

Zugänge, Barrieren und Potentiale für die internationale Mobilität von Wissenschaftlerinnen

Länderbericht Tunesien

Country dossier Tunisia

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1 Overview

Tunisia is a North African country with a population of 11.8 million (UNFPA, 2020). Tunisia has a relatively young population, with 66.8 percent of the total population between the age of 15–64 years (UNFPA, 2020). Tunisia gained its independence from France in 1956, and is currently classified as a lower-middle-income country (World Bank, 2019). It was formally a French protectorate. Arabic is the official, national language of Tunisia. French is the main foreign language (Badwan, 2019). The religion of the majority (98 percent) of the Tunisian population is Islam, while about 2 percent follow Christianity or Judaism.

Tunisia began its literacy programme in the 1960s with the aim of reducing the high post-independence illiteracy rate, which in 1956 was estimated to be 84.7 percent (96 percent for women) (UNICEF, 2007). Today, while Tunisia has successfully eradicated illiteracy among its population under the age of 15, the issue of illiteracy remains a challenge facing the nation, in particular among its female population aged 15 years and older. Recent UIS data show that a total of 1,197,998 of Tunisia’s female population aged 15 years and older are illiterate (see Table 1). This is approximately 10 percent of the population.

Table 1: Illiterate Population

	TOTAL	MALE	FEMALE	
Illiterate population				
15-24 years	67,069	30,653	36,417	(2014)
15 years and older	1,774,318	576,320	1,197,998	(2014)

Source: UNESCO Institute for Statistics (UIS), 2020

Tunisia was at the forefront of the 2010/2011 Jasmine Revolution, later named the Arab Spring. While coalitions of trade unions, students, political parties, and feminist organisations protested, mainly non-violently, education was thought to be a central component in the uprising. Fryer and Jules (2013) argued that because the higher education system had been reformed to make it more compatible with international structures, it created a politically conscious, outward-looking population able to overthrow an authoritarian, non-democratic political regime. A large presence of women was a noticeable feature of the Arab Spring in Tunisia (Moghadam, 2018), and high graduate unemployment was seen as one of the sources of discontent (DeBoer, 2016).

1.1 Higher Education

The University of Tunisia was established in 1960, as the first university in the country. There are now 13 public universities and a network of 25 higher technological studies institutes under the direct supervision of the Ministry of Higher Education and Scientific Research (Ministère de l’Enseignement Supérieur et de la Recherche Scientifique MESRS). In 2000, Tunisia established a legal framework for regulating the private higher education sector. While the number of private higher education providers was 47 (19.2 percent of total HEIs) in the academic year 2013/2014, this number increased to 74 in the academic year 2018/2019 (MESRS,

2019). Among the private institutions established is the American University in Tunis, inaugurated in 2015. The university is a partnership between the local private Université Montplaisir Tunis and three US universities: Clayton State University, the University of Michigan, and Savannah State University.

The total budgetary allocation for higher education and scientific research remains at 4.0 percent – a percentage that did not increase much between the academic years 2014 (4.9 percent) and 2019 (4.1 percent) (MESRS, 2019). The gross expenditure for research and development was recorded at 1.4 percent of the total gross domestic product (GDP) (MESRS, 2019).

Tunisian higher education has been heavily shaped by the transfer of structures from European systems (Fryer & Jules, 2013), with a small well-educated Tunisian elite studying in France (UUK, 2018). The Tunisian authorities introduced the LMD (Licence/Bachelor-Master-Doctorate) degree system in September 2006 (Champagne, 2007; Khelifi & Triki, 2020). LMD reforms in Tunisia were catalysed mainly by the problem of graduate unemployment (Hamida et al, 2017). The completion of a secondary education programme (baccalaureate) is the general prerequisite for joining undergraduate study programmes.

Education is free and compulsory for children aged 6 to 15 years ‘regardless of gender, social origin, skin colour or religion’ (Megahed & Lack, 2011). Some tuition fees are payable in higher education, and the government awards national grants to about a third of university students, particularly to those from underprivileged sections of society.

Most university subjects are taught in French, but some disciplines, including history, philosophy, journalism, Islamic studies and Arabic literature, are taught in Standard Arabic. Some universities have started to gradually introduce selected university courses in English (Havergal, 2016). The Tunis Business School opened in 2010 – the first public institution in Tunisia to use English as the main language of instruction. Tunisia has six universities in the overall *Times Higher Education World University Rankings* – all ranked 1000+ (Universities of Carthage, Manouba, Monastir, Sfax, Sousse). To improve the quality of teaching and research, Tunisia is investing in digital technology to support higher education, and has made increased ICT usage a key goal of the current reform process (Oxford Business Group, 2017).

1.2 Research

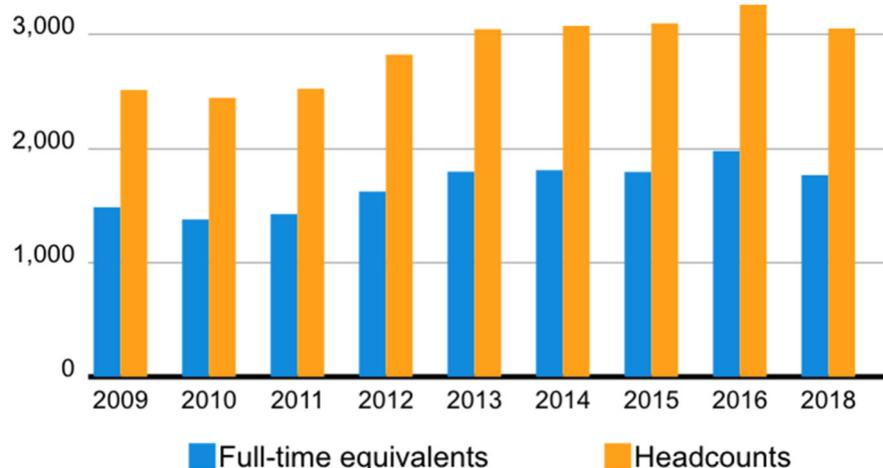
Scientific research is organised largely in universities within research laboratories or research units established in accordance with national priorities. In Tunisia there are:

- 1) 39 scientific research centres
- 2) 392 research laboratories
- 3) 215 research unities
- 4) 37 doctoral schools

The main research fields in Tunisian research centres are: Computing and ICT; Agriculture and Biotechnology; Social Sciences and Economics and Medical Sciences (MERIC-Net, 2019).

Tunisia’s top five partners for research collaboration are France, Saudi Arabia, Spain, Italy and the United States (UUK, 2018).

Figure 1: Researchers per Million Inhabitants



Source: UNESCO Institute for Statistics (UIS), 2020

Table 2: Growth of the Researcher Population

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Researchers in full-time equivalents (FTE)										
Per million inhabitants	1,490.54	1,384.74	1,431.41	1,627.92	1,801.16	1,814.12	1,799.02	1,982.23	...	1,771.61
% female	42.41	51.97	51.81	55.07	57.65	58.17	58.89	59.73	...	59.15
Researchers in headcounts (HC)										
Per million inhabitants	2,514.04	2,446.02	2,524.98	2,822.53	3,043.65	3,072.89	3,093.84	3,288.76	...	3,049.93
% female	42.10	47.80	47.80	50.70	53.10	53.90	54.60	55.40	...	56.10

Source: UNESCO Institute for Statistics (UIS), 2020

2 Gender and Education

Tunisia is currently ranked 124 out of 153 in the *Global Gender Gap Index* (World Economic Forum, 2020). However, Tunisia has long been recognised for its progressive attitude toward women, with feminist organisations emerging as early as 1936 (Arfaoui, 2020). More recently, state feminism has been a driving force behind reform (Moghadam, 2018). Gender equity has been central to the process of Tunisification,¹ and has had a profound impact on the culture of the education system (Fryer & Jules, 2013).

Since independence, education has been a priority for the Tunisian state. Between 1990 and 2010, Tunisia achieved major progress in relation to women’s access to education services and the labour market; and girls’ enrolment in secondary school more than doubled. However, it is important to note that there are significant differences in literacy and schooling rates among regions and between urban and rural areas (Chambers with Cummings, 2014).

¹ Tunisification is the connection between the unique history of Tunisia with the development of contemporary needs for education of its citizens.

2.1 Enrolment

Before 2000, women made up less than 30 percent of all university students in Tunisia. Since then, their participation rates have been steadily rising. In 2007, the gender equality ratio GER for higher education in Tunisia was 31.6 percent, while the nation boasted a gender gap of –12.6, as the percentage of women students (59.5 percent) considerably exceeded the percentage of males (40.5 percent) (Jaziri, 2019).

In the academic year 2018/2019, Tunisia’s higher education system enrolled 54,265 new students (of whom 34,560 were women). Women’s share of new enrolment has steadily increased over the years, from 63.1 percent in the academic year 2013/2014 to 65.9 percent in the academic year 2018/2019. There has been a drop in the numbers of new enrolments over the years. For instance, in the academic year 2013/2014, the total number of newly enrolled students in public universities was 71,915, this number dropped to 54,265 in academic year 2018/2019 (MESRS, 2019).

Table 3: Development in Enrolment between 2013–2019

	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019
Public Universities	71,915	67,683	48,983	57,503	54,007	54,265
Women’s share	63.1%	61.0%	61.0%	64.2%	62.8%	65.9%

Source: MESRS, 2019

In the academic year 2018/2019, the number of registered students enrolled in the Tunisian higher education system was 267,154 in total and over 60 percent of these were females (Statista, 2020). Public universities hosted 233,692 students (of whom 65.9 percent were women), and 33,462 students (of whom 44.8 percent were women) were enrolled in private universities. There has been an increase in the number of students in private universities over the years. For example, in the academic year 2013/2014, private universities hosted 7.8 percent of the total student population. This share increased to 12.5 percent in the academic year 2018/2019 (MESRS, 2019). One explanation for this increase is the rapid growth in private sector providers.

In the same academic year, Tunisia hosted 7,385 foreign students (of whom 91.3 percent were from the African continent) (MESRS, 2019). A breakdown by degree choice shows that engineering remains the most favourable study choice, with 51,502 students enrolled (of whom 20,326 – 39.47 percent – were women) in the year 2018/2019. The second favourite study choice was commerce and business administration, with 46,269 students enrolled (of whom 30,371 – 65.64 – were women), followed by journalism and multimedia, with 31,530 (of whom 15,765 – 50 percent – were women), according to data from the Ministry of Higher Education and Scientific Research (MESRS, 2019).

In terms of graduation from public universities, women continue to outperform men in the share in the number of graduates each year. In the academic year 2012/2013, women’s share

of total graduates was 67.4 percent; it continued to steadily increase over the years, reaching 68.9 percent in the academic year 2017/2018.

Table 4: Development in Number of Graduates

	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018
Public Universities	61,741	61,296	58,748	57,923	56,279	50,307
Women's share	67.4 %	67.0 %	66.5%	68.4%	67.8%	68.9%

Source: MESRS, 2019

The percentage of women graduating with degrees in the natural sciences has increased from 40 percent in the early 1960s to over 60 percent at present. The percentage of women enrolling in physics remained constant – at 30–35 percent – between the 1960s and the early 1990s, but now also exceeds 60 percent (Jaziri, 2019).

2.2 Transition to Postgraduate Study

A breakdown by degree level shows that a total of 36,290 students were enrolled in postgraduate taught degree courses (Master's degrees) in public universities for the academic year 2018/2019. Of these, 15,676 students (of whom 11,425, or 72.88 percent, were women) were enrolled in social science Master's degree programmes, and a total of 20,614 students (of whom 14,318, or 69.46 percent, were women) were enrolled in STEM Master's programmes. On average, the student population in postgraduate taught programmes has decreased over the years.

At postgraduate research level (PhD), the total number of enrolled students recorded was 11,629 (of whom 7,885, or 67.8 percent, were women) for the academic year 2018/2019, according to data from the Ministry of Higher Education and Scientific Research (MESRS, 2019).

Table 5: Student Population in Postgraduate Studies

	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019
Postgraduate Taught Programmes	40,086	37,957	38,307	37,043	36,950	36,290
Postgraduate Research Programmes	11,408	11,481	11,171	13,264	12,798	11,629

Source: MESRS, 2019

In Tunisia, the percentage of women among PhD graduates increased from 48 percent in 2004 to 56 percent in 2010. In the academic year 2018/2019, the total number of PhD graduates reached 2,359 students (of whom 1,573, or 66.68 percent, were women), according to

data from the Ministry of Higher Education and Scientific Research (MESRS, 2019). Thus, at present, more women than men earn a PhD degree. Women are a minority among PhDs in education and humanities and arts, which are fields that tend to be feminised. However, they outnumber men among PhDs in four fields of science, and quantitative equality has been achieved in natural science and engineering.

Table 6: Graduates from Postgraduate Programmes from Public and Private Universities

	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018
Postgraduate Taught Programmes	9,248	11,218	10,304	9,818	9,232	8,963 Women's share (72 %)
Postgraduate Research Programmes	742	825	1,325	1,455	3,068	2,359 Women's share (66 %)

Source: MESRS, 2019

In terms of graduates by specialisation, the data obtained from the Ministry of Higher Education and Scientific Research show the total number of graduates by specialisation and women's share in each. Unfortunately, no recent data are available with a breakdown by specialisation, study level and gender.

Table 7: Graduates across All Levels² by Discipline in Academic Year 2018/19 in Public Universities

Graduate Specialisation	Total number of graduates	Women's share	in %
Agri., Forestry, Fisheries and Veterinary	827	620	75%
Arts and Humanities	7,597	6,068	80%
Business, Admin. and Law	10,721	8,255	77%
Engineering, Manufacturing and Construction	8,561	3,702	43%
Health and Welfare	3,297	2,487	75%
Information and Comm. Technologies	6,579	4,018	61%
Mathematics and Statistics	633	402	63%
Services	2,019	1,045	51%
Journalism and Information	327	261	80%
Social Sciences	3,025	2,351	77%

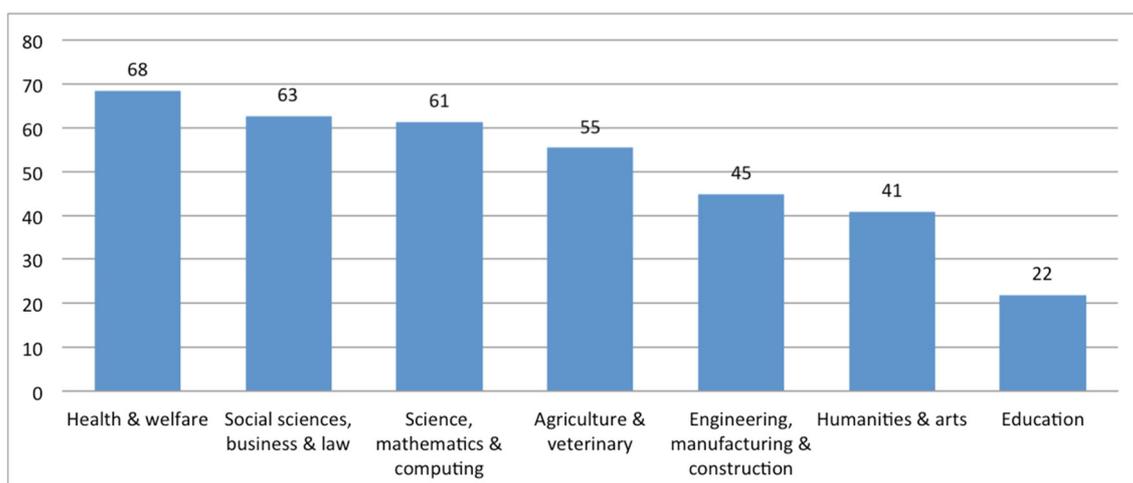
² A breakdown by gender for study level was not available at the time of carrying out this study. Please see: www.universites.tn

Source: MESRS, 2019

Women account for the majority of PhD graduates in health and welfare, as well as in social sciences, business, and law. While in 2010, women comprised 50 percent of PhD graduates in natural science and engineering, this figure masks a high level of disparity among subfields. Women accounted for 76 percent of all PhD graduates in the natural science and engineering subfield life science, but they earned 42 percent of the PhD degrees granted in engineering and engineering trades, and 41 percent of those in mathematics and statistics (SHEMERA, 2014). However, a lack of employment prospects faces PhD graduates.

The SHEMERA study (2014) found that, counter-intuitively, women were more likely than men to do a PhD in science, mathematics and computing whereas men were more likely to do so in humanities and arts. The strong representation of Muslim women among those studying science was reported by Stoet and Geary (2018, 2019). They termed it a paradox, because the countries with the highest levels of gender equality, e.g. Finland, Norway, and Sweden, had lower participation rates for women in STEM than the countries with low gender equality, e.g. Arab countries such as Tunisia.

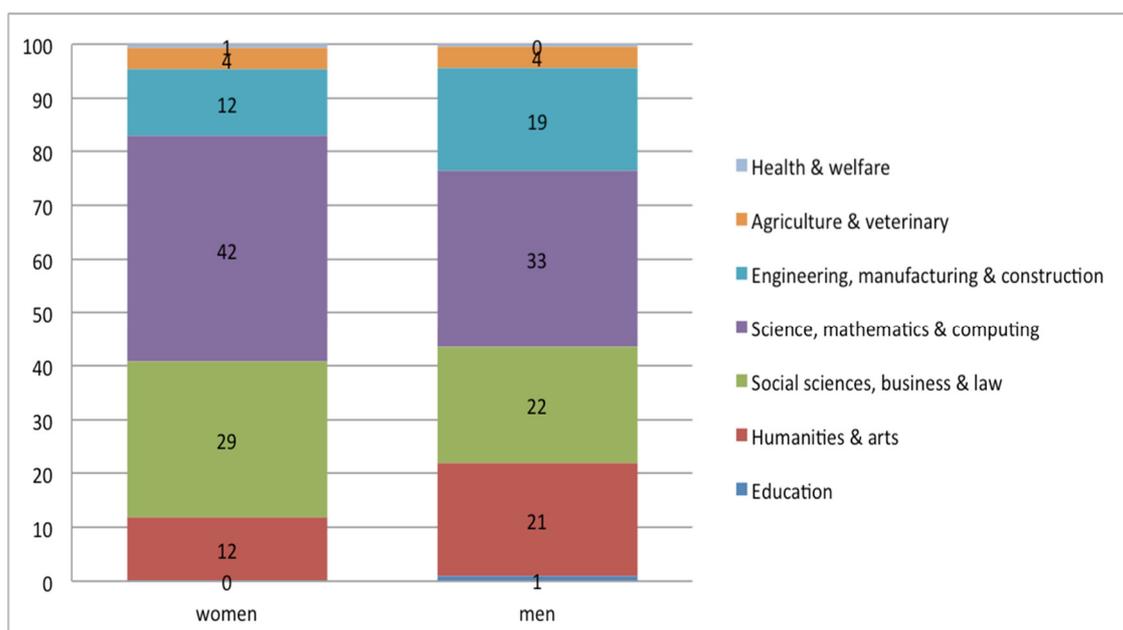
Figure 2: Proportion of Women PhD Graduates in the Different Fields of Science, 2010



Source: SHEMERA, 2014

The SHEMERA (2014) study found that in 2010, although women comprised 76 percent of all PhD graduates in the natural science and engineering subfield life science, they represented just 41–42 percent in the subfields engineering and engineering trades and mathematics and statistics. The study also reported significant vertical segregation in terms of career progression.

Figure 3: Distribution of PhD (ISCED 1997 level 6) Graduates across the Broad Fields of Study by Sex, 2010



Source: SHEMERA, 2014

Note: ISCED 1997 level 6 = ISCED 2011 level 8.

2.3 Women's Academic Careers

The graduate unemployment rate among young people remains high, reaching 19.4 percent and 40.4 percent for men and women, respectively, in the third quarter of 2016 (Bajec, 2019; Moghadam, 2019; Oxford Business Group, 2018). Women with higher education levels are affected by a high unemployment rate (Assaad and Boughzala, 2018), in particular among holders of PhDs (Jaziri, 2019; Sawahel, 2020).

Table 8: Unemployment Rate (Percentage) of Higher Education Graduates by Gender

	2009	2010	2011	2012	2013	2015
Male	14.6	15.8	23.7	15.8	20.9	19.9
Female	34.9	32.9	43.8	40.2	43.5	38.4
Total	23.4	23.3	33.6	26.9	31.6	28.6

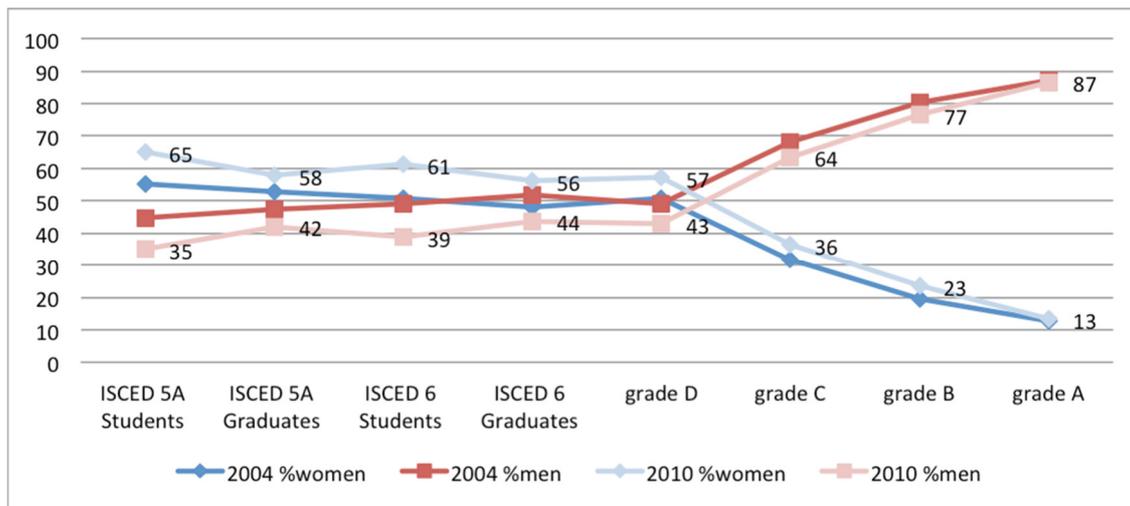
Source: Assaad and Boughzala, 2018

In addition to the overall problem of unemployment, women's careers in the natural sciences, and particularly in chemistry and physics, are thought to be inhibited by gender-based values that become more marked after graduation (Jaziri, 2019). For example, studies have found that Tunisian engineers indicate that traditional gender perceptions and expectations tied to familial roles did not fit with women's participation in engineering careers, and women engineers often choose teaching since it is culturally and logistically difficult to be on an engineering project site (DeBoer, 2016; Zghal, 2006).

The report *Education and Scientific Development in Organisation of Islamic Cooperation Countries 2016*, published by the Turkey-based Statistical, Economic and Social Research and Training Centre for Islamic Countries (SESRI, 2016) found that women researchers represented around 47 percent of the total number of researchers in Tunisia. This percentage increased in the following years to reach 56.1 percent (UNESCO Institute for Statistics, UIS,

2020), and placed Tunisia at the top of African countries, with the highest share of women researchers.

Figure 4: Proportions of Men and Women in a Typical Academic Career, Students and Academic Staff, 2004/2010



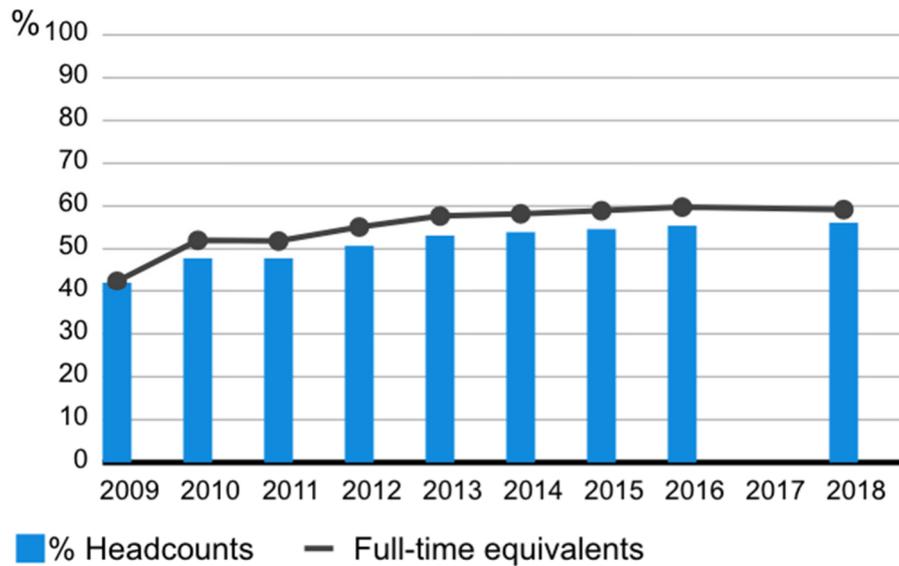
Source: SHEMERA, 2014

Note. ISCED levels in the figure refer to ISCED 1997. ISCED 1997 level 5A = ISCED 2011 levels 6 and 7; ISCED 1997 level 6 = ISCED 2011 level 8. Grade D = Assistant; Grade C = Assistant Professor; Grade B = Associate Professor; Grade A = Professor.

Tunisia applies nine grades for teaching personnel:

- Grade A: Professor
- Grade B: Associate Professor
- Grade C: Assistant Professor
- Grade D: Assistant
- Grade E: Key personnel of University Hospitals
- Grade F: Master technologist (“Maître technologue”)
- Grade G: Technologist
- Grade H: Assistant technologist

Figure 5: Women as a Share of Total Researchers



Source: UNESCO Institute for Statistics (UIS), 2020

There is very little recent information about women's academic careers in Tunisia. The country is sometimes included nominally and fleetingly in regional studies of academia (e.g. Greene & Richmond, 2016; Karam & Afiouni, 2014), or in regional studies of women's careers more generally (Afiouni & Karam, 2017) but, in the absence of readily available gender-disaggregated datasets, these studies often rely on raw data from university websites, for example.

Table 9: Researchers by Type of Employment and Headcount

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Researchers in full-time equivalents (FTE)										
Per million inhabitants	1,490.54	1,384.74	1,431.41	1,627.92	1,801.16	1,814.12	1,799.02	1,982.23	...	1,771.61
% female	42.41	51.97	51.81	55.07	57.65	58.17	58.89	59.73	...	59.15
Researchers in headcounts (HC)										
Per million inhabitants	2,514.04	2,446.02	2,524.98	2,822.53	3,043.65	3,072.89	3,093.84	3,288.76	...	3,049.93
% female	42.10	47.80	47.80	50.70	53.10	53.90	54.60	55.40	...	56.10

Source: UNESCO Institute for Statistics (UIS), 2020

Women were reported to make up 40 percent of all academics in 2010 (Cheikh, 2010), 47 percent in 2012, and more than 50 percent of all academics according to the latest count of 2018/2019. The total number of academics was 21,823 (of whom 11,233, or 51.47 percent, were women) (MESRS, 2019).

Table 10: Distribution of Full-time Faculty 2018/2019

Grade	Total	Women's Share
Professor	1,562	322 (20.61%)
Senior Lecturer	1,047	326 (31.14%)
Lecturer	6,502	3,345 (51.45%)
Assistant Lecturer	2,731	1,669 (61.11%)
Tutor: PhD Holders	885	661 (74.69%)
Doctoral Tutor	319	234 (73.35%)

Source: MESRS, 2019

There is an absence of any in-depth recent consideration of the topic of women's academic careers in Tunisia. One rare larger-scale study, the *SHEMERA National Report: Tunisia* (2014), expressed frustration with the lack of gender-disaggregated statistics, and noted that the main gap in data collection for Tunisia was for the category of researchers. The lack of data on researchers stemmed from the absence of an R&D survey in Tunisia; moreover, no raw data were available to estimate the gender wage gap in academia (SHEMERA, 2014).

The SHEMERA study (2014) found that women grade A academic staff in Tunisia were most represented in the medical sciences, where 27 percent of all grade A academics in 2010 were women. Around 15–16 percent of all grade A staff in the social sciences, the humanities and the natural sciences were women. The gender gap in 2010 was widest in engineering and technology and in agriculture, where just 10 percent or less of all grade A academics were women.

In summary, women in Tunisia are entering academia, and the STEM subjects, at all levels of study. However, they are under-represented at the higher professional levels.

3 Internationalisation

International cooperation is one of the main priorities of higher education policy in Tunisia. In the public sector, Tunisian universities have pursued a range of international agreements as a means to improving quality and enhancing mobility (Buckner, 2016). Tunisia commenced reform of its higher education system by implementing the Bologna Process in 2006, followed by the adoption of the new Law on Higher Education in 2008. This law formally introduced the European Credit Transfer System (ECTS), the three-cycle system of study, and the diploma supplement.

Most higher education institutions (HEIs) in Tunisia have established bilateral and multilateral cooperation with similar universities in EU countries, the Maghreb region, Arab countries, the USA, Canada, Asia, and other regions of the world. This cooperation focusses mainly on students' mobility, study visits, exchange of teaching staff, and research activities.

All Tunisian HEIs have participated in a significant number of Erasmus Mundus, Tempus and Erasmus+ projects (137 projects in the period 2008-2015). These projects have reinforced the exchange networks between institutions of higher education in the southern Mediterranean countries and the EU. Tunisia's thirteen public Tunisian universities are active and increasingly cooperating with partners in Europe and other regions in the world.

Besides the projects financed by the EU within the framework of the Erasmus+ programme, the Horizon 2020 programme, the Tunisian-European bilateral agreements, etc., Tunisia has several bilateral agreements with Asia, the US and the neighbouring countries. The General Directorate of International Cooperation at the Ministry of Higher Education and Scientific Research is the body designated to enter into and sign any of these agreements. The main tenets of these agreements are higher education, research, innovation and technology, and students' mobility. In addition to higher education, some of these agreements relate to culture, languages, secondary and primary education.

Regionally, Tunisia has cooperation with neighbouring Maghreb countries in higher education and scientific research. Tunisia has a well-established student exchange programme with Morocco. A similar mobility programme with Algeria is underway.

Furthermore, Tunisia is building new cooperation opportunities with some African and South African countries in higher education and scientific research. The Tunisian Ministry of Higher Education and Scientific Research is encouraging African students to study in Tunisian HEIs.

Tunisia is involved in a number of international programmes such as the Tunisian-American programmes, which offer degree and non-degree scholarships for Master's and doctoral students, researchers and academic staff. These programmes include "Partnership for the Enhanced Engagement in Research (PEER)", "Fulbright, Tech+" and "Thomas Jefferson" (MERIC-Net, 2019).

Some Tunisian institutions have agreements with educational institutions abroad which enable Tunisian students to get a double degree (European Commission, EC, 2017).

3.1 Patterns of mobility

The total number of mobile Tunisian students abroad is 23,730, according to the latest UNESCO Institute for Statistics data (UIS, n.d). France remains the first destination for study abroad, with a total of 9,499 Tunisian students in tertiary education. Germany is in second place, with a total of 5,599 students, followed by Romania with a total of 1,152 students. In the academic year 2016/2017, a total of 85 Tunisian undergraduates and 45 Tunisian post-graduates studied in the UK. The most popular subject areas for Tunisian students in the UK include business and administrative studies, social studies, engineering and technology, and languages (UUK, 2018).

- Tunisia has a number of opportunities for international mobility:
 1. **Simple study mobility:** concerns Bachelor's and Master's students who spend one semester or one year in a European university. These scholarships are granted within the framework of a mutual agreement between the institution of origin and the host institution on issues such as the recognition of the applicant's level, the transfer credits for courses and examinations completed externally (outside the degree awarding institution). In addition to that, the Ministry of Higher Education and Scientific Research offers each year a certain number of master's degree scholarships (for one or two years) for the benefit of selected students. These scholarships concern some European countries and Canada.
 2. **Going on an engineering student mobility for a final graduation project** (Projet de fin d'études: PFE): concerns only the realisation of the End of Studies Project "PFE" in the final year. The evaluation of the project occurs at the degree awarding institution. Most of these scholarships are funded by a national specific programme managed and run by the Ministry of Higher Education and Scientific Research.
 3. **Training mobility scholarships:** targets mostly doctoral students who are conducting research in research institutions and laboratories in Europe and elsewhere. National and international institutions, with a low involvement of European scholarship programmes, fund these scholarships.
 4. **Co-tutorship for doctoral studies:** some doctoral students benefit from a co-tutorship agreement between their home universities and a hosting university. The students spend one semester in each of the two universities during the three years of doctoral studies. At the end of their studies, students obtain a double doctoral degree or a joint doctoral degree, depending on the terms of the prior agreement. The mobility in this context commits doctorate supervisors to look for funding from different resources. Funding for mobility comes from resources provided by the home research institute, and bilateral agreements' support or national programs funded by ~~HERSM~~ the Ministry of Higher Education and Scientific Research (MESRS) (*bourse d'alternance*).

Professorial exchanges bring a number of teachers from France to Tunisian universities. They are placed at universities as *professeurs vacataires*, or visiting professors. By law, they

cannot be employed as full professors unless they are Tunisian or are married to a Tunisian (DeBoer, 2016).

3.2 Current debates on gender and mobility

Questions have been posed about how gender relates to opportunities and experiences of internationalisation (Morley et al, 2019, 2020). Mobility is seen as vital in an academic's career because it provides scholars with opportunities for interaction with other scholars internationally and for further professional development. However, opportunities can be highly gendered – especially in Africa (Prozesky & Beaudry, 2019). Internationalisation makes visible the patriarchal premium (Bhandari, 2017; Jöns, 2011; Matus and Talburt, 2009; Myers and Griffin, 2018; Rosner, 2015). Leemann (2010) suggested that mobility is not viewed as a social experience whose value is neutral, but as something that has value precisely because it can be drawn into fields of asymmetrical gendered relations. She argued that women academics are less geographically mobile than their male counterparts, and that greater geographic immobility can put women at a disadvantage with regard to tenure.

4 Study Limitations

4.1 Scholarship

There is a lack of quality studies on higher education in Tunisia. The descriptive, official documentation (e.g. European Commission, EC, 2017) does not include consideration of gender. The material that does focus on gender frequently overlooks differences among Tunisian women, and tends to present them as one category of analysis. Or the focus is on women's participation in the Arab Spring. Journal papers often lack analytical depth and qualitative data, and rely heavily on statistics that go out of date very rapidly. When Tunisia is included in studies of the MENA region, researchers often have to rely on raw data, e.g. from university websites, and only fleeting attention is paid to Tunisia.

4.2 Availability of Statistics

There are severe data gaps in relation to gender in higher education. While gender-disaggregated statistics are available for students, there is a lack of information about women's academic careers, and also in relation to the gendered implications of internationalisation. Moreover, whereas we have data for the total number of graduates by discipline and women's share of each, a breakdown by study level, discipline and women's share is unfortunately unavailable.

5 Key Findings and Recommendations

5.1 Key findings

1. The Arab Spring has been closely entangled with higher education in Tunisia – both in terms of producing a citizenry capable of overthrowing an authoritarian regime, and also in relation to subsequent reforms, many of which have focussed on internationalising the higher education system.
2. Girls and women are enrolling and succeeding in the education system at all levels, and are enrolling in high numbers in STEM fields in higher education, including at doctoral level.
3. Like many of the neighbouring countries, graduate unemployment is a major challenge – especially for women. Unemployment is a problem for graduates and post-graduates in Tunisia – even in STEM fields.
4. While internationalisation is a policy priority in Tunisia’s higher education system, there is an absence of gender-disaggregated data about opportunities and flows. Tunisia’s historical links with France have provided advantages and disadvantages. A major disadvantage is lack of exposure to the language of globalisation (English), and limited opportunities for mobility beyond Francophone countries.

5.2 Recommendations

1. **DATA:** There is a major gap to be filled in the availability of gender-disaggregated data on women’s academic careers, and also on flows and opportunities for women’s internationalisation in Tunisia. This could be a focus for a Humboldt programme.
2. **SCHOLARSHIP:** There is a noticeable lack of quality scholarship on all aspects of gender and higher education in Tunisia. This topic could be a focus for Humboldt funding.
3. **WOMEN and STEM:** Women are enrolling in STEM subjects at all levels of higher education, but appear to be discriminated against when trying to enter or progress in the labour market. There is work to be done to make the STEM professions more gender-sensitive and welcoming to women; e.g. a gender mainstreaming programme could be initiated by the Humboldt Foundation.
4. **GRADUATE UNEMPLOYMENT:** Addressing the growing disconnect between educational outcomes and labour market needs should be a policy and research priority. This could be a focus for a Humboldt programme.

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