

EMERG • Report

EMERG Approximation Report 2019

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1 Introduction

1.1 Context

The European Mediterranean Regulators Group (EMERG) was established on July 1st, 2008 in Malta, as an independent platform of National Regulatory Authorities for Electronic Communications Networks and Services.

The origin of EMERG lays in the ideals and principles of the Euro-Mediterranean cooperation set out in the Barcelona Declaration of November 28, 1995, which establishes the principles of a partnership aimed to turn the Mediterranean region into a common area of peace, stability and prosperity by way of the reinforcement of the political dialogue and of cooperation in security and economic, financial, social and cultural matters.

According to its Charter, the objectives of EMERG are the following:

- To act as a forum for regular discussions and exchanges of information for its Members on issues relating to electronic communications;
- To promote the approximation to the European regulatory framework and best practices among its Members;
- To monitor the development of the electronic communications in the Mediterranean area;
- To facilitate the cooperation and exchange of ideas and expertise with international organizations, other regulatory networks and sector experts;
- To prepare and contribute to the preparation of a region's reservoir of documents, reports, benchmarks, presentations, analyses and common positions.

EMERG is open to any National Regulatory Authority (NRA) concerned with the electronic communications sector that is member of or observer in the Body of European Regulators for Electronic Communications (BEREC) or party to the Euro-Mediterranean Partnership launched within the framework of the Barcelona Declaration of November 28, 1995 and/or to the ENP-South countries of the European Neighbourhood Policy.

Currently, EMERG is integrated by the NRAs of 23 countries: Algeria, Austria, Bosnia and Herzegovina, Croatia, Cyprus, Egypt, France, Germany, Greece, Israel, Italy, Jordan, Lebanon, Libya, Malta, Morocco, State of Palestine, Portugal, Spain, Switzerland, Syria, Tunisia and Turkey.

1.2 Objective of the Report

Approximation of the regulatory frameworks between EU and its neighbouring countries is a major objective of the European Commission and the main reason for sponsoring NRAs in the EMERG network.

The purpose of this report is to critically examine and evaluate the progress regarding the electronic-communications sector of EMERG member states, in particular the rapprochement of non-EU countries with the EU members. The report maps the progress achieved in the convergence of the telecommunications frameworks as well as comparison of trends and state of regulatory achievement between EU and non-EU countries. The special focus is put on the level of approximation achieved within the period of the last three to four years. In the last several years, steps have been taken to approximate EU standards and regulations in certain areas. For the purpose of this report, EMERG conducted a small survey focusing on the most important projects and trends that the regulators have been facing over the past 5 years.

The Report is structured in the following way: Chapter 2 presents the development of the EMERG countries in terms of institutional aspects. Chapter 3 focuses on regulatory developments and measures that have been undertaken by members to achieve rapprochement. Chapter 4 shows how countries have developed in terms of market parameters. In that regard it is also important to show where discrepancies are persisting, and the reasons behind these differences. Chapter 5 summarizes the findings and evaluates the recommendations made during the EMERG workshops in recent years.

2 Institutional Developments

The first section examines the institutional development in EMERG countries, that is the framework and legal environment in which NRA and market players operate. In the context of the Benchmark Report, we look at different aspects with regard to the framework conditions. To what extent are regulatory authorities independent? What competencies do regulatory authorities etc. have?

The benchmark with regard to institutional aspects is the European Framework. European telecom rules were last updated in 2009. To make them fit for the digital era the Commission proposed a new Electronic Communications Code (EECC) in September 2016. The provisional agreement reached in June 2018 was adopted by the Parliament and then by the Council in November 2018. Member States have until 21 December 2020 to transpose the new directive into national legislation. The new rules include measures to stimulate investment in and take-up of very high capacity networks in the EU as well as new spectrum rules for mobile connectivity and 5G. The Code also ensures that all citizens have access to affordable communication,

including the internet. It increases consumer protection and security for users and facilitates regulatory intervention.

With regard to the independency and empowerment to act without day-to-day political influence of the government this applies to almost all EMERG countries. Exceptions here are Israel and Palestine, where the telecommunications sector is still regulated by the Ministry of Telecommunications.

Alignment with EU Framework Directive 2009/140/EC			
EU Regulatory Framework	Country fulfilled	Development since 2014	Exceptions
Independent NRA	Nearly all EMERG Countries		Israel and Palestine
Principle of NRA independence – No ownership, operator and day-to-day politics influence	Majority of EMERG Countries	Portugal (Decree-Law no. 39/2015)	Bosnia and Herzegovina (financial independence), Portugal

As far as regular market analysis, transparency and enforcement are concerned, this takes place in all EMERG countries. According to the evaluations of the benchmark reports based on the surveys of NRAs, significant progress in implementation has been observed since 2014. Palestine has introduced a market review process based on the recommendations of the EU. Lebanon has introduced control and inspection regulations in the context of power to enforce fines and sanctions. All EMERG countries conduct public consultations and are required to publish the results of the consultations in a transparent manner. However, in five countries the consultation process is not mandatory (see figure).

Alignment with EU Framework Directive 2009/140/EC			
EU Regulatory Framework	Country fulfilled	Approximation development since 2014	Exceptions
Ex-ante market regulations & SMP identification	All EMERG countries	Palestine (market review following the recommendations of the EU)	Switzerland Lebanon (currently not applied)
Request of information rights	All EMERG countries	-	
Power to enforce fines and monetary sanctions	All EMERG countries	Lebanon (control/inspection regulations) Egypt (3% of net sales) Jordan (fines up to 200.00 JD)	Palestine
Accountability and transparency	Most EMERG countries	Most NRA are accountable before Government and Parliament	Tunisia, Morocco, Lebanon are only accountable before Government
Consultation process	All EMERG countries	All EMERG countries conduct public consultations and publish the results	Switzerland, Palestine, Morocco, Tunisia and Egypt not mandatory

Against the background of very different countries and different traditions with regard to regulating their markets, it is clear that non-EU members have in the past sought to adapt their regulations in line with the European framework. The continuation of EMERG would ensure that this will continue to happen in the future and that there will be an exchange between members, especially against the background of the implementation of the new Electronic Communications Code.





3 Regulatory Developments

Currently, at retail level, competition is driven partly by ex-ante regulation and infrastructure competition stemming from alternative networks (including, in some cases, mobile broadband services). Wholesale broadband markets, to a large extent, were created by ex-ante regulation. The current regulatory interventions have focussed on the incumbent operators copper and now fibre networks which are subject to regulation with very few exceptions. This led to a creation of service based competition in the fixed broadband markets. As regards the traditional copper telephone networks, regulation has been based on the ladder of investment concept to allow new entrants to enter the markets step by step in a manner where each step requires a certain level of investment in own infrastructure with the benefit of allowing the access seeker to increase its capabilities to offer better services at the retail level.

3.1 Market reviews

EU Member States have harmonized market analysis practices by virtue of the European legislation entered into force since 2002. Since then, regulatory measures on the retail market level have been steadily reduced. According to the EU regulation regulatory controls on retail services should only be imposed where national regulatory authorities consider that relevant wholesale measures or measures regarding carrier selection or pre-selection would fail to achieve the objective of ensuring effective competition and the fulfilment of public interest objectives.

Regarding the approximation with the EU Access Directive the analysis shows that non-EU EMERG countries have also moved away from implementing remedies in retail markets. Moreover price control in origination has been going back.

Approximation with EU Access and universal service directives				
Market	Remedies in EMERG Countries*			
	Access & Origination	Termination	Transit	Retail
Fixed voice telephony market	All EMERG countries but Lebanon and Malta	All EMERG countries but Lebanon	Remedies in non-EU countries: 	Remedies in non-EU countries: 
Mobile voice/SMS markets	Majority, Price control in EMERG: 	All EMERG countries, No price control in Israel, Egypt and Palestine	Retail regulation only in Morocco, Remedies in non-EU countries: 	
Fixed broadband markets	Duct Access Majority	LLU All EMERG countries but Egypt and Lebanon	Bitstream access Majority, exceptions are Switzerland, Malta, Bosnia, Egypt and Lebanon	

In the fixed broadband markets the majority of EMERG members have implemented a duct access obligation next to their passive and active wholesale broadband remedies. The majority of EMERG countries have implemented Local Loop Unbundling as well as bitstream access.

Overall, non-EU countries have repeatedly taken measures to align their regulatory frameworks with the European framework.

Bosnia & Herzegovina

With the purpose of aligning with the EU regulatory framework from 2009, in 2011 CRA adopted the Rule 54/11 on the electronic communications market analysis which lays down set of obligations to be imposed on designated operators with significant market power (SMPs) among which is obligation of keeping separating accounting records and the obligations of price control and cost accounting. After conducting relevant market analysis of wholesale markets of call termination in fixed and mobile networks CRA proclaimed operators with significant market power and imposed obligation of cost accounting and accounting separation. Following this process, in 2018 CRA adopted Rule on accounting separation. The Rule prescribes a framework for the preparation and drafting of regulatory financial reports and regulatory accounting documentation for designated operators with significant market power.

Bosnia and Herzegovina

Rule on accounting separation



Objectives

- Providing reliable financial information from designated SMP operators
- Enhancing market development by preventing discrimination and anti-competitive behavior on the market

Palestine

The MTIT defines relevant markets according to market review which identifies operators with Significant Market Power (SMP) and, consequently, it impose regulatory obligations on SMP operator. The market review is conducted on a periodic basis and the process has been aligned to the European practice.

Palestine

Relevant market analysis and LRIC cost model for mobile and fixed services



Objectives

- Determination significant market power and cost models for interconnection in fixed and mobile services
- The market review follows mostly the recommendations of European Union regulatory framework for electronic communications services

3.2 Spectrum strategies and 4G licensing

Across EMERG countries spectrum strategies and 4G licenses were developed, taking EU target dates and broadband goals into account.

Bosnia & Herzegovina

In December 2017 the CRA has adopted a regulatory framework for the use of RF spectrum for LTE purposes. Following global regulatory trends, CRA defined a new license for 4G systems, which is technologically neutral and submitted the proposal for licensee fee to the Ministry of Transport and Communications and Council of Ministers of Bosnia and Herzegovina. In 2019 4G spectrum licenses were issued to the nation's tri of mobile network operators. The concessions are valid for 15 years and oblige the license holders to begin offering commercial 4G services within one month of the award. The main objectives of the project are enabling further development of mobile market and provision of high-speed mobile data services. In terms of approximation to the EU regulatory framework, the establishment of 4G networks is necessary to achieve the targets set out in the EU 2020 Digital Agenda.

Tunisia

The reasons for initiating 4G licensing in Tunisia is to allow Tunisia to adopt innovations and promote broadband for all users. The objectives of the projects are to provide users by a 4G connection from 2017 and to allow inland areas to benefit from 4G services in the same way as the capital and the littoral zones. The benefits of the projects are the 4G license makes the operators networks more efficient by providing more innovative services. The operators realize massive investments in infrastructure for the whole economy of the country to develop ultra-modern mobile services and to improve the coverage of their networks in all the regions. In terms to the approximation to the EU regulatory framework, establishment of 4G networks is necessary to achieve goals of EU 2020 Digital Agenda

Turkey

Mobile broadband spectrum strategy in Turkey has been prepared with the aim to identify the roadmap which is necessary to achieve countries' targets related to the mobile services. Taking into account the assigned mobile spectrum and the level of mobile service usage, the result of project is draft report consisting of all spectrum identified for IMT services with assignment dates and the determination of necessary spectrum for sustainable growth of mobile services. This plan takes into account the target dates defined by the EU for the assignment of frequency bands such as 700 MHz, L-band etc. for use for mobile services. Furthermore, in 2015 Turkey held a tender for the IMT authorization and the frequencies allocated by this auction are on technologically neutral bases. Introduction of 4G and 4.5G will provide the high speed mobile internet and approximate country to the goals of EU 2020 Digital Agenda.

3.3 Consumer protection & QoS legislation

The protection of consumers and of the right for having access to affordable services is at the heart of the responsibilities of regulators. The EU Directive on Universal Service and Users' Rights (2009) contains several provisions aimed to secure the interests and rights of end-users beyond their access to the services falling under the scope of universal service. On the one hand, they evolve around the principle of providing end-users with information on the applicable prices and tariffs, standard terms and conditions and the quality of the publicly available communications services. On the other hand, it sets the conditions applicable to contracts for users. Finally, it establishes the obligation for EU Member States to ensure transparent, non-discriminatory, simple and inexpensive out-of-court procedures available for dealing with unresolved disputes.

Regarding EMERG, all countries have consumer protection and QoS legislation in place. There have been various workshops in the recent past on the issues, where concrete measures for further convergence were discussed and recommended.

EU DIRECTIVE on universal service and users' rights (2009)

Protection of consumers – ALL EMERG Countries

- contract conditions
- contract duration
- consumers complaints

Work shop

Quality of Service – ALL EMERG Countries

- Specific legislation adopted
- Q&S standards
- Penalties

Work shop

During the workshop, the EMERG members agreed on the following recommendations:

- **Improve the Complaint Process:** All EMERG members should improve consumer protection by implementing a consumer complaint unit and clearly defining a process on how customer complaints will be handled, including actions taken and publications.
- **Improve Transparency and consumer awareness:** EMERG members should improve consumer rights by enforcing and publishing minimum standards for contracts between Telco Operators and retail customers. In particular, all EMERG members should publish minimum standards and KPIs to enforce the consumer rights when changing the access provider.

- **Improve Services for elderly and disabled people:** The EMERG members should encourage service providers to improve standards for emergency calls, special services and harmonize specific low price offers for disabled and elderly people.

3.4 International Roaming

International roaming is one of the four major topics that EMERG Members plan to tackle in the future. Today, less than 10 countries have international roaming agreements in place. European countries are regulated via Regulation (EU) No 531/2012 on roaming on public mobile communication networks within the Union and EEA. In Bosnia and Herzegovina a multinational agreement with Montenegro, Serbia and Macedonia based on the EU model could be reached on 29 September 2014.

Bosnia & Herzegovina

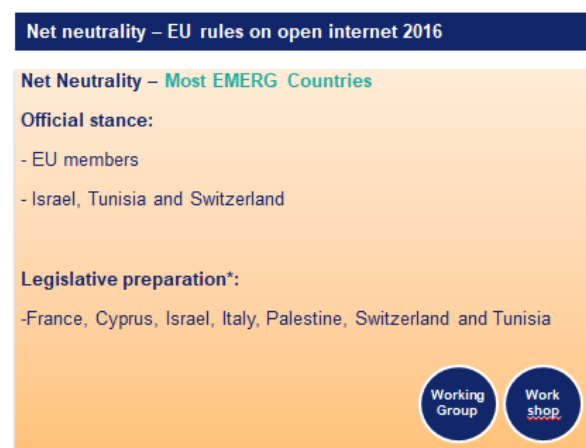
Regional Roaming Agreement Following the latest development in European Union regarding the ending of roaming charges between EU countries and due to a high roaming charges in the Western Balkan Region, Governments of four countries: Serbia, Monte Negro, BYRM Macedonia and Bosnia and Herzegovina at the end of 2014 signed the Agreement for lower prices of roaming for citizens of their countries. The Agreement envisage gradual lowering of roaming prices through three phases by 2017 and applies to all types of mobile services – voice calls, text messaging and internet use. In 2018 during the EU-Western Balkans Digital Agenda Summit it was agreed that this agreement will be expanded to cover all countries in the Western Balkans – WB6. Given the situation that the Roaming prices in neighbouring countries in Western Balkans region are significantly higher than what EU citizens pay in another EU member country, this agreement which is based on EU model is adopting EU best practice and is a part of EU Digital Agenda for the Western Balkans and in relation with EU Regulation No 531/2012 of the European Parliament and of the Council of June 2012 on reaming on public mobile communications networks within the Union.

International Roaming is a topic of EMERG Expert Working Group that was activated in 2019. As other regional groups, EMERG Non-EU members are interested in exploring ways of harmonization the international roaming tariffs with the European Union. The scope of the Working Group is to analyze the market differences between EU and Non-EU countries and to develop a scheme to signing an international roaming agreement between these two sides of EMERG.

3.5 Net neutrality

As of 30 April 2016 the European rules on the open internet (net neutrality) apply. The rules follow the adoption of EU Regulation 2015/2120 on 25 November 2015 that lays down

measures concerning open internet access and amend Directive 2002/22/EC on user’s rights relating to electronic communication network and services as well as the Regulation (EU) No 531/2012 on roaming within the Union. The regulation creates the individual and enforceable right for end-users to access and distribute internet content and services of their choice. Common EU rules on net neutrality ensure that the same provisions apply across Europe. Consequently all European members of EMERG have disclosed an official position on regulating net neutrality. But also non-EU EMERG Members have taken an official stand in the matter (see figure). In Israel the Telecommunication law prohibits operators to block or restrict services, applications or telecommunication equipment, while in Switzerland there is an ongoing legislative process foreseeing regulation focussing on rules of transparency and obligation for providers to inform end users. France, Cyprus, Israel, Italy, Palestine, Switzerland and Tunisia have included net neutrality in a law or legislative proposal. The EMERG expert workshop elaborated recommendations for further approximation between EU and non-EU members. An EMERG permanent working group was founded to align on this topic.



Net neutrality – EU rules on open internet 2016

Net Neutrality – Most EMERG Countries

Official stance:

- EU members
- Israel, Tunisia and Switzerland

Legislative preparation*:

- France, Cyprus, Israel, Italy, Palestine, Switzerland and Tunisia

Working Group Work shop

Most NRA’s actions will likely be devoted to traffic management (including monitoring QoS and assessing which specialized services can benefit from regulatory exemptions), 5G services, end-user rights and commercial practices, then transparency and national regulatory authorities’ supervision. Each country participants at the end of the workshop provided its opinion and agreed to the following recommendations:

- **Facilitating Net Neutrality and Transparency:** EMERG members are making efforts to facilitate Net Neutrality through developing regulatory framework and enforce transparency. Transparency should be included in the measurement tool especially regarding speed measurements and how to determinate it.
- **Implementation of QoS tools:** Several EMERG members are using regulatory tools concerning the QoS both for access and core part of network assessing the traffic

management. Regulators, who have not yet taken steps in this direction are encouraged within the EMERG to follow.

Net Neutrality is a topic of EMERG Expert Working Group activated in 2019. The main scope include benchmarking, the application of the Net Neutrality principles and traffic management practices. The purpose is to approximate the MENA countries policies to the EU Regulatory Framework.

3.6 Broadband plans

The EU Digital Agenda had targeted year 2020 to ensure widespread deployment and availability of ultra-fast broadband throughout the European Union. To achieve this, the Commission has channelled some of its public funds, via different instruments, to invest in broadband infrastructure. Next to that, Member States are encouraged to set own initiatives to promote the deployment of ultra-fast broadband services. However, having arrived in the final year of the Agenda to achieve the set out objectives, we are seeing different progress across the EU. While some countries are still constructing the means by which they can achieve them, others have actually achieved a remarkable progress in this regard, other European countries lag behind. With regard to EMERG, the majority of members have implemented measures to promote NGA networks, most non-EU countries also elaborated broadband plans. Exceptions are Israel, Bosnia and Herzegovina and Lebanon which do not have any elaborated funding plans, at least not from the state's side.


EU DIGITAL AGENDA 2020 – PROMOTION OF BROADBAND

Deployment of NGA networks - All EMERG Countries

- Exceptions: Israel, Bosnia and Herzegovina, Lebanon

Broadband Plans:

- Egypt, France, Italy, Jordan, Malta, Morocco, Portugal, Spain, Switzerland, Turkey, Croatia, Palestine, Tunisia



Several EMERG members have adopted broadband plans to enhance the broadband deployment following the EU broadband Strategy and EU Digital Agenda 2020.

Morocco

In Morocco the creation of National Plan for Broadband Development aims to ensure: (1) 100% of population access to high-speed broadband (at least minimum 2 Mbps) over a 10-year horizon; (2) 50% of population access to very high-speed broadband (minimum 100 Mbps) over 15 years.

Palestine

In Palestine the project of creating a Legal Framework for National Broadband Master Plan is conducted in order to create an approach for national broadband policy, guidelines for implementation of roadmaps and broadband services. The aim of the project is to increase penetration rates and competition.

In the context of an EMERG workshop recommendations were made for further approximation between EU and non-EU members, as well as on methods of financing a NGN roll-out.

Update Broadband Strategies: All EMERG members should encourage the elaboration of a national broadband strategy with the objective to accelerate broadband network deployment and broadband service usage over and above the purely market driven level. Strategies should include appropriate financing instruments.

3.7 New telecommunications trends

The electronic communications sector is fast changing area and NRAs are constantly facing new challenges. In this chapter we will examine whether NRAs deal with the new telecommunications trends from a regulatory point of view.

France

In its report published in February 2018, ARCEP sets out a series of proposals for guaranteeing an open internet, in other words for giving users back their freedom of choice. ARCEP suggests several levels of immediate action therefore seem advisable, beginning with a clarification of the fact that the principle of internet openness needs to apply to devices. Data-driven regulation is required beforehand, to analyze the topic and ensure fully informed users: employing a range of tools (collecting information from device manufacturers and OS providers, end-user reporting, promoting comparison tools, obligation of transparency towards professional users), the aim would be, on the one hand, to enable the public authority to deepen its expertise and, on the other hand, to encourage virtuous behavior by informing consumers about their choices and providing professional users with greater clarity .

Spain

In Spain, the CNMC has dealt with the evolution of the convergence of different telecommunications markets. Recently, the telecommunications market has converged with the audiovisual market. In order to guarantee replicability for competitors CNMC imposes a replicability test, with the aim of shaping the regulation to the market developments, in this case the process of convergence.

Morocco

In Morocco, in terms of strategy, the regulator deals with new topics in the context of a multi-purpose working group and a spirit of consultation with the various market players

Egypt

As for Egypt, there is an appetite in some sectors to embrace cloud services. Concerns are mainly related to security and privacy. On the operators' side, they started to leverage some of the smart devices' features such as location services, to offer value added services to their customers.

Croatia

Regulatory tools continue to focus on the nature of the services provided, adhering to the principle of technology neutrality. For instance, an important regulatory challenge is the mass adoption of virtual SIM cards installed in IoT devices during manufacturing (e.g. automatic emergency call services in cars), since the use of the tools will not be limited to a single country or an economic community, which will consequently place certain issues in international focus, such as service announcements, authorization, or ID management.

4 Market Development

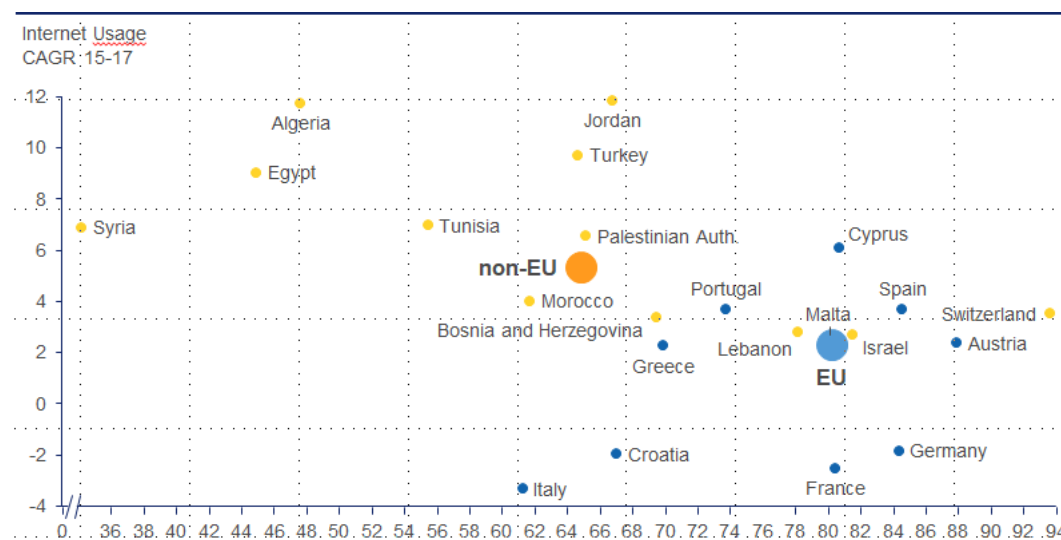
There are many common trends within the EMERG countries when it comes to market development and consumer data.

4.1 Fixed broadband markets

Based on ITU data regarding Internet usage by individuals, there is a gap between developed and less developed EMERG countries. On average, 3 out of 4 individuals uses internet in EU countries while in non-EU countries only slightly more than a half use the Internet. However, the average growth rate of Internet usage is much higher in non-EU than in EU countries as is shown in Figure 1. While many MENA countries have had growth rates of more than 5% between 2015 and 2017, EU countries have shown smaller growth in terms of internet usage.

Some EU countries even show negative growth rates, what could probably be due to fixed network mobile substitution of broadband usage in these countries. In some MENA countries the growth is very aggressive like in Algeria and Jordan. EMERG countries have been converging in terms of internet usage.

Figure 1: Internet usage (in % of HH) and development of internet usage (CAGR 15-17) in EMERG countries

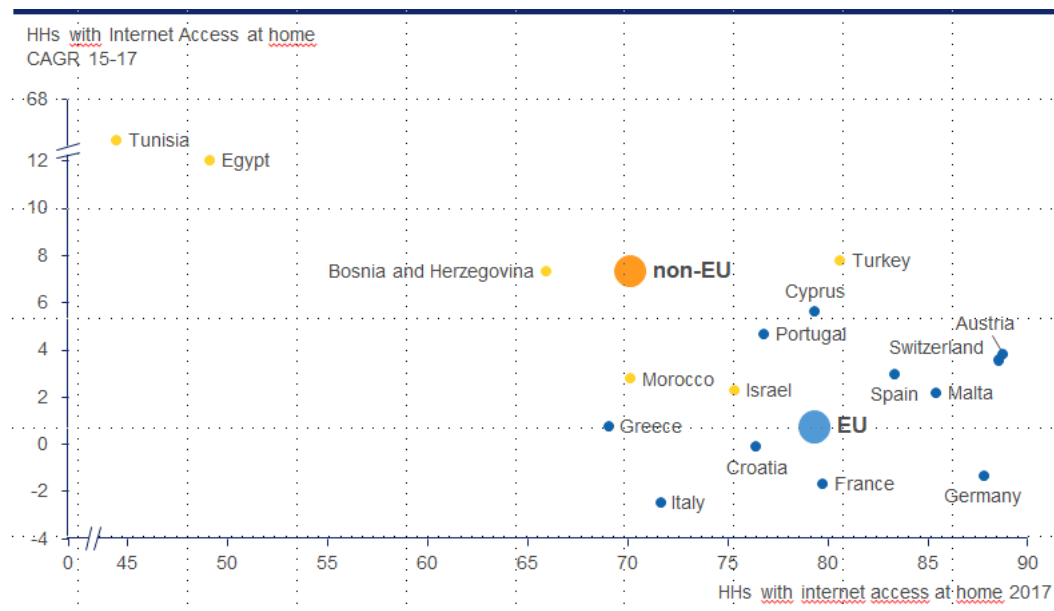


Note: *Big dots display median growth and usage for the groups EU and non-EU. Indicator is defined in the „MANUAL for Measuring ICT Access and Use by Households and Individuals” published and updated by the ITU, “Three individual use indicators (HH5, HH7 and HH10) are presented as the proportion of individuals who used [equipment, Internet access] in the last 12 month”, „Indicator values for HH5, HH7 and HH10 are calculated by dividing the number of inscope individuals using [equipment, Internet access] by the total number of in-scope individuals”.

Source: ITU.

A similar trend is observed when it comes to the portion of households with internet access at home. Figure 2 shows the share of households with internet access in EMERG countries coming from different region. While EU countries still have an overall higher share of internet access at home, the figure also shows that MENA countries have higher growth rates compared to EU countries. Overall we can conclude that in terms of internet access and usage EMERG members are converging.

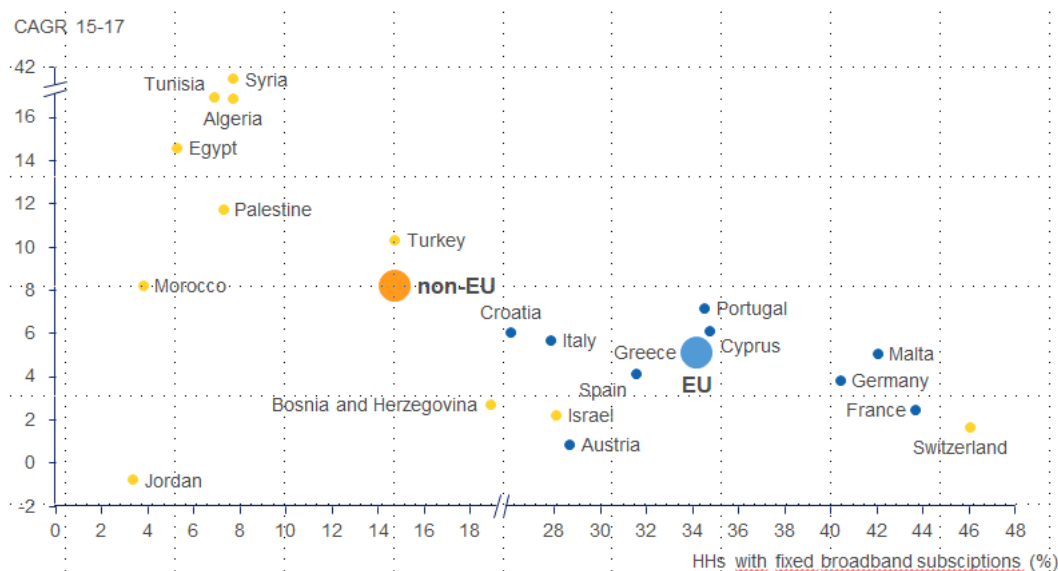
Figure 2: Portion of households with Internet access at home and development of subscriptions in EMERG countries



Note: Big dots display median growth and proportion for the groups EU and non-EU. The proportion of households with Internet access at home is calculated by dividing the number of in-scope households with Internet access by the total number of in-scope households.
Source: ITU.

Another field of approximation between EMERG countries can be observed with respect to the growth rates of fixed broadband subscriptions (Figure 3). While overall penetration figures are lower in MENA countries compared to EU countries, growth rates show that MENA countries are significantly improving with an average growth rate of 8% compared to 5% in EU countries. This is a trend which has been observed annually in the EMERG Benchmark Reports, which shows we can expect that these data will be converging even more in future.

Figure 3: Fixed broadband subscriptions (per 100 inhabitants) in EMERG countries (2017) and Development (2015-2017)



Source: EMERG.

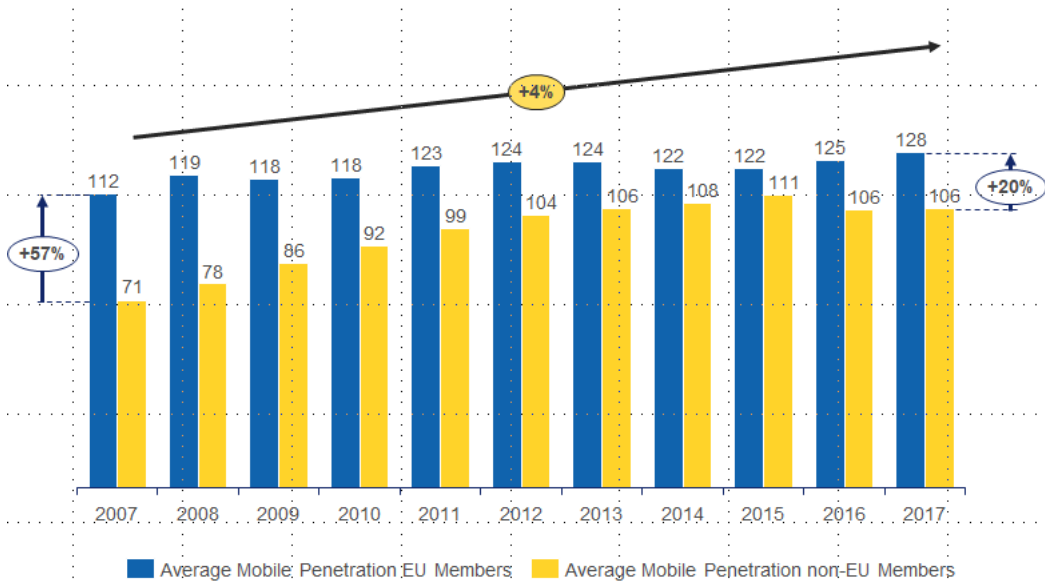
4.2 Mobile markets

In terms of coverage of mobile networks, the difference between EU and non-EU EMERG countries are negligible. Moreover, if coverage is measured in terms of population covered by at least one mobile network – whatever the network standard used (2G (GSM), 3G (UMTS), 4G (LTE) – the coverage in all EMERG countries is practically the same reaching between 99 and 100%.

With respect to the penetration rates there is however a difference between EMERG members. While the fixed network market in most EU countries is saturated and penetration rates cannot increase much further, this is also the main reason why non-EU countries managed to catch up. However, the situation in the mobile sector is different. Especially in the area of mobile broadband, EU countries are still in the growth phase. Non-EU countries as well, but not as fast as EU countries. Besides that, growth rates in the non-EU countries in the mobile communications sector are very heterogeneous between countries, while EU countries are characterized by comparable growth across all members.

Mobile Penetration rates in most EMERG countries have grown in the past 10 years. Exceptions are the EU countries Croatia, Italy, Portugal, and Israel. EU member countries penetration rates grew by 1,3% on average annually, while non-EU members grew significantly faster with an average CAGR of 4,1%. Some MENA countries, like Morocco and Jordan, have reported significant decreases in penetration lately, due changes in the statistical recording of active and un-active SIMs

Figure 4: Mobile Penetration Rate in EMERG Countries (% , ITU)



Source: ITU.

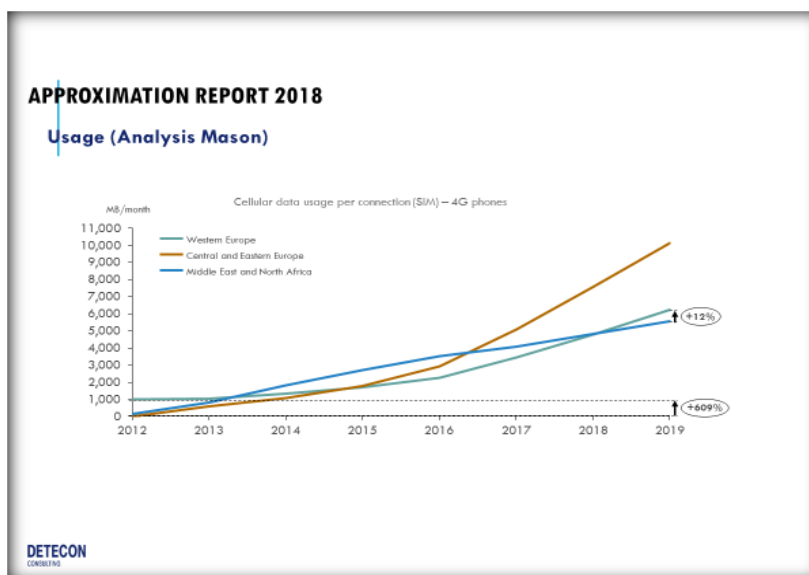
This is the main reason why on average the mobile penetration rates between EU and non-EU countries have been drifted apart (**Errore. L'origine riferimento non è stata trovata.**).

Mobile broadband is globally the most successful service in recent years and also in the EMERG countries. The region as a whole recorded an average coverage with 3G/4G networks of 93,6% approaching the overall mobile network coverage (2G/3G/4G) of 99,6%.

Figure 5 shows the growth of the use of the mobile Internet of the fourth generation of mobile telephony within EMERG countries.

Following cross section of data by regions it is obvious that all regions have been exercising growth in terms of mobile data usage. However, the growth of Central and Eastern Europe and MENA countries is stronger than one observed in Western Europe which shows that the demand market is leaning toward the approximation.

Figure 5: 4G mobile internet usage



Source: Analysis Mason.

5 Conclusions

Global economic trends are introducing digital society which is of much importance for better quality of life. Furthermore, modern technologies are bringing the new innovative services which are creating opportunities for business and country economies. This report shows that all of the EMERG countries recognize this potential.

Furthermore, all EMERG countries have been investing significant efforts in harmonization of legislative and regulatory framework in accordance with the EU and best practice.

As an important precondition for unbiased regulation of the sector is establishment of the independent regulatory authority which will conduct its duties free of any political pressure and influence.

In EMERG region as a whole market trends are converging. Even though there is still a significant gap when it comes to EU versus non-EU countries, by comparing some market indicators many converging trends that are coming from the demand side of the market are observed. Users patterns and behaviour are globally unified and high adoption of a new innovative services is widespread trend which allows assumption that this push from the demand side of the market can provide an incentive to the further market development.

In terms of regulatory development, there has been significant progress in EMERG region. Countries are putting efforts in implementation provisions related to market competition and liberalization. Even though in fixed telephony market in many non-EU countries historic

incumbent is leading firm in a good numbers of countries alternative networks are existing as well.

In fixed broadband market an average market share of biggest operator is scientifically lower than in fixed telephony market. The number of FTTH lines is increasing and all European and some non-EU countries have introduced LLU and other wholesale regulation in order to facilitate the entry of alternative operators.

Finally, many EMERG countries coming from both side of Mediterranean are taking a proactive step and addressing new challenges, thus preparing their countries for the technological revolution which is in progress. In this regard EMERG is facilitating the approximation of neighbouring countries with a variety of approaches:

1. **Common positions for the regulation of Future Technologies:**

- Future topics with high relevance for European NRAs are treated in workshops by the EMERG members. Recent recommendations may serve as direct input into the legislative process in the non-EU member countries
- Recent EMERG examples are workshops on 5G regulation, Autonomous Driving and IoT.

2. **Expert Workshop recommendations still to be implemented**

- Expert workshops provide non-EU EMERG members a platform to adopt legislation based on recommendations of the European Commission
- In addition the twelve EMERG Workshops in 2016, 2017 and 2018 produced 26 aligned recommendations among all participating NRAs which are published on the website

3. **Working Groups for special Topics**

- In Addition to Workshops EMERG has established and long-term working groups to implement approximation measures.
- The topics of the working groups are Permanent International Roaming and Net Neutrality

4. **Twinning Projects facilitated new members**

- EMERG members frequently participate in twinning projects, where contacts have been made during EMERG events,

- In 2018 Libya' application to become a sponsored member of EMERG was accepted. This may bring Libya back to an approximation path for Telco regulation.