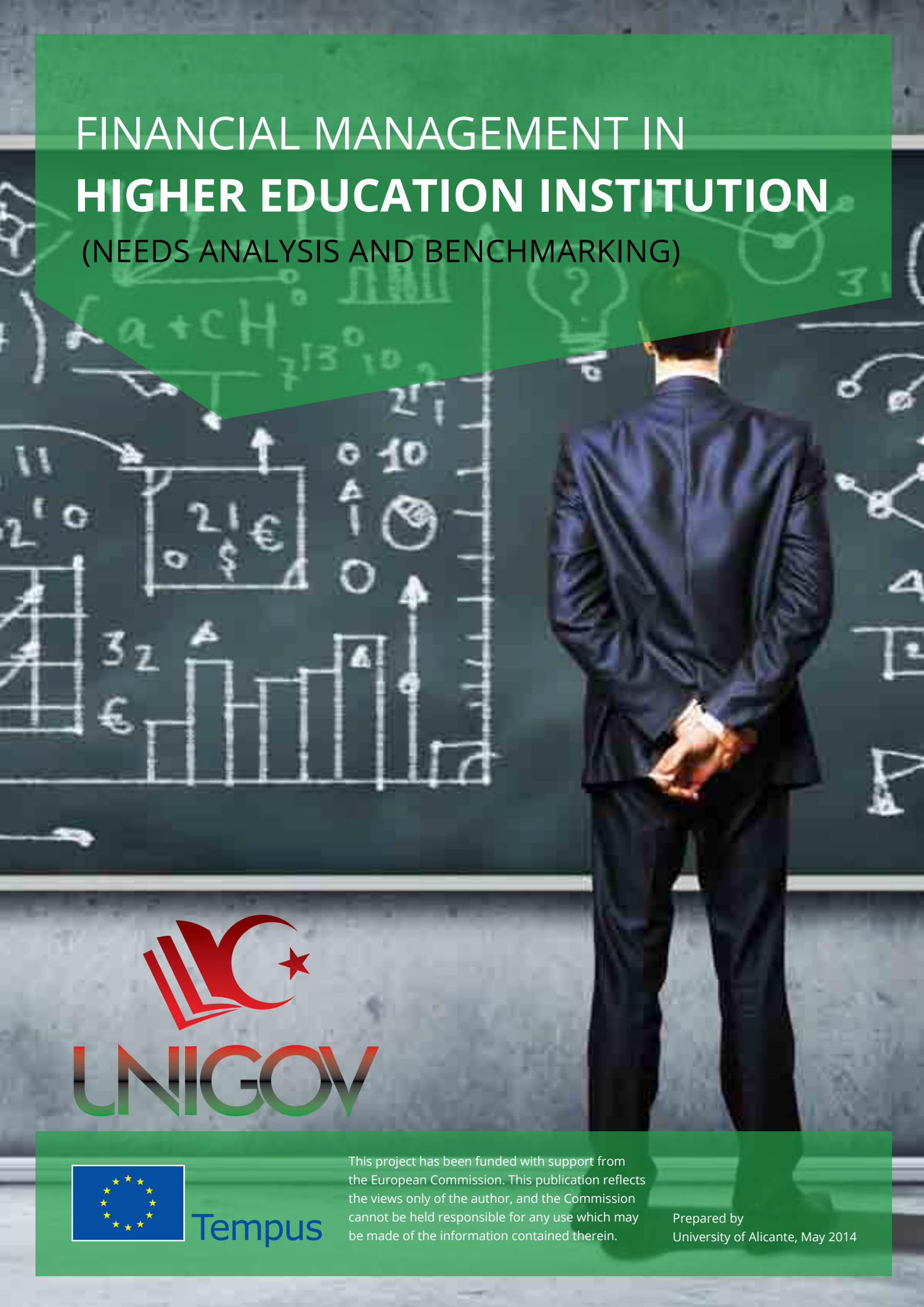
FINANCIAL MANAGEMENT IN **HIGHER EDUCATION INSTITUTION**

(NEEDS ANALYSIS AND BENCHMARKING)



UNIGOV

Tempus

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Prepared by
University of Alicante, May 2014

PROJECT **CONSORTIUM**

The UNIGOV project is composed by four European higher education institutions, one Libyan authority and seven Libyan higher education institutions.

Project co-ordinator:

University of Alicante – Spain

Libyan partners:

Ministry of Higher Education and Scientific Research

Libyan International Medical University

Omar Al-Mukhtar University

Sebha University

Al-Mergib University

University of Benghazi

University of Misurata

University of Zawia

European partners:

London Metropolitan University – the United Kingdom

Tallinn University of Technology – Estonia

Slovak University of Technology in Bratislava – Slovakia

Contact information:

International Project Management Office

University of Alicante

Torre de Control, Planta Baja

03690 – San Vicente del Raspeig

Alicante, Spain

Project website: http://www.tempus-unigov.eu/

Email: project.management@ua.es

Tel: +34 965 90 97 18

Fax: +34 965 90 97 15

Universitat d'Alacant
Universidad de Alicante

TALLINN UNIVERSITY OF TECHNOLOGY

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1. Project Background

UNIGOV, Modernizing University Governance and Management in Libya, is a three-year long project running from October 2012 to October 2015, and is co-funded by the Tempus programme of the European Commission. It aims at reinforcing ongoing governance reforms in Libyan higher education system by enhancing accountability and promoting institutional autonomy of Libyan universities.

Due to the global recession, higher education is facing more challenges than ever to secure stable income. Single financial supply source from the government for public universities or tuition fee for private universities are no longer a guarantee or sufficient. Higher education institutions (HEIs) around the globe are struggling for its survival and attempting to diversify its funding sources. In Libya, financing and governance of HEIs is among the major challenges in the higher education system according to the Overview of the Higher Education System in Libya 2012.

After the decades' of autocracy, the country is facing a completely new context and move towards to a free-market economy. Bearing the challenges in mind, UNIGOV designed a series of activities for a sustainable solution for the six public universities, University of Benghazi, Al Mergib Unviersity, Sebha University, University of Misurata, University of Zawia and Omar Al-Mukhtar University, and one private university, Libyan International Medical University.

With the assistance from the Ministry of Higher Education and Scientific Research in Libyan, and the other three European universities, London Metropolitan University from the United Kingdom, Tallinn University of Technology from Estonia and Slovak University of Technology in Bratislava from Slovakia, the UNIGOV coordinator, University of Alicante will develop the following with the consortium:

- Needs Analysis and benchmarking , in which training topics will be extracted
- Capacity building workshops
- A network for university managers
- Strategic financial actions for 2015-2019

The project's background, activities, news and events are also available on the project website - http://www.tempus-unigov.eu/

2. Executive Summary

Between Libya and the European HEIs, there are considerably different in the financial management:

- Libya has the least GDP per capital (€10k) but there is a significant difference in the total spending on higher education in percentage of GDP – 18% in Libya (ranked 3rd in total number of students) and an approximate 1% in the European counterparts.
- The overall (25%) and graduate's (10%) unemployment rate is high in Libya, which may be caused by the unrest in the country.
- Tertiary education in Libyan public universities is complimentary as it is in Slovakia, while an average of €425 in private universities.
- Libya has the least percentage of population holding an academic degree, 0.5%.
- Libya is not a signatory country of Bologna process and there is a difference of duration for a Bachelor's and Master degree.
- Slovakia spends the least on administration in HEIs (3%) while Libya spends a 44% although these two countries have a similar number of employees at HEIs. Nevertheless, Libya and Estonia share the same percentage in this expenditure whilst the number of employees in Libya is twice as much as in Estonia.
- Libyan public institutions enjoy a relatively stable financial subsides from the government, whilst the European institutions struggle to sustain its income owning to the financial crisis that adversely affected Europe.
- The stable income for Libyan public HEIs result in lack of diversity to capture capital as well as the culture for fundraising. The dependency on one single funding source is also found in the private university.
- It is unclear how effective or efficient the internal and external audit is in all participated HEIs.
- Human resources could be managed more effectively and shifted an approximate 10% of the total budget to research activities (by comparing the average expenditure on different categories).
- Little to none attention has been paid to the university-industry cooperation in the Libyan HEIs. There is a huge room for improvement in establishing strategic partnership with the industry for generating revenue and curriculum development (which is out of scope of this study).
- The shortage of R&D and innovation activities or university-industry cooperation leads to the total absence of awareness of intellectual property rights (IPR). None of the Libyan universities have a unit for intellectual property (IP) management.

Next, we will introduce the methodology used in the study.

3. Methodology

Following to the aim of this study, comparing the financial management in higher education institutions (HEIs) at macro (national) and micro (institutional), benchmarking was chosen as the tool to measure performances and indicators among the Libyan and European HEIs.

Benchmarking, as an internationally recognised methodology for performance analysis and comparison, is

"a learning process structured so as to enable those engaging in the process to compare their services/ activities/ products/ in order to identify their comparative strengths and weaknesses as a basis for self improvement and/or self-regulation"

(Jackson and Lund, 2000)[1]. In order to compare the performances and indicators, two sets of questionnaires had been developed and were distributed to seven Libyan (six public and one private) and four European public universities in the project consortium for macro and micro analysis.

The study has been undertaken during 2014, so all the data available here is corresponding to 2013. Some data was not public and the correspondent partner had to contact with the relevant Ministry of Education.

In the macro analysis, we attempt to examine the performance of the HEIs at the national level as well as the relationship with the external environment. On the other hand, micro analysis looks at the institutional financial management and performances in five areas, i) Funding sources, ii) organizational structure, norms and regulations, iii) Accountancy and IT system, iv) University-Industry Cooperation and v) Contract policies.

In the phase of analysis, all monetary figures were converted to euro according to the average exchange rate in April 2014 indicated in the Oanda website. Respondents were contacted by emails or telephone for ambiguous data.

Completed questionnaires from both Libyan and European universities can be found in the annexes.

In the next sections, we will examine the results of the macro and micro analysis.

[1] Jackson, Norman, and Lund, Helen. (2000). Introduction to benchmarking. Open University Press, Buckingham.

4. Comparative analysis

4.1 Macro Analysis

4.1.1 Libya

Libya, officially the State of Libya, is a country in the Maghreb region of North Africa bordered by the Mediterranean Sea to the north, Egypt to the east, Sudan to the southeast, Chad and Niger to the south, and Algeria and Tunisia to the west. With an area of almost 1.8 million square kilometres, Libya is the 17th largest country in the world.

The largest city and capital, Tripoli, is home to 1.7 million of Libya's 6.15 million people. In 2009 Libya had the highest HDI in Africa and the fifth highest GDP (PPP) per capita in Africa, behind Equatorial Guinea, Seychelles, Gabon, and Botswana. Libya has the 10th-largest proven oil reserves of any country in the world and the 17th-highest petroleum production.

COUNTRY LIBYA	
Population	6,155,000
GDP per Capita	€ 10,608
Overall Percentage of Population holding a Academic Degree	0.50%*
Total Spending on Higher Education in % of GDP	18%
Total Number of Higher Education Institutions	18
Total Number of Students	404,149
Total Number of Students - Public Universities (if available)	399,149
Total Number of Students - Private Universities (if available)	5,000
Total Number of Employees at HEIs	26,000
Number of Public Universities	14
Number of Private Universities	5
Average Annual Tuition Fees - Public Universities	FREE
Average Annual Tuition Fees - All Universities (If available)	€ 425
Unemployment Rate of Graduates	10%
Overall unemployment rate	25%
Average study time to complete bachelor level or equivalent	5 years
Average study time to complete master level or equivalent	3 years
Average Expenditure per Student per year	€ 5,356
Average Percentage of Spending on Administration in HEI	30%
Average Percentage of Spending on Research in HEI	NA (not separated from total spending)
Average Percentage of Spending on Teaching in HEI	NA (not separated from total spending)

*only master and PhD students

4.1.2 Estonia

General Description

Estonia is a country in the Baltic region of Northern Europe. It is bordered to the north by the Gulf of Finland, to the west by the Baltic Sea, to the south by Latvia (343 km), and to the east by Lake Peipus and Russia (338.6 km). Across the Baltic Sea lies Sweden in the west and Finland in the north. The territory of Estonia covers 45,227 km2 (17,462 sq mi), and the largest city and capital is Tallinn.

Macro Data

COUNTRY ESTONIA	
Population	1,312,000
GDP per Capita	€ 17,062
Overall Percentage of Population holding a Academic Degree	36%
Total Spending on Higher Education in % of GDP	1.10%
Total Number of Higher Education Institutions	29
Total Number of Students	64,806
Total Number of Students - Public Universities (if available)	58,362
Total Number of Students - Private Universities (if available)	6,444
Total Number of Employees at HEIs	12,500
Number of Public Universities	6
Number of Private Universities	1
Average Annual Tuition Fees - Public Universities	1,600
Average Annual Tuition Fees - All Universities (If available)	2,000
Unemployment Rate of Graduates	5.80%
Overall unemployment rate	7.60%
Average study time to complete bachelor level or equivalent	3.8
Average study time to complete master level or equivalent	2.5 (6,1 bachelor + master)
Average Expenditure per Student per year	€ 1,700 (without R&D costs)
Average Percentage of Spending on Administration in HEI	30%
Average Percentage of Spending on Research in HEI	25%
Average Percentage of Spending on Teaching in HEI	45%

4.1.3 Slovakia

General Description

The Slovak Republic is a landlocked state in Central Europe. It has a population of over five million and an area of about 49,000 square kilometres. Slovakia is bordered by the Czech Republic and Austria to the west, Poland to the north, Ukraine to the east and Hungary to the south. The largest city is the capital, Bratislava, and the second largest is Košice.

Macro Data

COUNTRY SLOVAKIA	
Population	5,400,000
GDP per Capita	€ 17,080
Overall Percentage of Population holding a Academic Degree	13.80%
Total Spending on Higher Education in % of GDP	0.86%
Total Number of Higher Education Institutions	39
Total Number of Students	200,743
Total Number of Students - Public Universities (if available)	150,000
Total Number of Students - Private Universities (if available)	50,743
Total Number of Employees at HEIs	21,538
Number of Public Universities	20
Number of Private Universities	12
Average Annual Tuition Fees - Public Universities	0
Average Annual Tuition Fees - All Universities (If available)	0
Unemployment Rate of Graduates	4.50%
Overall unemployment rate	14.00%
Average study time to complete bachelor level or equivalent	3-4 years
Average study time to complete master level or equivalent	1-2 years
Average Expenditure per Student per year	€ 5,000
Average Percentage of Spending on Administration in HEI	3%
Average Percentage of Spending on Research in HEI	32%
Average Percentage of Spending on Teaching in HEI	65%

4.1.4 Spain

General Description

The Kingdom of Spain has a total area of 301,340 km2, located in South-western Europe, bordering the Mediterranean Sea, North Atlantic Ocean, Bay of Biscay, and Pyrenees Mountains; at the southwest has France as neighbour. The capital is Madrid and the national territory comprises the so-called 17 autonomous communities and 2 autonomous cities.

Macro Data

COUNTRY SPAIN	
Population	47,021,031
GDP per Capita	€ 22,529
Overall Percentage of Population holding a Academic Degree	21%
Total Spending on Higher Education in % of GDP	1.20%
Total Number of Higher Education Institutions	74
Total Number of Students	1,412,472
Total Number of Students - Public Universities (if available)	1,249,883
Total Number of Students - Private Universities (if available)	162.589
Total Number of Employees at HEIs	297,389
Number of Public Universities	82
Number of Private Universities	32
Average Annual Tuition Fees - Public Universities	€ 850
Average Annual Tuition Fees - All Universities (If available)	€ 8,150
Unemployment Rate of Graduates	9.40%
Overall unemployment rate	27%
Average study time to complete bachelor level or equivalent	5 years
Average study time to complete master level or equivalent	2 years
Average Expenditure per Student per year	€ 9,874
Average Percentage of Spending on Administration in HEI	21.30%
Average Percentage of Spending on Research in HEI	33%
Average Percentage of Spending on Teaching in HEI	55.80%

4.1.5 The United Kingdom

General Description

The United Kingdom of Great Britain and Northern Ireland, commonly known as the United Kingdom (UK) or Britain is a sovereign state located off the north-western coast of continental Europe. The country includes the island of Great Britain (a term sometimes also loosely applied to the whole state), the north-eastern part of the island of Ireland, and many smaller islands. Northern Ireland is the only part of the UK that shares a land border with another state: the Republic of Ireland. Apart from this land border, the UK is surrounded by the Atlantic Ocean, with the North Sea in the east, the English Channel in the south and the Irish Sea in the west. The territory of UK covers in total 243,610 km2 (94,060 sq mi), and the largest city and capital is London.

Macro Data

COUNTRY UK	
Population	63,705,000
GDP per Capita	€ 26,154
Overall Percentage of Population holding a Academic Degree	20%
Total Spending on Higher Education in % of GDP	1.2%
Total Number of Higher Education Institutions	163
Total Number of Students	2,340,275
Total Number of Students - Public Universities (if available)	2,437,387
Total Number of Students - Private Universities (if available)	56,028
Total Number of Employees at HEIs	382,380
Number of Public Universities	161
Number of Private Universities	2
Average Annual Tuition Fees - Public Universities	€ 10,528
Average Annual Tuition Fees - All Universities (If available)	€ 11,146
Unemployment Rate of Graduates	4%
Overall unemployment rate	7.10%
Average study time to complete bachelor level or equivalent	3 years
Average study time to complete master level or equivalent	12 months
Average Expenditure per Student per year	€ 21,612
Average Percentage of Spending on Administration in HEI	37%
Average Percentage of Spending on Research in HEI	26%
Average Percentage of Spending on Teaching in HEI	43.1%

4.1.6 EU countries - Macro Analysis

Macro key findings of European countries at a glance:

- UK has the highest GDP per capita followed by Spain, being Estonia and Slovakia very close
- UK and Spain – more universities in relation to the number of inhabitants and also higher expenditure in Higher Education
- Great majority of universities in 4 countries is public
- UK lowest graduate unemployment rate: 1.7% (4.3% total)
- Spain highest graduate unemployment rate: 9.4% (20% total)
- Bologna process applies to all

Of the four EU countries, UK is the most populated, followed by Spain, Slovakia and Estonia. UK also has the highest GDP followed by Spain whereas Slovakia and Estonia have a very similar GDP per capita (around 17,000 Euros). However Slovakia and namely Estonia have the lowest number of inhabitants per number of higher education institution. From this statistic it may be assumed that Slovakian and Estonian citizens have better/easier access to education, compared with Spanish and British citizens.

Annual tuition fees are higher in UK than in the rest of the countries. Spain has similar a scheme as Estonia and Slovakia with no fees for higher education students. The EU countries are under the Bologna Process which " [...] aims to create the European higher education area by harmonizing academic degree standards and quality assurance standards throughout Europe for each faculty and its development". Being under this rule the EU countries must have their Bachelor and Master curricula adapted according to the standard of Bologna Process. Data shows that all four countries are following the standards.

UK and Spain spend a higher percentage of the GDP on higher education (1.2%), compare with Slovakia (0.86%) and Estonia (1.10%). However the UK spends more than a double per student and year than Spain. And Slovakia, also as a consequence of having no fees for higher education institutions, has a highest average expenditure per student and year than Estonia (€5,000 vs. €1,700)

The four universities have similar figures with regards average percentage of spending in administration, research and teaching. In the four of them teaching is the higher percentage, followed by research and/or administration. The most crucial difference is affecting Slovakia, with only 3% devoted to administration of higher education.

UK and Estonia have a clear majority of public universities, having only testimonial number of private universities (2 in the UK and 1 in Estonia). In Spain public universities are 60% of the total and in Slovakia there are slightly more private universities than public (12/20). Thus, these four countries provide a very heterogeneous scenario about the European higher education system, but as conclusion we could state that the majority of students of these 4 countries attend public universities

With regards employability of graduates, UK and Estonia have the best figures with low unemployment rates, both for graduates and overall. Slovakia has a low unemployment rate also for students (5.80%) however the overall rate is much higher (14%). Spain has an alarming 27% overall unemployment rate but the unemployment rate for the graduates is less than 10%, which implies a high private market benefit[2] for higher education students.

It can be concluded that there is no overwhelmingly large gap in government spending on higher education between these four European countries. However, it can also be seen that reducing tuition fees through government funding can encourage more citizens to study and by speculation, perhaps decrease unemployment rates.

[2] These are the benefits/impacts of HE accrued to individuals with regard to attaining higher earnings, reduced unemployment, labour market flexibility, or greater mobility

4.1.7 Macro analysis comparison Libya vs EU

- Libya has the least GDP per capital (€10k) but there is a significant difference in the total spending on higher education in percentage of GDP – 18% in Libya (ranked 3rd in total number of students) and an approximate 1% in the European counterparts. This outstanding percentage does not bring them to the leader on average expenditure per student per year. The British spent far more on every student (€21,612) than Libyan (€5,356), Slovakian (€5,000), Estonian (€1700 exclude R&D costs) and Spanish (€9,874).
- Despite of the high percentage of GDP spent in higher education in Libya, the unemployment rate of graduate is the highest (10%) among the participated countries, slightly ahead of the Spanish with a 9.4%. This disproportional figure may cause by the recent unrest in the country.
- Tertiary education in Libyan public universities is complimentary as it is in Slovakia, while an average of €425 in private universities.
- Libya has the least percentage of population holding an academic degree, 0.5%.
- Libya is not a signatory country of Bologna process and there is a difference of duration for a Bachelor's and Master degree.
- Slovakia spends the least on administration in HEIs (3%) while Libya spends a 30% although these two countries have a similar number of employees at HEIs. Nevertheless, Libya and Estonia share the same percentage in this expenditure whilst the number of employees in Libya is twice as much as in Estonia.
- No specific spending on reaching and teaching in Libyan HEIs can be concluded

In the next section, we will look closely in the micro institutional environment on financial management.

Next, we will introduce the methodology used in the study.

4.2 Micro Analysis

4.2.1 Micro analysis in Libya

1. Funding sources

- Public universities – completely depends on the government funding although there are universities indicate a 0.05 -1% income from other sources
- Private university – 90% from tuition fee and 10% from other sources.
- The dependency on one single income put the Libyan universities in risk financially - all public universities enjoy a full financial support from the Libyan government whilst the private university diversifies 10% of its funding source.
- There is no sign of funding diversity although an insignificant percentage of income indicated in 3 public universities (0.05%-1%).

2. Structure, Norms and Regulations

- One private, LIMU, and six universities
- Average time to complete a Bachelor's degree is 3 years while 4-6 years for a Master in all universities.
- Libyan universities tend to spend almost half of its budget on both administration and teaching in both public and private universities on administration, research and teaching, 43%, 12% and 43% respectively.
- Together with the private university LIMU, 3 other public universities spent less than average on administration, namely Misurata University, Al-Mergib University (AMU) and University of Zawia (UoZ).
- Comparing the University of Benghazi (UoB) and UoZ (given to the similar size, see Figure 2), UoB spent 30% more on administration and 30% less on teaching than UoZ.
- Average expenditure per student per year ranges from €900 to over €3,500 (except in the private university over €4000).
- Similarity on the procedure of budgeting and approval granted by the board, vice president or president.

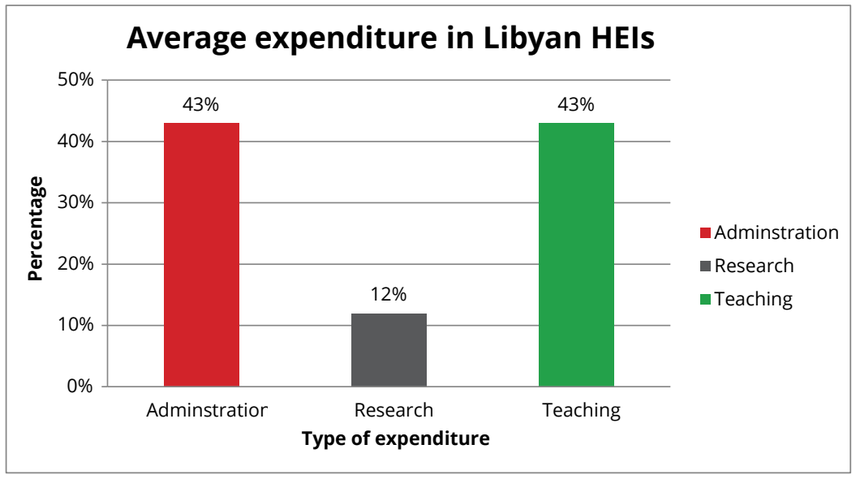


Figure 1: Average expenditure in Libyan HEIs

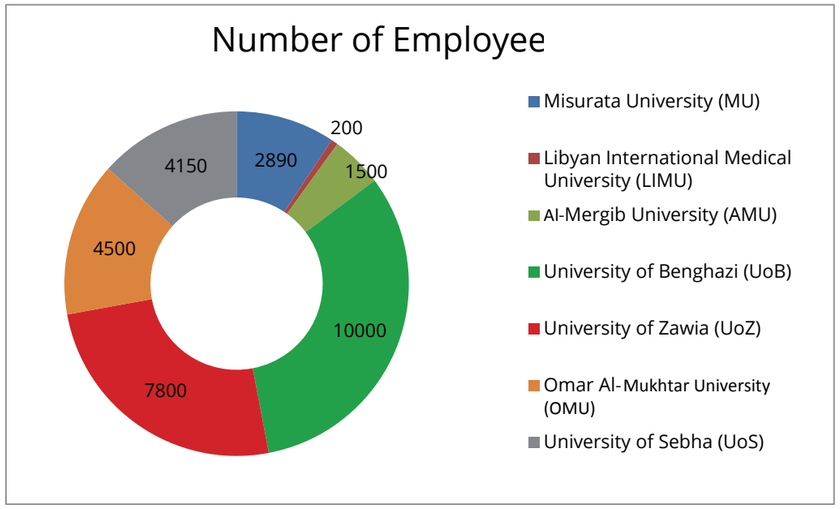


Figure 2: Number of employees in different Libyan universities

3. Accountancy and IT system

- Accounting is not fully computerised in Libya, e.g. AMU has no IT system for accountancy whereas UoZ partially has it integrated. In another word, accounting involves manual work.
- In house or customised systems are used for those who utilise an IT system according to the national standard.
- Both internal and external audits exist in all universities. The external audit comes from the Ministry of Finance while LIMU's is reviewed by its Board of Trustees.

4. University – industry cooperation

- LIMU has established 10 partnerships with the industry, which generate 10% of annual income through providing consulting or training.
- Despite of the absence of cooperation partnership with the private sectors, renting facilities and consultancy service brought 0.05% to 1% income to UoB, OMU and UoS.
- Other universities have no record in university-university cooperation or any generated income.

5. Contract policy

- Absence of intellectual property rights (IPR) policy in all universities.
- No universities own any patents or units in IP management/ technology transfer.
- The lack of policy or unit in IPR implies that there is low awareness in IP management as well as its revenue generating potential.
- Shortage of skilled personnel in IP management

4.2.2 Micro analysis in EU

1. Funding sources

- Most income comes from state or local government, except that London Metropolitan University relies 55% on its tuition.
- Diverse funding sources are seen in Spain, the United Kingdom, Estonia and Slovakia – 1% -6% in donation and sponsorship (except Spain), projects with private or public bodies (especially in Estonia that weight over 50% of its annual income)

2. Structure, Norms and Regulations

- All public universities
- 3-4 years to complete a Bachelor's degree and 1-2 years for a Master
- EU universities spend almost half of its budget on teaching (49%), 30% on administration and a 22% on research activities (Figure 3).
- Slovakia spends the least budget on administration (3%) and most on teaching (65%)
- Average expenditure on each student per year in ascending order is UA (€854), TUT (€1800), STUB (€5000) and LondonMet (€6575.40).

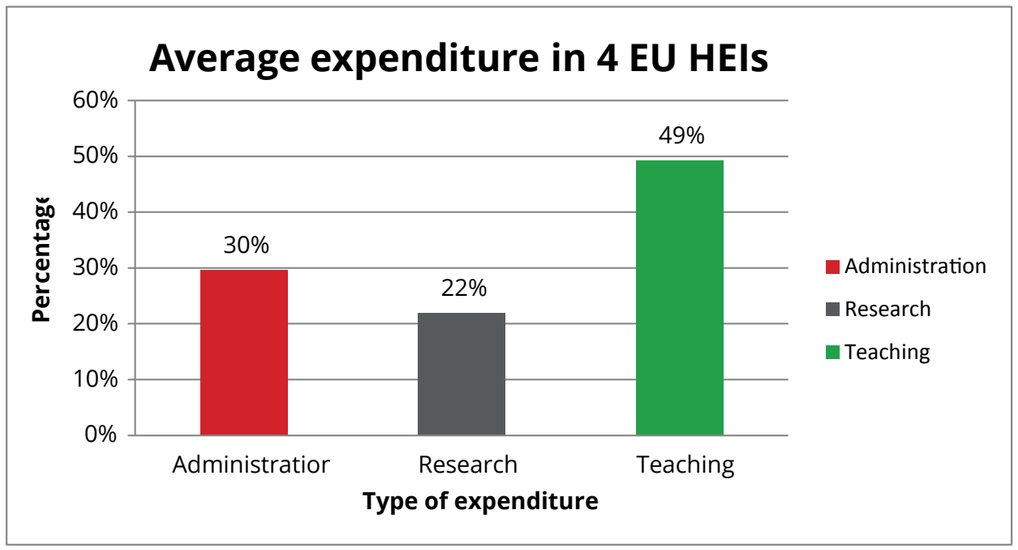


Figure 3: Average expenditure in the 4 EU HEIs (Spain, the United Kingdom, Estonia and Slovakia)

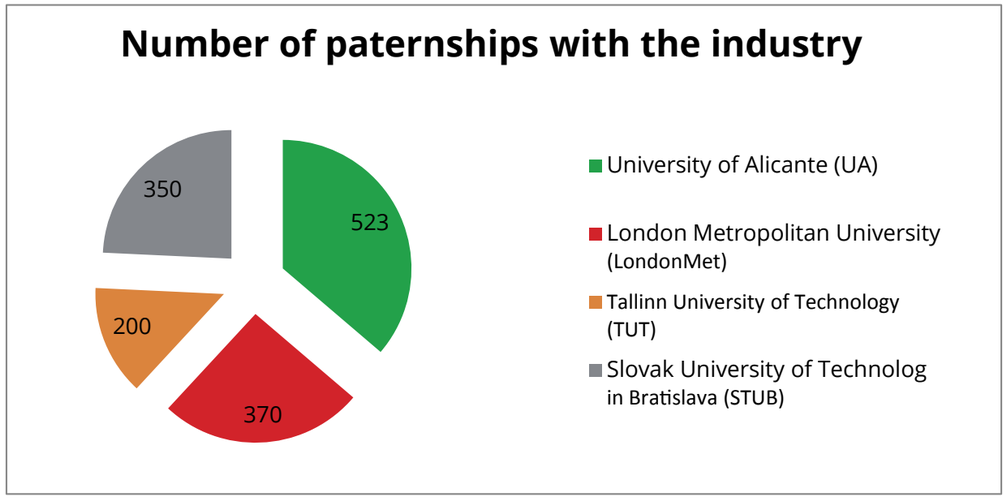


Figure 4: Number of partnerships with the industry in 4 EU HEIs

3. Accountancy and IT system

- Accounting in all universities is fully computerised and complied with national or international standard, e.g. ISCED
- System used are no homogenous, SAP in UA, e5 in LondonMet, MS Navision in TUT and a combination of state treasury and customised IT system in STUB.
- Both internal and external exist in all the EU universities. The external audit is a national body in the UK while, both national and local government would act as an external audit body.

4. University – industry cooperation

- All universities have established numerous partnerships with private sectors in the industry, least in TUT, 200, whist the most in UA, 523 (Figure 4)
- Regardless the number of partnerships TUT generated €10million from offering contracts, consultancy or trainings, while UA generated €17 million. LondonMet and STUB had €7 million and €6 million annual income respectively.

5. Contract policy

- IPR policies are regulated by both national and institutional rules. LondonMet is guided by the national rules while UA has its own internal ones.
- IPR offices or Technology Transfer office supervise the IP management
- TUT owns the most patents (53) and applications (14), followed by LondonMet owns 45 patents and UA with 14 applications.
- Annual revenue generated by patents from TUT is €10,000.

4.2.3 Micro analysis comparison – Libya vs EU

- Unlike in EU, universities in Libya rely on single source of income, i.e. the government or tuition fee, whereas the public universities enjoy relatively stable government subsides. The four universities from different European cities are clearly more dynamic in fundraising and diverse in its income sources, such as, donation, sponsorship, R&D contracts, trainings, consultancy, projects and among others.
- Despite of the homogenous regulations in higher education, there is a wide range of average expenditure on each individual student per year in Libyan public universities, from €900 to over €3,500 (while some €4,000 in the private). Owing to the different legal environment, no trend can be identified across the four countries.
- There exists both internal and external audit in the Libyan and EU universities and yet, the most remarkably difference is the use of modern technology in accounting practices.
- In Libya, research activities seem not to attract enough attention and an almost equal percentage was allocated to administration and teaching. In comparison with the EU counterparts, a 10% budget switched from administration to research while maintaining the similar budget on teaching as Libya.
- Except the private university in Libya, the rest has none to imperceptible university-industry cooperation. Comparing with the EU institutions, Libyan public and private universities are far from practising knowledge triangle. There is a huge potential for generating revenue from and establishing links with the industry.
- There is a lack of capital investment in research in all Libyan universities and subsequently, intellectual property (IP) management barely exists. The EU institutions are more active in advocating research, innovation and development. In addition, offices specialised in IP management are established within the institutions.

Acknowledging the similarities and differences between Libya and European institutions in financial management in higher education, you will find our conclusion and recommendations in the next page.

5. Conclusions and Recommendations:

Having in mind the macro and micro analysis, we have drawn the following conclusions and recommendations.

- Both macro and micro data shows that Libyan universities are highly dependent on one single financial income, i.e. the State for the public and tuition fee for the private universities. A dynamic funding mechanism shall be started lowering the dependency. The additional income generated from other funding sources could be invested in developing the shortage of R&D or university-industry cooperation.
- The lack of R&D activities leads to unconsciousness of intellectual property rights and absence of a proper institutional policy, needless to mention the insufficient human capacities to handle IPR.
- Not only does the cooperation with industry and stakeholders benefit R&D activities, it also facilitates to minimise the gap between curriculum and real labour market need (out of scope in this studies).
- The less dependency may also benefit the government to diverse its investment to other schemes for economic growth as Libya is investing an 18% of its GDP per capital on higher education. For instance, schemes to prepare students for tertiary education and boost the rate for academic degree holders in the country (0.5% currently) so as to prepare the emerging knowledge based economy in the new era.
- Despite of the highest percentage of GDP addressed to higher education in Libya, the average expenditure per student per year is not proportionally high (ranked 3rd place among five respondents). It is recommended to specify the expenditure on research and teaching in HEIs to enhance transparency and creditability, as well as further studies on improvement.
- Libya's expense on administration is roughly 9% higher than Spain although the student population in Spain is a triple of Libya's. Appropriate budget planning and human resources restructure will reduce redundant costs, and enhance efficiency and productivity.
- Taking into account the organisational culture in university differs from corporate, appropriate human resources policy should be in place to encourage university staff for non-academic tasks, e.g. establish university-industry cooperation.
- Upgrade and digitalise its financial system to increase efficiency and effectiveness in universities.
- Although it is undesired, the critical political situation should also be considered for the development as well as institutional reform.

Macro Benchmarking

Country	Libya	UK	Slovakia	Estonia	Spain
Population	6,155,000	63,705,000	5,400,000	1,312,000	47,021,031
GDP per Capita	€ 10,608	€ 26,154	€ 17,080	€ 17,062	€ 22,529
Overall Percentage of Population holding a Academic Degree	0.50%	20%	13.80%	36%	21%
Total Spending on Higher Education in % of GDP	18%	1.20%	0.86%	1.10%	1.20%
Total Number of Higher Education Institutions	19	163	39	29	82
Total Number of Students	404,149	2,340,275	200,743	64,806	1,412,472
Total Number of Students - Public Universities (if available)	399,149	2,437,387	150,000	58,362	1,249,883
Total Number of Students - Private Universities (if available)	5,000	56,028	50,743	6,444	162,589
Total Number of Employees at HEIs	26,000	382,380	21538	12,500	297,389
Number of Public Universities	14	161	20	6	50
Number of Private Universities	5	2	12	1	32
Average Annual Tuition Fees - Public Universities	FREE	€ 10,528	0	1600	€ 850
Average Annual Tuition Fees - All Universities (If available)	€ 425	€ 11,146	0	2000	€ 8,150
Unemployment Rate of Graduates	10%	4%	4.50%	5.80%	9.40%
Overall unemployment rate	25%	7.10%	14.00%	7.60%	27%
Average study time to complete bachelor level or equivalent	5 years	3 years	3-4 years	3.8	4 years
Average study time to complete master level or equivalent	3 years	12 months	1-2 years	2,5 (6,1 bachelor + master)	2 years
Average Expenditure per Student per year	€ 5,356	€ 21,612	€ 5,000	€ 1700 (without R&D costs)	€ 9,874
Average Percentage of Spending on Administration in HEI	30%	37%	3%	30%	21.30%
Average Percentage of Spending on Research in HEI	N A (not separated from total spending)	26%	32%	25%	33%
Average Percentage of Spending on Teaching in HEI	NA (not separated from total spending)	43.1%	65%	45%	55.80%

Annex II

Questionnaire and Responses **from Libyan unviersities (micro)**

		Misurata University	Libyan International Medical University (LIMU)	Al Mergib University
Type of University	Private / Public	Public	Private	Public
Funding Sources	Private [%]	0%	100%	No.
	Public [%]	100%	0%	No.
	Tuitions [Overall and Percentage of total Budget]	122,000,000 LD	90%	Nothing
	Donations	0%	0%	Nothing
	Through Projects (incl. Funding and Company/Private)	0%	0%	No.
	Sponsoring	0%	0%	100% by the Government
	Others (please Specify) Training	0	10	/
Organizational Structure, Norms and Regulations	Legal Form of the Institution	State Legal Form	Holding Company	Al-Mergib University
	Total Number of Employees	2890	200	1500
	Average Expenditure per Student per year	5,333LD (€3180,87)	7000 LYD (€4175,16)	Ld 100.000 approximately (€59645,10)
	Average study time to complete bachelor level or equivalent	4 years	5 years	4-5 years
	Average study time to complete master level or equivalent	3 years	na	3 years
	Average Percentage of Spending on Administration in HEI	25%	35%	32%
	Average Percentage of Spending on Research in HEI	38%	5%	3%
	Percentage of Spending on Teaching in HEI	38%	60%	65%
	“Please describe shortly the internal procedure for budgeting at your institution.”	According to the estimated budget for the previous year	Faculties estimate: their number of faculty staff, employees. And expected number of students. Based on this year’s budget and expected numbers, a budget committee will estimate the budget for next year. The budget is approved by Board of Trustees.	In july the financial controller and the financial department in the universty statrt estimating the budget for the coming year. the estimation depends on the expectations of the numbesrs of students, teachers and employees will enroll the university.The Libyan governemnt (mistry of planning & Finanace discusses the budget with financial controller. Accordingly, the send part of the budget in the first quarter of the year and then the other quarter .. and so on...
	How is the Organization Structured (Rector, Academic Senate, Board of Directors, etc.) (If available please attach an Organigram of the Organization or Role and Responsibility descriptions of Key Personell)?	Board of Directors	“Board of Trustees University Board: President, VP General Affairs, VP Academic, Deans, Directors, Registrar	The responsible for the budget is the financial departemt and the finanxcial controller. The rector is only informed and sometimes be informed about the plan.

Annex II

Questionnaire and Responses **from Libyan unviersities (micro)**

		Misurata University	Libyan International Medical University (LIMU)	Al Mergib University
Accountantcy and IT System	Accountancy Standard (National, IFRS, USGapp, Other...)	National	National	No.
	Usage of IT Systems for Accountancy (YES/NO)	Yes	Yes	No.
	If Yes - Which?	Local system	In house	/
	Is there a controlling unit/department within the Institution?	yes	Yes	yes, there is.
	"Is there a financial controlling system coming from outside the institution in place (court of auditors, external auditing company, etc.)?"	Yes, financial controller	Annual review by Board of Trustees	yes, there is.
	Budget Cycle Time	a year	Jan-Dec	12 months, from January, 1 till December,31.
University - Industry Coorporation	Number of Partners in the Industry	none	10	/
	(R&D contracts, consulting, trainings, etc.) "	none		/
	"Annual Revenues from Industry cooperation (R&D contracts, consulting, trainings, etc.) "	none	10% of total budget	/
	Form of Partnership with Industry Partners (Please Briefly Explain)	none		/
Contract Policies	Please describe the IPR policies your univesity follows when working with external partners in R&D	none	na	/
	Please describe product or IPR valorisation policies (how is IPR marketed and sold at your university)	none	na	/
	No. of Patents owned by the university	none	na	/
	Annual Revenues from marketing Patents or other IPR	none	na	/
	Does you institution have a dedicated IP management unit/office?	none	na	/
	In general, what type of intellectual property rights (IPR) and/or related tools and practices are used at your institution?	none	na	/

		University of Benghazi	University of Zawia	Omar Al-Mukhtar University (OMU)	University of Sebha
Type of University	Private / Public	Public	Public	Public	
Funding Sources	Private [%]	0%	[0 %]	0%	0%
	Public [%]	100% Public	[100 %]	100%	100%
	Tuitions [Overall and Percentage of total Budget]	0% the study is Free	[0 %]	N/A	N/A
	Donations	0%	[0 %]	None	None
	Through Projects (incl. Funding and Company/Private)	0%	[0 %]	1%	,05%
	Sponsoring	100% Ministry of High Education	[0 %]	None	None
	Others (please Specify) Training	1%	[0 %]	None	None
Organizational Structure, Norms and Regulations	Legal Form of the Institution	The university is subject to the law of Libyan universities	Academic Senate	Public university under public law	Public university under public law
	Total Number of Employees	10000	7800	4500	4150
	Average Expenditure per Student per year	2000LYD (€1192,90)	1500 LD (€894,677)	6000 LD (€3578,71)	5757 LD (€ 3433,77)
	Average study time to complete bachelor level or equivalen	4.5 years	4-5 years	4 Years	4 Years (5years for Eng.- 6 years for med.schools)
	Average study time to complete master level or equivalent	3 years	2-3 years	3 Years	3 Years
	Average Percentage of Spending on Administration in HEI	60%	30%	57%	59%
	Average Percentage of Spending on Research in HEI	10%	10%	14%	3.5-5%
	Average Percentage of Spending on Teaching in HEI	30%	60%	29%	24%
	“Please describe shortly the internal procedure for budgeting at your institution.”	The budget is calculated by calculating the budget of the previous year, plus 10 to 20% of them for future changes plus the new signings of staff, projects and members of the board of teaching		There is an office for internal budgeting	There is an office for internal budgeting
	How is the Organization Structured (Rector, Academic Senate, Board of Directors, etc.) (If available please attach an Organigram of the Organization or Role and Responsibility descriptions of Key Personell)?	0		President, Vice for (Financial) Vice for (Academic) Affairs	President , Deputy(Vice Pres) for (Financial and Administration), Vice for (Academic) Affairsan office for internal budgeting

Annex II

Questionnaire and Responses **from Libyan unviersities (micro)**

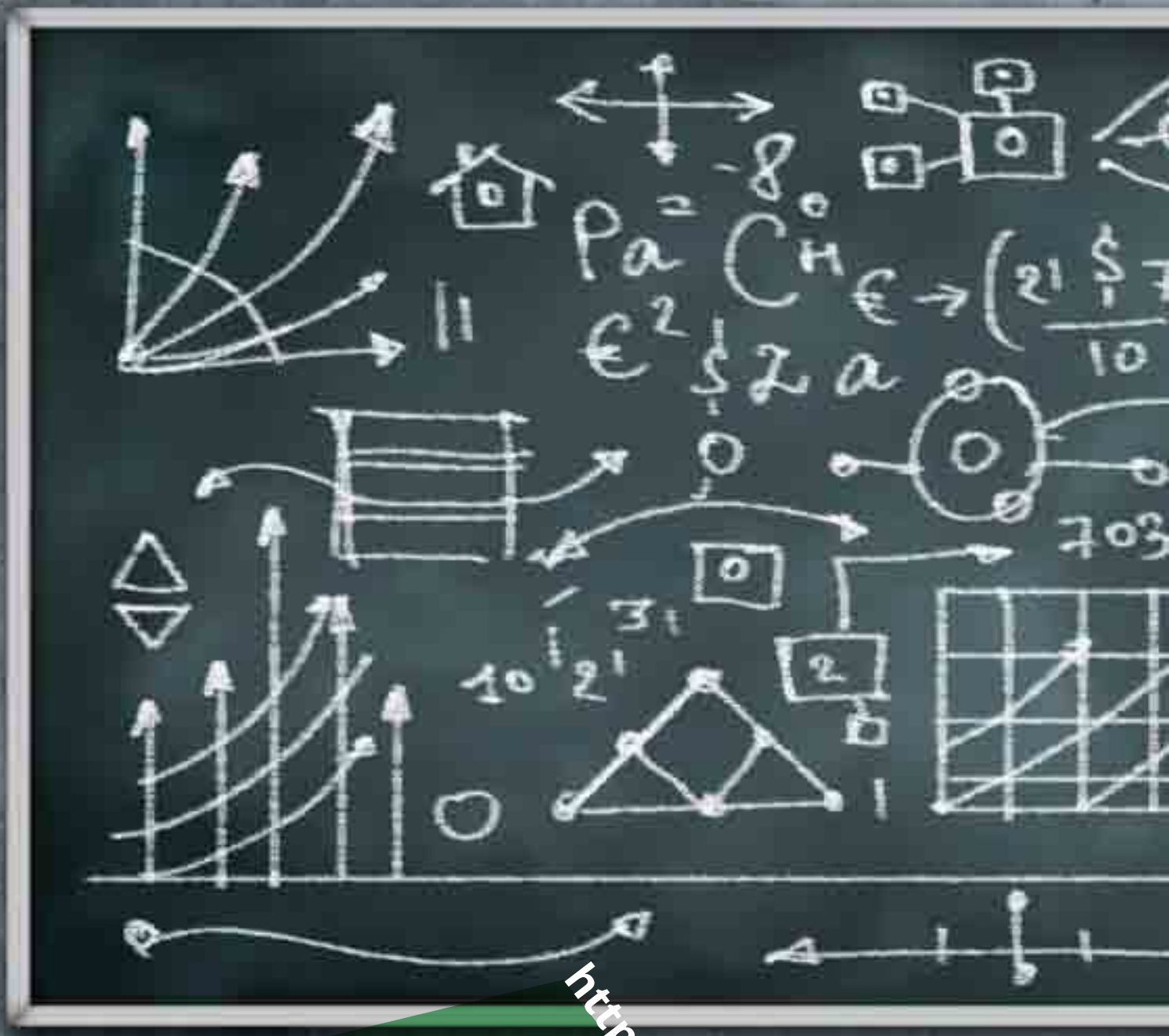
		University of Benghazi	University of Zawia	Omar Al-Mukhtar University (OMU)	University of Sebha
Accountantcy and IT System	Accountancy Standard (National, IFRS, USGapp, Other…)	National standard	(National)	National	National
	Usage of IT Systems for Accountancy (YES/NO)	Partualy yes	(YES	YES	YES
	If Yes - Which?	Locally made software		Local systems	Local systems
	Is there a controlling unit/department within the Institution?	Yes. Auding department and Control unit under suppervision of ministry of Finanace	Yes	YES	YES
	"Is there a financial controlling system coming from outside the institution in place (court of auditors, external auditing company, etc.)?"	court of auditors and ministry of Finanace	Yes, from the ministry	Ministry of Finance	Ministry of Finance
	Budget Cycle Time	January to December	Divided into quarters	Jan-Dec	Jan-Dec
University - Industry Coorporation	Number of Partners in the Industry	None	No	None	None
	(R&D contracts, consulting, trainings, etc.) "		No	-	-
	"Annual Revenues from Industry cooperation (R&D contracts, consulting, trainings, etc.) "	1% from total of budget		1000000	xxxxxxxx
	Form of Partnership with Industry Partners (Please Briefly Explain)	None	No	Rent,consulting and fees	Rent,consulting and fees
Contract Policies	Please describe the IPR policies your univesity follows when working with external partners in R&D	None	No	NA	NA
	Please describe product or IPR valorisation policies (how is IPR marketed and sold at your university	None	No	NA	NA
	No. of Patents owned by the university	0	No	NA	NA
	Annual Revenues from marketing Patents or other IPR	0	NO	NA	NA
	Does you institution have a dedicated IP management unit/office?	No	No	No	No
	In general, what type of intellectual property rights (IPR) and/or related tools and practices are used at your institution?	None	No	NA	NA

		London Metropolitan University	Tallinn University of Technology
Type of University	Private / Public	Public	Public
Funding Sources	Private [%]		0%
	Public [%]		100%
	Tuitions [Overall and Percentage of total Budget]	55%	9.0%
	Donations	6%	2%
	Through Projects (incl. Funding and Company/Private)	2%	53%
	Sponsoring	1%	6%
	Others (please Specify) Training		Governmental funding for teaching 22%, for RD and infrastructure 14%
	Legal Form of the Institution	The University is an Exempt Charity under the Charities Act 1993	Public university
	Total Number of Employees	1,733	2075
	Average Expenditure per Student per year	6575.4	1800€ /without RD costs)
	Average study time to complete bachelor level or equivalent	3 years	3.8
	Average study time to complete master level or equivalent	12 months	2,4 (6 bachelor + master)
	Average Percentage of Spending on Administration in HEI	40%	24%
	Average Percentage of Spending on Research in HEI	10%	34%
	Percentage of Spending on Teaching in HEI	50%	42%
Organizational Structure, Norms and Regulations	“Please describe shortly the internal procedure for budgeting at your institution.”	Budgets are compiled by faculties and then sent to central planning and finance departments	Budget is planned accordingly to strategy and governmental priorities. Budget is devided to 4 sources: teaching; science; other services and sponsorship. Estimated costs are proposed by faculties and departments with strategic aims and then put together as a total budget including all govermental and international funding.
	How is the Organization Structured (Rector, Academic Senate, Board of Directors, etc.) (If available please attach an Organigram of the Organization or Role and Responsibility descriptions of Key Personell)?	V-C’s Office http://www.londonmet.ac.uk/why-london-met/about-the-university/the-vice-chancellors-office/, 4 faculties	

		London Metropolitan University	Tallinn University of Technology
Accountantcy and IT System	Accountancy Standard (National, IFRS, USGapp, Other…)	National	National; IAS – International Accounting Standards; IPSAS – international public sector accounting standards; IFRS – international financial reporting standards; etc…"
	Usage of IT Systems for Accountancy (YES/NO)	Yes	Yes
	If Yes - Which?	e5	MS Navision
	Is there a controlling unit/department within the Institution?	through internal and external audits	Yes, an Auditing unit
	"Is there a financial controlling system coming from outside the institution in place (court of auditors, external auditing company, etc.)?"	external audir and HEFCE	external auditing
University - Industry Coorporation	Budget Cycle Time	1 year: August - August	12 months (01.01-31.12)
	Number of Partners in the Industry	approx 120	Strategic partners 6-8. Partners with contracted research aprx. 200
	"Annual Revenues from Industry cooperation (R&D contracts, consulting, trainings, etc.) "	approx 250	
	"Annual Revenues from Industry cooperation (R&D contracts, consulting, trainings, etc.) "	7 mln	10 812 049,95€
Contract Policies	Form of Partnership with Industry Partners (Please Briefly Explain)		Most are form of contacted research (R&D contracts, consulting, trainings, analyses, testing). With strategic partners it is also in the form of student involvement in projects as well as scholarship and case studies.
	Please describe the IPR policies your univesity follows when working with external partners in R&D	guided by national http://www.ipo.gov.uk/	New IP developed in contracted research (if paid by company) belongs to partner. TUT can use it in education and development. In case of state or other financing the IPR belongs to the inventors organisation (in case there are several it will belong to all and everybody can commercialize. For existing IPR everybody can apply licencing.
	Please describe product or IPR valorisation policies (how is IPR marketed and sold at your university)	through Enterprise at London Met	We do not evaluate the IP by money. The most important is the plan to bring the invention to market. TUT support licencing as well as foundation of spin-off where the authors of IPR are involved.
	No. of Patents owned by the university	45	53 patents and 43 patent applications
	Annual Revenues from marketing Patents or other IPR	unknown	10 000€
	Does you institution have a dedicated IP management unit/office?	Each faculty	Yes, part of TTO
	In general, what type of intellectual property rights (IPR) and/or related tools and practices are used at your institution?	Each faculty (4) have their approaches depending on their needs	There is IPR code of conduct. The prototyping is supported by protofond (founded by TUT, Tehnopol (science park) and Swedbank). TUT has 2 foreign expert on IPR who are supportin decision making. TTO organises trainings for scientist in the field of IPR. TUT has licencing contact drafts and supporting procedures for negotiations.

		Slovak University of Technology in Bratislava	Universidad de Alicante (UA)
Type of University	Private / Public	PUBLIC	Pública
Funding Sources	Private [%]	6 mil. 15%	
	Public [%]	87 mil, 85%	
	Tuitions [Overall and Percentage of total Budget]	total budget 93 mil.EUR	21.30%
	Donations	2%	0%
	Through Projects (incl. Funding and Company/Private)	4%	10%
	Sponsoring	3%	
	Others (please Specify) Training	Contracts with companies 6%	
	Legal Form of the Institution	Public Non profit	Public Law
	Total Number of Employees	3015	3478
	Average Expenditure per Student per year	5000	854 €
	Average study time to complete bachelor level or equivalent	3.5	3
	Average study time to complete master level or equivalent	2.5	2
	Average Percentage of Spending on Administration in HEI	3%	52%
	Average Percentage of Spending on Research in HEI	32%	12.00%
	Percentage of Spending on Teaching in HEI	65%	40%
	“Please describe shortly the internal procedure for budgeting at your institution.”	state Treasury system and IT Magion system	
Organizational Structure, Norms and Regulations	How is the Organization Structured (Rector, Academic Senate, Board of Directors, etc.) (If available please attach an Organigram of the Organization or Role and Responsibility descriptions of Key Personell)?		“Governing bodies: --The Social Council (Consejo Social): is the body intended to represent the public interest and act as a bridge between society and the university. • The Governing Council (Consejo de Gobierno): is the university’s main governing body. It sets out the strategic and programmatic lines for teaching, research, human and financial resources, as well as the guidelines and procedures for their application. • The University Assembly (Claustro Universitario): brings together the entire university community. With a membership of up to 300 people, it comprises the Rector (the chairperson), the Secretary General, the Manager and representatives of all groups within the university and the community. • The School and Faculty Councils and Departmental meetings: the Faculties or Schools elect councils chaired by the Dean or Director. The majority of the members are teachers or professors with a permanent appointment at the university. • Individual roles: Rector, Vice-Rector, Secretary General, Manager, Faculty Deans, School, Department and Institute Directors of Research.”

		Slovak University of Technology in Bratislava	Universidad de Alicante (UA)
Accountantcy and IT System	Accountancy Standard (National, IFRS, USGapp, Other…)	National, ISCED	National
	Usage of IT Systems for Accountancy (YES/NO)	Yes	Yes
	If Yes - Which?	State treasury and Magion IT system	SAP
	Is there a controlling unit/department within the Institution?	yes	society and the university.
	"Is there a financial controlling system coming from outside the institution in place (court of auditors, external auditing company, etc.)?"	yes	National and local government
	Budget Cycle Time	one year	anual
University - Industry Coorporation	Number of Partners in the Industry		523
	"Annual Revenues from Industry cooperation (R&D contracts, consulting, trainings, etc.) "	350	
	"Annual Revenues from Industry cooperation (R&D contracts, consulting, trainings, etc.) "	6 mil.	17M
	Form of Partnership with Industry Partners (Please Briefly Explain)	bussines activities, cooperation agreements	
Contract Policies	Please describe the IPR policies your univesity follows when working with external partners in R&D	Now starting with IPR officies	We follow internal rules (UA´s Norms for IP 2008) as well as the contracts in case of public funding
	Please describe product or IPR valorisation policies (how is IPR marketed and sold at your university)		Depending on the case.SGITT-OTRI is the implementation of these policies following the procedures stated in UA´s Norms 2008
	No. of Patents owned by the university	0	14
	Annual Revenues from marketing Patents or other IPR		
	Does you institution have a dedicated IP management unit/office?	yes Know -How centre	Yes,SGITT-OTRI.Transknowlia at the Office for the Management of International Projects (OGPI) gives additional advice depending on the concrete case
	In general, what type of intellectual property rights (IPR) and/or related tools and practices are used at your institution?	Each faculty (4) have their approaches	Patents,Utility models,Trademarks,Copyright (software + databases)



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For more information,
please contact
University of Alicante:
project.management@ua.es

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