# The Reality of Scientific Research in the Middle East

# Its obstacles and ways to develop it

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# GENERAL INTRODUCTION 1/6

- Education in the Middle East has consistently faced a variety of challenges. According to the **World Bank**, the quality of education in the region is falling behind other regions and needs urgent intervention and reform in order to address issues associated with **unemployment in MENA area**.
- **Higher education** plays an invaluable role within society because it creates additional opportunities for development and provides knowledge transfer for students and other stakeholders, and promotes change, creativity, innovation, and progress.

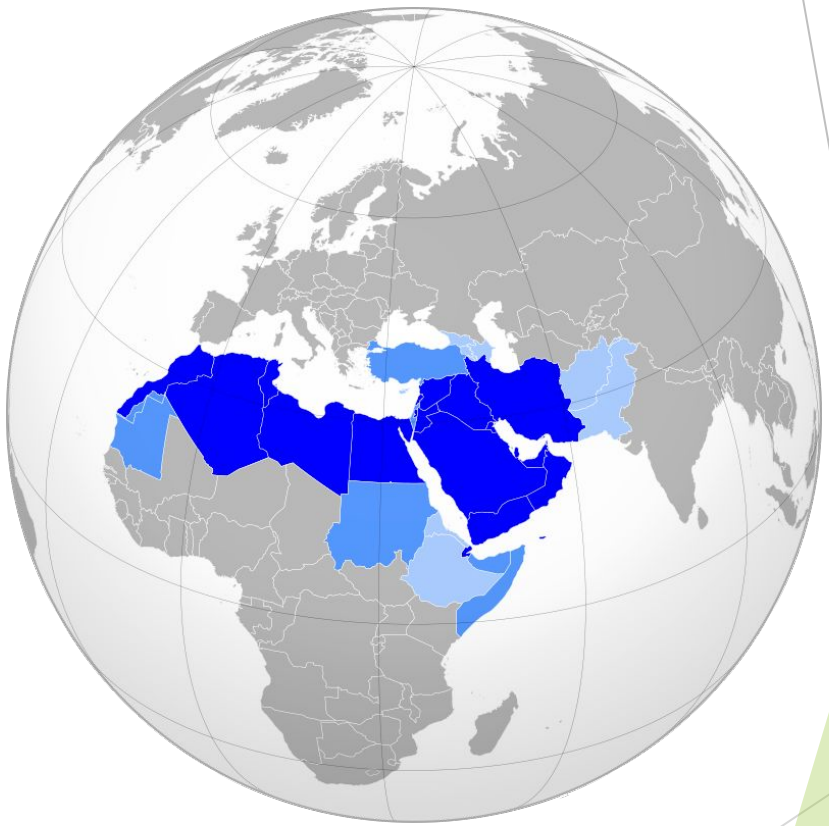


# GENERAL INTRODUCTION 2/6

## MENA Region

MENA is an acronym for the **Middle East and North Africa** (MENA) region. The region is typically considered to include around 19 countries, but the definition can be stretched to include up to 24.

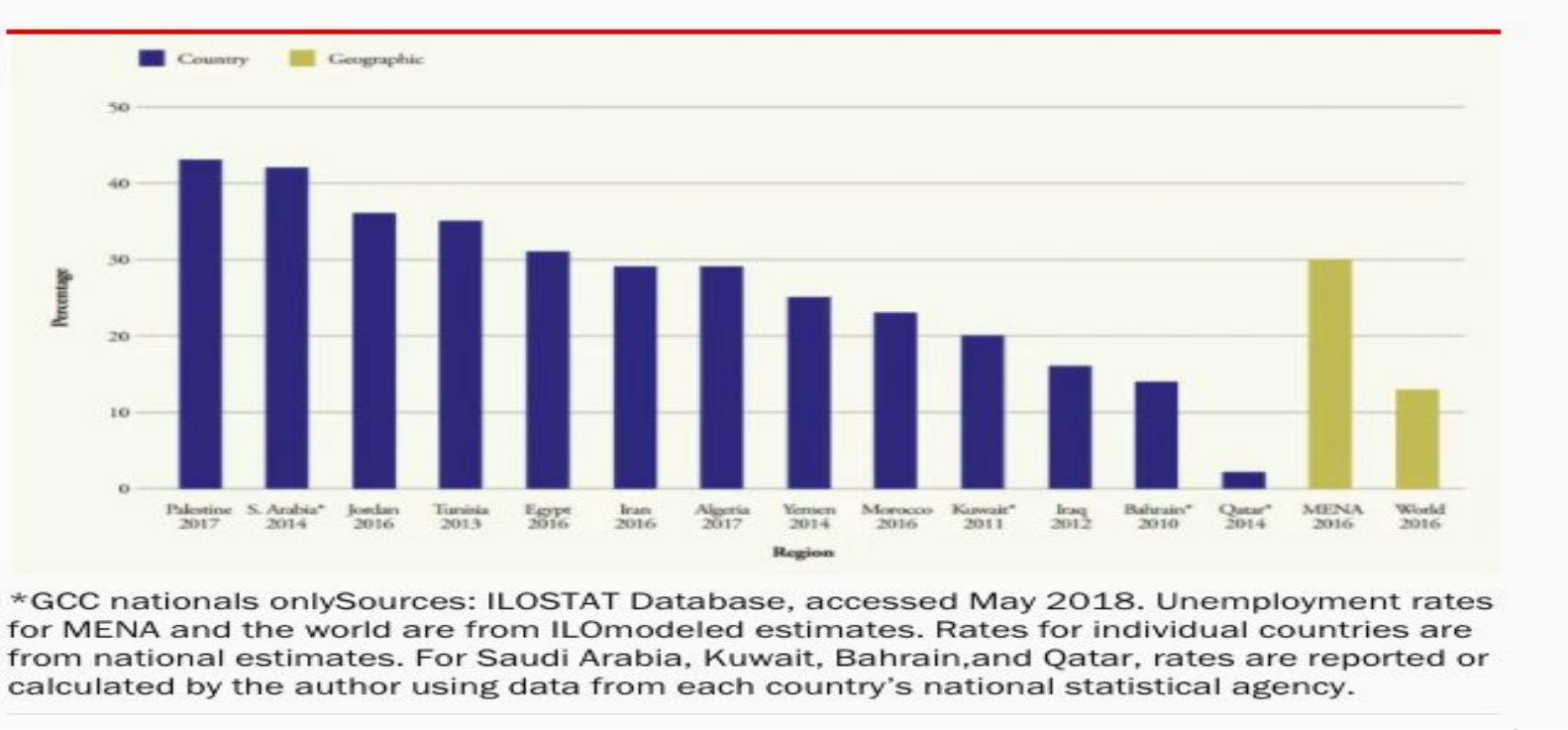
"MENA" has no standardized definition; different organizations define the region as consisting of different territories, or do not define it as a region at all.



# GENERAL INTRODUCTION 3/6

The question of **governance in higher education** is particularly relevant in the MENA region where **youth unemployment** rates are higher than in any other region across the world – 30% in the Middle East.

MENA youth often search for years before finding work.




*GCC nationals onlySources: ILOSTAT Database, accessed May 2018. Unemployment rates for MENA and the world are from ILOmodeled estimates. Rates for individual countries are from national estimates. For Saudi Arabia, Kuwait, Bahrain,and Qatar, rates are reported or calculated by the author using data from each country's national statistical agency.

# GENERAL INTRODUCTION 4/6

- There is a broad consensus on the role of governance in improving education quality in **tertiary education** and therefore employability.
- The higher education policymakers of the country have to take into account the task for turning the country's youth into well-educated and skilled workforce
- The concept of **quality assurance**, applied to governance of the higher education institutions, applied to teaching and learning, research and openness towards the economic environment, is now widely known in the region and in both public and private universities.



# GENERAL INTRODUCTION 5/6

- Modern universities are linked to the **economic and political environment** in which they operate. Universities should be responsible actors in their societies because they are directly involved in generating new knowledge and **because they teach and form young people** to become leaders, entrepreneurs, scientists, professionals and responsible citizens.

- A well-performing higher education system is necessary for any country in the world to be competitive today**. Universities need to innovate to provide the kind of education that will enable their graduates to be competitive and to contribute to the economic and social growth of their countries**.



# GENERAL INTRODUCTION 6/6




- When we talk about the **attractiveness** of the universities in the region, we have to talk about **research** as well. Most of the higher education institutions in the region are predominantly **teaching insititutions / universities**. They often only offer bachelor and master degrees, causing another issue, namely the limited availability of doctoral studies.
- Teaching but not educating?!!!

# The role of scientific research in the Middle East countries

- **Scientific research** generally speaking is facing a critical situation in the **Middle East region**. While international rankings have become the first priority of universities engaged in research across the world, most universities undertaking scientific research in this region are occupied with other matters more vital to their survival.
- Because **most universities** from the Middle East engaged in research activities are confronted with political and economic uncertainties than worrying about rankings, the lack of context in rankings undervalues the role of research universities in newly industrialized countries and does little to improve their plight or improve the educational system.
- **Gross expenditure on research and development** (GERD) has been low in Middle East countries for almost four decades and is lower than the world average at between 0.1 per cent and 1.2 per cent of **Gross Domestic Product** (GDP). OECD countries devote about 2.2 per cent of GDP to research and development.



# Some Challenges Facing Scientific Research in the Middle East 1/3

- **Low rates of Expenditure** on Scientific Research.
- **Low outputs** of Scientific research (publications and patents).
- **Adopting the method of transferring and memorizing knowledge** rather that getting it through research.
- Scientific **research of graduate students** is rather **traditional** and does not tackle socio-economic development.
- Non-compliance with the implementation of a **national policy** or a **clear strategic plan** for scientific research.
- **Lack of cooperation and coordination** among universities as well as **lack of exchange of information, experiences**, publications and co-research.



# Some Challenges Facing Scientific Research in the Middle East 2/3

- **Disconnection** between scientific research and national and international **sustainable development Goals SDGs**.
- **Ignoring quality and innovation** in promotion requirements at some universities. However, the requirements are based rather on spending a specific period of time and submitting specific number of scientific research.
- **Lack of scientific research activities** and **its impact** on Sustainable Development Goals SDGs.
- **Fragility of university education systems** in general due to its novelty where **most universities** have been **established in the last quarter of the 20th century** and at the beginning of the 21st century.
- **Low quality of education** due to the inflation of **student number** and **limited number** of available **staff members.**



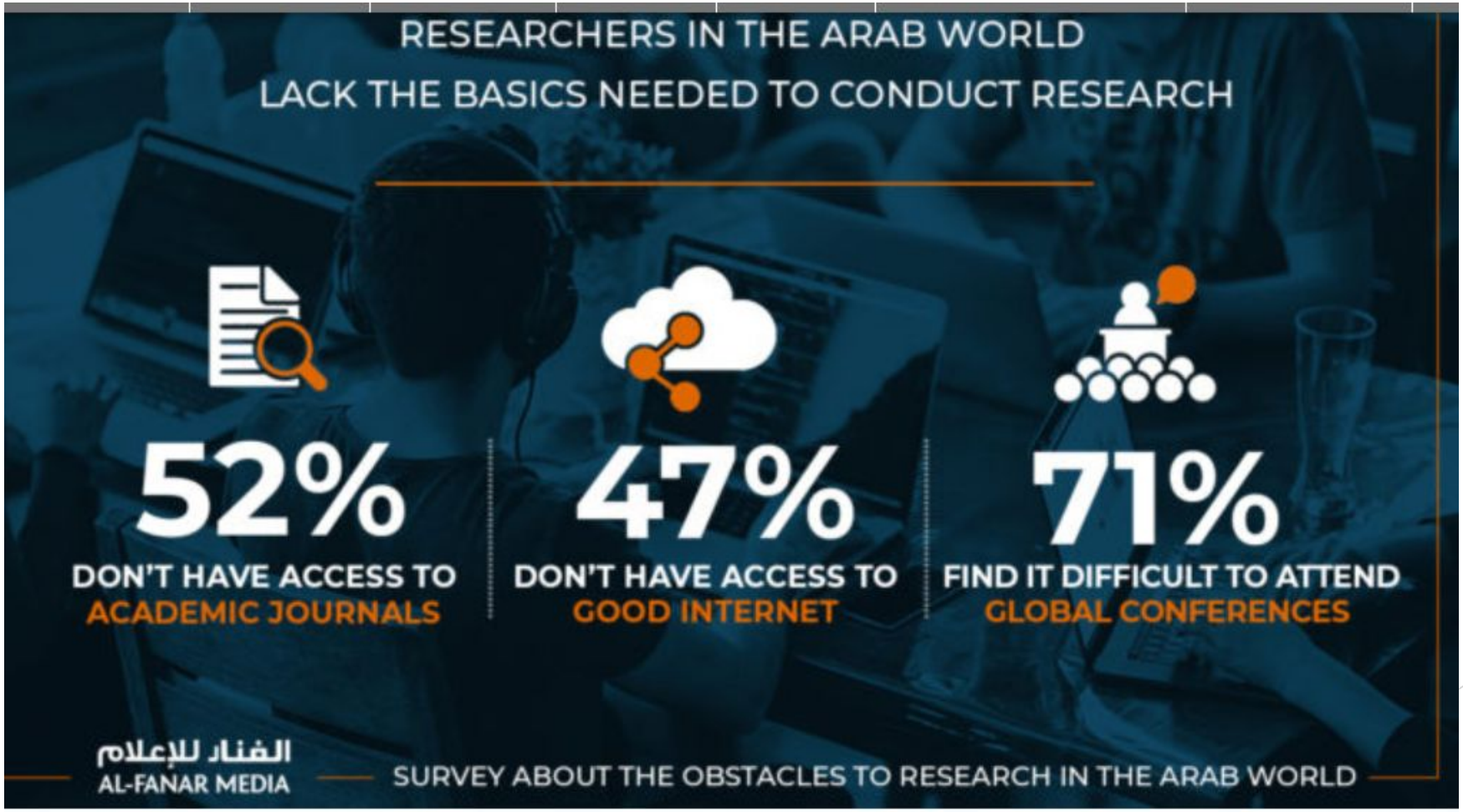


# Some Challenges Facing Scientific Research in the Middle East 3/3

- **Unemployment of research results** in economic projects due to weak links between research institutes and production sectors.
- **Lack of specialized centers** for scientific research.
- An over –inflated ego in researchers and **lack of interaction with team work**.
- Lack of **universities**' autonomy, governance and institutional performance.
- Weak quality of HE **outputs**.



# RESEARCHERS'BASICS NEEDED TO CONDUCT RESEARCH



# The case-study of the Higher Education system in the Kurdistan Region of Iraq: some facts….

- **First Phase:** higher education process started with the foundation of Sulaimaniyah university in 1968. And later transferred to Erbil in 1981 and named Salahaddin University.
- **Second Phase:** After liberation of the Region in 1991, the KRG reopened the University of Sulaimaniyah and founded the University of Dohuk in 1992.
- **Third Phase:** In 2006, with the formation of fifth KRG cabinet, the MoHESR was established to reorganize and modernize the work of the HEIs. During this cabinet the region had four public universities and two board of technical studies and ten private universities.
- **Fourth Phase:** Reform in Higher Education: In 2009, the sixth KRG cabinet continued the modernization process, taking on a holistic reform program for HESR. The KRG adopted a new vision and long-term strategy that led to the design of a new road map for reformation of the HE system. The mission is to achieve quality in HE and SR.








# REFORM PROCESS ON QUALITY ASSURANCE AND RESEARCH DEVELOPMENT

- **Aspects of Reform:**
- Reforming in **teaching process** and establishing a modern **Teaching Quality Assurance (TQA) system**.
- Reforming the **research training** **and** **funding** **system to revitalize scientific research.**
- Beginning a **continuous academic development**.
- **Building capacity** by investing in people and infrastructure (HCDP, Sending students abroad).
- Establishing and **institutional licensing and accreditation system**.
- Reforming the **management structure of the universities and technical institutes** to minimize waste and promote university independence.
- Reforming the **administrative system** to minimize bureaucracy and put students and staff first.



# Again some history about the reform process in KRG

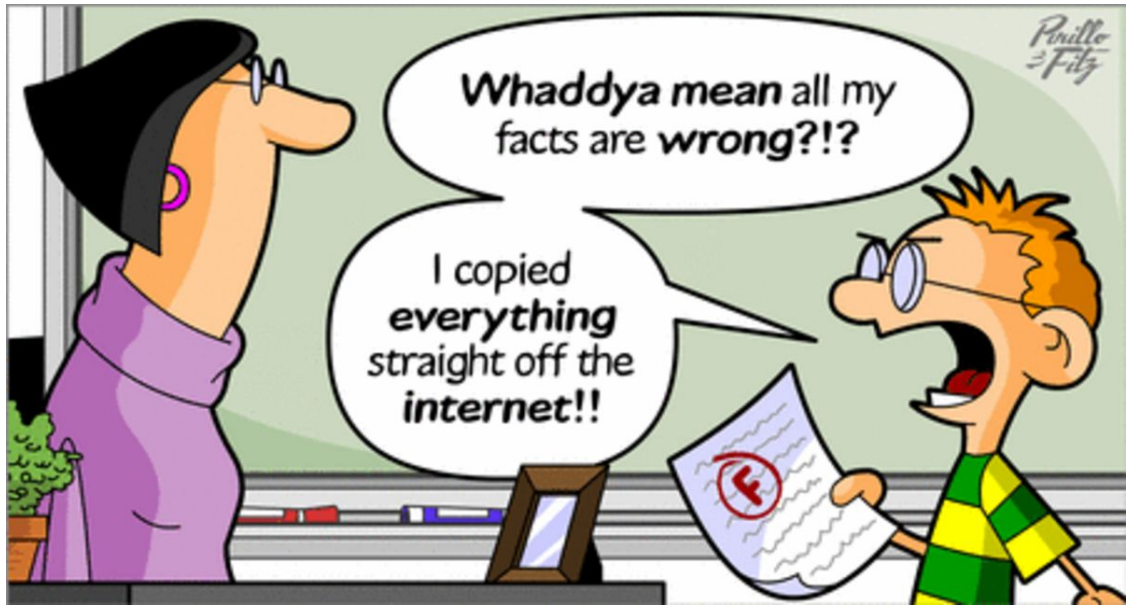
- **Fifth Phase**: The seventh KRG cabinet developed the **process of modernizing Higher education** and its projects.
- **Sixth Phase:** The eighth KRG cabinet (Recent Reforms) intensified its attempts to level up the quality of universities and academic domain of universities.

1. **National Ranking**
2. **Granting Researchers.**
3. Training teachers and teaching staff ( Finland, Germany, Iran)
4. International Exchange Program ( sending students abroad as well as teaching staff)
5. Curriculum Development
6. Pedagogy
7. **Bologna process (APPRAIS)**
8. Internationalization (TIGRIS project)
9. **Encouraging Researchers (Academic Promotion Reform).**
10. Accreditation



# Despite some progress, still some obstacles:

- **Political** conflicts.
- **Economical** factor: big and noticeable economic deterioration since 2014 because of the fight with ISIS and other financial issues.
- **New methods and curricula** (preparing staff and learning environment)



# Key aspects about the Kurdish HE strategy 1/2

- **The KRG ministry** of higher education has planned in its own **vision and mission** to focus on the **quality** and made a lot of reforms to secure the quality. So **quality is a key element not only for accreditation**, but also to ensure better opportunities for the future of our graduates and generations to respond to the market needs.



# Key aspects about the Kurdish HE strategy 2/2

- **On the ministerial level,** we have taken a number of steps in this regard including, creating an internal quality assurance process for which a number of criteria have been developed like **teaching quality assurance, continuous academic development and student feedback**. We also created another tool that helped us to leverage the quality and the visibility of our universities internationally, that was through the implementation of **National University Ranking program NUR** for all the public and private universities in the region.



# Bologna Process implementation…the key challenges

**In 2015 and as a part of the reform project in higher education system**, the ministry began to implement Bologna Process in the universities. This was done to help the students' mobility around the Universities within the system and preparing them after the graduation to play a productive role in the societies and to respond to the labor market easily based on their skills and abilities. This is of course is done by changing the philosophy of the education and the methodology of teaching by shifting from teacher-centered learning into student centered learning. For this reason, the KRG ministry of higher education implemented the pedagogy project to train the members of teaching staff with up to date methods of teaching.



# TVET reform….new entry

- The Ministry of Higher Education and scientific Research is too much concerned about both **TVET and market needs** in terms of job opportunities. Just recently, at the end of Aug, 2019 our Ministry sponsored a National Scientific Conference entitled **'Technical Education Reform in Kurdistan Region - towards the Bologna process**'', which was held by the Polytechnic universities in the region in Erbil, Sulaimani and Dohuk in which the main focus was on TVET.



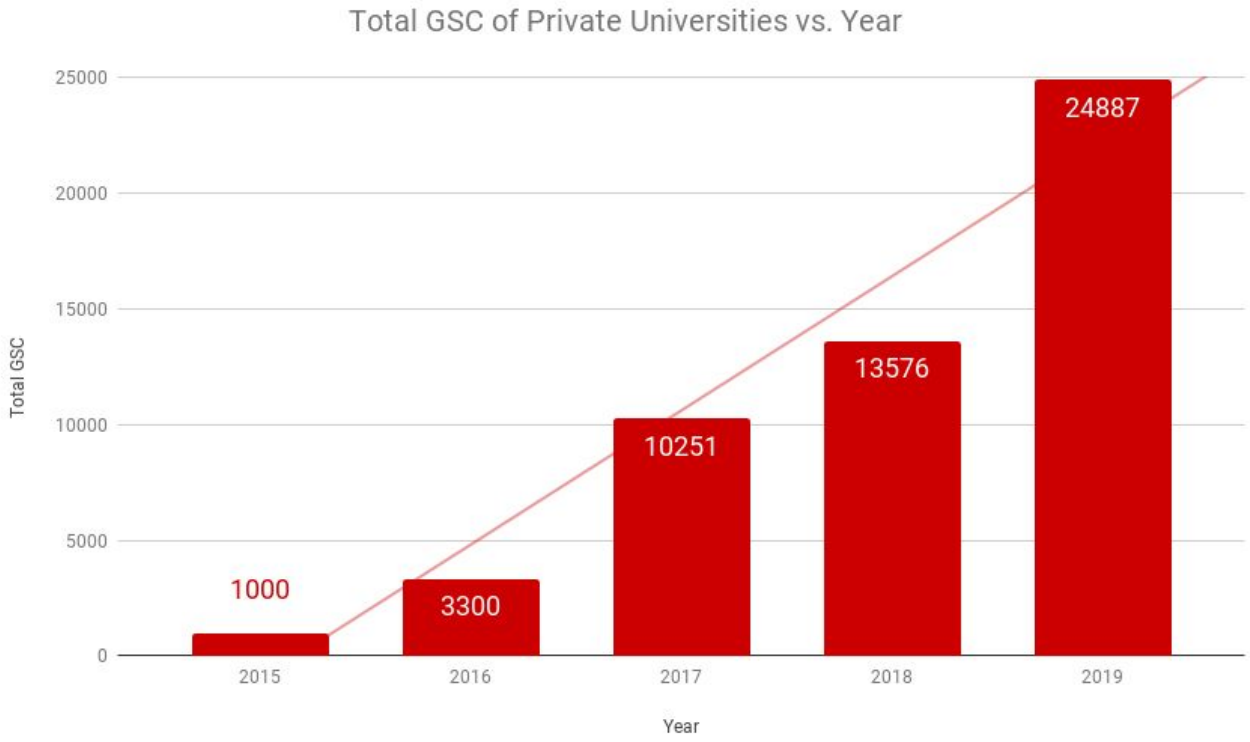
# What about scientific research in KRG HE system?

- In terms of **research collaboration,** our universities have made a **very good progress in this respect.** The Ministry asked our universities to have Research Center in their universities, and the quality assurance process and NUR have made a big difference in increasing the number of publications by our researchers in high quality journals.

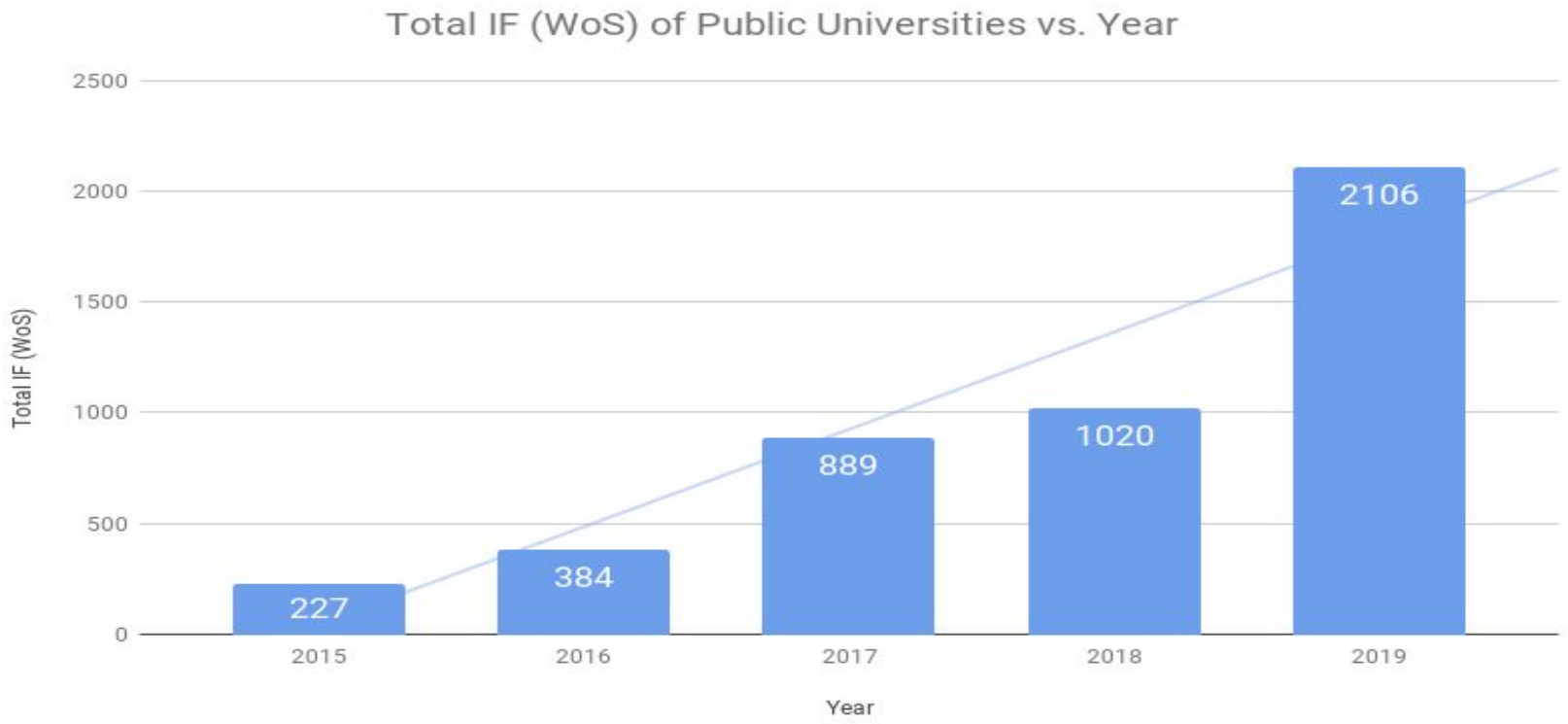
- **For example** in 2015 only 75 papers were published in Scopus and web of science while this number was increased to 1005 by 2019. This statistic is liable to be changed when we will announce the result of **National University Ranking** in January 2023. It is also the same with the number of IF in which there were only 227 IF collected by our researchers in 2015 but this number was increased to 2100 IF by 2019. So there is a big change in this regard.



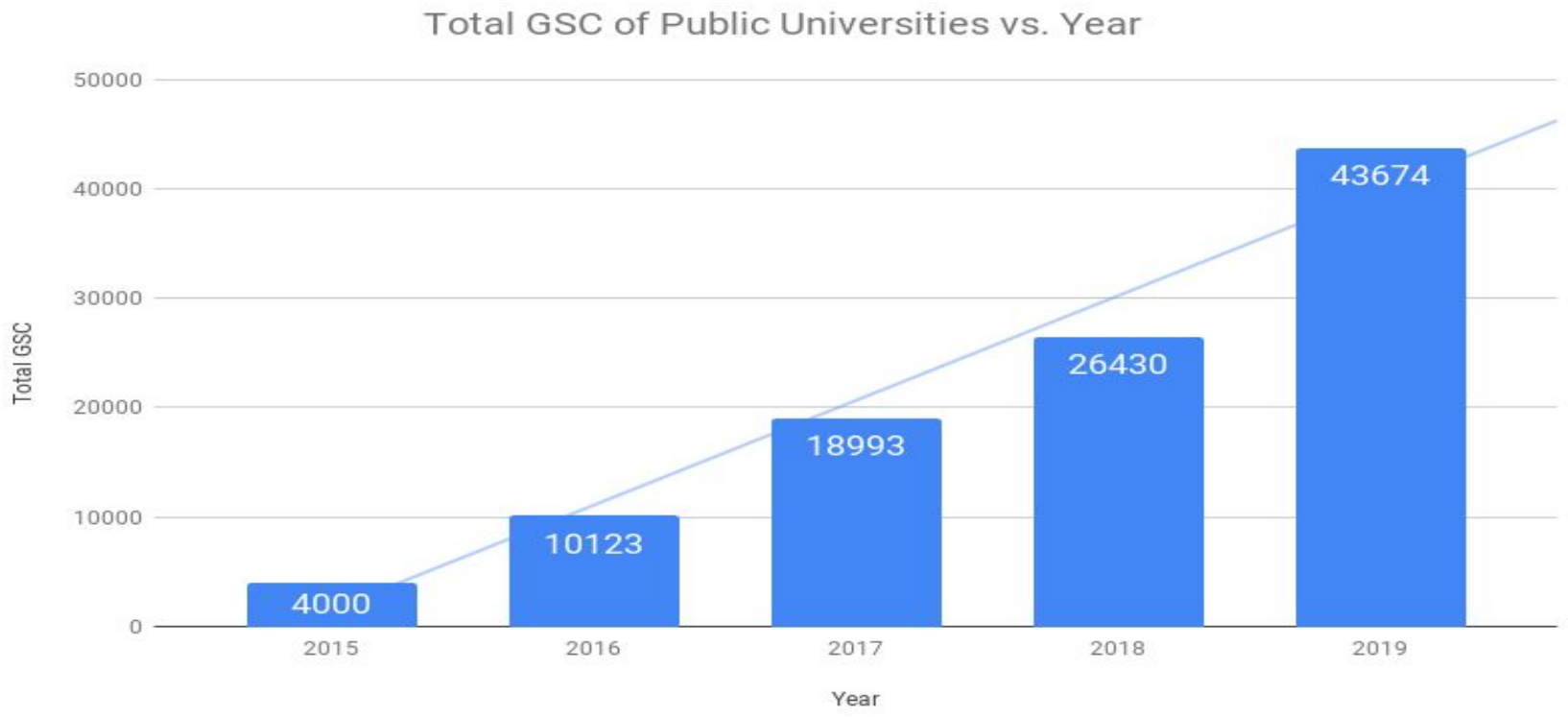
# Total GSC of Private Universities in Kurdistan



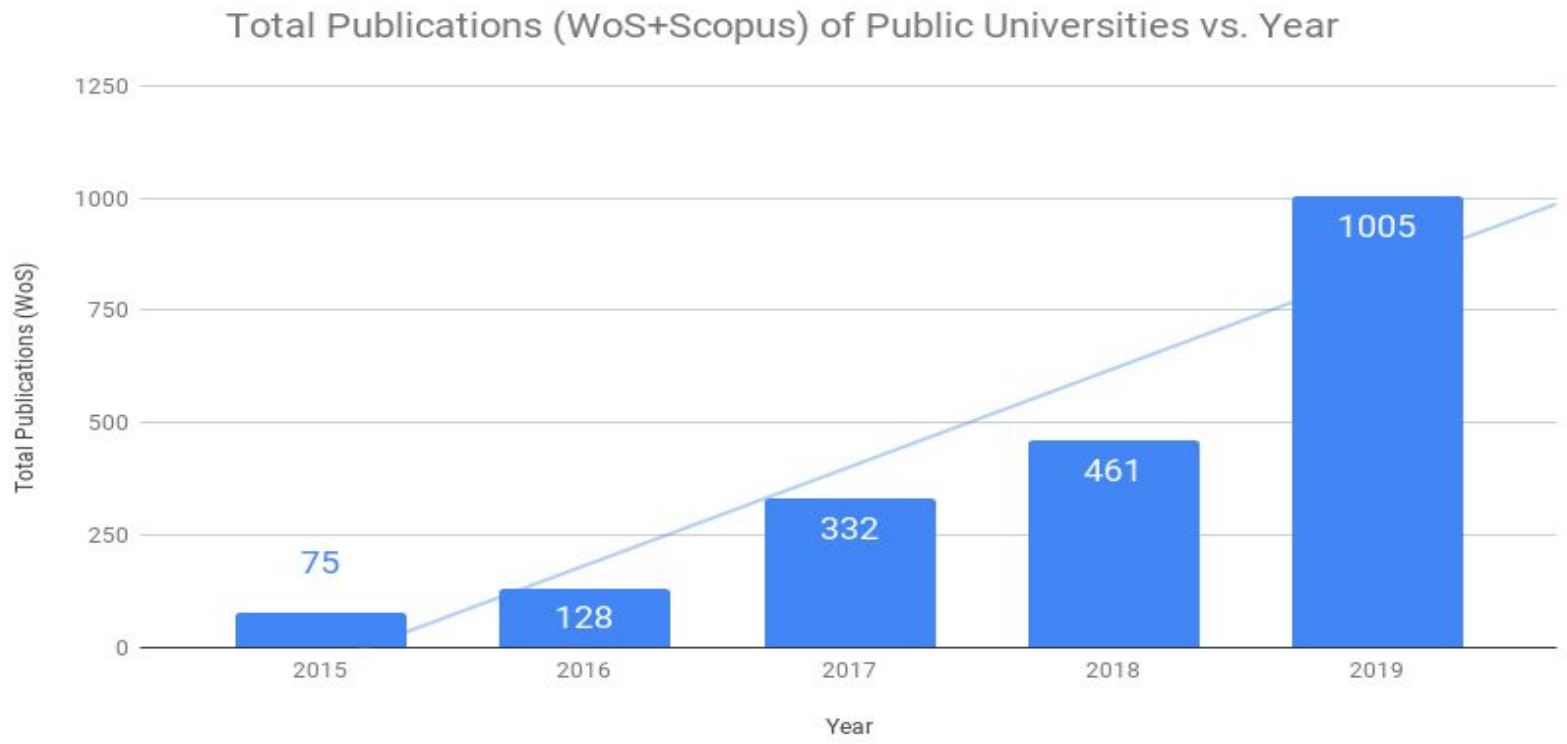
# Total IF of Public Universities in Kurdistan



# Total GSC of Public Universities



# Total Publications of Public Universities



# National Research Council

- Moreover, the ministry have established **a National Research Council** in Kurdistan, for the first time in the region, to support the researchers and in the first phase we have allocated over 250 million IDs as the first grant to fund the researchers apart from other collaborations and joint works with other universities around the world.
- But we still have some obstacles and challenges among them the financial crisis of the region which has limited our support to the researchers financially and to equip these research centers and laboratories with modern equipment.

- One of the solutions to meet the challenges is to increase the budget for scientific research, select meaningful priority areas for research, lay down workable strategic goals and action plans, establish adequate databases and networking capabilities, and robustly encourage private sector input and participation.

# CONCLUSIONS

- We need to call for concrete actions in three specific directions:
  - **enhancing human capacities;**
  - **creating strong synergy between education, research and socioeconomic systems;**
- **and formulating a program for education reform across the Middle East that caters for the different needs across various countries, because there will never be one solution that fits all the conditions and challenges faced.**



# Thank you very much for your attention

