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Youth, Training and Labor Insertion in Sudan: Lessons from the INSO Project

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Abstract

The article deals with the relation between higher education and employment in Sudan. It evaluates the efficiency of a training project realized in collaboration between international and local private and government partners that aimed to provide university graduates with employment opportunities. The INSO Project (Innovation in society: Training paths and human capital enhancement in Sudan) took place from 2017 to 2019. The research methodology consists of a questionnaire survey among the project participants to collect data on their employment achievements after almost two years of their graduation and a series of interviews about their professional integration. The collected data are analyzed in the context of the Sudanese socio-economic environment, higher education, and development. The study reveals a significant rate of employment for the graduates of this training project and a positive impact of specific training related to job search techniques.

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Labor insertion of university graduates is a challenge everywhere in the world. This challenge is particularly blatant in African countries due to their rapid demographic growth and the limitations of their higher education systems.

This research project aims at understanding how a specific training program can provide university graduates with employment opportunities in an African country like Sudan. It does so by analyzing the outcomes of the INSO project (Innovation in society: Training paths and human capital enhancement in Sudan), that was realized via international cooperation between 2017 and 2019. The INSO project included various training activities with the objectives of facilitating the professional insertion of 138 university students of technological undergraduate programs, job creation and digital transformation in the framework of the sustainable development of the country.

In their conference paper, A. Fornasari and colleagues (2019) have already thoroughly illustrated the above mentioned project objectives and its methodology. Two years after the completion of the project, a short study was designed to look at the results of the program in terms of employability and employment. This article presents the empirical evidence produced by this study as well as a simple analysis in relation to the actual context of Sudan, which has considerably evolved since the end of the INSO project.

The Sudanese Context

In 2010, Sudan was considered the 17th fastest-growing economy in the world given the rapid development of the country – largely due to oil profits, despite international sanctions. However, the secession of the Republic of South Sudan in 2011 gravely affected the Sudanese economy as more than 75 percent of the oil fields exist in the southern part of the country. The heyday of the oil economy ended abruptly and "growth slowed in 2016 to an estimated 3 percent" (Darbo&Eltahir, 2017, p. 2). At the same time, these diminished resources were mainly used to ensure the stability of the ruling system.

The 2016 budget had officially destined 25 percent of state expenditures for the security apparatus and some sources suggest that percentage may have risen up to 70 percent (Nuba Reports, 2016), while "spending on education and health combined amounted to a mere 3.3 percent of that year's budget" (Hassan& Kodouda, 2019, p. 92).

This economic deterioration alongside the international trade embargo and the corruption of the Islamist-military rule of Omar Al-Bashir (Casciarri et al., 2015*)* caused a highly stressful financial situation for the people and a great sense of frustration and wrath among the youth. In a desperate attempt to tackle the situation, Al-Bashir reduced the number of ministerial positions from 49 to 21 by September 2018, which left some members of the privileged elite without a share in power.

Previous revolutionary ventures in 2011 during the Arab Spring, in June 2012 and in September 2013 were repressed by the security system. Nonetheless, on December 19, 2018, the rising prices and the lifting of subsidies on basic goods sparked a new series of protests and demonstrations demanding a civil government and democracy. But this time the revolutionaries learned from past failed experiences and found new strategies for a non-violent revolution which successfully overthrew the regime of Omar El-Bashir on April 11, 2019. This marked the beginning of a very troublesome transition towards a democratic system.

The 3 year process of transition still ongoing that started in August 2019 is led by a Sovereign Council composed of military members appointed by the Transitional Military Council (TMC) and some civilians proposed by "the opposition umbrella group that had emerged over the months of protest, the

Forces of Freedom and Change (FFC)" (Hassan & Kodouda, 2019, p. 90). These two parties signed a constitutional declaration that defined a transitional period that should have led to multiparty elections in 2022. This process was altered by the unilateral seizure of power by the President of the Sovereign Council the General Abdel Fattah al-Burhan in October 2021. Negotiations between the different stakeholders are still in progress without any agreement as for February 2023.

The demographic factor also contributed to the revolution. Sudan's population has increased from 10 million in 1956 to almost 45 million inhabitants today. The Population Division of UN predicts a population of 55 million inhabitants in Sudan in 2030. According to this forecast, Sudan will become the 23rd most populated country in the world by 2050. This increase, also present in other countries of the region, already has an impact on the incapacity of the labor market to absorb such rapid growing workforce (African Development Bank Group, 2020; International Labour Organization, 2016; Yeboah & Jayne, 2016).

In fact, the distribution of the population in Sudan according to age shows that 61.5 percent of the population are under 25 years old (Challenge Fund for Youth Employment [CFYE], 2021). Within this age group, none have experienced democracy as they were born during the Bashir regime. Nonetheless, these young people were the backbone of the revolution. However, after three years of transitional government, they "are still largely excluded" (Aalen, 2020) and are unable to find signs of financial recuperation in their country – indeed, the Sudanese pound (SDG) exchange rate to the US dollar (USD) has increased from 47.5 SDG on December 18, 2018 to 628.5 SDG on February 2, 2023 (Bank of Khartoum, 2023).

The case of Sudan is little different from situations in other countries that have recently experienced similar social uprisings, such as Algeria, Chile, Colombia, Lebanon or Senegal. Beyond local political grievances, it is possible to identify a combination of factors behind these reactions related to youth, tertiary education, bad employment conditions and gender imbalances (Bennarosh, 2020).

Literature Review

Higher Education and Labor Insertion in Sudan

From the above mentioned demographic distribution and related socio-economic context, one can understand the great demand for education, and the subsequent difficulty of absorbing such numbers of young people after completion of university studies into the labor market, particularly in the metropolitan area of Khartoum (Denis, 2006).

To these factors it is necessary to add: (i) the presence in Sudan of almost one million refugees (mainly youth) from the neighboring countries (United Nations High Commissioner for Refugees [UNHCR], 2023); (ii) the characteristics of the university system; (iii) the large-scale shifts of the population from rural to urban areas due to the search for better conditions; (iv) the progress of desertification; and (v) the presence of unresolved armed conflicts that caused the displacement of more than three million persons (Denis, 2006; UNHCR, 2023).

Since the arrival to power of Omar El-Bashir, the fast-paced development of the university system in Sudan resulted in an increase in the number of vacancies for university students by a factor of 70 – from admitting 6,080 new students in 1989 to 437,462 for the 2018-2019 academic year, the last one under Bashir´s regime (registration at Sudanese universities is centralized through the Ministry of Higher Education [MOHE], which sets the number of students that every university can register in each academic program, i.e., the number of "vacancies"). In a similar period, the Algeria higher education system, for instance, multiplied the number of university students by 7.5.

In 1989 just 6 percent of graduates with a secondary school leaving certificate (83,388 students) could find vacancies in Sudanese universities, and those few opportunities were only granted in the capital (MOHE, 2016). Whereas in 2016, there were 82 institutions of higher education in Khartoum state and 42 in other states of the country. From then on the number of available vacancies has continued to

grow (with 451,957 vacancies available in Sudanese universities for first year students for the 2019-2020 academic year), while demand appears to have stagnated (Hussein, 2021).

In this way, higher education in Sudan seems to have met the quantitative challenge. The overall tertiary education gross enrollment rate is higher than other Sub-Saharan countries (17 percent in Sudan vs. 9 percent in other countries of the region), though still inferior to the global average (36 percent). Female participation in the student population is also relatively high, around 52.6 percent (MOHE, 2019), while in the Sub-Saharan African region the percentage of female university students is around 40 percent. Therefore, from the gender perspective, Sudan is more in line with the worldwide trend of feminization of higher education than its neighboring countries (Meyer et al., 2020).

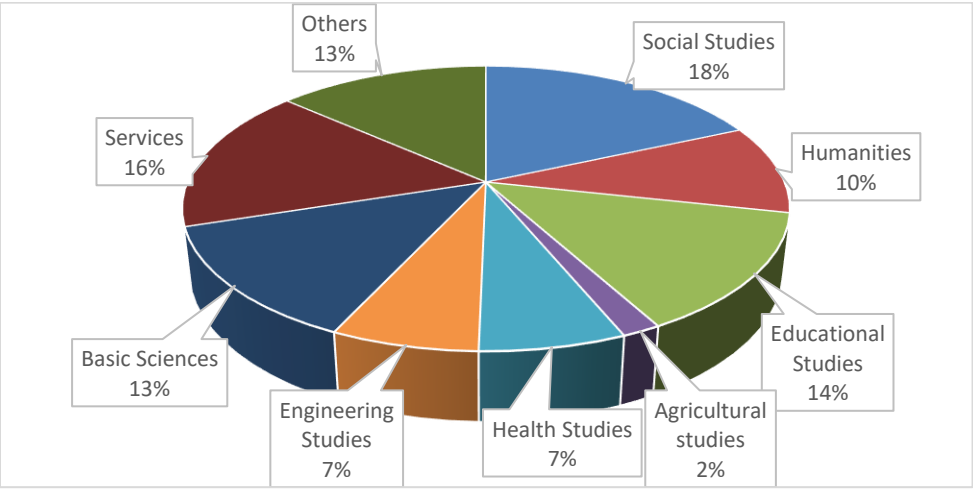
In 2014, M. Imad Al-Din published a self-evaluation carried out by the main university of Sudan, the University of Khartoum. The SWOT analysis of the university underscored the inadequacy of their academic programs in relation to the real needs of the labor market and the lack of "provision to the graduates… the necessary skills and knowledge to render them competitive" (Imad Al-Din, 2014, p. 25).

These two points of weakness become still more challenging when we consider them along with the strong demographic growth. They risk to transform universities into a factory producing unemployed people.

Table 1: Distribution of students enrolled in Sudanese universities according to degree and major specialities (2015/2016) excluding students of university Colleges (Ismail, 2017)

Specialization	Bachelor Students			Diploma Students			Total number
	Male	Female	Total	Male	Female	Total	
Social Studies	72,956	58,617	131,573	5,183	5,560	10,743	142,316
Humanities	28,693	31,418	60,111	7,838	10,429	18,267	78,378
Educational Studies	34,386	67,670	102,056	1,169	1,845	3,014	105,070
Agricultural studies	5,547	8,039	13,586	39	28	67	13,653
Health Studies	13,530	34,965	48,495	754	1,785	2,539	51,034
Engineering Studies	32,342	12,799	45,141	4,571	1,767	6,338	51,479
Basic Sciences	24,705	29,683	54,388	29,550	17,657	47,207	101,595
Services	0	0	0	62	66	128	128
Others	32,705	23,811	56,516	30,930	17,071	48,001	104,517
Total	244,864	267,002	511,866	80,096	56,208	136,304	648,170

Figure 1: Proportion of students enrolled in Sudanese universities according to major specialities (2015/2016) excluding students of university colleges (Ismail, 2017).



Imad al-Din (2014) also points that "the role of higher education institutions in the socio-economic development of Sudan is weak and much inferior to what it was supposed to be" (p. 72). We find that the interaction between the deficient educational system caused by the low quality of education – at the macro level – and the high incidence of unskilled workers – at the micro level – leads to low skill and technology levels, severe skills mismatch, low transfer of knowledge, high dependence on foreign technologies at the macro and micro levels and poor industrial performance at the micro level. This situation generates a lot of unemployment, which is considered the second main problem according to 32

percent of Sudanese respondents to a survey carried out by the Sudan Polling and Statistics Centre (2018). Indeed, in the Arab world, the phenomenon of unemployment among university graduates has been thoroughly examined (Bennarosh, 2019). However, the primary problem according to the Afrobarometer is the management of the economy (Isbell &Elawad, 2019).

Another element that hinders Sudanese youth from finding employment opportunities is the exaggerated development of the public sector. The policy focus on the public sector has created a non-conducive eco-system for the promotion of private business. In fact, from 2007 to 2016, the public sector's share in GDP increased from 6 to nearly 40 percent (United Nations [UN], 2016). Part of this phenomenon related to Bashir´s policy to reward those who were to be pillars for the stability of the regime, especially after 2011, in particular, the Sudan Army Forces (Hassan& Kodouda, 2019).

The problems for the private sector to make business independently from the regime network were reflected by the World Bank report entitled *"Doing Business" (World Bank, 2017)*. Darbo&Eltahir quote the same report, that describes the Sudanese business environment, to point that "Sudan's overall ranking fell over the year by four points, down to 168th out of 190 countries" (2017, p. 9). While the 45,823 interviews conducted by Afrobarometer in 34 African countries between 2016 and 2018 gave an average of 62 percent self-employed workers, 24 percent in the private sector and 12 percent in government institutions, the results for Sudan were 56 percent, 15 percent and 28 percent respectively (Makanga&Msafiri, 2020).

In 2018, the unemployment rate in Sudan was not extraordinarily high at 18.6 percent (International Monetary Fund, as quoted by British Council Sudan, 2020, p. 16), although, the percentage of vulnerable employment was 40 percent for that same year according to United Nations Development Program ([UNDP], 2019). The category "vulnerable employment," refers to the "percentage of employed people engaged as unpaid family workers and non-account workers" (UNDP, 2019, p. 327).

The difficulty of finding employment affects women in a particular way. The female to male ratio of youth unemployment for the population age group 15 to 24 was 2.16 while the total unemployment female to male rate was 2.51 (UNDP, 2019). The negative bias towards young women's employment has been further investigated by local research teams (Assad et al., 2018). Among the factors that explain the high rate of vulnerable employment is the low percentage of skilled labor force at 22.8 percent (UNDP, 2019). Another important fact that defines the structure of the labor market in Sudan is the migration of highly skilled professionals to Arab Gulf countries (Samia, 2011). By the end of 2014, there were around 500,000 Sudanese economic migrants working in the Gulf States (Strachan, 2016).

The way to address the inability of the economy to create job opportunities that may match the growth in the population and the workforce necessarily involves the capacity to create a more conducive environment for private investments, and to set policies that facilitate the creation of income-earning opportunities for the unemployed (United Nations [UN], 2016). The economic future of Sudan relies on the development of agriculture. This sector represents 42 percent of employment activities in Sudan (Pedrò& Watanabe, 2017). Public services and trade each represent 19 percent, but most Sudanese students are enrolled in academic programs of humanities (cf.

Table 1). This fact, and the lack of relevant skills already mentioned, may produce unemployment or lead university graduates to work in jobs that require lower qualifications and are located in the informal sector. In fact, 21 percent of private employers in Khartoum´s formal sector prefer foreign workers because of their efficiency and skills, according to a survey carried out by the Ministry of Labor (Pedrò& Watanabe, 2017).

The mismatch between educational output (supply) and labor market requirements (demand) explains the need "to upgrade skill levels and encourage the development of local technologies to narrow the technological gap and achieve economic development in Sudan" (Samia, 2011, p. 283). Such a mismatch is challenging for policy design as there is no simple, ready-made answer. All developing and emerging countries face this type of skills-jobs adequacy issue. The reliance upon strategies based on improvement of domestic production for a better international position on the global value chain is seriously questionable (Schwalje, 2012). In fact, it is the very concept of a knowledge based-economy which must be reconsidered, no longer in terms of highly competitive activities but rather with regards to sustainable development issues (Meyer, 2019).

The INSO Project

The Regional Development and Protection Program for North Africa of the European Union (RDPP NA) officially aims to strengthen the protection of migrants by offering alternatives to irregular migration along the route of the central Mediterranean basin, and to support the development of local job opportunities that generate profit in the regions of origin and transit of migrants (International Organization of Migrations [IOM], 2021). In 2017, the program included Sudan since it is located in a strategic position along one of the main migratory routes between Africa and Europe. Sudan is a country of transit, destination, and origin of migrants (Greco, 2012). In fact, 15 percent of migrants who attempted to cross the Mediterranean Sea through Libya between January and February 2021 were Sudanese (IOM, 2021b).

Since Italy was responsible for the RDPP NA and Trust Fund Africa, the Ministry of Interior, through its Department for Civil Liberties and Immigration-International Relations Unit, opened the call for projects. The National Research Council of Italy-Institute for Research on Innovation and Services for Development (CNR-IRISS) got funding for the project "Innovation in Society: Training paths and human capital enhancement in Sudan" (INSO), that was executed from the end of 2017 to the beginning of 2019 in partnership with a Sudanese university, Comboni College of Science and Technology (CCST), the Ministry of Higher Education and Scientific Research of Sudan (MOHE) and the Life Long Education Centre of the Aldo Moro University of Bari (Centro per l'Apprendimento Permanente in Italian, CAP-UNIBA) (Fornasari et al. 2019).

The project had the patronage of the Embassies of Italy to Sudan and the Republic of the Sudan to Italy and it aimed at:

a) Developing the necessary skills for the insertion of university students in the labor market;

b) Empowering their capacity to transform their graduation projects into workable initiatives that generate work opportunities;

c) Contributing to the modernization and the digitalization of administration (Fornasari et al., 2019).

The Beneficiaries

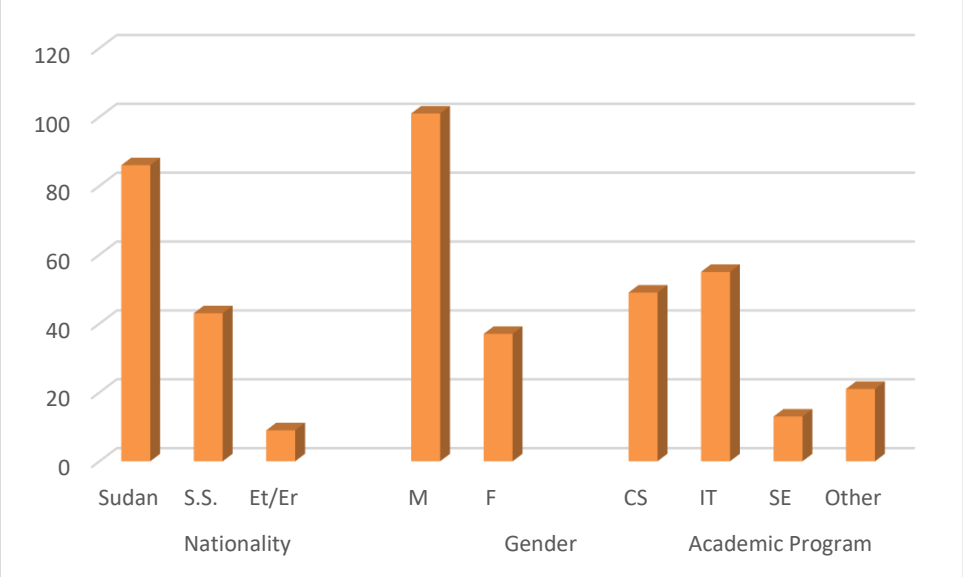
The targeted beneficiaries of the training were 138 university students, 2 university lecturers and 4 senior staff members of the MOHE. In a country that is still struggling to introduce ICT in the

administration of government and private institutions, university students of Computer Science (CS), Information Technology (IT), Software Engineering (SE) or Management Information Systems seemed to be the most suitable participants for the INSO Project, as they could play a paramount role in the process of modernization of the Sudanese labor market and were better equipped to follow an online program.

Since knowledge of the English language is a key element in ICT studies as well as in the transition process of a country called to open itself to the globalized world, placement tests were carried out by CCST to select university students for the project.

A total of 235 applicants sat for the selection tests evaluating English proficiency: 118 from CCST and 117 from other 16 different universities. The selected students, 65 from CCST and 73 from 15 different universities, were in the second-last year of their respective university programs. In this way, they were supposed to complete the project training before their final graduation.

Figure 2: INSO Project students according to nationality, gender and academic program.



(S.S. = South Sudanese; Et. = Ethiopian; Er. = Eritrean; M. = Male; F. = Female; CS = Bachelor´s Science in Computer Science; IT: Intermediate Diploma in Information Technology; SE. = Bachelor´s Science in Software Engineering).

86 students of the INSO Project were Sudanese (62 percent), 43 (31 percent) were South Sudanese and 9 (7 percent) were Ethiopian and Eritrean. In Sudanese universities, 52.6 percent of the student population are female students (MOHE, 2019). Nonetheless, technical studies like these are frequented more by male students, as in this case (73 percent). CCST also selected two lecturers who were already involved in the organization of internships for university students as beneficiaries of the training program while MOHE selected four senior staff members.

Learning Content and Methodology

The training content focused on disciplines dealing with the concept of sustainability, the creation of micro-enterprises and the development of project proposals for the students along with a training course for university lecturers and MOHE officials that aimed at creating a network of "Departments of Professional Orientation in Universities," leveraging the analysis and responsible management of the territory, pedagogical innovation and international scientific cooperation. The learning activities for the

university students of the project were delivered through a blended approach that combined place-based workshops and internships in Sudan and a Learning Management System (LMS), Moodle, administered by CAP-UNIBA.

Student Engagement

The average participation for 72 training hours of place-based workshops was 78 percent. Since the skewness of the respective frequency distribution is negative (-1.30), we can state that most of the 138 students grouped around the maximum time of participation. In fact, 98 students took part in more than 75 percent of the total time of the workshops while 29 completed them totally. Just 13 students took part in less than 50 percent of the learning hours. A problem arose when it was found that 35 of the project students did not have a personal e-mail address and were unable to access the Learning Management System for the online training. Consequently, only 103 students were able to continue the online training stage (73.6 percent of the original number of students). Among them, 16 students never accessed the platform and did not benefit from the training provided. Therefore, the online training activities were carried out by only 87 students. Seventy-three video lectures were uploaded on the platform. They registered an average of 217.19 views per video lesson. Individual study was also supported by in-depth material in PDF formats and conceptual maps. A total of 102 resources were uploaded, each of which was displayed 197.72 times on average. There were 257 written interactions and 4,215 views either inside the forums or through the chat application of the LMS (CAP, 2019, p. 5).

First Assessment and Immediate Outputs

50 students out of the 87 active students (57.5 percent) completed the assessment questionnaire. The performance of 28 students was excellent (13-18 correct answers) and 22 students performed well (7-12 correct answers) (CAP, 2019; Fornasari et al., 2019). The two lecturers of CCST trained by the project in Naples (CNR-IRISS) and Bari (CAP-UNIBA) were in charge of organizing another element of the program – the internships for the 67 students who studied at the College. These students were distributed among 13 private and government institutions including the MOHE. CAP-UNIBA distributed another questionnaire through "Google Forms" to evaluate the effectiveness of the online training comparing the expected objectives with the results obtained. The three evaluation criteria were:

1. Students' satisfaction with the usefulness of the course;
2. Evaluation of the learning process in terms of self-perception;
3. Transferability-impact on working career.

From the analysis of the results, it was possible to conclude that the module on "job search techniques" got the best score as it was considered the one where the objectives were best achieved and the most useful in relation to students' studies and job search. The module on "marketing management" was the second best, considered in terms of achieved objectives, and the one on "social networks and relational dynamics," in terms of usefulness in relation to studies and job search. The students expressed their satisfaction with the contribution of the online training to their previous knowledge and affirmed that they improved their working efficiency "a lot" after the course (71 percent) and that they already "had the opportunity to use the knowledge learned in their university tests or in their professional experience" (19/34) (CAP, 2019, p. 18). As project outputs, CCST signed conventions with companies for students' internships and for further collaboration; created a new BSc in Information Technology whose curriculum design benefitted from the project experience; and established an ICT Start-ups Incubator, the Comboni Innovation and Entrepreneurship Center, registered in April 2021 as C-Hub Limited Company by Guarantee.

After the completion of the project, CCST sent a questionnaire to the project students in which 77 percent expressed their desire to start their own business but they felt blocked by obstacles like lack of capital (95 percent), lack of know how (13 percent), fear of the unknown (8 percent) and lack of self-confidence (5 percent). These results were based on the self-perception of the students. Nonetheless,

experience suggests that they are less aware of their lack of know how. All those elements justified the need to create the Start-ups Incubator that could help university graduates or students to transform their business ideas into reality and give continuity to the project.

Research Method

After almost two years from the end of the project training, a study has been carried out in order to understand how a specific training program can provide the students with employment opportunities after their university graduation in a country like Sudan. The research has been designed to obtain representative data from the involved population and in-depth information about the factors of employability. Thus the study combines quantitative and qualitative approaches. A questionnaire survey provides quantitative data and a series of interviews provides qualitative data.

A Questionnaire Survey for a General Picture

The objective of the survey is to a get a picture as complete as possible of the employment achievements of the university students who followed the training course provided by the INSO project two years after the project conclusion. In other words, the research aims to test the validity and transferability of the INSO Project as a model for the enhancement of human capital in Sudan.

The 138 students who followed the project between 2017 and 2019 were not reachable through digital media. In fact, the survey population was made of the 103 university graduates who had an e-mail address at the time of the project execution and who could benefit from both the face-to-face and the online training. Nonetheless, it is necessary to recall that 16 students had never entered the LMS during the project training and therefore the real population was made up of 87 graduates. The questionnaire was built with the major aim of maximizing the answer rate in order to ensure credible interpretations. Thus, few and simple questions were proposed.

The invitation to participate in the research and the link to the questionnaire were sent through e-mail, Messenger and the Whatsapp group of the project. The first part of the questionnaire consisted of socio-demographic data such as age, gender, residence and citizenship. The second set of information had to do with the academic background, institutional affiliation, graduation status and major field of study of the respondents. The third section contained questions about their employment status, the date of beginning professional activities and the impact of the INSO training course on their job achievements. The questionnaire ended with a request to interview the respondent and to provide contact data for such purpose in case of a positive answer.

The questionnaire was prepared on Google Forms and the link was sent on August 10, 2020. Answers were collected until August 30, 2020. The answers were displayed and processed in an Excel file in September 2020. 42 responses were eventually received out of the 87 above mentioned. Considering the volatility of the population concerned and the digital limitations of the context, a 48 percent rate of answering is very satisfactory. It allows significant descriptions and relevant interpretations. However, it does not open the door for sophisticated statistical analysis, with groups too small within the subdivisions.

Personal Interviews to Investigate Professional Achievements

For the respondents with employment at the time of the survey, further information about their professional integration was needed. The majority of them accepted the invitation to meet with the team for an interview. The members of the research team decided to conduct these interviews through the intermediary support of assistant researchers. This constituted an opportunity to train university students through fieldwork experience.

The interviews' guidelines were designed by the authors of this research along the following axes:

- Description of job position (company, tasks, sector, size, etc.);

- Type of contract;
- Satisfaction and feelings;
- Future plans;
- The way they applied for the job and got it;
- Whether the INSO training helped in getting their position or not.

Aspects of major interest were networking, soft skills, formal or informal labor market, and how an institutional program such as INSO could interact with these data. The assistant researchers trained by the authors of this study got precise indications in a preparatory session before going into the field. They were split in pairs of interviewers, in order to make it easier for them to conduct the discussion while recording it at the same time. They managed to complete these interviews and produce 16 reports by the end of January 2021. The reports were written in English even though the interviews took place in Arabic.

Results

This section presents the data collected from the 42 students who responded to the explorative questionnaire and the 16 personal interviews.

Professional Integration after the INSO Project.

The following table provides a picture of the labor insertion of the Project graduates after almost two years of its conclusion:

Table 2: Professional Integration After Almost Two Years of the Project Conclusion

The INSO Project	helped find a job	"I work in the internship place"	"I work but not due to INSO"	"I worked before starting INSO"	No answer	Total	%
Full time job	11	2	8			21	50
Part-time work	1		3			4	9.5
Occasional work	2			1	2	5	12
I do not work					12	12	28.5
TOTAL	14	2	11	1	14	42	
%	33	5	26	2	33		

29 out of 42 surveyed graduates found jobs within the two consecutive years after the end of the project training. 16 of them expressed a positive link between the specific training received through the INSO project and their job achievement. This link is particularly direct in the case of 2 students who are working in the place where they carried out their internships. The field interviews revealed that in meeting the challenge to find a job, the preparation for job search, CV writing and self-presentation were the aspects of the Project that helped them more, compared to their technical abilities and direct qualifications. In the same line, the interviewees mentioned other supportive elements like the awareness of the environment, the ability for interpersonal communication, soft skills (working in team, problem solving and diversity management) and the capacity to understand labor market conditions. Several of them mentioned that they are interested in pursuing a career abroad, either through master degree programs and beyond, or by obtaining a working position in a foreign country. Three of them actually held such a job already, in particular in South-Sudan, Egypt and Canada. Some of them work for foreign companies and institutions in Sudan. Three interviewees were optimistic about the future of Sudan. Nonetheless, the wish expressed by most interviewees with regards to opportunities abroad was a sign of

the difficult challenges the country is facing and the uncertainties about the possibilities of an improvement of the socio-economic situation in Sudan.

The internal push factors or the external attractiveness were referred to by young men more than women though women may also be sensitive to job prospects abroad. Most of the interviewed people, women and men, expressed their satisfaction with the job they had. They mainly worked in the fields in which they qualified: computer and information sciences. They worked as technicians, engineers or even teaching staff. In spite of their satisfaction, they mentioned that they would take other job options if good opportunities became available. Several of them also referred to an entrepreneurial project down the line, once they acquired more experience. They valued the training received through the INSO project in this regard. As for the job search process, diversity prevails. Some found the position thanks to their connections and others sent their CV to different institutions until they were contacted. As already mentioned, 2 project students transformed their internship into a professional position. Most of them went through trial periods of some weeks to a few months.

Factors Influencing Job Prospects

About half of the students who answered the explorative questionnaire (22/42) are graduates of Comboni College of Science and Technology (CCST) while the others (20/42) studied in 5 different universities ("Other" on Table 3). Slightly more than half of them are Sudanese (23/42) and 19 come from refugee families (2 from Eritrea and 17 from South Sudan). It is worth mentioning that most students of CCST who responded the questionnaire are from refugee families (18/22). Among the refugee graduates, 8/10 were born between 1984 and 1993 (2 students did not declare their date of birth).

Table 3: Demographics of the Questionnaire Respondents

	Nationality		Gender		University		Date of Birth	
Work	Sud.	Foreig.	Male	Female	CCST	Other	1984-1993	1994-1998
Full time job	14	7	12	9	8	13	5	14
Part time	2	2	3	1	2	2	1	3
Occasional	3	2	4	1	2	3	0	5
I do not work	4	8	8	4	10	2	4	6
TOTAL	23	19	27	15	22	20	10	28

The results show that refugee students find it more challenging to insert themselves in the Sudanese labor market. They are in a foreign country and therefore their network of contacts is weaker than the Sudanese young people. Moreover, since they come from conflict areas, they missed some school years and consequently they finish university studies later than other students.

The majority of the respondents to the survey pretend to have a "full time regular job" while only 9 of them declare having either part time or occasional ones. However, the interviews clarify very much this point. Most of those with full time positions have short term renewable contracts. Their status is rather precarious and some have obtained the position through a couple of months of volunteer or temporary work. This is not a surprise in a country with an important informal labor market, where even qualified jobs may be highly flexible. It also has to do with the young age of the job candidates (below 25 years old, in average) as their employers want to test them in early stages or the beginning of their career.

Results Discussion

The research results confirm that the sector of knowledge of the selected students – computer and information sciences – is one that offers good job opportunities though it demands some additional skills to the strictly academic ones. The project did strengthen them. The research shows, indeed, that university students in Sudan make good use of specific training related to job search techniques such as CV writing or self-presentation. This conclusion, two years after the completion of the INSO project, is coherent with the assessment done by the students immediately at the end of the project. The most appreciated training module then had been "Job search techniques" (CAP, 2019, p. 15). This is meaningful, particularly if we acknowledge that economic growth over the past two decades, even if more remarkable in other countries of the continent, has failed to be translated into sustained employment gains and poverty reduction in Africa (Baah-Boateng, 2016).

Even if the study is not quantitatively meaningful, it is worth placing its data in the African context. In a survey carried out by Afrobarometer with 45,823 interviews, completed between September 2016 and September 2018, "on average across 34 countries, about one-third of respondents said they were employed full-time (22%) or part time (12%), while 27% were unemployed and 39% were not active in the labor market" (Makanga&Msafiri, 2020, p. 1). The same survey asked: "Do you have a job that pays a cash income? [If yes:] Is it full time or part time? [If no:] Are you currently looking for a job?" (Makanga&Msafiri, 2020, p. 4). 39 percent of Sudanese respondents declared that they did not have a job. The study published by the CFYE (2021) also states that youth unemployment in urban areas of Sudan grew between 2009 and 2014 from 19.7 percent to 39.3 percent (p. 5). The same study even mentions that "50% of the women with tertiary education degrees is unemployed" (CFYE, 2021, p. 6).

Moreover, the Sudanese environment looks much too challenging to have university graduates starting their own business within a short period after their graduation in spite of their wishes. The Entrepreneurial Intention Rate is about 30 percent in Sudan (Innovation and Entrepreneurship Community [IEC], 2017). The process to register a company is too complex and expensive and "it is not yet possible to register venture capital firms, digital enterprises or social enterprises" (CFYE, 2021, p. 7). The weakness of the entrepreneurship ecosystem and the lack of connection between academia, start-ups and end users justify the creation of specific structures such a Start-ups Incubator to support those graduates who have the capacity and the wish to start their own companies.

Conclusion

The study on the impact of a specific training program, the one provided through the INSO project, to support the employability of young graduates in Sudan has some limitations, mainly related to the size of the sample and also the lack of comparison of the data collected from the INSO graduates with data from similar students who did not benefit from the project training. Another limitation is the impossibility of having access to reliable data on the number of university students since 1989 up to the present. This is the reason why the study presents data on the development of university vacancies instead of the above mentioned number. But in spite of these limitations, the evidence does reveal a significant rate of employment for the graduates of this training course (29/42) and a positive impact of specific training related to job search techniques like CV writing and self-presentation.

These conclusions are also valid for university graduates coming from refugee families. In their case, in addition to the challenges Sudanese youth face, it is necessary to consider the weakness of the lack of a network necessary to start a business or to insert oneself into the labor market. With regards to international cooperation, if such a project as INSO confirms the potential improvement of local labor market conditions for the youth, it also points at the frailty of the working conditions. Moreover, the skills upgrading and social openness provided by the training program is no deterrent for mobility.

A basic reflection about the articulation of international cooperation and socio-environmental needs remains crucial. Such analysis should be nurtured by other complementary research projects. In the

current situation, with social difficulties exacerbated by the aftermath of the pandemic and the 2019 Revolution, evidence based analysis should directly feed decision making.

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