	-0.59**	4.43(5)	-1.17**
Soft skills											
Communication skills	4.18(4)	3.05(3)	1.13	3.20(3)	0.98	3.31(3)	0.87	3.41(4)	0.77**	3.51(4)	0.67*
Personal skills	4.39(5)	1.48(1)	2.91**	1.49(1)	2.90**	1.57(2)	2.82**	1.54(2)	2.85**	3.97(4)	0.42
Intercultural skills	4.07(4)	2.38(2)	1.69**	2.27(2)	1.80**	2.21(2)	1.86**	2.20(2)	1.87**	3.00(3)	1.07**
Learning skills	4.29(4)	2.33(2)	1.96**	2.49(3)	1.80**	2.57(3)	1.72**	2.57(3)	1.72**	3.92(4)	0.37
Entrepreneurial skills	4.13(4)	1.85(1)	2.28**	1.98(1)	2.15**	2.09(2)	2.04**	2.35(2)	1.78**	3.00(3)	1.13**
Ability to think	4.26(4)	2.10(2)	2.16**	2.18(2)	2.08**	2.09(2)	2.17**	2.17(2)	2.09**	3.49(4)	0.77*
Teamwork	4.49(5)	3.33(3)	1.16	3.45(3)	1.04*	3.58(4)	0.91*	3.64(4)	0.85	4.16(4)	0.33
Creative thinking	4.33(4)	1.88(2)	2.45**	2.23(2)	2.10**	2.53(2)	1.80**	2.56(2)	1.77**	3.30(3)	1.03**
Efficiency	4.37(5)	2.73(3)	1.64**	2.62(3)	1.75**	2.67(2)	1.70**	2.71(2)	1.66**	3.24(4)	1.13**
Problem solving skills	4.29(4)	2.55(2)	1.74**	2.67(3)	1.62**	2.89(3)	1.40**	2.91(3)	1.38**	3.78(4)	0.51
Planning and organizational skills	4.44(5)	2.73(3)	1.71**	2.67(3)	1.77**	2.59(2.5)	1.85**	2.63(2)	1.81**	3.19(3)	1.25**
Proactivity and flexibility	4.33(4)	1.68(1)	2.65**	1.80(1)	2.53**	2.01(2)	2.32**	2.03(2)	2.3**	3.19(3)	1.14**
Resilience to stress	4.32(4)	1.73(1)	2.59**	2.02(2)	2.30**	2.09(2)	2.23**	2.28(2)	2.04**	3.16(3)	1.16**
Leadership	4.03(4)	2.20(2)	1.83**	2.31(2)	1.72**	2.33(2)	1.70**	2.36(2)	1.67**	3.16(3)	0.87**
Conflict management	4.29(4.5)	2.78(3)	1.51**	2.64(3)	1.65**	2.73(3)	1.56**	2.66(3)	1.63**	2.68(2)	1.61**
Digital/ICT skills	4.26(4)	2.13(2)	2.13**	2.31(2)	1.95**	2.97(3)	1.29**	2.99(3)	1.27**	3.30(3)	0.96**

Notes: MSD=Mean Skill Demanded; MSS=Mean Skill Supplied; MD=Mean Difference; Mann-Whitney Test: **=Significant at 1%, *=Significant at 5%; The numbers in brackets are median values

The measure of mismatch in terms of job search skills showed that graduate employees at all academic levels perceived that agricultural training institutions did not equip students with the necessary job search skills namely: identification of job opportunities, drafting of a good Curriculum Vitae, drafting of a good cover letter, and strategies for a job interview (Table 3). However, graduates from agricultural training institutions might have a minimum job search skill to be able to be competitive in the process of getting employment in the labour market.

Table 3. Perception of graduates of job search skills supplied by agricultural training institutions

Job search skills	Levels of education				
	BEAT	**DEAT**	**Bachelor**	**Master**	**PhD**
Identify job opportunities	1.45(1)**	1.45(1)**	1.51(1)**	1.61(1)**	2.84(3)
Drafting of Curriculum Vitae	1.80(2)**	1.89(2)**	2.00(2)**	2.05(2)**	2.68(3)
Drafting of cover letter	1.73(2)**	1.76(2)**	2.16(2)**	2.24(2)**	2.73(3)
Pass a job interview	1.35(1)**	1.52(1)**	1.59(1)**	1.65(1)**	1.97(2)**

*Notes. $X \geq 3$ is good; Figures in the table are mean Likert scales; The numbers in brackets are median values; ** Significance level [Wilcoxon test ($X: \neq 3$), $p < 0.01$]*

4.2. Qualifications mismatch in the agricultural labour market

4.2.1. Mismatching of graduates' employees' current job to the level of study

The education level of most agricultural graduate employees surveyed matched with the level demanded by the job (Figure 4). However, about a quarter of Bachelor (27.94%), Master (28.11%) and PhD (29.73%) graduate employees were overeducated, meaning that they have had to take jobs that require a lower level of education (Figure 4). This remark was done for 9.04% of employees with a DEAT as the highest level of study. It can be explained by a rapid growth in enrolment to agricultural training institutions.
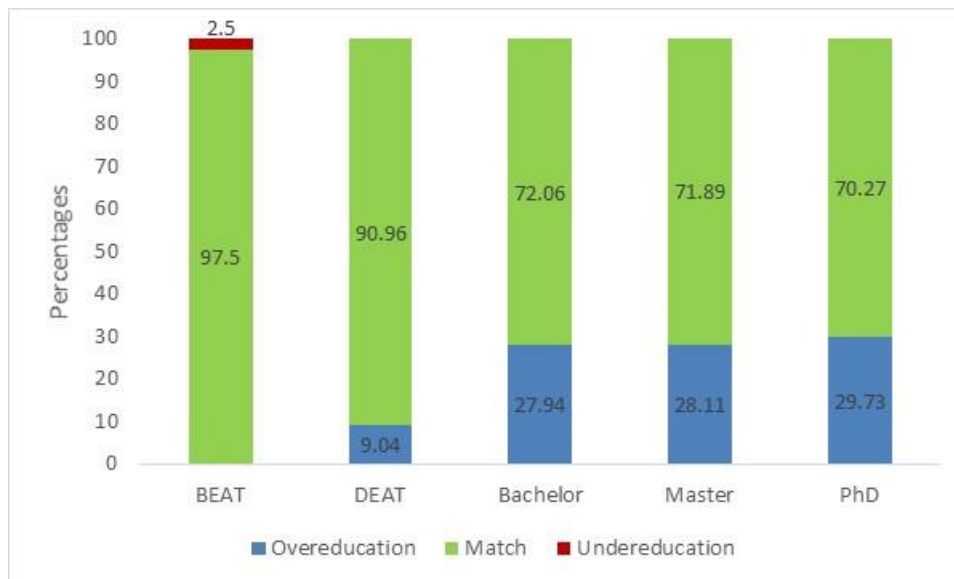
Figure 4. Relevance between agricultural graduate employee's study level and job position

4.2.2. Mismatching of graduates' employees' current job to the field of study

The majority of agricultural TVET diplomas holders [BEAT (87.5%), DEAT (86.7%)] and agricultural higher education diplomas holders [Bachelor (87.25%), Master (92.43%), and PhD (91.89%)] revealed that their current employment was relevant to their field of study (Figure 5). These findings imply that most employers in agricultural sector recruit agricultural graduates with appropriate profile in terms of field of study.
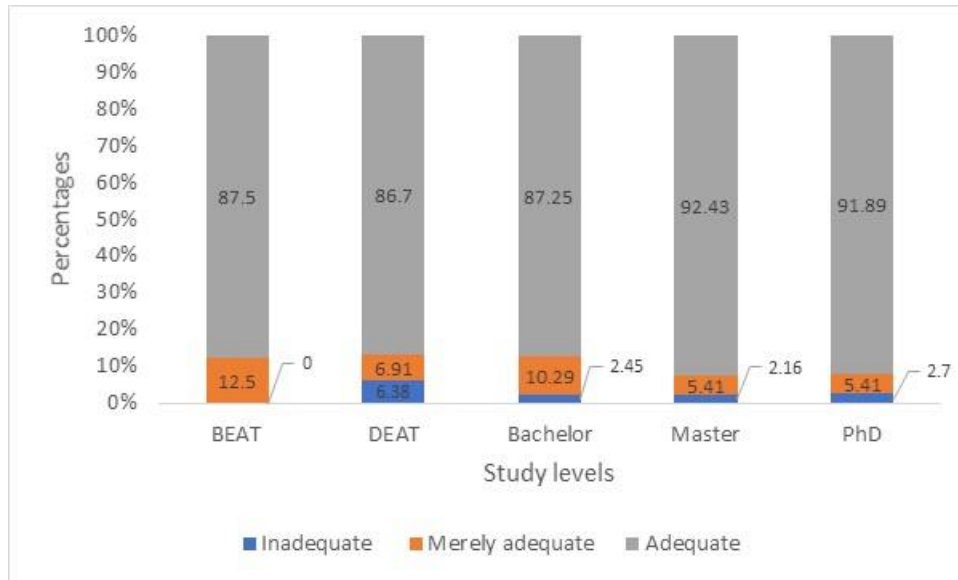
Figure 5. Employees' perception on the relevance of field of studies and job position

5. Discussion

5.1. Skills mismatch in the agricultural labour market

The findings showed that there is an under-skilled type of mismatch for soft and digital skills and an over-skilled for hard skills among agricultural graduates regardless of the education level. This finding implies that agricultural training institutions equip students with hard skills, but fail to equip them with soft and digital skills. The over-skilled between supply and demand for hard skills was not consistent with the study of Pitan and Adedeji (2012), who indicated an under-skilled for hard skills in Nigeria. This could be explained either by the fact that the study of Pitan and Adedeji (2012) considers all the sectors in the labour market, or the difference in educational system of both countries. Moreover, the top three major weaknesses in the supply of soft skills by the graduates were personal skills, learning skills, proactivity and flexibility, and resilience to stress for BEAT, DEAT, Bachelor, and Master holders; and conflict management, planning and organizational skills, and resilience to stress for PhD holders. Changes in the structure of work

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should have major implications for the changing nature of the skills acquired in training institutions (Brown et al., 1997). The lack of fit between soft and digital skills supplied and demanded is a sign of a serious deficiency in the relationship between the agricultural labour market and the agricultural training institutions which would consequently reduce graduate productivity and increase the unemployability. This mismatch is explained by the non-existence of a training system closely linked to the needs of the labour market. In other words, the training supplied by agricultural training institutions does not allow beneficiaries to develop soft and digital skills. As a result, they are less employed by employers, especially private enterprises, who consider them to be less skilled. The mismatch between supply and demand for soft and digital skills is consistent with earlier findings in various countries. This is for example, the case of Pitan and Adedeji (2012) in Nigeria who reported an under-skilled for soft and digital skills such as analytical, entrepreneurial, critical thinking, communication, decision-making, information technology, interpersonal, problem-solving, self-directed learning, technical, and numeracy skills. That is, it should be the responsibility of the agricultural education system to ensure that agricultural graduates acquire soft and digital skills which will respond to increased demands and challenges in the agricultural labour market. In this case the curriculum should be updated regularly following the needs of the labour market. This is possible by increasing opportunities and incentives to promote collaboration between employers and agricultural training institutions through the development of collaborative platforms between employers and agricultural training institutions, and by further involving employers in curriculum design, evaluation, and innovation.

Furthermore, agricultural graduate employees at all academic levels perceived that agricultural training institutions did not equip students with the necessary job search skills namely:

identification of job opportunities, drafting of a good Curriculum Vitae, drafting of a good cover letter, and strategies for a job interview. Seeking a job requires strong search skills to engage successfully with employers with vacancies. Hence the importance of job search skills for agricultural students. As an example of this importance, a recent research on the job search intervention in Australia found an increase in job-find rates and the improvement of the quality of job matches (Briscese et al., 2020). Besides, an intervention that delivered training on job search skills to a group of young jobseekers with low educational attainment in Mauritius showed a positive impact for youth job search behaviours (Castaneda et al., 2020). Therefore, Benin's agricultural students should be equipped with job search skills in addition to hard, soft and digital skills to make them more competitive in the labour market. Such initiatives should focus on specific aspects such as practical training in how to apply for jobs and prepare for interviews, explanation of the realities of the job search process. Besides, an example of a good practice for enhancing graduate's access to employment is the mentoring programme that proved to be a success in the literature. Mentoring helps to build confidence and expand one's network in addition to providing sometimes practical training in employability skills (Raposa et al., 2019). More specifically, Kluve et al. (2016) stress that effective interventions are those that combine multiple interventions, such as skills training, mentoring. Therefore, it is crucial for organizations working on youth employment to initiate employment-oriented mentoring programme that include skills training for a great impact.

5.2. Qualifications mismatch in agricultural labour market

Even though most of graduate employees was well-matched by education level, the study found that the incidence of overeducation (about one quarter) is more substantial than undereducation for DEAT, BSc, MSc and PhD graduates. This implies that graduates face difficulties finding

employment that match their level of study and are then compelled to accept lower-level. This could be explained by the fact that the educational system is creating more agricultural graduates with higher qualifications willing to take the same job so that employers, especially private enterprises and civil society organizations, prefer exploiting them without necessary increasing the wage. More importantly, labour markets in developing countries are often characterized by a large proportion of employment in the informal sector. Generally, this sector does not require a high level of qualifications, which makes the incidence of overeducation more serious among employees (Chua and Chun, 2016). The findings are consistent with those of Jote (2017) who reported a vertical education-job mismatch among a third of engineering graduates in Ethiopia. Besides, Herrera and Merceron (2013) also found an overeducation of 20% on average in Sub-Saharan Africa. Therefore, agricultural training institutions should prioritize training programmes based on labour market demand. in terms of education level.

Regarding the mismatch by field of study, most agricultural graduate employees surveyed regardless of their education level declared that their current employment was relevant to their field of study. Only about 2% of agricultural higher education diplomas holders and 6.38% of DEAT holders have an employment irrelevant to their field of study. These findings confirm Verhaest et al. (2017) who showed that field of study mismatches are relatively infrequent among individuals in technical fields of study, and relatively frequent among those with a humanities or arts degree. In fact, these graduates do not voluntarily choose mismatch, but are driven to it because they cannot find work in their field due to the fact that agricultural training institutions create more graduates in those disciplines which have relatively less demanded in the labour market. The study by Farooq (2011) showed that more than one-tenth of Pakistani graduates reported a total lack of relationship between their current jobs and their studied field of discipline.

A sound occupational-specific education would ensure the matching jobs. Therefore, there is a need for agricultural training institutions to prioritize the selection of training programmes based on the market demand in terms of field of study.

6. Conclusion

The study was carried out to investigate the skills and qualifications mismatch in the agricultural labour market in Benin. Through a survey of employers in the agricultural sector and agricultural graduates' employees, the findings showed that regardless of the education level, there is a mismatch between agricultural graduates' skills and the demand of the labour market for all types of soft, digital, and job search skills under review. The study further showed that even though there is a good match for most graduate employees, the incidence of overeducation is more substantial than undereducation for DEAT holders and agricultural high education diplomas holders. In addition, only about 2% of agricultural high education diplomas holders and 6.38% of DEAT holders have an employment irrelevant to their field of study. The implication of these findings is that there is a need for agricultural training institutions to update training curricula by integrating the skills lacking for each academic level such as ICT/Digital agriculture, soft skills (transformative leadership, teamworking, creative thinking, proactivity and flexibility, personal skills, learning skills, entrepreneurial skills, ability to think, efficiency, problem solving skills, intercultural skills, planning and organizational skills, resilience to stress, conflict management), and job search skills (identification of job opportunities, drafting of a good Curriculum Vitae, drafting of a good cover letter, and strategies for a job interview); increase opportunities and incentives to promote collaboration between employers and agricultural training institutions through the development of collaborative platforms between employers and agricultural training institutions, and by further involving employers in curriculum design, evaluation, and innovation;

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prioritize the selection of training programmes based on the labour market demand in terms of level and field of education. In addition, youth employment programmes should implement employment-oriented mentoring programmes that integrate practical trainings on the process of accessing and securing an employment in agricultural labour market.

7. Acknowledgment

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