# Policy Diffusion and Telecommunications Regulation

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*To Matis*

# Preface and Acknowledgements

This book is the result of a three-year research project based on policy diffusion and telecommunications regulation in the Middle East and North Africa (MENA). Following the 2011 MENA political upheavals, it became clear that information and communications technologies (ICT) have developed into a powerful tool for the next generation of citizens. This research project focuses, however, on the infrastructural side of ICT. Without going into the use of ICT by generations of online citizens, this project aims at uncovering the strategies of governments to expand mobile and internet access. Egypt, Jordan and Morocco were chosen as country cases to explore the transformation of telecommunications regulation in the region. Regulatory authorities, ministries, corporations and non-governmental actors participated in critically discussing the transformation of the sector, which gave me a fresh insight into the development of telecommunications beyond the usage of social networks, such as Twitter or Facebook.

I authored the country cases while based at the politics department of the University of Exeter, United Kingdom, and with the support of the Center for Studies on Media, Information and Telecommunication (SMIT) specialising in social scientific research on media and ICT at the Vrije Universiteit Brussels (VUB) in Belgium. Intermediary and partial results of the project have been presented at numerous conferences, during which valuable feedback and support were shared. This is particularly the case of the Rapid Response Grant, created by the Global Media Policy (GMP) Group, part of the International Association for Media and Communication Research (IAMCR) and the Open Society Foundation

(OSF), which funded part of the field research and the participation in the 2014 IAMCR conference in Hyderabad, India, where preliminary results were presented.

This book would not have been possible without the numerous interviewees who were contacted for field research. European Union (EU) officials and representatives of consultancy companies, in addition to Moroccan, Jordanian and Egyptian government officials, researchers and professionals, provided essential information to the empirical study. This book is based on their precious time, advice and feedback. Special thanks are additionally expressed to colleagues who supported this study with their knowledge and experience, specifically Professor Tina Freyburg (University of St Gallen), Professor Alison Harcourt (University of Exeter), Professor Oliver James (University of Exeter) and Professor Jan Loisen (VUB). Finally, I wish to express my gratitude to Harriet Link, Marc Méan, Claire Widdison and my family for their support throughout the whole project, from the very first ideas to the completion of this book.

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# Contents

# List of Abbreviations

| | |
|---|---|
| 2G | Second Generation of mobile telecommunications technology |
| 3G | Third Generation of mobile telecommunications technology |
| 4G | Fourth Generation of mobile telecommunications technology |
| 5G | Fifth Generation of mobile telecommunications technology |
| AGCOM | Authority for Communications Guarantees (Italy) |
| ANACOM | National Communications Authority (Portugal) |
| ANFR | French National Frequency Agency |
| ANRT | National Agency of Telecommunications Regulation (Morocco) |
| ARAGNET | Arab Regulators Network |
| ARCEP | Regulatory Authority for Electronic Communications and Postal Services (France) |
| BAKOM | Federal Office for Communications (Switzerland) |
| BEREC | Body of European Regulators for Electronic Communications |
| BTI | Bertelsmann Foundation Transformation Index |
| CDMA | Code Division Multiple Access |
| CEE | Central and Eastern European Countries |
| CEPT | European Conference of Postal and Telecommunications Administrations |
| DAC | Development Assistance Committee |
| DG DEVCO | Directorate General Development and Cooperation |
| DG ECHO | Directorate General Humanitarian Aid and Civil Protection |
| DSM | Dispute Settlement Mechanism |
| DTTB | Digital Terrestrial Television Broadcasting |
| EBRD | European Bank for Reconstruction and Development |
| EBU | European Broadcasting Union |
| EC | European Commission |
| ECC | Electronic Communications Committee |

| | |
|---|---|
| EEAS | European External Action Service |
| EMERG | Euro-Mediterranean Regulators Group |
| ENP | European Neighbourhood Policy |
| ENPI | European Neighbourhood and Partnership Instrument |
| ERG | European Regulators Group |
| ETSI | European Telecommunications Standards Institute |
| EU | European Union |
| EUROSTAT | Statistical Office of the European Communities |
| FAO | Food and Agriculture Organization |
| FDI | Foreign Direct Investment |
| FRATEL | French-speaking Telecommunications Regulation Network |
| GATS | General Agreement on Trade in Services |
| GATT | General Agreement on Trade and Tariff |
| GBT | Group on Basic Telecommunications |
| GE06 | Geneva 2006 Agreement |
| GHz | Gigahertz |
| GMP | Global Media Policy Group |
| GSM | Global System for Mobile Communications |
| HACA | Audiovisual Regulatory Agency (Morocco) |
| HDI | Human Development Index |
| IAMCR | International Association for Media and Communication Research |
| ICT | Information and Communications Technology |
| IMF | International Monetary Fund |
| IO | International Organisation |
| IRG | Independent Regulators Group |
| ISDN | Integrated Services Digital Network |
| IT | Information Technology |
| ITU | International Telecommunication Union |
| JTC | Jordan Telecommunications Company |
| LTE | Long-Term Evolution |
| MCIT | Ministry of Information and Communications Technology (Egypt) |
| MEDSTAT | Euro-Mediterranean Statistical Cooperation Programme |
| MENA | Middle East and North Africa |
| MHz | Megahertz |
| MINCOM | Moroccan Ministry of Communication |
| MoA | Memorandum of Association |
| MOICT | Ministry of Communications and Information Technology (Jordan) |
| NATO | North Atlantic Treaty Organization |
| NATP | New Approaches to Telecommunications Policy |

| | |
|---|---|
| NRA | National Regulatory Authorities |
| NTRA | National Telecommunications Regulatory Authority (Egypt) |
| ODA | Official Development Assistance |
| OECD | Organisation for Economic Co-operation and Development |
| OFCOM | Office of Communications (United Kingdom) |
| ONA | Omnium Nord-African |
| OSF | Open Society Foundation |
| RRB | Radio Regulation Board |
| SMIT | Studies in Media, Information and Telecommunication |
| SNI | Moroccan National Investment Company (Ex-ONA) |
| TCC | Telecommunications Corporation (Jordan) |
| TDMA | Time Division Multiple Access |
| TRC | Telecommunications Regulatory Commission (Jordan) |
| UAS | Universal Access and Service |
| UHF | Ultra-high Frequency |
| UK | United Kingdom |
| UmP | Union for the Mediterranean |
| UMTS | Universal Mobile Telecommunications System |
| UNDP | United Nations Development Programme |
| US | United States of America |
| USAID | United States Agency for International Development |
| USO | Universal Service Obligation |
| VHF | Very High Frequency |
| VoIP | Voice over Internet Protocol |
| VUB | Free University of Brussels |
| WGI | Worldwide Governance Indicators |
| WRC | World Radiocommunications Conference |
| WSIS | World Summit on the Information Society |
| WTO | World Trade Organization |

# List of Figures

# List of Tables

CHAPTER 1

# Introduction

*This opening does not mean a change of orientation. It will not damage the relationships with the existing partners. Indeed, Morocco remains loyal to its commitments, linked to its historical allies (…). Equally, Morocco will put all efforts to reinforce the strategic South/South partnership, particularly with the African brothers.*[1]
King Mohammed VI, Fête du Trône, Morocco, 30 July 2016

The Moroccan King, Mohammed VI, gave a speech on 30 July 2016 to celebrate the 63rd anniversary of the King and People's Revolution, in which he announced his commitment to open the country to new partners, in particular those from the Global South. The King underlined the need for Southern countries to develop the strength to overcome issues of poverty, extremism and war. Without rejecting the historical, often ex-colonial, allies, his speech reinforced the need for more cooperation with regional partners, including the Gulf and African countries, and to foster the regional capacity of the Global South (Kingdom of Morocco 2016). This talk can be seen as an expression of Southern emancipation, which penetrates almost all areas of social and political life. Taking regulation in the area of information and communications technologies (ICT), this study explores emancipation in a field in which today's regulatory choices have long-lasting consequences.

In this study, I investigate regulatory reforms in the telecommunications sector in three selected developing economies—Egypt, Jordan and



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Morocco—with a focus on the role of regional and European trends. Common knowledge suggests that the European Union (EU) and its member states are the main influential regulatory power in the Middle East and North Africa (MENA) region. For instance, Europeanisation literature expects that the EU pushes its own regulatory model not only to member states but also to partner countries, which do not have prospect of accession (Cardwell 2011; Lavenex 2008; Sasse 2008). However, the empirical analysis of selected MENA telecommunications regulations reveals that reforms are not always determined by European countries but may also originate from other developing countries, notably from Latin America.

I argue that, in cases where a field is not strongly politicised and in which the costs are not high, it is possible for MENA countries to show emancipation by adopting policies that do not originate from the EU. This is observed in the case of universal service obligation (USO) policies implemented by states to ensure that telecommunications services not only reach the most remote parts of countries but also concentrate around larger cities. In the case of the adopted USO model in Morocco, regulatory influence originates from Peru rather than the EU. This illustrates a will for emancipation from the EU partner, without jeopardising the EU–Morocco relationship. In fact, USO policies represent an ideal case for taking distance from the traditional partner and proving the sophistication of a country's regulation, if there is a will to do so. At the same time, such a non-politicised and non-costly subsector as USO can become an ideal tool to show commitment to the EU partner, which is seen in the Jordanian case.

MENA countries have experienced a dramatic increase in their spread and consumption of ICT services since the early 2000s. A booming young and urban population has quickly adopted "smart" mobile phones, through which internet is provided (ITU 2014). The relevance of ICT in this part of the world became evident during the 2011 upheavals. Without reducing the political awakening of the Arab world to the simple usage of internet and mobile technologies, it has become common knowledge that ICT is at the core of the next generation (Guaaybess 2013).

As of 2014, the total population of MENA countries amounted to 340 million, of which 60 per cent lived in cities. An average of 39.5 per cent of this population is under 25 years old,[2] as shown in Table 1.1 (Eurostat 2015; UN 2017; World Bank 2017), which represents an immense potential market for digital technologies. In all three country

**Table 1.1** Population and mobile phone subscription

| | *Population below 24 years old (%) (2015)* | *Mobile phone subscription (%) (2000)* | *Mobile phone subscription (%) (2014)* |
|---|---|---|---|
| Egypt | 48.4 | 1.9 | 114.3 |
| Jordan | 53.5 | 8.1 | 147.8 |
| Morocco | 43.2 | 8.1 | 131.7 |

Note: Entries are based on statistics provided by the World Bank and the UN databank (World Bank 2017, UN 2017)

cases the use of mobile phones increased—from approximately 8 per cent in Jordan/Morocco and 2 per cent in Egypt, respectively, in 2000 to more than 100 per cent in each of them in 2014 (World Bank 2017). This shows that in a little more than a decade, the mobile ICT usage by MENA citizens evolved from close to none to more than one mobile subscription per person.

The market potential of young connected MENA citizens has been recognised by international companies. Given the geographical proximity and historical ties, European companies are likely to be particularly active in the ICT markets of MENA countries. Indeed, economic interests are vested in the Euro-Mediterranean telecommunications context. A large number of cables connect the EU member states with MENA countries, except for the West Bank and Gaza. Egypt plays a major role with a connection made up of 13 cables, compared to 2 for Jordan and 5 for Morocco (World Bank 2014:65). Since the cables were built to link both sides of the Mediterranean, connections between MENA countries are almost non-existent, and as of 2014 only one broadband cable linked Morocco, Tunisia, Algeria and Libya (World Bank 2014:64). Moreover, the Euro-Mediterranean interlinkage in the telecommunications sector is visible in the presence of large multinational companies that have their headquarters in EU member countries, such as the French Orange and British Vodafone.

Due to the corporate presence of European companies in MENA countries, and given that the rapid technological changes require new or revised regulations to manage the sector efficiently (Padovani and Pavan 2011), international, and in particular European, actors can be expected to seek to extend their influence by promoting their regulations as a model to follow. Indeed, the EU, and specifically the European Commission (EC), has risen as a dominant actor setting standards, largely in order to bridge its own deficiencies, notably the lack of compatibility between ICT systems

among EU member states (Humphreys and Padgett 2006; Thatcher 2007). The EU also extended its influence to international arenas, such as the World Trade Organization (WTO) and the International Telecommunication Union (ITU) (Rodine-Hardy 2013:46). The standardised policies of the EC became an available and practical model to follow for both EU member states and extra-European countries, specifically within the EU–MENA region.

In fact, a growing number of telecommunications conferences, programmes and joint regulatory groups, such as the New Approaches to Telecommunications Policy (NATP), the Euro-Mediterranean Regulators Group (EMERG) and telecommunications twinnings,[3] manifest a strong regulatory linkage between the EU and MENA regions. Furthermore, EU and MENA countries are all part of the ITU Region 1, and hence share the same spectrum range, as allocated by the ITU. Countries that are part of the same ITU Region tend to harmonise standards to facilitate the sharing of equipment and benefit the markets of scale (Mattli and Büthe 2003). In consequence, and according to existing studies of EU rule adoption (see Bennett 1991; Brooks 2007; Dobbin et al. 2007), one would expect MENA countries to adopt the European models of telecommunications regulation.

However, in this study, variance in adoption is observed in the three country cases, Egypt, Jordan and Morocco, and in the two selected subsector cases, USO and spectrum management. This shows that explanations based on the EU regulatory influence or being part of a similar ITU Region (as is the case for EU and MENA countries) are not sufficient to account for the different results. In fact, when considering the diverging market specifications of the EU and the MENA countries, the adequacy of the EU model is questionable (Hollis 2013). While the EU model is built on fixed telephony infrastructure in relatively small territories with concentrated competition, MENA countries have experienced a rise in mobile telephony in bigger territories, often less easily accessible with no available fixed infrastructure. The differences between the regions challenge the assumption that European policies are likely to diffuse extensively in the MENA region.

Empirical findings show that the adoption of EU regulation is in fact nested in domestic strategies. While the Egyptian cases present only limited policy adoption, both Jordan and Morocco adopt policies that originated externally to a larger extent. Nevertheless, for both countries, adoption strategies vary, illustrating different scenarios of commitment to

the EU (e.g. USO and spectrum management in Jordan), emancipation (e.g. USO in Morocco) and sophistication (e.g. spectrum management in Morocco). These findings support the argument that South–South and South–North regulatory trends are challenging the traditional North–South and North–North flows of ICT regulation (Bauer 2010a).[4] The South versus North terminology is too restrictive to account for the complexity of worldwide interconnections. It is nonetheless employed in this study to follow Bauer's account of regulatory trends in the telecommunications sector. This study specifically focuses on trends arising from the South, which underline how Southern developing countries are rising in the sector with innovative regulatory propositions challenging the traditional regulatory order originating from more industrialised countries.

## Policy Diffusion and Telecommunications Regulation in MENA Countries

Policy diffusion is the main literature used in this study to analyse policy changes in Egypt, Jordan and Morocco. I follow Simmons et al. (2008:7), according to whom international policy diffusion occurs "when government policy decisions in a given country are systematically conditioned by prior policy choices made in other countries (sometimes mediated by the behaviour of international organizations or private actors and organizations)." This definition of policy diffusion largely reflects early studies on innovation, for which the novelty of a programme is key (see Eyestone 1977; Gray 1973; Mohr 1969; Walker 1969). Yet, it allows for a diverse number of actors (e.g. ministries, national regulatory authorities (NRAs), regional groupings of NRAs) to be involved in policy-making, as well as enabling a variety of objects of diffusion (e.g. programmes, policies, laws, projects) to be considered for analysis.[5]

I combine two conditions to be fulfilled for policy diffusion to be observed. First, the two governance systems, that is, the policy-giver and the policy-taker, need to interact; and, second, the diffused model must be new to the governance system adopting it. In this study, I focus on regulatory systems at the state level; however, policy diffusion can take place at other levels as well, such as municipalities, counties or regional organisations (Bennett 1991; Karch 2007; Stone 1999). The novel and interactional aspects of diffusion are essential to distinguish policy diffusion from other forms of policy-making, such as socialisation (Bennett 1997; Evans 2006; Starke 2013; Stone 1999). The two conditions furthermore make

it possible to transcend a European-centred approach when analysing regulatory change and to be open with regard to a multitude of sources and motivations.

To study policy diffusion in the MENA region, I focus on telecommunications regulations. While several authors have observed transnational trends closely (see Bauer 2010b; Rodine-Hardy 2013), telecommunications policy diffusion has so far been neglected in the context of developing countries and the MENA region most specifically. Yet, the telecommunications sector presents characteristics relevant to any study of policy change. It is not only a typical cross-border policy sector but it is also marked by competing economic interests and a large number of sophisticated actors involved in the policy process (Padovani and Pavan 2011; Raboy and Padovani 2010). Hence, high potential for profits for both the government and the private sector exist in the field. Most citizens around the world are consumers of phone services, representing an immense market with vast potential gains. At the same time, the telecommunications sector also requires substantial investment to maintain and upgrade the infrastructure. Moreover, international telecommunications take place across borders; service providers hence need to coordinate. Typically, international associations or bodies intend to harmonise worldwide standards to ensure the functionality of the service and to balance the many interests involved (Büthe and Mattli 2013; Rodine-Hardy 2015). In such policy fields, countries tend to look abroad for potential investors and at other countries' regulatory systems if they want to stay abreast of policy practices worldwide and update their domestic systems accordingly. Thus, policy adoption is likely to be observed in the sector.

Specifically, I focus on two subsectors of telecommunications: universal service obligation (USO) and spectrum management. The first policy subsector, USO, refers to the provision of affordable basic telecommunications services to every resident of a country. The second policy subsector, spectrum management, concerns the regulation, allocation and use of spectrum. Both subsectors are linked to the connectivity of citizens. Policies managing USO aim at expanding the coverage to territories which would not be considered by phone companies, due to their lack of profitability. Policies managing spectrum aim at selling the frequency resources and planning their use, so that mobile services can attain the maximum number of consumers and reach the highest profits. Both policies, thus, aim for connectivity but through different approaches. While USO is a domestically oriented policy with limited economic interests, spectrum

management is based on economic profits and represents a key site of destabilisation and competition (Mansell and Raboy 2011). As different interests are at play in each of the two sectors, I expect variation in their adoption.

This study focuses on the period from 2000 to 2014, when the field research was concluded. The three selected countries, Egypt, Jordan and Morocco, experienced key political and economic developments since their independence from colonial powers in the late 1940s and 1950s. They have furthermore undergone dramatic change in their consumption of ICTs since the late 1990s. I selected 2000 as a starting point since it marks the rise of mobile and internet technologies in the MENA region, which took place from the start of the millennium (Nyirenda-Jere and Biru 2015). The selected period hence captures the transformation of newly adopted telecommunications law in each of the countries, namely the Telecommunications Law No. 13 in Jordan, established in 1995, and the Telecommunications Law No. 24-96 in Morocco, established in 1997. In Egypt, the Telecommunication Regulation Law No. 10 was introduced a little later, in 2003. Thus, the starting point for the analysis of the law's transformation is 2003 in this case.[6]

To compensate for the difficulty of accessing data in countries known for their relatively opaque organisation and accountability (Abdulla 2007), and specifically on potentially politicised matters such as ICT developments (e.g. in terms of censorship and government control of information and access), I discuss telecommunications reforms from a technical approach. Focusing predominantly on infrastructure considerations rather than a political perspective enabled me to gain access to policy information beyond potential limitations. To achieve this aim, NRAs, which serve as delegates for ministries in technological fields such as telecommunications (Badran 2012; Büthe and Mattli 2013; Christou and Simpson 2014; Zhao 2002), were ideal partners possessing a dynamic first-hand experience of the sector.

## Argument and Analytical Steps

To explain regulatory reforms in MENA countries beyond Europeanisation, I proceed in two steps. The first step aims to identify whether and under which conditions the phenomenon of policy diffusion has occurred in a given situation. For this, it is necessary to observe the adoption of a new policy item domestically and to trace it back to the interaction between

two governance systems. Focusing on state variables, I argue that a country's degree of openness and external interconnectedness (i.e. governance and market openness and political and market interconnectedness) shed light on its likelihood of adopting a certain policy that originates elsewhere. The second step aims at analysing the four main mechanisms of diffusion, notably learning, imitation, competition and coercion, and the influence of sector variables on these mechanisms. I focus on a sector's domestic salience and international salience as well as the sanction capacity of international actors, such as international organisations (IOs) or states.

*Observation and conditions of policy diffusion (step 1)*: To understand whether policy diffusion has taken place in any of the six country and sector cases, I take two aspects into account: the product and the process. I can conclude that policy adoption has taken place only if both are present (Beyers 2010; Schimmelfennig and Sedelmeier 2004). The *product* takes the form of a regulation, law or programme that has been imported from another country. The *process* sheds light on the context in which product adoption has taken place. For the latter, the interaction between the policy-giver and policy-taker must have been decisive for the policy-taker to adopt a certain policy. If policy diffusion is observed, I then analyse the conditions under which the adoption took place. To this end, I specify four state-level variables (i.e. governance and market openness and political and market interconnectedness) that define the degree of vulnerability of a state to external forces in terms of the openness of its market and governance as well as its interconnectedness with external actors. It is this economic and political vulnerability that is expected to determine the necessity for adopting countries to look abroad for models.

*Mechanisms of diffusion (step 2)*: In the second part of this study, I suggest a novel framework based on three characteristics of the telecommunications sector (i.e. domestic salience, international salience and sanction capacity). The first variable, domestic salience, relates to the prioritisation and importance of a policy for the adopting country. The second variable, international salience, is illustrated by an existing international regulatory framework and large economic interests. There is a consensus that certain solutions to deal with specific policy problems need to be provided cross-nationally. The third variable, sanction capacity, measures the ability of the dominant actors to impose sanctions in case the adopting country does not adequately comply with international standards. Sanction capacity refers not only to the possibility for IOs to impose sanctions but also to

the capacity of influential state actors to impose their own views. I suggest different constellations of these three sector variables and argue that each one supports one specific mechanism out of the four major mechanisms of diffusion: learning, imitation, competition and coercion.

## Structure of the Book

Chapter 2 presents the theoretical and conceptual framework on which the study is based. Drawing on the policy diffusion literature, I develop a two-step analysis to systematically compare the six selected country and subsector cases. The first step (observation and conditions of policy diffusion) focuses on the existence of policy diffusion across jurisdictions and discusses the conditions under which a country is expected to adopt a policy that originated elsewhere. The second step (mechanisms of diffusion) defines a set of sector variables that are expected to determine through which mechanism adoption is taking place in each of the selected subsectors.

Chapter 3 explains how the study addresses the practical difficulties in measuring policy diffusion. I operationalise the key variables (i.e. state and sector variables) explored in this study. Furthermore, I provide a descriptive account of the selected cases, that is, three country cases, Egypt, Jordan and Morocco, and two subsectors, USO and spectrum management. Finally, I give detailed information regarding the field research and specify the research techniques used to collect and analyse the empirical data.

Chapter 4 contextualises the sectoral analysis of telecommunications in MENA countries, with a focus on Egypt, Jordan and Morocco until the early 2000s. Starting with the development of the MENA states from independence in the 1940s and 1950s, I focus on the transformation from large bureaucracies and state-led economies to a partial retreat of the state. Finally, I address the transformation of the telecommunications sector from a system of state-owned monopolies to the delegation of core state functions to regulatory authorities.

Chapter 5 focuses on the two selected subsectors, USO and spectrum management. I describe the different trends taking place in each of the sectors. I also define specific regulatory options for each one, which will be traced in the empirical chapters (i.e. mobile and broadband technologies for USO and technological neutrality and spectrum trading for spectrum management). These regulatory options simplify the observation of policy

adoption for each subsector. I also present the EU regulatory model for each sector to provide an understanding of which policy model would have been readily available for MENA countries to adopt.

Chapters 6–8 analyse policy diffusion in the telecommunications sector from 2000 to 2014 for each country case. I start by giving a detailed account of policy adoption for USO and spectrum management, respectively, before discussing the two empirical steps of the conditions and mechanisms of diffusion. The Jordanian example is presented as a country case in which policy adoption is most likely to happen due to tight institutionalisation of cooperation with external countries and notably the EU. The Egyptian case is presented second; here, policy adoption is expected to be limited. Egypt illustrates the case with the least reliance on external actors. It is expected that policy diffusion is not likely to take place as much in Egypt as in the two other countries. Lastly, the Moroccan case demonstrates a situation in which policy adoption is likely to take place, but it is inspired by non-European countries, notably Peru, in the case of USO.

Chapter 9 provides a comparative analysis of the case study results and explains the observed variation in the conditions and mechanisms of diffusion across all six country and sector cases. In all three country cases policy diffusion has taken place; however, in the case of Egypt diffusion is limited. Hence, a comparative analysis of the mechanisms of diffusion (the second analytical step) is only provided for Jordan and Morocco. The findings underline the role of governance openness in determining under which conditions policy adoption is likely to take place. Furthermore, this study shows that sectors with high international salience (i.e. spectrum management) are more likely to follow mechanisms of competition and coercion, rather than sectors with low international salience (i.e. USO), which are more likely to follow mechanisms of learning and imitation.

Finally, Chap. 10 summarises the key findings of the book. I provide an informed discussion on policy diffusion in the light of the study's results, specifically the conditions and mechanisms of diffusion in the telecommunications sector. The book concludes by linking ICT regulatory reforms and their main driving forces in the Euro-Mediterranean area to a global movement of innovation originating from Southern countries such as Peru or Chile, but also Morocco. This supports the rise of a new generation of policy innovations with the potential to leapfrog the models provided by European countries.

## Notes

1. "Cette ouverture ne signifie nullement un changement de cap. Elle ne se fera jamais au détriment de ses partenaires. En effet, le Maroc reste fidèle à ses engagements, attaché à ses alliés historiques (…). De même, le Maroc ne ménage aucun effort pour renforcer le partenariat stratégique solidaire sud/sud, surtout avec nos frères africains" (Kingdom of Morocco 2016).
2. The MENA average is calculated based on data provided for the following eight countries: Algeria, Egypt, Israel, Jordan, Lebanon, Morocco, Palestine and Tunisia. In contrast, in the EU-28, the population of below 25 years old reached 27.1 per cent in 2013 (Eurostat 2015:17).
3. Twinning projects are instruments of institution building created around EU policy objectives and jointly agreed with the receiving country (European Commission 2012). In the telecommunications sector, two twinning projects with Egypt and Jordan between 2008 and 2013 aimed at improving the efficiency of national regulatory authorities (NRAs) based on the European model.
4. The North–North dimension illustrates regulatory changes led by the United States (US) and other Northern countries embarked on policies of privatisation and liberalisation. The North–South flow embodies the trends in which industrialised countries imposed processes of reform on Southern countries, particularly through the demands of lenders such as the World Bank (Bauer 2010a:9).
5. Note that while I draw on both policy diffusion and policy transfer literature, I principally use the term "policy diffusion" for simplifying reasons. Analytical tools suggested by both literatures appear adequate to study the developments of telecommunications regulation in the three selected MENA countries. More importantly, the use of these literatures avoids the risk of falling into a European-centred approach, according to which any regulatory change would be explained as a consequence of European activities (Bulmer et al. 2007).
6. Note that this study does not focus on the processes surrounding the establishment of the 1995, 1997 and 2003 telecommunications laws, but their development since the time they were introduced up until 2014.

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CHAPTER 2

# Theoretical Framework

Policy diffusion at the government level refers to the process through which domestic policy decisions are conditioned by prior policy choices made in other countries (Simmons et al. 2006:787). This process of diffusion is sometimes mediated by IOs or private actors (Simmons et al. 2008b:7). While this definition has achieved consensus in the literature, I specifically focus on the adoption side of the process. That is, I analyse the "receiving" aspect of diffusion but disregard the promotion of the policy itself, that is, the "giving" aspect of diffusion (Gilardi 2016:9).

In this study, the analytical framework builds on two steps. In the first step, I explore the phenomenon of policy diffusion and identify the state-level conditions under which policy adoption is likely to take place. State variables define the degree of vulnerability of each country, in terms of openness and interconnectedness, vis-à-vis influences exercised by external actors. Openness defines the degree to which a country is open to foreign influences, notably through the organisation of its regulatory (i.e. delegation) or market system (i.e. privatisation). Interconnectedness relates to the reliance on external countries for political (i.e. foreign aid) or market (i.e. foreign direct investment [FDI]) purposes. The four variables conceptualise different aspects of a state's organisational development and are hence analytically distinct. Empirically, however, they can overlap to a certain degree.

In the second step, I explore the mechanisms of diffusion for those cases in which policy adoption has taken place. Here, I focus on three



V. Wavre, *Policy Diffusion and Telecommunications Regulation*,
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sector-level variables, domestic salience, international salience and sanction capacity, and argue that different combinations of the sector variables shed light on which mechanisms of diffusion have been at play during the process of adoption (Rogers 2003; Shipan and Volden 2008; Simmons et al. 2008b). Drawing on the diffusion literature, I work with the four main mechanisms of diffusion, namely learning, imitation, competition and coercion.

This two-step analytical framework reflects a wider shift in studies of policy diffusion from identifying policy diffusion to exploring its mechanisms (Dobbin et al. 2007; Meseguer and Gilardi 2009). This shift is explained by the difficulties in observing the process of diffusion in the first place. Hence, it can be difficult to gather solid empirical evidence demonstrating that adoption would not have happened if policy interaction between the giving and taking models had not taken place (Bennett and Howlett 1992:290; Starke 2013). Hence, diffusion is generally a contentious issue, with authors criticising the validity of policy diffusion research in general (James and Lodge 2003). I address these difficulties by systematically identifying both the product and the process of policy diffusion, as part of the first step of the framework.

## Conditions of Policy Diffusion

Policy diffusion is only one of various attempts to describe and explain the dynamics of policy convergence (Börzel and Risse 2011; Gilardi 2010). It is hence crucial to clearly define what policy diffusion is (and what it is not) in order to separate it from other forms of policy-making, such as socialisation (Beyers 2010:909; Freyburg 2015).[1] In other words, it must be empirically demonstrated that the diffusion effect cannot be explained by alternative explanations, including independent domestic causes, such as modernisation or international causes or shocks, such as a war or natural disaster (Bennett 1997:215; Starke 2013:565; Stone 1999:56). Hence, policy diffusion must take place within a temporal cluster, where the adoption of a policy is correlated with a previous adoption of this policy in another country. Policy diffusion occurs if a policy is adopted or modified as the result of a traceable interaction with a policy model applied by another regulatory system.

Globalisation has significantly increased the demand for transnational regulatory coordination. In consequence, governments and IOs have become ever-more proactive in promoting harmonisation of policies

(Bennett 1991; Stone 1999). This stresses the vulnerability of countries to policy changes that take place abroad, in particular if they share membership in regulatory networks. Hence, the adoption of policies by one or more countries may influence the decision of another country to also adopt the policy (Bikhchandani et al. 1998; Brooks 2007:703). Overall, the decision to adopt a specific policy in a country is made based on decisions made by other countries.

Specifically, I use two complementary concepts, that is, the product and the process, to establish whether policy diffusion has taken place in a given situation (Beyers 2010:911; Farrell and Heritier 2005; Schimmelfennig and Sedelmeier 2004:662). The product refers to the "physical" observation of the diffused regulation item. It must be discernible in the policy documents of two different regulatory systems or countries that a specific regulation item has been transferred from one to the other. The product can take various forms, such as a regulation, law, policy guidelines, idea or programme (Dolowitz and Marsh 1996:350; Karch 2007:2; Weyland 2006:17). The process defines the interaction between the two different systems, which results in the adoption of the product. Once a case of policy adoption has been observed, it is possible to explore the conditions under which it occurred. In doing so, I focus on the domestic context of the adopting country drawing on four state-level variables that refer to its openness vis-à-vis external influences and the cross-national interconnectedness of its polity and economy.

In brief, I argue that a governance system is more likely to adopt a policy that originated externally if it is vulnerable to international or regional policy developments. A political system becomes vulnerable to external influences and incentives with increasing openness, that is susceptibility to exposure to external actors, and interconnectedness, that is cross-border connections among countries. Each concept, that is openness and interconnectedness, is divided into two sub-concepts. Openness accounts for regulatory practices within both the administration (governance openness) and the market (market openness). Interconnectedness underlines relations of political dependency between two countries, be they political (political interconnectedness) or market-related (market interconnectedness). Each concept is thus conceptualised by both a governance-related/political and market-related approach, which underlines two central poles of influence in policy-making, namely the role of the state and the role of the market (see Elkins et al. 2006; Meseguer and Gilardi 2009; Schmitt 2014). These four variables capture the degree to

which countries need to pay attention to external actors for political and economic reasons.

More precisely, firstly, "governance openness" refers to the organisational practices of policy-making in a country (Rodine-Hardy 2013:57–59). In essence, I argue that the likelihood of being influenced by policy decisions of other countries increases with the decentralisation of policy-making, such as the delegation of policy-making to dedicated experts. In particular, decentralisation allows NRAs to conduct policy-making as delegates to the ministries. In consequence, policy-making becomes shifted to a less political arena, depoliticising policy-making on these specific issues (Burnham 2001; Flinders and Buller 2006). Furthermore, an NRA tends to cooperate with its respective counterparts from other countries to exchange policy-relevant information and best practices, which leads to international regulatory cooperation (Dunlop and Radaelli 2012). Decentralisation of policy-making through delegation is common in fields characterised by technical issues, such as telecommunications regulations (Büthe and Mattli 2013). Accordingly, the first hypothesis on the conditions under which I expect policy diffusion to take place reads as follows:

***H1**: The more policy-making is decentralised, the more likely a country is to adopt a policy that originates from another country/-ies (governance openness).*

Secondly, "market openness" refers to a state's practices regarding the organisation, in particular the ownership structure, of its market. Specifically, it is linked to the role of the private sector in policy-making and to the harmonisation across countries necessary to permit trade (Humphreys and Simpson 2008:855). A country relying on private corporations for its market development is likely to open its regulation by including a variety of stakeholders, thus losing the kind of regulatory control that is commonly associated with state monopolies (Holderness 2009; Kinda 2012). This is particularly revealing in sectors such as telecommunications, which have experienced an evolution from a system based on state monopolies to an almost complete liberalisation (Michalis 2007). Accordingly, the second hypothesis on the conditions under which I expect policy diffusion to happen reads as follows:

***H2**: The more the national market is privatised, the more likely a country is to adopt a policy that originates from another country/-ies (market openness).*

Thirdly, "political interconnectedness" underlines the vulnerability of a country's policy-making to external influences. If a country relies on other countries for political reasons (e.g. dependence on foreign aid or support to maintain domestic security), it is likely to also orientate itself to these countries when introducing new policies or modifying existing policies (Dezalay and Garth 2002). It is through these political interactions that a country can learn about policy developments elsewhere and, in reaction, may change its policy accordingly. In this study, I concentrate on interconnectedness between countries that results from the political motivations and consequences of giving and receiving foreign aid, respectively. Giving and receiving aid create a situation of dependence, which, I argue, can have consequences in terms of transferring policy solutions from the aid giving to the aid receiving country (Alesina and Dollar 2000; Wilson 1988:326). Accordingly, the third hypothesis on the conditions under which I expect policy diffusion to happen reads as follows:

***H3**: The more a country is politically dependent on another country, the more likely it is to adopt a policy that originates from this country (political interconnectedness).*

Finally, "market interconnectedness" underlines the reliance on another country for investments. Foreign investments are central to a country's economic development (Braithwaite and Drahos 2000; Büthe and Mattli 2013). If a country relies on other countries for economic reasons, it is likely to also orientate itself to these countries when introducing new policies or modifying existing policies (Hafner-Burton 2005). Here, the variable is related to the degree of international trade interdependence, as defined by the amount and spread of FDI. This is adequate for the telecommunications sector, which requires particularly high levels of investments to develop (Hsueh 2015). In this case, it is specifically expected that a country with high needs of foreign investment to develop its domestic sector is likely to orientate itself towards the requirements of the countries providing the investment and harmonise its market conditions to attract and satisfy the investors. Accordingly, the last hypothesis on the conditions under which I expect policy diffusion to happen reads as follow:

***H4**: The more a country is economically dependent on another country, the more likely it is to adopt a policy that originates from this country (market interconnectedness).*

## Mechanisms of Policy Diffusion

Drawing on existing studies, I distinguish four dominant mechanisms of diffusion, namely learning, imitation, competition and coercion (Rogers 2003; Shipan and Volden 2008; Simmons et al. 2008b). These mechanisms may overlap in real case scenarios; they are, however, analytically distinct. By systematically defining each mechanism, it is possible to link the mechanisms to different combinations of sector variables and thus to conclude, in cases of policy adoption, which mechanism has been at play.

### *Learning*

The mechanism of learning supposes that decision-makers in one country observe the adoption and implementation of a policy and its impact in another country and decide whether to apply it domestically or not (Shipan and Volden 2008:841). Learning is a voluntary act. It is an action-oriented evaluation of an external model with regard to its suitability to solve problems at home (Rose 1991:7). The focus is on the adequacy and efficiency of a model and the commitment to improve domestic policies. The adopting country observes the consequences of a certain policy elsewhere, and seeks to assess its likely success at home (Meseguer 2005:72; Shipan and Volden 2008:841). The result could either be positive in terms of learning about potential solutions, or negative—indicating risks to avoid. The result of the learning mechanism is the full or partial adoption of specific policy models and their adaptation to the domestic context, sometimes combining elements from different sources.

The ideal-type mechanism of learning assumes a context where rational learning is possible. Such a context provides information about alternative policy solutions in an unbiased manner (Meseguer 2005:72–73; Meseguer and Gilardi 2009:530–538). Nevertheless, such contexts are not always perfect in real case scenarios and thus bounded and channelled learning is more likely to take place; here, the policy-makers need to use shortcuts due to the impossibility of reviewing a wide range of information (Dobbin et al. 2007:460–461; Weyland 2006). Information is thus selected and weighted differently according to selected requirements, leading to rational bias and risking the adoption of inefficient and non-functional policies (Meseguer 2005:72–73; Meseguer and Gilardi 2009:530–538).

To conclude, learning is a voluntary decision about the adequacy and efficiency of an external model in addressing domestic policy problems. It

is a time-intensive form of policy-making where different policies are compared in order to identify which ones could be adapted to domestic needs. Learning can resemble imitation, except for the focus on the content of a policy (i.e. a case of learning) rather than its initiator, who is acting as a role model (i.e. a case of imitation). Nonetheless, certain forms of learning are similar to imitation, in particular if focusing on a successful policy becomes a cognitive shortcut in itself (Simmons and Elkins 2004:175).

### *Imitation*

The mechanism of imitation (also called emulation or mimicking) is likewise the result of a voluntary act. However, the adopting country is not interested in learning from the experience of others but is oriented towards the actor itself, which is perceived as the leader in the field (Dobbin et al. 2007:452; Shipan and Volden 2012). A policy-maker becomes a role model if identified as implementing innovative policies in the field in question. A policy-maker may also endorse a leadership role in international fora, such as transgovernmental groups or IOs, due to greater experience or knowledge in the field, or as a consequence of general market or political power. In the case of imitation, a policy is adopted by copying it with only minimal corrections (Rogers 2003; Simmons et al. 2008a). Imitation is often described as a product of social construction (DiMaggio and Powell 1983:150; Dobbin et al. 2007:450; Meseguer and Gilardi 2009:530), where policies are spread because they are socially valued, independently of their performance.

Imitation implies that policies with increasing popularity may be adopted with higher probability, as they have become the most "typical" thing to do. This is explained by the concepts of policy momentum and information cascades, according to which the growing adoption of a certain policy stimulates more adoption (Bikhchandani et al. 1992; Walker 1969). This effect is more likely in situations where there is limited information regarding the possible options. In such cases, no other information might be available than the adoption itself (Elkins and Simmons 2005:43). Hence, intrinsic aspects of the policy, such as its origin and adoption frequency, are more relevant than its content.

To conclude, imitation is the result of a voluntary decision, where the focus is put on the perceived leader in the field and the most common policy solution, regardless of its content and its adequacy to the domestic context of the adopting country. When imitating a policy, even weaknesses

may be transferred into the domestic legislation of the adopting country. Imitation may therefore lead to suboptimal solutions if the adopted policy solution is inadequate to the domestic context.

### *Competition*

The mechanism of competition is defined by a voluntary act to engage with policy-making activities of other countries, too. However, the attention is on the individual competitor rather than the perceived frontrunner in the field. That is, the adoption of a policy that originates elsewhere is motivated by the maximisation of benefits or the fight over scarce resources, including acquiring loans and contracts (Elkins and Simmons 2005:42). Following a logic of consequences (Checkel 2005), competition is based on cost-benefit calculations. Hence, competition mechanisms can take place to balance the fears of economic privation and thus avoid unnecessary costs. It can also take place to guarantee potential rewards or benefits (Meseguer and Gilardi 2009:530).

Competitive rewards can also be non-financial, for example, signalling compliance with international norms to secure foreign aid, membership in IOs or an improved regional/international status or reputation (Brooks 2007:704; Büthe and Mattli 2013; DiMaggio and Powell 1983:151; Mattli 1999). Hence, in the case of competition, policy-makers intend to maximise their competitive rewards, both financial and non-financial. Policy-makers tend to harmonise and standardise regulation to ensure they get their share of the potential profits, notably by creating domestic conditions that will attract foreign investors. Policy-makers may compete to secure or increase existing profitable schemes, but they may also compete to challenge specific policy orders to claim additional shares of the benefits.

To conclude, competition results from a voluntary act based on cost-benefit calculations, closely involving the private or corporate sector. Competitive goals include material gains as well as non-economic rewards, such as improved status or access to financial aid. In such cases, the diffusion of policies becomes instrumental as a reform strategy. It shows a commitment to external actors that domestic reforms are undertaken.

### *Coercion*

In contrast to the three mechanisms of diffusions discussed previously, coercion is not based on a voluntary act. On the contrary, coercion illus-

trates an externally imposed act of policy change. The focus is on coercive leaders, who have the capacity to impose compliance on the adopting country (Bennett 1991:227). Nevertheless, since coercion describes a policy change following an alteration in incentives (Dobbin et al. 2007:454), it is here considered as one of the four major mechanisms of diffusion.

Coercion can take on various forms. Direct coercion occurs if a country imposes its policy on another country, notably through physical means. Indirect coercion works through externalities or functional dependencies (Evans 2006:480–481). Such dependencies take place when the international community defines a problem in a particular way and expects all countries to adopt similar policies to address this problem, which was for example the case when the 1980s structural adjustment measures were imposed on developing countries (Dolowitz and Marsh 1996:348–349). In such cases, coercive practices are numerous and include the manipulation of economic costs and benefits (Dobbin et al. 2007:454), the promise of financial aid or grants incentives (Shipan and Volden 2012:791) or the monopolisation of information or expertise (Simmons et al. 2008b:10). Conditionality is also treated here as a mechanism of coercion, since it is possible to identify actors imposing specific policies. In such cases, powerful actors set requirements in order to provide aid, loans or any other sort of support[2] (Dobbin et al. 2007:457).

To conclude, coercion is about the non-voluntary adoption of a policy that is imposed by an external actor and aims at manipulating the cost-benefits calculation of the targeted state government. In the case of regulatory developments, coercion is not exclusively understood in terms of direct and physical means but includes more subtle power relationships as well. This is the case, for example, within international fora that apply conditionality. Based on the theoretical definition of all four mechanisms of diffusion, Table 2.1 classifies each mechanism according to four criteria:

**Table 2.1** Conceptualisation of the four mechanisms of diffusion

| | *Learning* | *Imitation* | *Competition* | *Coercion* |
|---|---|---|---|---|
| Engagement | Voluntary | Voluntary | Voluntary | Forced |
| Attention | Adequacy | Leadership | Profit | Pressure |
| Action | Comparison | Reproduction | Calculation | Compliance |
| Decision | Adaptation | Copy-pasting | Maximising gains | Imposition |

engagement, attention, action and decision. This enables easier comparison between the mechanisms.

I argue that the combination of three sector variables, that is domestic salience, international salience and sanction capacity, determines what mechanism of diffusion is at play in a given case of adoption. The first variable, domestic salience, refers to the prioritisation of one sector over another by policy-makers. Specifically, a sector is domestically salient if policy-makers decide to act upon it effectively. This is the case for issues that carry an economic or political visibility. Such issues become a priority for policy-makers to handle (Hoeglinger 2016; Jenni 2015). In the presence of domestic salience, I expect that policy-makers commit to transform the policy. To do so, they may deploy appropriate resources, including time and expertise.

International salience, in turn, is about the degree of international interest in the sector, often illustrated by the existence of international regulations. It requires a sector to be on the policy-making agenda of external actors, which is more likely to happen if a policy issue can be solved transnationally only (Büthe and Mattli 2013:208; Hsueh 2011; Humphreys and Simpson 2008:855).

Finally, sanction capacity captures the ability of IOs, influential states and other relevant actors to impose policies on countries against their autonomous will (Shipan and Volden 2008; Weyland 2006:2). I distinguish between sectors in which an international actor has the capacity to sanction domestic policy choices, or not—be it through conditionality, the manipulation of costs and benefits or the manipulation of information. In brief, I argue that specific combinations of these three sector variables—domestic salience, international salience and sanction capacity—enable us to infer which mechanism of diffusion has been at play in cases of policy diffusion, as illustrated in Table 2.2.

**Table 2.2** Sector conditions and the four diffusion mechanisms

| | *Domestic salience* | *International salience* | *Sanction capacity* |
|---|---|---|---|
| Learning | + | – | – |
| Imitation | – | – | – |
| Competition | + | + | – |
| Coercion | – | + | + |

Note: + variable is present; – variable is absent

I focus only on those four combinations that are theoretically plausible and also have greater chances of occurring in the real case scenarios. Evidently, any mechanism that is based on a voluntary commitment to adopt policies that originated elsewhere is incompatible with the presence of sanction capacity. In addition, if more than one combination would theoretically lead to the same mechanism, I focus on the combination that is most likely to take place empirically. In consequence, I disregard the possibility that a country adopts a policy only because it is internationally salient, without prioritising the issue domestically and in the absence of sanction capacity. I further ignore the possibility that all factors are present, that is an issue is domestically and internationally salient, plus the presence of an external actor with sanction capacity. I here argue that a domestic commitment to transform a policy that is equally salient both domestically and internationally is not likely to lead to a situation of conflicts, where a policy needs to be imposed on the adopting country (Beach 2005; Tallberg 2002:612). Finally, I select the most typical combination that centres on the presence of sanction capacity. I assume that only if an issue is internationally salient will an external actor be inclined to also use its sanction capacity (see Börzel et al. 2010; March and Olsen 1998; Martin 1992).

As to the remaining combinations, as given in Table 2.2, the first combination (learning) describes a sector, which is domestically but not internationally salient, and in which external actors have no sanction capacity. If policy adoption happens in such a situation, I argue, it is likely to result from processes of learning. Learning commonly takes time and requires sufficient resources and coordination among different stakeholders, such as ministries and NRAs, to transform a specific policy. If a sector is domestically salient, appropriate resources are likely to be deployed by domestic policy-makers in order to improve policies and enhance their effectiveness. In addition, learning can happen independently from external action. That is, a sector does not need to be on the agenda of external actors, such as IOs, specific countries or international corporations. Since there is no pressure from the international community, no coercion is likely to be exercised either.

The second combination (imitation) describes a sector which is not domestically salient. Furthermore, neither international salience nor sanction capacity is present. In such a situation, policy adoption should be the product of processes of imitation. Here, the development of a policy is not a priority for domestic policy-makers. There is no time-consuming

involvement in enhancing a policy that has become unsatisfactory or obsolete. Policy-makers adopt policies that originated from other policy systems by using shortcuts, such as adopting the most common policy in the field. Here, in a similar way to learning, imitation does not require international pressure for change. The adopting country has complete leeway to change its policies, according to its own domestic prioritisation. For the same reason no coercion is observed either.

The third combination (competition) describes a sector which is domestically and internationally salient, and in which external actors have no sanction capacity. Policy adoption should hence be motivated by competition. In this case, domestic salience underlines the need to provide expertise and find solutions to develop a policy that has domestic political and/or economic visibility. At the same time, international salience corresponds to an interest of the international community (e.g. IOs or forums and member states of such IOs) in reaching policy solutions that are anticipated to enhance their own interests. The encounter of both domestic and international interests creates a space where competition between policy-makers to best allocate the domestic and international resources can take place.

The final combination (coercion) describes a sector which is not domestically but internationally salient and in which external actors have the capacity to sanction non-compliance. Policy adoption is hence imposed externally. Here, the development of a policy is not driven by domestic interest but by coercion. It is not the result of a voluntary act, as would be the case in learning, imitation or competition. Rather, if a sector is internationally salient and external actors do have the capacity to sanction non-compliant behaviour, they will pressurise the non-compliant country to adopt a policy in line with their expectations.

To conclude, I posit that state variables, in particular the state's openness to external influences and its transnational interconnectedness, determine the likelihood of policy adoption (Hypotheses H1–H4). In cases where policy adoption has taken place, I then argue that properties of the sector, namely domestic and international salience and sanction capacity, allow to disentangle the four traditional mechanisms of diffusion: learning, imitation, competition and coercion. In the three empirical chapters, that is Chaps. 6 (Jordan), 7 (Egypt) and 8 (Morocco), I confront these theoretically derived expectations with empirical data. In the next chapter, I address the methodological challenges of doing so, in particular as regards measuring policy diffusion.

## Notes

1. In socialisation, individuals develop a sense of belonging to a group. They redefine their own norms and practices and adapt (rather than adopt) their behaviour accordingly (Beyers 2010:909).
2. Conditionality has notably been researched extensively with regard to the EU membership prospects of Central and Eastern European countries (Padgett 2012; Schimmelfennig and Sedelmeier 2004:663).

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CHAPTER 3

# Research Design

The state-level conditions and the sector-specific mechanisms of policy diffusion are explored by considering the development of telecommunications policies in three MENA countries—Jordan, Morocco and Egypt. Specifically, I focus on the trajectories of the respective telecommunications laws since 2000, that is, the millennium transition and the rise of mobile phone technologies, including mobile internet, in the MENA region (Nyirenda-Jere and Biru 2015), up until 2014. Importantly, I do not focus on the establishment of the laws as such—which took place in 1995 in Jordan, 1997 in Morocco and 2003 in Egypt—but on the decisions taken to adapt and develop certain policies in light of subsequent societal and technological changes. I use cross-case comparative analysis to qualitatively test whether the theoretically derived variables can explain variance in policy diffusion in two sectors, USO and spectrum management, across Egypt, Jordan and Morocco. Cross-case comparative analysis permits qualitative investigation of the similarities and differences across carefully chosen cases, which is useful for the analysis of policy diffusion (Blatter and Haverland 2012; Starke 2013:567–569).

## Operationalisation of the Variables

### *Dependent Variable*

This study's dependent variable is the adoption of a policy. It is measured through the observation of the product, that is, the object that has been



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diffused from one system to the other, and the process, that is, the interaction between two governance systems (Beyers 2010; Schimmelfennig and Sedelmeier 2004). Adoption in terms of the product is observed if a similar policy item (e.g. regulation, law, policy guideline, idea or programme) can be distinctly identified in two different governance systems. In addition, the process must be observed as well, that is, an interaction between the two systems must have taken place. Only by observing both the product and process can it be concluded that policy diffusion has taken place. This technique ensures that diffusion is not accidentally attributed. For instance, policy adoption could be explained by other events including independent causes, such as modernisation, or unexpected external events, such as natural disaster (Bennett 1997:215; Starke 2013:565; Stone 1999:56). Diffusion in terms of both product and process can hence take different shapes defined by the respective mechanism at play, as summarised in Table 3.1.

I consider policy adoption as a continuum, ranging from none to complete adoption (Newmark 2002). I assign "not applicable" (na) if no adoption is observed in either the product or the process of diffusion. High (1) policy adoption means that the link between the diffused and adopted models is complete, direct and straightforward. Medium (0) policy adoption refers to partial links between the diffused and adopted models. Finally, low (−1) policy adoption is about weak and vague links. The codes are equivalent to three equidistant values. To reach the total for the product and process for each regulatory option, I sum up the values. In cases where an average is not a full number, the lowest value is selected. Here I prefer to adopt a more cautious approach to policy diffusion, due to the difficulty of observing policy diffusion methodologically (James and Lodge 2003).

**Table 3.1** Categories of product and process

| | *Learning* | *Imitation* | *Competition* | *Coercion* |
|---|---|---|---|---|
| Product | Combination of different regulatory models | One specific model is copied (including shortcomings) | Selected regulatory model outbids the current model | Regulatory model benefiting the external actor |
| Process | Comparing a variety of regulatory models | Identifying the most typical regulation | Identifying the regulatory model with a competitive advantage | No autonomous policy-making decision |

**Table 3.2** Regulatory options to observe policy adoption

| | *First regulatory option* | *Second regulatory option* |
|---|---|---|
| USO | *Mobile telephony*<br>Inclusion of mobile phones in the definition and scope of USO | *Broadband internet*<br>Inclusion of broadband internet in the definition and scope of USO |
| Spectrum management | *Technological neutrality*<br>Specification of technological neutrality when allocating spectrum rights | *Spectrum trading*<br>Possibility given to spectrum owners to trade unused spectrum with interested stakeholders |

Telecommunications regulation is a vast policy field. Given the complexity and abundance of legislative information, I concentrate on two options for regulating USO or spectrum management, respectively, as presented in Table 3.2. Each regulatory option can be potentially adopted or not into domestic legislation. They were selected based on crucial academic and technical reports in the field, notably from the European Bank for Reconstruction and Development (EBRD) and the World Bank (e.g. EBRD 2012; World Bank 2014).

For USO, the two regulatory options are linked to ongoing debates on the inclusion of mobile telephony and broadband internet in the scope of USO. They are related to the evolution of ICT worldwide, in particular the increasing interest in mobile technologies rather than fixed ones. The focus on mobile telephony only is specific to developing countries, where fixed telephony is declining and households have a tendency to be cell-only. In such cases, fixed infrastructures are neither feasible nor practical (Gideon and Gabel 2011; Xavier 2008). Broadband internet is also rising as technologies develop and challenge the traditional focus on functional internet. With developed internet speed and capacity, the question has arisen as to which internet standard is vital to citizens and whether broadband internet should become a part of the scope of USO as well.

For spectrum management, the two regulatory options are linked to the need for regulation to become more flexible in spectrum allocation and use. The autonomy of governments to take decisions in the field is limited by the cross-border coordination required to use these resources efficiently. However, leeway exists in relation to the management and allocation of spectrum nationally. Technological neutrality and spectrum trading have emerged as dynamic solutions in the domestic management of spectrum. Technological neutrality represents more flexibility for the

phone operators to use the frequency with different technologies and not to be tied to restrictive standards (Michalis 2007:251; Wellenius and Neto 2008:3). Spectrum trading relates to the ability of operators to trade their unused spectrum with interested stakeholders once they have purchased it, without having to hand it back to the regulator beforehand (World Bank 2011).

### *State-Level Variables*

Under which conditions does policy diffusion take place? I argue that the domestic context of the adopting country (i.e. state-level variables) determines whether or not policy diffusion takes place. The selected country cases represent a cluster of countries which are likely to adopt policies that have originated elsewhere, notably due to their close institutionalisation with the EU. They nonetheless present variance in terms of openness and interconnectedness. I hypothesise that it is in particular the similarity of problems faced by political systems (i.e. governance and market openness) and the cross-national interconnectedness of governance and markets (i.e. political and governance interconnectedness) that can account for variance in the observation of policy diffusion.

To allow for comparison, I select the MENA average as a benchmark. I select nine states that belong to the MENA region, as defined by the World Bank (World Bank 2017b), and that are also part of the Southern European Neighbourhood Policy (ENP): Algeria, Egypt, Israel, Jordan, Lebanon, Morocco, Palestine (West Bank and Gaza), Syria and Tunisia (European Commission 2017). This allows for comparison of state-level variables in Egypt, Jordan and Morocco, based on regional coherence and a similar level of institutionalisation with the EU.

*Governance openness* is measured by using one of the Worldwide Governance Indicators (WGI) measures, namely government effectiveness, which captures a country's bureaucratic quality (World Bank 2017c). This measure captures the ability of the government to formulate and implement sound policies through methods of delegation and accountability (Kaufmann et al. 2009). It focuses on the perception of the quality of public services, the quality of the civil service, the quality of policy formulation and the credibility of the government's commitment to such policies (Kaufmann et al. 2010:4). In addition, it captures the degree of independence of policy-makers from political pressures, notably from the ministries, which is adequate for measuring delegation and decentralisation (Duvanova 2017). I use a binary measure of governance openness

based on the 2000–2014 MENA[1] average. If a country's aggregated value over this period is above the MENA average, I code it as open towards external influences (+).

*Market openness* is based on the Economic Transformation figure provided by the status index of the Bertelsmann Transformation Index (BTI) (Bertelsmann Foundation 2017). It includes the level of socio-economic development, organisation of the market and competition, currency and price stability, private property, welfare regime, economic performance and sustainability.[2] I use the index covering economic transformation to operationalise market openness. This is adequate to measure the level of openness, as it refers to the implementation of privatisation and liberalisation measures, following structural adjustment measures imposed by the World Bank, the International Monetary Fund (IMF) and Western donors, in the 1980s and 1990s. The data covers the period from 2003 to 2014, which gives sufficient indication to analyse the trend of the variable. I again use a binary measure of market openness based on the 2003–2014 MENA[3] average. If a country's aggregated value over this period is above the MENA average, I code it as open towards external influences (+).

*Political interconnectedness* is measured using net official development assistance (ODA) as a percentage of gross national income (GNI) (World Bank 2017a). This measure consists of disbursements of loans made on concessional terms and grants by official agencies of the members of the Development Assistance Committee (DAC), by multilateral institutions and by non-DAC countries. These disbursements are made mostly to promote economic development and welfare in countries and territories in the DAC list of ODA recipients (OECD 2017; World Bank 2017a). This is an adequate measure to capture dependence on foreign aid. I here use a binary measure of political interconnectedness based on the 2000–2014 MENA[4] average. If a country's aggregated value over this period is above the MENA average, I code it as interconnected with external influences (+).

*Market interconnectedness* is calculated using net inflows of FDI in percentage of GDP from 2000 to 2014 (World Bank 2017a). FDI is measured by the World Bank as the net inflows of investment to acquire a lasting management interest (10 per cent or more of voting stock) in an enterprise operating in an economy other than that of the investor. It is then divided by GDP (World Bank 2017a). This measure gives no complete picture of international investment in an economy as capital raised locally is not covered. It is nonetheless useful to assess whether a higher level of FDI, compared to the global income of a country, has an impact on the likelihood of policy adoption. I also use a binary measure of market

interconnectedness based on the 2000–2014 MENA[5] average. If a country's aggregated value over this period is above the MENA average, I code it as interconnected with external influences (+).

### *Sector-Level Variables*

How does policy diffusion take place? In cases where policy diffusion is observed, I argue that the combination of three sector variables—domestic salience, international salience and sanction capacity—determines what mechanism of diffusion is at play in a specific situation. The first variable, domestic salience, refers to the prioritisation of one sector by the policy-makers. International salience, in turn, is about the degree of international interest in the sector, often illustrated by the existence of international regulations and large corporate interests. In this case, there is a consensus that certain policy solutions need to be provided cross-nationally. Finally, sanction capacity captures the ability of IOs, influential states and other relevant actors to impose sanctions on non-compliant countries. I assess all three variables primarily based on the information provided by the interviewed domestic and international policy-makers, but cross-check and complement the information provided with primary and secondary sources, including policy documents and communications.

*Domestic salience* is assessed based on the policy-makers' involvement with the development of a policy. I code an issue as domestically salient if policy-makers evaluate a policy as failing and address the need to reform it. As this measure is based on the perception of policy-makers of the failure of a policy, this may lead to a subjective account of domestic salience, which may differ among policy-makers. As such, it is essential to consider as well the resources deployed to address the policy failure which includes time, financial and organisational measures (e.g. the creation of specific committees, several rounds of reviews, the participation to international conferences). Thus, if policy-makers identify the need to reform a perceived failing policy and they outline the resources and measures undertaken to transform the policy, then I code the respective issue as salient.

*International salience* refers to the idea that international interests in a specific sector can become a motivation for change. I code an issue as internationally salient if policy-makers discuss the role of international and regional actors and mention the need to address issues that are cross-border by essence. If there is a consensus among policy-makers that a certain policy needs to be solved cross-nationally (e.g. eventually mediated by inter-

national and regional organisations), I conclude that the policy in question can be characterised as internationally salient. Furthermore, I consider cross-national economic interests in the sector. That is, if policy-makers underline the role of lobbying or economic pressure to achieve certain goals, then I consider the respective issue as internationally salient as well.

*Sanction capacity* is about the leverage of international actors to enforce a regulatory framework. Sanction capacity is present if the development of a sector is subject to potential sanctions in case of non-compliance with international regulatory frameworks. However, it is not enough that the possibility to impose sanctions exists; it is possible that sanction capacity exists on a lower level, such as an asymmetrical power relationship within regional and international bodies. In such cases, I code an issue as having sanction capacity, if policy-makers express frustration regarding the need to follow international regulation and the lack of flexibility to develop a specific policy beyond an existing regulatory framework. Table 3.3 summarises the sector-level variables and their indicators.

**Table 3.3** Measurement of the sector variables

| | *Indicators* | *Definition* |
|---|---|---|
| Domestic salience | Enhancement of performance | Policy-makers emphasise the need to ameliorate a specific sector, which is so far inadequate or insufficient. |
| | Resources deployed | Policy-makers have used several rounds of reviews and different regulatory tools to come up with a solution (e.g. creation of focus groups, committees, attending conferences). |
| International salience | Role of international and regional organisation(s) | International and regional organisations have developed a framework to deal with the issue. There is an international consensus that such issue shall be solved beyond the territory of individual states. |
| | Importance of the international market | Cross-national economic interests are central in the process of policy-making (e.g. lobbying, harmonisation of standards) |
| Sanction capacity | Existence of sanction schemes | There exists an international regulatory frame (e.g. cooperation agreement, association) that allows international actors to enforce decisions. |
| | Lack of alternative options | Policy-makers refer to the need to follow international regulation. Policy-makers feel there is no possibility to look for other models beyond the regional or international framework to which they are bound. |

## Case Selection

### *Country Cases: Jordan, Morocco and Egypt*

I select three country cases, Egypt, Jordan and Morocco, which are similar in key context characteristics. All three countries acquired independence in the 1940s and 1950s: to be precise, Jordan in 1946, Egypt in 1953 and Morocco in 1956. All three experienced a major budget and fiscal crisis in the 1970s and 1980s, which was followed by adjustment measures sponsored by the Washington Consensus, that is, the IMF, the World Bank and major Western donors. These measures led them to considerably liberalise and privatise their economy. They also adopted more delegation in regulatory governance, notably through the creation of regulatory authorities to complement the work of the ministries (Badran 2012).

Importantly, all three countries display comparable levels of political and economic liberalisation (El-Said and Harrigan 2014; Richards et al. 2013; Rivlin 2013). Even though the Freedom House Index rates Morocco and Jordan as partly free but Egypt as non-free (Freedom House 2017), all three can be classified as semi-authoritarian political regimes. Freedom House sets the threshold distinguishing non-free from partly free at 5.5 (Freedom House 2017), with higher values signifying less freedom on a seven-point scale; the scores of all three countries are clustered around that threshold between 2000 and 2014 (average score of Egypt is 5.6, Jordan 5 and Morocco 4.6). Furthermore, all three countries are middle-income economies, as measured in GDP per capita (World Bank 2017a), and show similar growth rates. Between 2000 and 2014, the yearly average of the GDP growth corresponded to 4.2 per cent in Egypt, 5.2 per cent in Jordan and 4.5 per cent in Morocco, higher than the MENA average (excluding high-income countries) of 3.67 per cent (World Bank 2017a).

The development of the telecommunications sector in all three countries followed a similar path as well. After independence, the incumbent companies were first nationalised before the IMF and World Bank asked them to comply with their adjustment measures. This paved the way for the entrance of new actors, including foreign actors, in the sector and for the creation of private–public partnerships. Liberalisation processes in the field started in the 1990s. Each country now has three to four major companies providing mostly mobile services and one incumbent company that only provides fixed-line services (except in Morocco, where the incum-

bent company also provides mobile services). Hence, in terms of reform, for each country the costs to implement the EU model would have been similar, considering the comparable context of transformation of the sector.

Finally, all three countries have similar institutionalised relations with the EU through partnership agreements, in particular the Barcelona Process since 1995, the ENP and the Union for the Mediterranean (UmP) as well as a series of bilateral association agreement and action plans (Bicchi 2010; Cardwell 2011; European Commission 1995).

More specifically, the three countries are part of similar Euro-Med telecommunications regulatory projects, largely linked to the Barcelona programmes. All three have participated in several intergovernmental and regional projects, notably the New Approaches to Telecommunications Policy (NATP), which started in 2001. They are also members of the regulatory group EMERG, which was set up by the EU and MENA NRAs in 2008 through the funding of the NATP-III programme. Lastly, even though Morocco and Jordan were granted EU advanced cooperation status, which recognises efforts to move closer to the EU and reinforces bilateral relationships, in October 2008 and October 2010, respectively (European Commission 2014; European Council 2013), Jordan and Egypt benefited from telecommunications twinning programmes with EU member states (from 2008 to 2010 in Egypt and from 2011 to 2013 in Jordan). It can be assumed that these efforts to address policy reforms can at least partially make up for the fact that Egypt has not been granted an advanced status.

Overall, it appears that explanations based on costs or institutionalisation do not account for variation of adoption among the country cases (Börzel et al. 2010; Langbein and Borzel 2013:571). Thus, it is argued here that the cases of Egypt (i.e. limited adoption), Jordan (i.e. adoption influenced by the EU) and Morocco (i.e. adoption influenced by non-EU partners) follow a different logic. Furthermore, it is difficult to account for adoption differences based on different trade reliance with the EU. Hence, the EU plays a key role as trade partner for the three countries, but in particular in Morocco, where more than half of the total trade is done with the EU-28 partners, followed by Egypt with 31.4 per cent and Jordan with 15.5 per cent (Eurostat 2015). Thus, trade with the EU cannot explain adoption divergences.

In fact, the three country cases show crucial differences in terms of their openness and interconnectedness vis-à-vis external influences. International

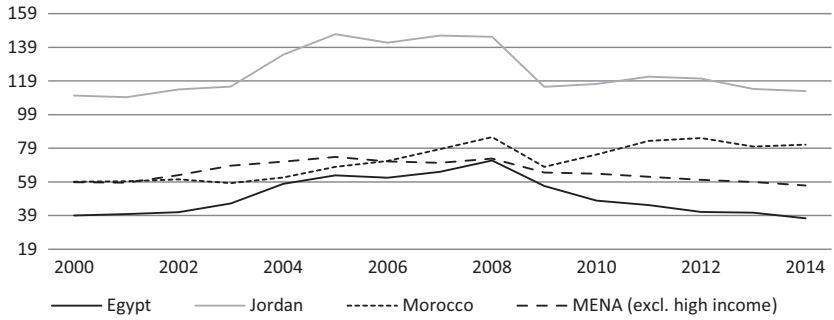


**Fig. 3.1** Comparison of trade ratio

trade is used here as a proxy to support this evidence. Figure 3.1 displays international trade in percentage of GDP (World Bank 2017a). It is possible to observe that Jordan relies mostly on international trade for growth, followed by Morocco and then Egypt, which suggests a greater openness and interconnectedness of Jordan to external actors than Morocco and specifically Egypt.

In conclusion, despite similar degrees of economic growth, Jordan presents the case that relies most and Egypt presents the case that relies least on external actors in terms of trade dependencies. This supports the expectation that Egypt is the least vulnerable country of the three selected cases. Jordan, in turn, is expected to rely the most on policies originating elsewhere. Finally, Morocco is expected to rely on external actors to a greater extent than Egypt, but it may enjoy more domestic leeway due to a lower vulnerability to external actors than Jordan.

### *Sector Cases: USO and Spectrum Management*

For each of the selected country cases, I investigate whether policy diffusion happened in two subsectors of telecommunications: USO and spectrum management. I define telecommunications in rather technical terms as the "transmission and reception of signals by any electromagnetic means" (WTO 1995:Art.3a), which includes different types of services and technologies. The selection of two different policy subsectors allows for variation in the sector variables to be analysed. This is specifically the case concerning international salience and the capacity for sanction.

USO is a national-oriented policy. That is, domestic USO decisions have no impact on USO systems elsewhere; rather, their impact is limited to the territory. USO policies exist to avoid social exclusion, which may take place when companies only provide access in territories that are profitable, thus isolating parts of the poorer and more remote areas of a country. USO policies are implemented by state governments to ensure the provision of affordable telecommunications services to the whole population (Parsons and Bixby 2010:121). Thus, based on the limited impact of USO across borders, USO policies are not internationally salient. There is no international framework defining what USO policies shall be. The ITU, World Bank and WTO recognise the exceptional characteristics of USO, which they define as being uniquely linked to the competence of the individual states. USO measures are even accepted as derogation to free trade in order to protect consumers from digital isolation (WTO 1996:Art.3). Similarly, there is no sanction framework in USO, as there is no existing body of regulation defending a specific USO model.

Spectrum management provisions, as opposed to USO, are linked to international regulation and practice and thus embody international salience adequately. Spectrum management is a cross-border issue. Electromagnetic spectrum is similar to non-physical waves. The overlap of such waves creates radio interferences which may harm the signals, creating issues of inefficiency and security, for example, relating to privacy, military surveillance, maritime and aeronautical services (Chaduc and Pogorel 2008; Wellenius and Neto 2008:6). As such, in spectrum management, countries have been forced to cooperate for decades in order to avoid radio interferences (Delaere and Cullel-March 2014; Garcia Leiva 2013). The international framework for spectrum management is closely linked to the ITU regulation and its annual World Radio Conference (WRC). Furthermore, economic stakes are high in the sector, which creates conflicting interests among stakeholders (Cave et al. 2007). For instance, phone operators wish to expand their markets in the developing countries by acquiring more spectrum and market shares. This may take place at the expense of other actors (e.g. television channels, public services), which do not possess similar financial capacity to invest into the most efficient frequencies for their own use (Mazar 2016:127–128).

Thus, in terms of international salience and sanction capacity, the USO and spectrum management sectors differ greatly. While USO is not marked by international salience and sanction capacity, spectrum management is.

In USO, conflict of interest may take place according to which USO contracts are given to which company and following what type of allocation. However, it normally only concerns markets that are difficult to access and where the lack of market opportunities do not attract companies (i.e. low international salience). Due to the little international political and economic interest involved in policy-making in USO, I expect that policy diffusion is dominated by mechanisms of learning and imitation. In contrast, spectrum management is defined by large economic and political consequences (i.e. high international salience). Conflict of interests may also arise, as well as a struggle for power among various private and public actors. I expect that policy diffusion in spectrum management is likely to take place following mechanisms of competition and coercion.

## Data Collection and Analysis

Expert interviews provide the main source of original data to analyse the selected cases. I personally interviewed 52 experts representing a variety of key actors in the field of telecommunications and MENA–EU relations, notably employees of regulatory agencies, technical organisations, business operators and ministries responsible for ICT. I identified them primarily based on reports by IOs, namely the EBRD, WTO and ITU, and EU–MENA cooperation documents, including twinning fiches outlining policy cooperation between EU member states and the selected MENA countries. I then used the snowball[6] method to identify more relevant experts (Berg 2009:51). The selection of experts was finalised once the circumstances of policy-making had been clarified and validated by several experts, and no additional information was gathered through further interviews (Bulmer et al. 2010; Gubrium and Holstein 2002).

The field research was divided into two phases with two different objectives. During the first phase, which took place mostly in Brussels and focused on 22 European experts, I aimed at clarifying general questions, such as whether or not there were joint initiatives between both regions, the motivation behind creating such initiatives and their functions. I intended to determine the relationship between the EU and the MENA area in terms of regulatory approximation in general and in the telecommunications sector in particular. During the second phase, which took place in Egypt, Jordan and Morocco and focused on local NRAs, I explored technical and specific questions. I personally met 12 experts in Morocco, 12 in Jordan and 6 in Egypt. This set of interviews focused on

the contexts in which certain regulatory options were adopted or rejected. With this second set of interviews, I aimed at understanding technical issues and focused closely on the policy sectors themselves.

The interviews were semi-structured. They explored the context in which policies were developed. I built the interviews around a set of topics that I discussed with all interviewees, but which were tailored to their respective areas of expertise and professional roles. Thus, the interviews were run in a looser form, relying mostly on a series of topics, rather than specific questions (Berg 2009:107; Davies 2001:76). After each interview, I immediately transcribed and uploaded them in the qualitative software NVivo for coding and analysis. The coding implied marking the text and tagging particular segments of the interviews to create grouped nodes (Atkinson and Delamont 1996). Such nodes indicate that a particular passage of the interview relates to pre-defined topics of relevance for the analysis. This is particularly suitable for the use of thematic coding based on the grouping of data along a selection of keywords, expressions or statements (Kvale and Brinkmann 2009; Saldana 2013; Smith and Osberon 2008), which is used to measure sector-level variables in this study (see Table 3.3). Hence, the use of qualitative software supported the retrieval of information and analysis of the case studies, by facilitating their comparison.

The information provided by the interviewees was complemented and triangulated with a selection of policies and policy-related documents, that is, governmental bulletins, IOs' publications and archival records (Sugiyama 2012:33). I specifically consulted additional sources surrounding the policy process in Egypt, Jordan and Morocco, such as laws, decrees, proposals, directives and communications. I also used a selection of key policy documents related to the Barcelona Process and the European Neighbourhood and Partnership Instrument (ENPI) framing the relationship between the EU and the Southern Mediterranean Countries, for example, association agreements, action plans, activity reports and strategy documents (European Commission 1995; European Communities et al. 2000, 2002, 2004). Finally, I considered key legislative documents on the EU and MENA information society, such as the Cairo Declaration on the Information Society (Cairo Declaration 2003), the EU communications on NATP programmes (European Commission 2015) and the Conclusions of the Rome, Cairo and Dundalk Conferences on Information Society (Euro-Mediterranean Meeting of Ministers 1996, 2005, 2008).

## Notes

1. The MENA average is calculated based on data provided for the following nine countries: Algeria, Egypt, Israel, Jordan, Lebanon, Morocco, Palestine (West Bank and Gaza), Syria and Tunisia.
2. The BTI analyses and evaluates the quality of democracy, a market economy and political management in 129 developing and transition countries (Bertelsmann Foundation 2017).
3. The MENA average is calculated based on data provided for the following eight countries: Algeria, Egypt, Jordan, Lebanon, Libya, Morocco, Syria and Tunisia.
4. The MENA average is calculated based on data provided for the following eight countries: Algeria, Egypt, Israel, Jordan, Lebanon, Morocco, Palestine (West Bank and Gaza) and Tunisia.
5. The MENA average is calculated based on data provided for the following six countries: Algeria, Egypt, Jordan, Lebanon, Morocco and Tunisia. Due to the strong outlier figure, well above regional average, of Palestine (West Bank and Gaza), this country is not included.
6. The snowball method supports the identification of additional experts to be met, by referral of the already interviewed people (Berg 2009:51).

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CHAPTER 4

# Regulatory Trends in MENA Telecommunications

The MENA region experienced in-depth transformation in the second half of the twentieth century. Following restructuring processes in the 1980s, large bureaucracies and state-led economies saw a partial retreat of the state from the economy (i.e. liberalisation and privatisation) and regulation (i.e. delegation). Understanding these transformations is crucial to fully grasp the relevance of governance and market openness as well as political and market interconnectedness for policy diffusion in the MENA context. Since the telecommunications sector experienced a shift from state-owned governance to its almost complete privatisation, these transformations are particularly traceable in this sector. This is notably visible in the evolution of international bodies regulating the field. The WTO became a challenger to the originally sole authority of the ITU, which shows a shift of paradigm from state-owned monopolies to a system based on competition and liberalisation. Corporations and NRAs, as well as their transnational networks, increasingly play a relevant role in regulatory decisions, complementing and sometimes replacing international politics taking place within IOs.

## Transformation of the Regulatory States

### *Bureaucratic Expansion Post-Independence*

The expansion of the bureaucracy is characteristic of the MENA region and it is important to understand the development and level of governance



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openness in the region. Independence from the colonial powers was gained at the expense of local business elites and largely supported by military coups or monarchical players (Henry and Springborg 2010). The weakening of the entrepreneurial classes also encouraged the expansion of the state, with only little capacity for resistance (Doyle 2016). While colonial rule did not introduce a centralised tradition in MENA countries, it drastically reinforced this already existing tendency (Ayubi 1988).

Furthermore, since independence and despite the opposition to colonial rule, MENA countries followed the Western examples of nation-state organisations and governments. Large states became characteristic of the region, regardless of size, colonial legacy or ideology. Public sector expansion was notably used by state elites as one of the main vehicles to create a unified state, as was the case in Jordan (Cammett 2011; Chatelus and Schemeil 1984). The bureaucratisation process encouraged the expansion in public bodies, such as the numbers of administrative units, personnel and expenditures (Amin 1980:84).

Egypt, Jordan and Morocco are similar in terms of their governance openness, which is generally rather low. In all three cases, power is centralised in only a few key figures. Both Morocco and Jordan are kingdoms and although both countries have engaged with parliamentary systems, the role of the Kings, Mohammed VI in Morocco and Abdullah II in Jordan, remains prominent. In Egypt, not a kingdom, the relationship between the military and the political sphere is still very close and power is held by a handful of key players; President Abdel Fattah el-Sisi is a former military chief, as have been several other Presidents before him, including Hosni Mubarak, who was overthrown in 2011.

### *Crisis of the State and Structural Adjustment*

Bureaucratic growth and state-led economies grew hand in hand in post-independence MENA countries. This expansion has been referred to as the emergence of the "patron state," where the state embraced the role of both business entrepreneur and provider. That the state positioned itself as a major businessman by assuming greater economic initiative is an important factor in understanding market openness in the MENA region. Originally, this "patron state" brought solutions for several of the weaknesses inherited by the post-independence state, for example, rapid population growth coupled with limited natural resources, apart from oil, and political instability (Richards and Waterbury 1998:205).

From the 1970s onwards, however, strategies of development through large administrations proved unable to solve domestic issues, such as unemployment and the inadequacy of the education system in resolving labour needs. Growth declined in most non-oil-producing countries (Fisher 2013). Public enterprises specially suffered from frequent malfunctions. They failed to absorb all resources and penalised private enterprises (Richards et al. 2013). In the telecommunications sector, state monopolies did not prove efficient in the long term and lacked competitiveness. The sector soon experienced a deterioration of its infrastructure and services leading to in-depth restructuring (Wallsten 2001).

The MENA systems ultimately gave rise to a severe fiscal and budgetary crisis. The twin gaps between domestic savings and investment, on the one hand, and between exports and imports, on the other, became insupportable, as MENA states accumulated large foreign debts (Richards and Waterbury 1998:207; Rivlin 2001:70). Both the debt and the burden of financing it rose sharply until the states were deeply engaged in structural adjustment programmes providing short-term rescue (El-Said and Harrigan 2014). The crisis led to a restructuring of the market following the Washington Consensus principles of austerity measures and structural adjustment. The liberalisation of the market was a priority, based on measures of privatisation and deregulation. This reflected a change in regime based on sometimes traumatic and disruptive transformations, led by foreign institutions such as the IMF and World Bank and foreign lenders, including the United States (US) and the EU (Butkiewicz and Yanikkaya 2005; Easterly 2005). Such measures have been criticised as reflecting the interests of industrial states and lending agencies and enforcing measures approximating coercion, from loans to military force (Hinnebush and Ehtashami 2013; Pitcher 2012; Richards et al. 2013).

### *Dependence and Vulnerability to External Actors*

The crisis of the MENA states was accentuated by the rentier characteristics of several countries in the region. Rentier economies illustrate vulnerability to external actors, and specifically political interconnectedness, as they depend on foreign rent to support their population and economy. In many cases, such systems are related to the sale of oil. Rentier *states* usually describe oil-producing countries, which base most state revenues on the export of state-owned energy resources (e.g. the Gulf countries). Rentier *economies*, instead, refer to a broader range of foreign rent, including

foreign aid, debt write-offs[1] or labour remittances (Luciani 1987:69–75; Rivlin 2001:65). These forms of external rent emanate from foreign sources and are not generated through domestic production (Chaudhry 2007).

In rentier *economies* the role of the state as a recipient and dispenser of rent is smaller than in rentier *states*. However, both systems are closely linked. In fact, expatriate worker remittances and economic aid in MENA countries often result directly or indirectly from the area's oil wealth (Romagnoli and Mengoni 2014:104). Jordan illustrates this interlinkage between oil states and rentier economies—more so than Egypt and Morocco. Jordan is commonly referred to as a "non-oil-producing oil economy," where most of the gross domestic expenditure is estimated to have derived from direct grants and budget support loans from the neighbouring oil-exporting countries (Anani and Khalaf 1989; Brand 1992). Egypt presents some characteristics of rentier economies, with sources including oil revenues, remittances of Egyptians abroad, tourism and foreign aid, all of which do not originate from the country's own productivity (Osman 2011:140). Morocco is one of the main producers of phosphate in the world (FAO 2004). This is also a source of revenue, which does not originate from domestic production activities.

The main implications of a rentier economy are the instability of income and the vulnerability to economic and political developments of the countries on which they depend, for example, richer oil or non-oil states in the region, donor countries outside the region or international financial organisations, such as the IMF or World Bank (Harik 1992; Okruhlik 1999). For instance, the regional and international developments in the 1970s and 1980s (e.g. the fluctuation in oil prices and regional armed conflicts) had a direct impact and accelerated the fiscal and budget crisis of several MENA countries, including Egypt, Jordan and Morocco (Henry and Springborg 2010; Luciani 2013).

### *Privatisation and the Restructuring of the State*

Egypt, Jordan and Morocco present similar timelines in terms of bureaucratic expansion, state-led economies and ultimately fiscal and budgetary crises. The 1980s and 1990s saw all three countries turning to international lenders such as the IMF and World Bank and engaging in restructuring measures.[2] In this context of fiscal and budgetary crises, all three countries underwent dramatic and sometimes traumatic transformations. These measures represent a transformative change and illustrate a general movement towards more openness and interconnectedness, since they

required the receiving countries to open up their markets, delegate part of the regulatory activities to specialised bodies (e.g. NRAs) and privatise national enterprises. MENA countries launched some degree of privatisation and delegation, and diminished the role of the state in the economy (Cammett 2007; El-Said and Harrigan 2014:100; Richards et al. 2013:243).

These new forms of market organisation relate adequately to the market interconnectedness variable, which illustrates the increasing importance of foreign investment and investors for the domestic market of MENA countries. While such measures have not brought the expected growth in countries that implemented them, they have led to radical changes in a number of sectors (e.g. liberalisation and privatisation of most state-led industries). The telecommunications sector in the MENA region is an example of such a shift, with a rise in the sale of government shares in incumbent companies to private domestic and foreign businesses in the late 1990s and beginning of the 2000s.

Egypt, Jordan and Morocco experienced the rise of the private sector following the restructuring measures of the 1980s and 1990s. Even if the promised levels of economic development following the adjustment measures did not happen as expected, a certain level of restructuring took place. MENA countries embraced the next decade as part of a neoliberal order based on liberalisation and privatisation and led by international financial and economic institutions, with the ultimate aim to reduce the size and scope of the state (Stevenson 2010:13). Nevertheless, in Egypt, Jordan and Morocco, the state did not completely retreat from the economy. In several cases, the states have kept an influence in privatised enterprises through shared ownership, which suggests that generally levels of market openness and interconnectedness in the region shall be low.

## Transformation of the Telecommunications Sector

The telecommunications sector underwent a radical transformation from state-owned monopolies and their corresponding political order (i.e. embodied by the ITU) to a new order based on liberalisation, privatisation and delegation (i.e. embodied by the WTO and the creation of NRAs and NRA groupings). Theoretically, this transformation illustrated the retreat of the state, as owner and provider of telecommunications services. In practice, however, most states retained at least a partial ownership in some of the main companies, notably the incumbent ones. Incumbent providers tended to focus on the fixed lines and often proved incapable of following

the trend towards mobile telephony. Such companies would not have survived, had the state not been their main investor (Garbacz and Thompson Jr 2007). Situations where the state is the main owner of the fixed line are still visible in many developing regions, and specifically in Africa (Freyburg et al. 2017). To illustrate the transformation of the telecommunications sector, two foci are presented here. The ownership of telecommunications corporations in Egypt, Jordan and Morocco illustrates the partial retreat of the state. Furthermore, a focus on EU–MENA NRA cooperation is interesting to understand the role of NRAs as delegate to the ministries to implement policies. Specifically, the focus on NRA groupings between the EU and MENA region (i.e. EMERG and EU–MENA twinning projects) sheds light on new regulatory channels to exchange best practices.

### *Privatisation and the Partial Retreat of the State*

The structure of the telecommunications markets in Egypt, Jordan and Morocco is similar: that is, three to four companies exist in each country, with at least three operators providing mobile services. Variation exists in terms of privatisation of the fixed-line incumbent and the remaining degree of ownership and involvement of the state. Jordan, Egypt and Morocco started to liberalise their communications sector in the late 1990s. Maroc Telecom, also called Itissalat al Maghrib (IAM), started operating in mobile telephony in 1994 and was owned by the state until 2001. In Jordan, the incumbent fixed-line operator, Jordan Telecom Company (JTC) was progressively privatised from the late 1990s until 2008, when the largest share was bought by the Orange Group (Orange Jordan 2008). In Egypt, however, the fixed-line incumbent operator, Telecom Egypt, is still majority owned by the state (Telecom Egypt 2010). In Egypt, discussions are ongoing to create a system based on unified licences, where each company could be a provider of fixed and mobile services equally (MCIT 2014; World Bank 2011). This would allow Egypt Telecom, the fixed-line incumbent, to provide mobile services, without going through a process of competitive mobile licence allocation. Mobile companies in Egypt are, however, not strongly supporting such a licensing system, as providing fixed services has only limited market value (Expert EG5). Unified licences are, however, innovative in that they do not tie telecommunications services to a specific technology.

Table 4.1 provides an overview of the patterns of ownership for the existing mobile phone companies in each country. I focus on four

**Table 4.1** Shareholders of mobile phone operators

| | *Company name* | *European companies* | *Gulf companies* | *Domestic public companies* | *Domestic private companies* |
|---|---|---|---|---|---|
| Egypt | Telecom Egypt | | | Egyptian government 80% | |
| | Mobinil | Orange Group (France) 94% | | | Orascom 5% |
| | Vodafone EG | Vodafone Group (UK) 55% | | Telecom Egypt 45% | |
| | Etisalat EG | | Etisalat (UAE) 66% | National Post Authority 20% National Bank of Egypt 10% | |
| Jordan | Jordan Telecom/ Orange JO fixed Zain JO | Orange Group (France) 51% | Noor Telecom (Kuwait) 10% Zain Group (Kuwait) 91% | Social Security Corporation 29% | |
| | Orange JO Mobile | Orange Group (France) 90% | | | |
| | Umniah | | Batelco (Bahrain) 96% | | |
| Morocco | Maroc Telecom (IAM) | | Etisalat (UAE)[a] 53% | Kingdom of Morocco 30% | |
| | Meditel | Orange Group (France)[b] 40% | | Caisse de Dépôt et de Gestion 30% | Finance. Com 30% |
| | Inwi (ex-WANA) | | Zain/Al Ajial (Kuwait) 31% | ONA[c] 69% | |

Note: Entries, as of 2014, are based upon company reports (World Bank 2014:129; Orange Jordan 2008; Zain 2014; Batelco 2013:61; Telecom Egypt 2014a; Mobinil 2012; Vodafone Egypt 2014b; Orange Jordan 2014)

[a]Until 2013, partial ownership belonged to Vivendi (France) 53 per cent (IAM 2014:32, 2015:32; ANRT 2007b)

[b]Until 2010, partial ownership belonged to Telefonica Moviles (Spain) 32 per cent and Servicio de Telecommunicaçoes (Portugal) 32 per cent (Meditel 2010:24; ANRT 2007a)

[c]Omnium Nord-African (ONA) was dissolved in 2010 and is now part of the Moroccan National Investment Company (SNI). The Moroccan Royal Family has a large stake in SNI (Abdellatif 2014)

categories of main shareholders (over 5 per cent of shares) in each telecommunications company (Holderness 2009). The first two categories refer to privately and publicly owned companies, whose origins are either in EU member states or Gulf countries. The third category, domestic government companies, relates to the shares that the government owns in the company, that is, directly, as the government, or indirectly, through a public enterprise. The last category, domestic private companies, shows the ownership by national private companies.

Table 4.1 sheds light on three main trends in the structure of ownership in Egypt, Jordan and Morocco. The majority of companies either have their origins either in European or Gulf countries or they belong to the states themselves (i.e. cases of national private ownership are very few). As expected, European companies, particularly French (Orange) and British (Vodafone) ones, have a strong hold on mobile companies in all three countries, which confirms the importance of studying the relationship between the EU and MENA areas in the sector. Gulf countries are the second major foreign actors in the sector. While the relationship between the Gulf countries and Jordan has always been very close, it is still very interesting to see how closely the Gulf countries are involved in major corporations in all three countries. The presence of Gulf corporations in Egypt and Morocco is more recent than in Jordan. Nevertheless, the increasing presence of Gulf states in MENA countries also shows a competing tendency against the traditional presence of European corporations, for example, in 2013 Etisalat (UAE) bought 53 per cent of Maroc Telecom shares from Vivendi (France). Nevertheless, these cases are too few and over too short a period to come to any conclusion on the change of corporate influence in the region.

It is observed here that multinational phone corporations originate uniquely from the Gulf and European regions and no company originates from other locations, such as the US, China or other major industrial countries. This illustrates the importance of being part of the same ITU Region to develop the market and standards for an efficient bandwidth use (i.e. the EU member states, Gulf and MENA countries are all part of the ITU Region 1). There is also no presence of other MENA companies (excluding from the Gulf region) in each other's market. This suggests a lack of cross-regional interest in the MENA region and explains in part the minimal practice sharing across countries, except for spectrum management to avoid radio interference (Expert JO2).

Finally, the large presence of state ownership in Morocco and Egypt suggests that more state control of ICT services may exist than was previously suspected. Only in a few cases are companies purely owned by domestic private actors. This illustrates that despite privatisation and liberalisation measures in all three countries at the end of the twentieth century, state ownership and control remain to some extent. The presence of the state in the telecommunications sector is specifically visible in the case of Egypt, where three out of four companies have some degree of state ownership (direct and indirect). It is also visible in Morocco, where the state has partial ownership in two out of three companies (direct and indirect). The unique case of indirect presence of the Jordanian state in the fixed incumbent operator (i.e. 29 per cent owned by the Social Security Corporation) and the complete retreat thereof in the mobile phone companies exemplifies the reputation of Jordan as a champion of liberalisation practices in the late 1990s, with an almost complete retreat of the state in the sector (Mofleh et al. 2008; Westrup and Al-Jaghoub 2007). This further illustrates how market openness and interconnectedness are likely to be higher in Jordan than in Egypt and Morocco.

### *Institutionalisation of EU–MENA Telecommunications Cooperation*

Apart from the state, corporations and international regulatory fora, NRAs have arisen as major actors in the regulation of the sector (Thatcher 2007, 2011). This is specifically the case in sophisticated and technical sectors, like telecommunications, where specific knowledge is required for regulatory developments. In such sectors, the involvement of the media, national political parties or citizens is seen as an impediment to industry-friendly administrations (Harcourt 2008:10). The delegation of regulatory processes from the ministries to the NRAs has also led to an increase in regional groupings to tackle policy issues transnationally. This is observable in the context of EU institutions, but also in the MENA region (Badran 2011). In fact, the presence and importance of NRA groupings has increased in the EU–MENA region itself, embodying the new channels for soft cooperation complementing and sometimes substituting the role of IOs.

Numerous transgovernmental networks surround the MENA telecommunications sector. I focus here on the EMERG, a transgovernmental

NRA grouping, and the EU–MENA twinning partnerships (i.e. institutional collaboration among a small number of NRAs). Both EMERG and the EU–MENA twinning projects have had overlapping fields of policy-making, as is the case in USO and spectrum management. They are furthermore similar in that they aim at developing policies following NRAs' regulatory interactions, with a specific focus on the EU model (Cardwell 2011:237). Nonetheless, the involvement of MENA NRAs in each of them differs and shows different types of attitudes towards the EU. While EMERG may serve as a platform to show the competences of MENA NRAs and provide a space for contestation of the EU model, twinning projects are linked to the approximation of the EU model. This is specifically clear in the Jordanian case (i.e. Telecommunications NRA twinning between 2011 and 2013).

*The Euro-Mediterranean Regulators Group (EMERG)*

EMERG was created in 2008, through the NATP-III programme.[3] It was built out of the need for further liberalisation of the electronic communications markets between the EU and MENA countries, to stimulate the spread of ICT and to encourage foreign and domestic investment (EMERG 2008). At the heart of its founding statement is the need to harmonise market conditions, since EU member states and neighbouring countries face similar challenges and opportunities (EMERG 2008:1). EMERG's membership is opened to all NRAs enlisted in the 2008 Malta Declaration, member of the Body of European Regulators for Electronic Communications (BEREC) or of the Southern ENP countries (EMERG 2012a:Art.2). It now comprises around 20 NRAs[4] of both the EU and the MENA areas and organises several yearly workshops based on the interest of the members. NATP-III worked as a logistic body for EMERG until 2014, when it became autonomous with an established secretariat and structure hosted by the Portuguese NRA (Autoridade Nacional de Comunicações, ANACOM).

The EU has reduced its funding since the end of NATP-III but remains close to the development of EMERG. The EC is not officially part of EMERG as a member, but is regularly present as an observer.[5] Furthermore, while EMERG is a forum of best practice sharing among a variety of EU and MENA NRAs, it has a tendency to present the EU model as the example to be followed. Its foundation documents underline that the network is a tool to spread EU best practices in MENA countries and to progressively implement the EU regulatory model abroad (EMERG

2008). The 2012 EMERG report reiterates the logical choice of using the EU framework as the key model and implementing it when gaps are identified (EMERG 2012b:7).

This suggests that the dynamics within EMERG are more vertical, imposed by the EU, rather than horizontal, among equal partners, as previously thought. Nevertheless, EMERG is built on a voluntary basis and is dependent on the commitment of participants towards setting up resources to manage the network. In that sense, MENA countries are not empty shells adopting the EU model without questioning, but they can freely engage (or disengage) with the proposed policies. An expert underlines that EMERG mostly suggests a certain direction, "[t]here is no coercion, but the possibility to finance expertise (…). This is a soft approach to the export of EU legislation" (Expert EU2).

Hence, EMERG embraces a non-coercive approach to expand EU legislation to the MENA. The 2012 EMERG report serves as a reminder that this forum is not an action-oriented vehicle of diffusion "EMERG is flourishing as a platform for knowledge exchange between experts, but not yet as an action-oriented vehicle for improvements and alignments" (EMERG 2012b:5). The report underlines that if it is true that regulatory harmonisation is at stake in EMERG, it is also true that Southern Mediterranean countries are not member states, or candidate countries to the EU, and thus no legal obligation is set for them to integrate the EU model (EMERG 2012b:7). EMERG thus represents a forum where the EU model is pushed forward, but MENA NRAs have discretion to accept the model or contest it, without leverage from the EU to impose any decision.

*EU–MENA Twinning Projects*

The EU–MENA twinning projects on telecommunications, on the other hand, represent an institutional tool with practical goals to be reached. They aim to enhance the organisation and competences of the MENA NRAs, based on the EU NRAs' experience. They are instruments of institution building built around EU policy objectives, which aim at promoting an approximation to the EU acquis communautaire[6] (Lavenex 2011:385). They were introduced in 1998 in the EU enlargement context to support the implementation of the EU regulation in Central and Eastern European (CEE) states and were progressively extended to ENP countries from 2004 onwards to implement the association, partnership and cooperation agreements (European Commission 2012b). Twinning projects usually consist of two or three European countries sending experts

jointly to a third ENP country to achieve practical results. They aim at fulfilling an objective related to one or more priority areas set out in the Action Plans. This was the case for the 2008–2010 Egyptian[7] and the 2011–2013 Jordanian[8] NRA twinning projects which aimed at implementing legislative reforms and regulatory alignment of policies (European Commission 2012a:VI; European Union and Egypt 2007b; European Union and Hashemite Kingdom of Jordan 2005).

This form of collaboration is innovative as the beneficiary country retains the ownership of the project until its completion. The EU stresses that entering such a project follows a decision taken by the beneficiary country, including political and financial commitment to achieve mandatory results (European Commission 2012a). It is thus a voluntary and action-oriented instrument and must be distinguished from regular technical assistance projects. The beneficiary country endorses high expectations to achieve the reforms.

However, in a similar way as with EMERG, the EU benchmark is the dominant model to be approximated. This capacity-building instrument is based on the primacy of EU legislation. One of the aims of the twinning instruments is notably to support ENP countries in harmonising their legislation with the EU and bringing the common fundamental principles of ENP countries in line with those of the EU (European Commission 2012a). Thus, the dominant role of the EU is present in both EMERG and twinning projects; however, while twinning projects expect practical and observable results, EMERG does not, at least in the short term.

Both EMERG and twinning projects are examples of the new systems of regulatory delegation that may lead to cross-national collaboration, which illustrate effectively the implications of governance openness. EMERG and EU–MENA twinning projects adequately exemplify how the opening of domestic regulatory practices to foreign influence may lead to intergovernmental policy diffusion. The influence of the EU is observed in both cases. In twinning partnerships, as in EMERG, the EC is not an official member of the project/regulatory grouping. However, the EC funds the full (twinning) or partial (EMERG) expenses. In the case of twinning projects as well as in EMERG, the EC is in fact closer to the grouping than it may appear. Indeed, EU NRAs convey regulations that take their origins from EU regulation. Hence, both groupings represent ideal observation points to discuss regulatory exchange between MENA and EU countries.

## Notes

1. Egypt, Jordan and Morocco experienced debt write-offs in the 1990s, which can also be considered characteristics of rentier economies (Rivlin 2001:68). Jordan received around USD 300–500 million debt reductions every year between 1992 and 1995. Morocco received USD 2.9 billion write-off in 1991. Finally, Egypt received more than USD 2 billion debt write-off in the 1990s (World Bank 2015).
2. Morocco engaged with the IMF in 1983, Jordan in 1989 and Egypt in 1991.
3. NATPs are financed by the EU. They started in 2001 and were finalised in 2014, with the last funding supporting EMERG activities.
4. Countries of the MENA region are Algeria, Egypt, Israel, Jordan, Lebanon, Morocco, the Palestinian Authority, Syria and Tunisia. Turkey was initially a beneficiary of the NATP-II programme, but as a candidate country to EU accession, it is no longer part of the beneficiaries of NATP-III. Countries of the European area are Austria, Cyprus, France, Germany, Greece, Italy, Malta, Portugal, Spain and Switzerland. Algeria and Malta have not participated in EMERG since 2008 and 2009 respectively (EMERG 2008:2–3, 2012b:2).
5. This is different from BEREC, which was created in 2006 among European NRAs, as a pan-European platform to ensure a consistent application of the EU regulatory framework. The official membership of the EC in BEREC has notably been criticised by EU member states, as the demonstration of the heavy hand of the EC in the sector (Michalis 2007:214).
6. The EU *acquis* communautaire is "the body of common rights and obligations that is binding on all the EU member states" (European Commission 2017).
7. Section 2.5b: information society: further progress in electronic communications policy and regulation and the development and use of information society applications, including improving the efficiency of the NTRA and developing a comprehensive regulatory framework (European Union and Egypt 2007a, b).
8. Action 29: regional cooperation shall be supported in various regional projects, such as environment, energy, telecommunications and transport (European Union and Hashemite Kingdom of Jordan 2005).

   Action 56: development and use of Information Society applications, steps to liberalise the market for fixed voice telephony, harmonising licensing access, interconnection or universal service and implement plans on e-Government, e-Commerce and e-Finance (European Union and Hashemite Kingdom of Jordan 2005; TRC 2013).

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CHAPTER 5

# Universal Service Obligation (USO) and Spectrum Management

USO and spectrum management aim to extend access to communications technologies to the greatest number of citizens possible, albeit through different channels and objectives. USO policies are targeted at providing access to ICT to territories that are remotely located or unprofitable. In planning their market coverage, companies would not automatically invest in infrastructures that would not be profitable. Thus, in the absence of specific provisions, certain regions would remain disconnected. One of the options for the state is to allocate USO by licence to one company (usually the incumbent) and reimburse the investment fees through a fund paid by all existing companies. Thus, expanding access in this case refers to the implementation by the state of measures to avoid the isolation of a certain territory. Spectrum management regulations are believed to extend connectivity through another process. Here, mobile phone companies purchase spectrum, owned by the state, to increase their capacity and market coverage. Competition in mobile telephony (i.e. the extension of coverage through innovative means to use spectrum) is thought to increase access and eventually ensure that all territories of a country are covered by at least one operator and using a multitude of technologies (Cave et al. 2007; Chaduc and Pogorel 2008). To facilitate the observation of policy adoption in both subsectors, two regulatory options were chosen, which represent potential regulatory directions that any country can take to develop its policies (see Chap. 3). These regulatory options (i.e. mobile and broadband services for USO and technological neutrality and spectrum trading



V. Wavre, *Policy Diffusion and Telecommunications Regulation*,
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for spectrum management) are discussed further here. The EU model regarding both subsectors and regulatory options is also given to enable easier comparison with the available regional model.

## USO: Mobile and Broadband Services

USO policies are defined as the provision of basic telecommunications services to every resident of a country at a reasonable price (Parsons and Bixby 2010:121). In that sense, connectivity to basic telephony services is considered a social right for citizens, which justifies state interference in the corporate sector (Simpson 2008:106). USO policies are commonly considered as measures to protect consumers, which is a position shared by the most relevant IOs in the field, notably the World Bank, ITU and WTO. They are an exception to the normally enforced competition principles in the telecommunications sector, in that countries can enforce an exception to free trade to ensure universal service provision. The WTO reference paper declares that "[a]ny Member has the right to define the kind of universal service obligation it wishes to maintain. Such obligations will not be regarded as anti-competitive per se, provided they are administered in a transparent, non-discriminatory and competitively neutral manner and are not more burdensome than necessary for the kind of universal service defined by the Member" (WTO 1996:Art.3).

Thus, at the origin, USO was used as a corrective regulatory tool to reduce the negative social effects of liberalisation in telecommunications industries. It represented the solution for equitable service provision, to ensure a positive impact of economic development and to develop the required infrastructure (Alleman et al. 2010:88). USO was created to ensure that telecommunications service providers would not only focus on the profitable populated regions but also invest in scarcely populated or remote areas. A typical USO option is to appoint by licence one provider, commonly the incumbent fixed operator, to serve the whole population. Typically, in times when telecommunications services were provided by state-owned monopolies, USO policies were cross-subsidised. Local calls and calls in rural areas, which tended to be less profitable, were cross-financed with more profitable long-distance calls and those in urban areas (Calzada et al. 2010; De Streel 2003). Since the liberalisation of most telecommunications services, USO extra-services tend to be reimbursed by a specific fund, generated by the contributions of the remaining companies.[1]

Alternatively, USO are not allocated by the state but follow a competitive allocation process (reverse auction or minimum-subsidy auction). Here, the winner of the tender is the one putting forward the lowest request for a subsidy to provide USO. Such systems have their origins in Latin American countries (Carril 2000; Donoso Abarca 2002). In 1994, Chile established the Fondo de Desarrollo de las Telecomunicaciones and launched the first competition in 1995 (World Bank 2011:161). While the services firstly aimed at fixed network payphones, they expanded to include other technologies, such as mobile phone services. Several countries of Asia and Africa followed the competitive tendering system, such as the pioneers Nepal in 1998 and Uganda in the 2000s (World Bank 2011:161). This system allows more recent telecommunications companies to compete with the incumbent operator, which may be useful so as not to champion an incumbent company, which potentially already enjoys a greater market share than new joiners (Humphreys and Simpson 2008).

### *Mobile and Broadband Technologies*

This study explores two regulatory options (i.e. the inclusion of mobile and broadband technologies in the scope of USO) that currently exist in the field, in order to best grasp policy movements and options in USO. Technological advances and the widespread liberalisation of pricing and tariffs have recently brought into question the necessity and adequacy of USO provisions to provide access to ICT to all citizens of a territory (Alleman et al. 2010:87; Oguz 2013:13). This is specifically the case concerning advances in technologies relating to mobile telephony and broadband internet access.

Yet, USO is still commonly based on an outdated model of telecommunications services based on a fixed line. This is typically the case for USO in EU member states (De Streel 2003). However, considering the improvements in the mobile technologies in the sector, the validity and scope of USO is increasingly put under pressure. On one side, the focus on fixed telephony seems obsolete, as in many cases, and specifically in developing countries, mobile services, including mobile internet (e.g. smartphones, dongle), are the only available services, supplanting fixed lines. On the other side, the competition argument suggests that the increase in competition among mobile phone companies is sufficient to ensure that telephony services are available in the whole territory. Competition among mobile phone companies, thus, entails the capacity to

bridge the gap of telecommunications access, through increased mobile services, which would render USO regulation redundant (Oguz 2013:15).

The view that healthy competition may reduce the negative effects of liberalisation is furthermore supported by the premise that not every citizen who has access to communications technology will use it effectively. For instance, it may become apparent that people in rural areas do not necessarily require broadband services, which would involve massive investment. This confirms that in some cases, a reference to universal *access*[2] rather than *obligation* would be more adequate to pinpoint societal changes (World Bank 2011:153). In such cases, developing the availability of services does not necessarily lead to a growth of usage, which means that resources are at risk of being wasted without increasing social benefit. In this study, USO is preferred to universal service *access* as it more adequately displays the compulsory component falling on mobile and fixed operators to provide USO services. In fact, universal services sometimes go beyond the provision of fixed lines, pay phone or functional internet to include the establishment of community access points (e.g. in universities, schools, libraries, health centres).[3] This is motivated by the high desirability of widespread access to and diffusion of ICT for social and economic reasons (World Bank 2011:154).

### *European Regulations of USO*

The EU framework is directly linked to the traditional definition of USO based on fixed telephony and minimum functional internet connectivity, thus not incorporating mobile and broadband services in its scope. Originally, in the 1990s, the EU system based on cross-subsidisation was largely based on French administrative law (De Streel 2003; European Commission 1996; European Council 1994). After the liberalisation of the sector in 1998, telecommunications services were increasingly privatised and ruled under competition law. The EU developed a USO baseline to harmonise the different practices across EU member states. The 2002 universal service directive defines USO as the provision of a minimum set of services to all end-users at an affordable price. Member states must ensure that services are made available in their territory, irrespective of their geographical location (European Parliament and European Council 2002:51). The revised 2009 Directive reframes USO by stating that the aim is to ensure good quality and publicly available services through effective competition and choice,[4] but it does not change the fundamen-

tals and scope of USO (European Parliament and European Council 2009a:Art.1).

Subsequent reviews of the USO policies have concluded similarly. The 2011 communication on universal service in e-communications states that there will be no extension of the USO scope to mobile services or to broadband connections (European Commission 2011). Regarding the inclusion of mobile services in USO, the 2013 communication mentions that subscriber penetration reached 124.4 per cent in October 2010, from which the EC concludes that there is no risk of social exclusion (European Commission 2011:7). Regarding broadband services, the 2011 communication states that DSL broadband was available to 95 per cent of the EU population by the end of 2010, but was only used by around 23 per cent to 83 per cent across member states (European Commission 2011:6). Hence, this does not represent a substantial majority of the population and thus does not need to be included in USO.

Hence, the 2002 and 2009 directives and subsequent reviews of USO do not include mobile phone and broadband services as part of the USO scope. Both directives clearly mention that USO does not refer to mobile telephony nor Integrated Services Digital Network (ISDN)[5] (European Parliament and European Council 2002:recital 8, 2009a:recital 5). The European Parliament, however, released a report on 24 October 2013 asking the EC to consider changing the scope of the USO to include the obligation to offer broadband internet access at a fair price (European Parliament 2013). The situation has not changed since then, but demonstrates that debates are taking place within the EU institutions themselves discussing the validity of USO as it currently stands.

## Spectrum Management: Technological Neutrality and Trading

Spectrum is used in many services and technologies depending on its carriage capacity[6] from geolocation, meteorological, mobile telephony, digital television and radio services to the wireless car keys. Its use by governments for military, defence and maritime and aeronautical services makes it a highly sensitive subject (Chaduc and Pogorel 2008; Mazar 2016). Regulation occurs mainly to prevent harmful interferences across borders and also to achieve economic and technical efficiency of spectrum use (Cave et al. 2007). Radio interference is a specifically sensitive issue for the security of a country (e.g. cross-border surveillance, military spying,

privacy concerns). As such, very early on, the ITU was created as an intergovernmental forum to manage spectrum signals worldwide.

The ITU has had a long history of international coordination for over 100 years. It is in charge of developing and coordinating the creation and ratification of telecommunications treaties by the member states. It holds world and regional radio conferences every three to four years, to establish regulations, agreements and plans for the global use of radio spectrum. The latest version of the Radio Regulation, the main body of ITU laws, was revised and adopted by the 2012 WRC, which took place in Geneva, dealing with the technicalities, standards and limitations for the effective management of spectrum across the world (ITU 2012b). Essentially, the ITU Radio Regulation divides the world into three regions to manage spectrum efficiently, with each region consequently being allocated specific sets of frequencies (ITU 2012b:Art.5). The aim is to ensure the compatibility of spectrum uses and to limit interferences across countries of each region. The ITU Region 1 comprises all countries in the European and African continents, as well as countries further east, such as Uzbekistan and Mongolia as far as the area to the north of Russia, but excluding Iran. The ITU Region 2 includes the continents of North and South America and the ITU Region 3 includes the Asian and Australian continents, as well as Iran. Thus, Egypt, Jordan and Morocco are part of the same ITU Region 1 together with EU member states.

Besides the ITU, spectrum management is also taken into consideration in various WTO sources. The WTO reference paper defines that the allocation and use of scarce resources need to be carried out in an objective, timely, transparent and non-discriminatory manner. It also mentions that the current state of allocated frequency bands needs to be made publicly available, except for the frequencies allocated to governments (WTO 1996:Art.6). This shows the potential for non-transparent spectrum use for government purposes such as the military and defence services.

One of the main current developments in spectrum regulation relates to the planning of the digital switchover, an initiative supported by the ITU. The digital broadcasting switchover, known as the transition to digital terrestrial television broadcasting (DTTB), is supposed to free a large portion of lower frequencies to allow for a re-allocation of spectrum and provide a more efficient use of the spectrum (ITU 2012a; World Bank 2011:114).[7] It is particularly relevant for mobile phone operators who would like to use the freed spectrum to expand their markets and technologies, such as the long-term evolution (LTE) standard, commonly

linked to 4G technologies (Cullel 2011; Lamy 2014). The 2006 Regional Radiocommunications Conference adopted a document on digital migration strategies and principles, which set a deadline for the analogue television switch-off by 17 June 2015 for ultra-high frequency (UHF) band and by 2020 for very high frequency (VHF) band (ITU 2006, 2012a). The digital broadcasting plan, referred to as the GE06 (i.e. in reference to the 2006 Geneva agreement), covers 116 countries of Africa and Europe and was agreed for the frequency bands 174–230 MHz and 470–862 MHz (ITU 2012c).

Many developing countries have encountered delays when attempting to complete the digital switchover (Ala-Fossi 2012; Cullel 2011; Stirling 2012). Morocco approved a law on 17 June 2015 confirming its commitment to meet the GE06 deadline for UHF bands (HACA 2015). Egypt and Jordan's digital switchovers are still ongoing. Difficulties in completing the switchover can be linked to various factors (Garcia Leiva and Starks 2009). Firstly, variations in population densities lead to limited numbers of analogue TV broadcasting channels in developing countries compared to Europe (i.e. less crowding). This creates less pressure on the regulators and the corporations to expand the offer in spectrum (Stirling 2012). Secondly, the technological infrastructure and financial resources are not always sufficient to run the sophisticated transition process (ITU 2012c). Finally, the lack of an adequate regulatory framework may slow down the process (Gulati and Yates 2012).

In the EU, the 2009 recommendation asked member states to complete the switch to DTTB by 2012, with several countries completing it earlier: for example, Sweden and Finland completed it in 2007 and Germany in 2008 (European Commission 2009). In this field, the EU experience is an important and available example to follow, specifically for countries of ITU Region 1 (Ala-Fossi 2012). The leading DTTB role of the EU was, however, challenged during WRC-2012 and WRC-2015. Hence, African and MENA countries contested the EU and asked for the allocation of the bands 694–790 MHz to mobile services exclusively (i.e. not related to digital TV)—a request that was accepted by the ITU (Lamy 2014).

### *Technological Neutrality and Spectrum Trading*

Two regulatory options, that is, technological neutrality and spectrum trading, are taken as reference points to discuss the current developments of the spectrum sector. Despite the strong influence of the ITU in

managing spectrum internationally, neither the ITU nor other regulatory framework, such as the WTO, gives advice regarding domestic spectrum management, such as the use of auction or inclusion of technological neutrality or spectrum trading in management reforms. This depends on domestic and regional decisions and standardisation practice. In general, domestic spectrum management raises concerns among stakeholders, because slow regulatory changes are not dynamic enough to follow the pace of changing technologies and business practices. For both regulatory options, the owner shall be entitled to flexibility in its use of spectrum in order to maximise the efficiency of the spectrum use and reduce spectrum shortage.

Technological neutrality is an innovative trend in spectrum management. It means that the allocation of spectrum shall not be linked to a defined technology, but it shall be left to the owner to decide the best way to use it. It is grounded in the idea that neither governments nor companies should be able to dictate how to utilise spectrum technologies (World Bank 2011:203). Here, the fast-changing nature of ICT technology and markets suggests that regulators should avoid as much as possible the dictating of specific technical platforms and instead allow the greatest flexibility for the industry to innovate and evolve (World Bank 2011:203).

Spectrum trading means that the purchaser of spectrum is allowed to change the use for which the spectrum was initially registered while maintaining the right to use it (World Bank 2011:111). El-Moghazi et al. (2008:3) mention that spectrum trading "usually refers to the part of spectrum where users have exclusive license that can be traded to other users. Therefore, users of spectrum are those with the highest valuations for the spectrum." Here, in a similar way as with technological neutrality, the reasoning emphasises the role of the market and corporations in developing standards, rather than the role of policy-makers. The risk of spectrum trading is, however, that dominant firms set excessive prices for the trade. The World Bank emphasises competition law to overcome such excesses (World Bank 2011:111).

### *European Regulations of Spectrum Management*

Spectrum management is largely coordinated by international bodies. However, on regional levels, some areas undertake additional commitments through subregional telecommunications organisations. This is the case of the EU, where action has been only minimal in spectrum manage-

ment and has been focused on standard settings (Michalis 2007:251). The EU has, however, operated through the European Conference of Postal and Telecommunications Administrations (CEPT).[8] Originally, CEPT members were the monopoly-holding postal and telecommunications administrations. The CEPT activities nowadays consist of cooperation on commercial, operational, regulatory and technical standardisation issues, with a focus on spectrum use via the Electronic Communications Committee (CEPT 2017). For instance, the EU developed the Global System for Mobile Communications (GSM) standards. It then developed the subsequent *Universal Mobile Telecommunications System (*UMTS) standards for the 3G technologies, within the frame of the European Telecommunications Standards Institute (ETSI). Both GSM and UMTS contributed to technical spectrum efficiency and also supported the creation of a single market in goods and services, allowing significant profits for telecommunications corporations (Michalis 2007:251).

The 2009 Better Regulation Directive mentions that service and technology neutrality should be the norm in all spectrum bands allocated to electronic communications (2009b:recital 34). The EU position confirms that spectrum should not be tied to technology, as it evolves faster than policies. The same position is endorsed for spectrum trading. The 2009 Better Regulation Directive mentions that NRAs can allow spectrum owners to freely transfer or lease their usage rights to third parties to allow valuation by the market (2009b:recital 39). The CEPT 2011 report on spectrum underlines that some national licences in EU member states already allow for partial transfer of usage right, according to the frequency allotment, geographical area and duration of the licence (CEPT 2011).

Nevertheless, both regulatory options, while endorsed in the policies' recital,[9] are not specified in the body of the regulation. The 2009 policy mentions that transitional rules may be additionally required to implement technological neutrality and spectrum trading (European Parliament and European Council 2009b:recital 40). Nevertheless, the 2013 draft telecommunications law, while including both regulatory options, still does not delineate how both regulatory options shall be implemented across member states. The 2013 Telecoms Single Market (TSM) plan draft regulation nonetheless foresees the possibility of the EC mandating the re-assignment of spectrum for wireless broadband through procedures harmonised at the EU level[10] (European Commission 2013). Hence, it is observed here that both regulatory options are seriously considered, but they are not yet harmonised at the EU level.

This shows that for the EU the implementation of technological neutrality and spectrum trading regulation is at the early stages. The EU is nonetheless closer to innovative regulations in spectrum than is the case in the USO sector. This is particularly true for member states promoting competition and flexibility to regulate the sector, such as the United Kingdom (UK), under the leadership of the Office of Communications (OFCOM) (Garcia Leiva 2011; Michalis 2007:252–253). For both technological neutrality and spectrum trading, EU policies are evolving and the EC is planning the re-assignment of spectrum in specific cases.

The two regulatory options for each subsector (i.e. mobile and broadband internet for USO and technological neutrality and spectrum trading for spectrum) are used in the following empirical chapters to observe policy adoption. They are central to observe if adoption is taking place and, if so, under which conditions and through which mechanisms the adoption can be explained. Specifically, each empirical chapter discusses the approach of the country cases towards the EU model and elaborates potential explanations for the full, partial or non-adoption of the EU model.

## Notes

1. Many different types of USO funding exist, which is typically a case for variation among EU member states (Humphreys and Simpson 2008:856).
2. Universal service refers to service at the individual or household level, for example, through a telephone capability in each home. Universal access refers to a publicly shared level of services, through public payphones or internet telecentres. The generic term of universal access and service (UAS) is advocated by the World Bank to encompass both intertwined aspects of USO (World Bank 2011:153).
3. In this study, however, the focus is set on projects surrounding the expansion of phone and internet communications and not the distribution of hardware such as computers, as these are not always linked to telecommunications policies only but also tackle sectors such as education or internal affairs, which are not the focus of this research.
4. Article 4 confirms the provision of access at a fixed location and provision of telephone services. This article further specifies that member states shall ensure that all reasonable requests for connection at a fixed location are met by at least one undertaking. In addition, the connection shall support voice, facsimile and data communications at sufficient data rates to permit functional internet access (European Parliament and European Council 2009a:Art.4).

5. ISDN is a data transfer technology. It enables wide-bandwidth digital transmission over the public telephone network, transferring data significantly faster than with a dial-up modem (TechTerms 2015).
6. Different parts of the spectrum band have different carriage capacity. For example, signals sent using higher frequencies reach shorter distances, but have a higher capacity to carry information (Mazar 2016:127). This matters for the allocation of signal to mobile companies, who intend to get the better quality waves for different types of services (e.g. texts messaging, Voice over the IP (VoIP) applications, such as Skype, watching and sharing videos).
7. A digital dividend (i.e. freeing part of the spectrum for different allocation) arises because of the greater compression that is possible with digital signals to broadcast TV channels. Digital compression allows the transmission of several, up to eight, standard digital television channels in the radiofrequency spectrum previously used by a single analogue channel (World Bank 2011:114).
8. The CEPT is a Europe-wide grouping comprising national technical experts. It was founded in 1959 by 19 countries and has expanded to 48 countries currently (CEPT 2017). In the EU, spectrum management provisions need to be consistent with the work of international and regional organisations dealing with radio spectrum management such as the ITU and CEPT (2009b:recital 30).
9. A recital is preliminary or introductory to a text (also to pleadings). It provides an explanation of the reasons for the contract, transaction or policy (West's Encyclopedia of American Law 2008).
10. The EU connectivity package was launched in September 2016. Specifically, the EC aims at proposing a new European Electronic Communications Code with simplified procedures (European Commission 2017a, d).

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CHAPTER 6

# Jordan

Jordan is presented as a case with high vulnerability, in terms of openness and interconnectedness, towards external actors. Thus, policy diffusion is likely to take place in both subsector cases. Indeed, for both USO and spectrum management, Jordan has adopted policies that originated elsewhere in a complete and straightforward manner. Furthermore, the influence of the EU on rule adoption has been strong. The Jordanian USO regulations are largely modelled on the EU regulations, despite being inadequate to the domestic context. This is specifically the case for USO. Jordanian policy-makers followed the EU position in USO. They decided not to extend USO to mobile and broadband telephony and still base the model on direct allocation to the fixed-line service provider. This illustrates a case of imitation based on the EU system. The adoption of EU policies shows commitment to the EU cooperation, without costly involvement from the country itself (Wavre and Freyburg 2017). The Jordanian spectrum management regulation is generally in line with international regulation in the field. However, in this case, policy-makers regret that no policy alternative exists and that they need to follow what EU countries do in the sector. This is notably the case due to power relationship within the ITU. This illustrates a case of policy adoption following (soft) coercion mechanisms.



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## Diffusion in the Telecommunications Sector

In Jordan, as in Egypt and Morocco, there has been massive growth of mobile phones and internet over the last decade. Mobile phone subscriptions increased from 8.1 per cent in 2000 to 147.8 per cent in 2014 (World Bank 2017). Progressive reform of the ICT and postal sectors started in the mid-1990s. In 1995, the Telecommunications Law No. 13 was passed and the Jordanian NRA, the Telecommunications Regulatory Commission (TRC), was established. The 1995 law was amended in 2002. Its more recent review started in 2015,[1] but is not yet finalised (INTAJ 2012:9). Nonetheless, changes in the constitution in 2011, following the political turmoil in the region, have affected the sector without directly amending the telecommunications law (Kingdom of Jordan 2011). This is the case concerning the dependence of the TRC on other government bodies. The TRC is now reporting directly to the Ministry of Telecommunications, instead of reporting to the Jordanian President (Expert JO3).

In a similar way as with Morocco, the accession to power of King Abdullah II following his father in 1999 brought a generation of state officials putting the development of the ICT at the core of their agenda. Major initiatives were undertaken to build an ICT industry to create employment and spread social and economic development (Kulchitsky 2004:35; Mofleh et al. 2008:4; Westrup and Al-Jaghoub 2007:12). In the late 1990s, Jordan even planned to become a major actor in ICT, such as Singapore or Bangalore, and outperform other major players in the region, but this did not happen in practice (Ciborra and Navarra 2005:145). Nevertheless, in 1995, Jordan had become the first country in the Arab region to enact a modern telecommunications law and to establish an independent regulatory body (INTAJ 2012:10). JTC, the incumbent phone operator, owned by the government, was progressively reformed to meet liberalisation standards. By 2008, the government had removed all ownership. A majority of shares were sold to the Orange Jordan Group (Orange Jordan 2008:49).

Jordan, like Egypt and Morocco, possesses three major mobile telecommunications players. The first mobile licence in Jordan was granted in 1994 to Fastlink, which was then acquired by the Kuwaiti group Zain in 2003 (Zain 2014). In 1999, JTC was granted the second licence to provide mobile services and became Orange mobile a year later (Orange Jordan 2014:18; TRC 2009). A third mobile operator, Umniah, was

licensed in 2004 (TRC 2009). It was acquired by Batelco, a Bahraini consortium, in 2006 (Batelco 2013:61). The avant-gardist liberalisation of the sector is characteristic to Jordan. However, a weak economy and infrastructure coupled with a difficult geopolitical situation led to smaller steps in its market-oriented policies.

### *Universal Service Obligation in Jordan*

High policy diffusion is observed in the Jordanian USO model. In terms of product and process, there is a clear link to the EU model. Several rounds of review of the scope of USO have been undertaken since 2000. Nevertheless, no major changes to the policies were implemented. In fact, the Jordanian decision not to include mobile phones and broadband internet in the USO definition is exactly the same as what has been decided by the EU. The Jordanian USO model is based on one fixed telephony USO provider, JTC, now part of the Orange Group. There is no specific interest in developing a more efficient system. Expert JO1 from the Ministry of ICT (MOICT) states "[r]ight now, we have a USO policy, but to be frank with you, it isn't as effective and efficient as it is supposed to be" (Expert JO1).

USO provisions are mentioned in the Telecommunications Law No. 13 of 1995. It briefly states that measures to implement universal service shall be undertaken by the TRC (TRC 1995:Art.12a.16). More details regarding the implementation of USO were given in a general government policy for universal service published in 2004 and followed by several consultations undertaken by the TRC concerning the overall principles of USO and the content of the regulations (MOICT 2004; TRC 2006:1). This consultative work materialised in an Information Memorandum on USO published in 2006 by the TRC (TRC 2006). The government also published several statements on USO, which clarify Jordan's position in the field (MOICT 2007, 2011). Finally, the 2013 National Strategy of Jordan foresaw the revision of USO policy from December 2014 to ensure the correct balance between the freedom of operators to offer competing services and the need to ensure affordability and availability of services across Jordan (MOICT 2013:27–28). To that purpose, the TRC and the MOICT formed a committee to review the USO policy; however, Expert JO8 confirmed that no official outputs would be published before 2016 (Expert JO8). Hence, the outcome of this latest review is not included in this analysis.

The Telecommunications Law No. 13 is not very specific concerning USO. The first chapter of the law (which defines terms used in the law) mentions that the universality of service refers to the provision of a minimum set of ICT services in areas and communities. The facilitation of the provision and use of such services are delineated by the terms and conditions specified and modified as needed by the TRC (TRC 1995:Art.2). The 2004 government policy on USO gives more precise information. It states that "[a] universal 'service' obligation or a universal 'access' obligation is a requirement placed upon telecommunications licensees to serve particular geographic areas or groups of citizens where it may be perceived that without the imposition of the requirement those areas or groups would not be given the opportunity to take service" (MOICT 2004:Art.1.1). The Jordanian USO framework focuses on connecting the population rather than territories. It mentions that USO shall be available in all municipalities and populated areas with a population of 300 or more permanent inhabitants. Exceptions may be delivered upon request (MOICT 2004:Art.1.6.1). This law foresees that USO provisions are based on access and there is no decision taken regarding the use of a specific technology to deliver USO, hence leaving complete freedom to the regulators regarding its practical application.

In practice, USO is based on fixed telephony services and its provider, JTC (i.e. the fixed-line incumbent), was selected by the TRC. The 2004 USO government policy mentions that one of the TRC's roles is to select licensed operator(s) to be universal service provider (MOICT 2004:Art.1.4c). In fact, the 2004 government policy foresees that until there is effective competition in fixed services, JTC will continue to be the USO provider in all geographic areas and will continue to bear the entire cost of the USO under the terms of licence (MOICT 2004:Art.1.8). This was still the case during the field research conducted in April 2014. In Jordan, there is provision to establish a universal service fund. Article 86 mentions that a fund may be established to increase the universality of telecommunications and information technology services and contribute to the expansion and development of infrastructure of these services (TRC 1995:Art.86). However, this was never implemented in practice. As such, no fund has been established to cover the fees of the fixed telephony USO provider.

*Product of Diffusion*

Despite being at the core of discussions to transform USO, the Jordanian policy-makers decided not to go for mobile phones and broadband inter-

net and to remain with their system based on direct allocation to the fixed provider, JTC. The 2004 government policy mentions that universal service shall include the Basic Public Telephone Service, comprising minimum necessary standards for customers to make and receive local, national and international calls supporting speech, facsimile and data communications sufficient for functional access to internet services. Functional internet access shall be made available and be equivalent in data rate, reliability and continuity of service to that used by a majority of subscribers. This shall take into account technical factors that may limit the performance of such technologies in certain geographic locations (MOICT 2004:Art.1.5). An interesting feature of this article is that the concept of optimal technology may be determined by the TRC, hence leaving the possibility to challenge or refresh the position on USO, if needed (MOICT 2004:Art.1.5).

While the field research was being conducted in Jordan, the decision on whether to include mobile telephony and broadband internet in the USO scope was being debated. The interviewed experts from the TRC confirmed the fact that neither mobile telephony nor broadband services shall be included (Expert JO7, Expert JO8). This is surprising, as the 2011 statement of the government mentions that mobile telephony and broadband internet access should now be the basic communications services for the purpose of universal service (MOICT 2011:Art.2.6.1). Expert JO7 underlined that the decision not to include the broadband and mobile market telephony in USO was taken because "[t]he current policy definition is limiting towards USO (…) In general, current USO policies only include basic telephony services and directory services" (Expert JO7). This opinion was, however, not shared by the second USO expert. He mentioned that the USO definition as it exists could include broadband internet as well, as it gives leeway for regulators to apply it. However, the expert mentioned that the decision not to include both the mobile and broadband services in the definition was taken by the TRC and the government, arguing that such services shall result from a private choice of the consumer and not from a service provided by the government (Expert JO8).

*Process of Diffusion*

In the case of USO in Jordan, the interaction with external models is visible and almost uniquely focused on the EU. Several experts mentioned their will to follow EU legislation in the field (Expert JO6). It was evident from the interviews that frequent and institutionalised interactions exist

between the development of the Jordanian legislation and the EU model. For instance, the existence of a telecommunications twinning between the Jordanian TRC and two European NRAs was often mentioned by the TRC experts and confirms interlinkages between both regions (Expert JO2, Expert JO3). USO provisions are one of the items covered by the TRC twinning project, which illustrates the existence of an interactive policy process between the EU and Jordan.

The position of leaving mobile and broadband services to the consumer as a private choice is almost exactly the same as the EU position, where recent reviews of USO also concluded that broadband and mobile telephony shall not be in scope and shall remain determined at consumer level (European Commission 2011:6). An expert from the Jordanian MOICT says that the issue of inserting broadband services in the USO is an argument they have with the TRC; however, this expert states that "[t]his is a concern, as even in the EU, it [broadband] is not included, so why should we [include it]?" (Expert JO1). This illustrates that policy adoption in USO in Jordan is closely linked to the interaction with the EU model. The fact that Jordan is not including broadband and mobile services in the USO scope, despite discussing both possibilities, illustrates a case where policy change is deliberately not adopted, so as to remain in line with the EU. This does not mean, however, that policy adoption is not taking place. In fact, the decision by policy-makers not to adopt certain changes is also an option foreseen in policy diffusion research (Dolowitz and Marsh 1996).

### *Spectrum Management in Jordan*

Medium policy adoption is observed in the Jordanian spectrum management case. Furthermore, the focus on the EU is straightforward. Expert JO5 from the TRC mentions that Jordan follows the biggest markets in the region. He states that the TRC uses the EU to do benchmarking with regard to spectrum pricing, spectrum planning, allocation and licensing practices. In that regard, the ITU allocation of similar bands in ITU Region 1 pushes the TRC to look at the EU models and technologies, rather than the US (Expert JO5). Technological neutrality has been included in the licence since 2007. Concerning the question of spectrum trading, the policies include them but technologically the country is not yet capable of implementing such a policy fully. Thus, the process of diffusion is observed in this case, but the product of diffusion is less clear.

Spectrum provisions are included in chapter V of the Telecommunications Law No. 13 (TRC 1995). The MOICT enables the TRC to prepare the national plan for frequency allocation and national register of frequency assignment. Spectrum is described as a national resource, the use of which shall be regulated by the TRC in accordance with the law. It further specifies that the TRC prepares the tables, plans and registers that are necessary for this purpose (TRC 1995:Art.30). By contrast with its USO policies, Jordan has had an avant-gardist focus on its spectrum management since the early 2000s. The 2003 Policy Statement launched the National Broadband Network and the e-government programme (MOICT 2011). It was followed by the 2007 Policy Statement on unified licences and reviewed market dominance. The number of telecommunications licences rose and wireless operators received additional spectrum (MOICT 2011:6). In 2011, a government statement promoted the development of quantity and quality of service, underlining the key role of spectrum to improve the development of the telecommunications market (MOICT 2011:Art.2.5.3). The statement foresees that the TRC uses market-based evaluations for spectrum, such as auctions and administrative incentive pricing. The TRC is also entitled to take prompt, but proportionate, steps to investigate interference complaints, stop illegal spectrum use and address other interference issues (MOICT 2011:Art.2.5.3).

Spectrum management in Jordan is also closely linked to military control, even if the country is a remarkable supporter of competition in the field. In fact, the 1995 Telecommunications Law No. 13 mentions that no stakeholder may use any electromagnetic waves below 3000 GHz transmittable in space without obtaining a licence. However, the Jordanian Armed Forces and Security Departments, in coordination with the TRC, may use radio frequencies allocated and assigned for their use without a licence (TRC 1995:Art.31). The 2013 National ICT Strategy also mentions that a review of spectrum use shall include from October 2016 an agreement with the military on how to make use of freed spectrum in specific cases. The agreement shall define the circumstances and duration of when spectrum can be recovered by the military (MOICT 2013:28). This delineates a notable weight of the military in spectrum allocation.

*Product of Diffusion*

Both technological neutrality and spectrum trading have been mentioned and underlined in a series of government statements and policies (MOICT 2007; MOICT and TRC 2008). The 2007 Statement of Government

mentions that the TRC adopts wherever possible advanced spectrum management principles, including a technology- and service-neutral approach to spectrum, spectrum reuse and spectrum sharing (MOICT 2007:Art.68f). It also mentions that the TRC awards spectrum according to market demand, using auctions and possible secondary trading when appropriate (MOICT 2007:Art.68j). An expert from the TRC mentions that Jordan is in line with the ITU and neighbouring countries and has acquired modern spectrum management tools (Expert JO4). The 2013 National ICT Strategy further states that spectrum management needs to be reviewed starting in July 2014, to develop the use of advanced spectrum management principles including spectrum reuse, spectrum sharing and the potential for secondary spectrum markets (MOICT 2013:28). This shows that the Jordanian spectrum management policies are dynamically managed and in line with international practices in the sector.

However, some experts from the corporate sector deplore the fact that the TRC and the MOICT do not sufficiently implement their regulation in practice. The expert from Zain, for instance, mentions that the TRC and the government are committed to implement technological neutrality, but this was not respected in practice, forcing the companies to purchase more bands for diverse technologies (Expert JO9). This expert argues that if this has been the case so far, it is because the government gets higher fees for selling new bands than for implementing technological neutrality on the existing allocation (Expert JO9). This shows a discrepancy between regulation provisions in theory and practice. Jordan is aligned in terms of policies, but shows limitations in implementing certain policies.

Effectively, Expert JO5 of the TRC mentions that even if they do discuss white spaces and reframing, the technical context does not allow the implementation of such regulatory options. He further confirms that technological neutrality is not applied consistently in Jordan and will probably not be implemented soon, as it depends on how intensely the operators would lobby in this direction, which does not yet seem to be the case. To him, this can be explained because of the size of the Jordanian market, which is relatively small and thus not creating sufficient spectrum shortage to expect strong lobbying from the corporations (Expert JO5). Limitations due to a slight technological delay are also visible in the case of the digital switchover, which has not yet taken place in Jordan and thus no liberation of more bandwidth has been possible so far. Nevertheless, the 2013 National ICT Strategy mentions that starting from January 2015 and for a duration of six months a spectrum review shall be

implemented to identify what additional spectrum could be freed up by switching to digital transmission (MOICT 2013:28), showing commitment by Jordanian policy-makers to advance the sector technically.

*Process of Diffusion*

In spectrum management, as expected, policies develop based on strong interactions with various partners, for example, neighbouring countries (because of interferences), international frameworks (such as the ITU) and regional partners (such as the EU). One of the heads of the TRC reiterates the "internationality" of spectrum: "[t]he [Jordanian] planning is in line with the ITU and in coordination with the neighbouring countries" (Expert JO4). Additional attention is drawn towards the EU, as a key benchmark, due to its technical expertise and market dominance. Expert JO5 from the TRC mentions that Jordan has to follow the biggest markets in the region, as it makes more sense from a technological and also geostrategic point of view. This expert mentions that the TRC does benchmarking with the EU in the spectrum management area, in particular concerning spectrum pricing, spectrum planning, allocation and licensing practices. This expert mentions that "[w]e get the most useful information from the EU, because we are allocated into the same ITU Region 1 and the technologies we use originate from the EU, such as GSM, UMTS. It makes more sense to follow the EU rather than the US in this aspect" (Expert JO5). In this case both regulatory options, technological neutrality and spectrum trading, are included in Jordanian policies, despite a delay in implementing them efficiently. Furthermore, it appears that the EU's role in spectrum management is largely dominant.

Table 6.1 summarises the product and process findings for each subsector and regulatory option. It shows that policy adoption has taken place in Jordan. By adding the results of the product and process for each of the

**Table 6.1** Observation of policy diffusion in Jordan

| | *Regulatory option 1* | | | *Regulatory option 2* | | | *Total (both options)* |
|---|---|---|---|---|---|---|---|
| | *Product* | *Process* | *Total 1* | *Product* | *Process* | *Total 2* | |
| Jordan: USO | + | + | + | + | + | + | + |
| Jordan: Spectrum | ± | + | ± | ± | + | ± | ± |

Notes: + high policy adoption; ± medium policy adoption; – low policy adoption

regulatory options, the Jordanian cases show a high level of adoption for USO and medium level of adoption for spectrum management. Thus, it is possible to discuss the second step of the framework of diffusion (i.e. the mechanisms of diffusion) in both cases.

## State-Level Conditions of Diffusion

Under what conditions did policy diffusion take place in Jordan? The Jordanian government shows a commitment to be part of the international community. It followed structural adjustments quite thoroughly, but economic growth did not take place as expected and the state remains involved in the economy and society. Nevertheless, regionally, Jordan championed the implementation of regulatory adjustment measures, such as delegation and privatisation, which is illustrated by high scores in governance and market openness. Furthermore, its economic and political system is based on rentier features, and its role as a buffer state in an unstable area has created a country strongly vulnerable to external countries, notably from the European and Gulf regions, which explains high scores for interconnectedness. Jordan gradually intended to wean itself off reliance on economic rent. The re-orientation of the economy has brought about an increase in exports. Nevertheless, despite large investments in education and welfare, the country still suffers with structural difficulties, such as high unemployment rates, in particular among the young and better educated (Rivlin 2013:155). Table 6.2 illustrates state-level conditions in Jordan. Here, high vulnerability to external actors is observed, as measured by high levels of governance and market openness and political and market interconnectedness (Hypotheses H1–H4).

Jordan embarked on a process of state-building later than countries such as Egypt. Its independence in 1946 was constructed on an artificial base (Ayubi 1995:367). Many of the state-led decisions and industrial

**Table 6.2** State-level conditions of diffusion in Jordan

| *Governance openness* | *Market openness* | *Political interconnectedness* | *Market interconnectedness* | *USO* | *Spectrum* |
|---|---|---|---|---|---|
| + | + | + | + | + | ± |

Notes: + variable is present; – variable is absent. For USO and spectrum: + high policy adoption; ± medium policy adoption; – low policy adoption

programmes were thus taken with the purpose of creating the basis for a functional state (Brand 1992:168; Chatelus and Schemeil 1984). Since independence, Jordan has had to juggle with small resources and a relatively heterogeneous population in a generally unstable area. With a central location at the heart of the Middle East and its role as a relatively stable country in the midst of the regional instability, Jordan soon embraced a role as a buffer state in the eyes of the international community (Vivekanand and Kollar 1997:157).

### *Governance Openness*

Jordan scores higher than the MENA average in governance openness. This shows that the government implemented measures of delegation and regulatory organisation efficiently, describing a high degree of openness to external influence. Jordan, like Morocco, underwent IMF-imposed structural reforms in the 1980s. Jordan has traditionally been viewed as a free-market economy, which did not follow the Arab-socialist or state-capitalist experiments of the 1950s and 1960s, despite the marked role of the state (Brand 1992:170). This does not mean, however, that the government has had a limited role in the development of the country. On the contrary, most Jordanian industrial activity has been initiated by the government (Ayubi 1995:367; Choucair 2006). Nevertheless, following the structural reforms of the 1980s, Jordan saw the emergence of new generations of politicians focusing on competition and technologies to develop the country. Jordan implemented delegation and decentralisation measures quite thoroughly, which was recognised by the international community as an exemplary way to implement structural measures (El-Said and Harrigan 2014). These measures include regulatory organisation, which is here observed with a higher level of governance openness than the regional average.

### *Market Openness*

Jordan also scores above the MENA average in market openness, paralleling the governance openness variable. Here as well, the changing economic orientations of the early 2000s, following the structural reforms, coincided with a turning point in governance. The accession of power by King Abdullah II in February 1999 paved the way for a series of reforms aimed at strengthening the economy, increasing employment and reducing

poverty (El-Said and Harrigan 2009; Zakharova 2004). However, while King Abdullah II pushed for reforms in a variety of sectors, opposition was strong against certain measures—undermining the interests of groups close to the monarchy. The result has been government control of the privatisation programmes and the sale of public companies to strategic investors with close ties to the palace and often with a link to security establishments, similar to what happened in Egypt and Morocco (Choucair 2006). Jordan nevertheless is often considered as a champion for the implementation of structural adjustment measures, notably the implementation of liberalism and market measures (El-Said and Harrigan 2014), which lead here to a higher level of market openness than the regional average.

### *Political Interconnectedness*

As with the openness variables, Jordan scores higher than the MENA average in political interconnectedness. Jordan shows strong rentier economy features, which are directly linked to political interconnectedness. The structure of the economy in Jordan differs from that of Egypt and Morocco in several ways. Balancing a process of state-building and a key role as a buffer state under close scrutiny of the international community has been a difficult exercise for Jordan. Foreign policy and economic development have been closely connected and Jordan has developed a system based on the extraction of rent from the international system, mainly in the form of economic and military aid from Western Europe, the US and Japan (Rivlin 2001:113). Jordan is a rentier economy, which means that most of its income originates from outside the country and not domestically. As it is a relatively small economy, built on a narrow productive base, it is heavily dependent on foreign aid and the remittances of Jordanian citizens working abroad, notably in Gulf countries, for its growth (Alon 2010). The rentier system renders Jordan vulnerable to regional and international economic and political developments, particularly in the neighbouring Gulf countries (Luciani 2013). This is illustrated here by a higher level of political interconnectedness than the regional average.

### *Market Interconnectedness*

Finally, market interconnectedness is equally high, mirroring the general trend for Jordan. It shows the high level of reliance on FDI for domestic

growth and embodies the excellent reputation of Jordan in terms of commitment to the international community. The increasing debt burden of Jordan led it to call in the IMF and negotiate a structural adjustment programme in 1988, which resulted in a series of policies of privatisation, trade liberalisation and reduction of public debt. This caused unrest in parts of the country due to increasing prices (Brand 1992:167; Ryan 1999:666; Westrup and Al-Jaghoub 2007:11). In this disruptive context, in a similar way as with Egypt, several privatisation policies of joint private–public ownership were implemented to ensure political cohesion in Jordan. Nevertheless, by 2005, Jordan was considered as an excellent example of how a country can develop using the assistance of the IMF (El-Said and Harrigan 2014; Piro 1998; Westrup and Al-Jaghoub 2007:12). Since the early 2000s, Jordan has made noticeable steps to adjust to international commitments by following the IMF and World Bank policies and by joining the WTO and entering into Free Trade Agreements (FTAs) with both the EU and US (in 2001 and 2000 respectively). FDI has increased in consequence. This is illustrated here by a higher level of market interconnectedness than the regional average.

The higher levels of market interconnectedness correspond to the general tendency of Jordan presenting higher degrees of all four variables. This is in line with the assumption that Jordan is more vulnerable, in terms of openness and interconnectedness to external countries, and likely to adopt policies that originated externally. Following the observation that policy adoption takes place in Jordan in a clear and straightforward manner, this confirms Hypotheses H1–H4 (H1 *governance openness*, H2 *market openness*, H3 *political interconnectedness* and H4 *market interconnectedness*), which assume that policy adoption is more likely to take place in the presence of higher levels of openness and interconnectedness.

## Sector-Level Mechanisms of Diffusion

How is policy diffusion taking place in the Jordanian case? Medium to high policy adoption is observed in both Jordanian USO and spectrum management policies. As such, the second step of the framework focusing on diffusion mechanisms can be further analysed. The Jordanian USO case corresponds to imitation, that is, limited domestic salience, coupled with limited international salience and no external sanction capacity. It appears that Jordan copies what the EU does in the field. In this case, the policies are inadequate for the Jordanian context and have no practical

**Table 6.3** USO and spectrum management in Jordan

| | *Domestic salience* | *International salience* | *Sanction capacity* | |
|---|---|---|---|---|
| USO | – | – | – | Imitation |
| Spectrum | – | + | + | Coercion |

Notes: + variable is present; – variable is absent

effect on the current situation. This case seems to suggest that USO is an ideal case for Jordan to show support for the EU regulatory model, without having to go through costly policy changes. The Jordanian spectrum case corresponds to the mechanism of coercion, that is, limited domestic salience, coupled with international salience and the presence of sanction capacity. It appears that Jordan implements international and regional laws, since it is a country that follows what is being done in the sector. It does not have the power or commitment to challenge external systems and thus adopts policies without implementing them fully. Table 6.3 summarises the situation for Jordan.

### *Universal Service Obligation: Imitation*

*Domestic Salience*

In the Jordanian USO case, domestic salience is visible yet limited. While the USO regulation foresees a review of the USO policies every four years, it appears that almost no change to the policy has been undertaken. Yet, the policy seems largely obsolete and outdated. In Jordan, the USO based on fixed-line and functional internet is not adequate, as fixed telephony is losing market share and households are increasingly relying on mobile services only (ITU 2014). Several experts in Jordan mention that USO policies are ill-suited. Expert JO8 from the TRC mentions that the Jordanian USO system is actually too old (Expert JO8). Thus, the question arises why fixed telephony is still the focus. Expert JO8 mentions that even if the fixed infrastructure covers the whole country, it is not used in many areas, because of the preference for using mobile services. The fact that fixed telephony is getting less and less popular represents for this expert a reason actually not to change anything in the policy (Expert JO8). The ill-suited policy has in fact almost no implications for the telecommunications landscape in Jordan.

The lack of interest by policy-makers in adapting the policy is also clear, as the domestic corporate sector questions the existence of the USO system. An expert from the Orange Group, of which the USO provider is part, mentions that in Jordan a universal service fund does not exist, which means that all USO costs are borne by JTC/Orange fixed. This expert deems the situation unsatisfactory and wishes for the imitation of other models, notably creating a fund or organising tenders, that is, similar to Morocco (Expert JO10). The other two mobile phone companies in Jordan, however, rather than supporting the creation of a fund or tenders, advocate for the complete withdrawal of USO policies. Expert JO11 of Umniah argues that as fixed telephony is decreasing and not used in its whole capacity, no USO policy is actually *needed* (Expert JO11). Another expert from the phone company Zain mentions that USO in Jordan is old fashioned. It should be annulled and overlooked (Expert JO9). The fact that competition in mobile services is sufficient to provide telecommunications services to the whole population is also underlined by the MOICT. Nevertheless, to the MOICT, the inadequacy of a USO based on fixed services, compared to a thriving mobile sector, justifies keeping the status quo (Expert JO1); hence confirming the limited domestic salience in this case.

*International Salience and Sanction Capacity*

There is also no sign of international salience or of sanction capacity. No international framework exists delineating the scope and content of USO policies that domestic countries should adopt. Unlike with spectrum management, USO is not a sector where transnational coordination needs to take place for the efficient use of the resource. Jordan gets its influence from Europe. Its USO decisions are closely linked to the EU's position in the sector (i.e. no inclusion of mobile or broadband technologies in the scope of USO). Nevertheless, this does not represent a situation of transnational dependence. The EU model is a source of influence; however, the existence of a specific EU model does not impact the quality of the Jordanian model and vice versa.

In fact, the Jordanian USO case shows an interesting situation where Jordan adopts EU policies in the field, without needing to do so. This is even more striking as the EU policies seem inadequate to the Jordanian context. Furthermore, there is no leverage from the EU to enforce such adoption. This delineates a situation of voluntary imitation by Jordan of the EU model. This is illustrated by the 2010–2013 TRC twinning

project. Jordan committed to implement EU policies based on a close collaboration with the Italian, French and Spanish NRAs, with EU's financial support of EUR 1.4 million (European Union and Hashemite Kingdom of Jordan 2010:19). The TRC twinning aimed at supporting "the development of the Jordanian Telecom sector in regards to telecom market, competitive environment and quality and quantity of telecom services" and achieving a "regime compatible with the EU regulatory framework," including universal services and spectrum management (European Union and Hashemite Kingdom of Jordan 2010:7).

The fact that twinning projects are financed by the EU and are conducted by EU NRAs may indicate that there is a certain level of constraint on Jordan to achieve these EU-oriented goals. However, twinning projects are based on the commitment from the recipient country. They do not represent an external imposition, but a voluntary engagement by Jordan to engage in policy changes following a specific model, in this case the EU's. This confirms the Jordanian commitment to approximate what the EU does. This is specifically the case with the development of USO policies, which represent a largely non-controversial issue, with only limited costs to apply the regulation (Wavre and Freyburg 2017). Rule adoption, following the mechanism of imitation, may here serve as a signal to support EU–Jordan cooperation. The absence of domestic and international salience, without sanction capacity, attests to policy diffusion following imitation mechanisms.

### *Spectrum Management: Coercion*

*Domestic Salience*

Domestic salience is visible, yet limited. While policies and regulatory actors underline the efficiency of the Jordanian spectrum system, it appears that there is no necessity to challenge the status quo as spectrum is not domestically crowded. The lack of implementation of existing policies and the lack of interest from regulatory authority and corporations alike to challenge the status quo demonstrate that the sector is functional as it is, without implementing technological neutrality and spectrum trading fully. There is no pressure domestically to gain spectrum efficiency, since the country does not suffer spectrum scarcity. Expert JO6 mentions that "[t] here is no shortage, it is always ready and available" (Expert JO6). Confirming this position, Expert JO9 of Zain, one of the three mobile

phone providers of Jordan, mentions "[w]e discuss reframing, white spaces, digital dividend, spectrum trading. Luckily in Jordan, we do not have shortage, and this is not really the problem" (Expert JO9). The issue of spectrum shortage is very different from the situation in Europe, where DTTB represents a clear source of available spectrum to be freed. In Jordan the switch to DTTB has not yet been achieved, which might in part be explained by its non-prioritisation by policy-makers and corporations alike. It appears that Jordan adopts policies regarding white spaces or digital dividend only because it is something being done in the ITU or in the EU, but it is not really needed domestically, and it is not domestically applied.

*International Salience*

International salience is, as expected, central to spectrum management. One of the heads of the TRC mentions that spectrum management is an international issue and that the ITU plays a very important role in this case (Expert JO4). Most Jordanian policies are in line with international standards, as required by the ITU and the ITU Region 1. Expert JO4 mentions that "[t]he planning is in line with the ITU and in coordination with the neighbouring countries" (Expert JO4). One of the heads of the TRC mentions that Jordan is fully harmonised with the ITU directives. He mentions that Jordan is in line with the ITU requirements and neighbouring countries and that its policies are generally up to date (Expert JO6). Expert JO6 mentions that "[w]e participate in all activities related to the spectrum. We do believe that we have a very efficient spectrum management in Jordan" (Expert JO6). Hence, Jordan is aware of new management techniques and has included them in the policies, at least informatively. Nonetheless, the Jordanian experts mentioned the difficulty for the country to apply new regulatory management techniques, as long as the digital switchover has not been concluded allowing for the liberation of more bandwidth (Expert JO5).

*Sanction Capacity*

More importantly, the Jordanian case shows the limited leeway to implement its own policies, illustrating a case of sanction capacity. Several experts mention power struggles within the ITU. The expert from Umniah describes the relationship with the EU as forced. He mentions that "[w]e are forced to do in many cases, what the EU does" (Expert JO11). For this expert, this is, however, not always undesirable if it means that the

Jordanian government's spectrum regulation gets closer to the rules of the market, as in the EU (Expert JO11). The limited leeway of Jordan to stand against dominant actors is expressed within the TRC too. Expert JO5 from the TRC mentions that Jordan is not producing technology, but they use it "[s]o we are not influencing. We can vote, but at the end we ally with the EU" (Expert JO5). He further states that in situations where the EU and MENA countries differ within the ITU, it is not always possible to implement the interest of developing countries. Major players within the EU are a lot stronger (Expert JO5). This shows the final beneficiary of the policies. Policy adoption becomes coercive here as it benefits the diffuser country, rather than the adopting country.

In the case of Jordan, a subtle power relationship within the ITU sheds light on asymmetrical interactions, where Jordan needs to apply what has been decided internationally. It suggests that the spectrum sector in Jordan mostly follows coercion mechanisms. However, this does not demonstrate a case of hard coercion. Jordanian experts mention no formal risk of sanctions. It rather concerns a more subtle form of coercion based on alliances and asymmetrical regulatory powers, which give Jordan no choice but to adopt international regulation in the field, as defined by the regional leaders, in this case the EU. The absence of domestic salience, with the presence of both international salience and sanction capacity, attests to policy diffusion following coercion mechanisms.

## Notes

1. In a subsequent exchange of emails in 2015 to clarify the situation, Expert JO3 confirmed that the Ministry of ICT (MOICT) withdrew the new Telecommunications Act, stressing that there was no need at the moment for a new law to govern the sector, and that the current law is practical as it is and adequate for the sector (Expert JO3).

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CHAPTER 7

# Egypt

In comparison to Jordan and Morocco, it is expected that the regional autonomy of Egypt would render it less dependent on external countries to conduct policy-making. Policy diffusion is expected to take place in Egypt, but to a lesser extent than in Jordan and Morocco. This is confirmed here. The diffusion of policies is less straightforward and external policy inspiration is only partial. This has a consequence for the empirical design. Since the mechanisms of diffusion framework is only functional for cases where policy adoption is clear and widespread, it cannot apply to the Egyptian USO and spectrum cases. As such, this chapter does not explore mechanisms of diffusion in domestic USO and spectrum policies. The Egyptian case is nonetheless of great interest, as it departs from the Moroccan and Jordanian ones, illustrating a case of policy stagnation between the years 2000 and 2014.

## Diffusion in the Telecommunications Sector

Telecommunications services in Egypt have seen exponential growth, as in Jordan and Morocco. Mobile phone subscriptions in Egypt rose from 1.9 per cent in 2000 to 114.3 per cent in 2014 (World Bank 2017). The Telecommunications Law No. 10 was put in place in 2003 and established the National Telecommunications Regulatory Authority (NTRA) (NTRA 2003). Developments in the telecommunications sector in Egypt have been characterised by avant-gardist policy reforms, such as the launch in



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2007 of 3G mobile services, where Egypt was the first African country to do so (NTRA 2008). Furthermore, a strong interest in Egypt arose to implement unified licences for both fixed and mobiles services[1] (Expert EG5). During the field research, nonetheless, Egypt had put the project on hold (Telegeography 2014, 2015). This also shows the weakness of the Egyptian telecommunications market, plagued by outdated policy structures, with the involvement of the state in all aspects of telecommunications services, paralysing potential reforms.

In Egypt, dynamic developments of the sector mostly took place between 1998 and 2011, illustrated by a change of political orientation. The sector found a renewed dynamism after the foundation of the 1998 ICT Ministry, by Dr Ahmed Nazif, who later became Prime Minister of Egypt in 2004 (Abdulla 2007:19; NTRA 2007:1). His cabinet was dismissed in 2011 by President Hosni Mubarak following the regional and national political turmoil and led to the stagnation of the sector until 2014. This period of change in ICT orientation (1998–2011), marked by the presence of a technocratic-enthusiast in government, was underlined in the expert interviews, notably by experts from the corporate sector (Expert EG5). While before 2011 the sector underwent several transformations, the 2011 political changes had a paralysing effect on the ongoing development of the sector.

In Egypt, the extensive role of the state in phone companies can be easily observed when analysing ownership of fixed and mobile companies. The fixed service operator is Telecom Egypt, which is majority owned by the government (Telecom Egypt 2014a). As with both Jordan and Morocco, the mobile phone market is shared by three mobile phone operators. Mobinil is the main player in the field. It received its licence in 1997 and a 94 per cent share was bought by the French Orange Group in 2012 (Mobinil 2012). The second mobile telephony player received its mobile licence in 1998 under the name of ClickGSM. A majority shareholding, 55 per cent, was bought by the British group Vodafone in 2007. The remaining 45 per cent of the company is owned by the Egyptian government (Telecom Egypt 2010:30; Vodafone Egypt 2014b). In 2006, a third mobile licence was awarded to the Emirati company Etisalat, which owns 66 per cent of the company. Furthermore, 20 per cent of the shares of Etisalat are owned by the Egyptian National Post Authority and 20 per cent by the National Bank of Egypt (Oxford Business Group 2011). Thus, in Egypt, the government is involved in two out of three mobile companies, plus the fixed-line company. This shows the potential for governmental

control in the telecommunications sector (Abdulla 2007, 2013). Nevertheless, this does not mean that policy developments cannot take place. Hence, Egypt developed its 3G band allocation earlier than other countries in the region.

### *Universal Service Obligation in Egypt…*

Policy diffusion in the case of Egyptian USO policies is low. There are signs of interaction with other models (notably the EU one), but the development and adoption of USO regulations have been limited. USO remained undefined and vague until 2014, when a call was launched to provide mobile telephony to three cities of South Sinai. Thus, since 2014, USO projects have started to be developed and implemented, but they took place after the scope of this study and hence are not used here for the analysis.

Two articles in the Telecommunications Law No. 10 mention USO. However, their scope is relatively narrow, and in both cases USO is not distinctly described. Firstly, the law states that telecommunications services shall be compliant with the provision of universal service, without detailing what is universal service and how to implement it (NTRA 2003:Art.2). Secondly, the Telecommunications Law No. 10 mentions that when granting licences, one of the obligations includes the consideration of USO (NTRA 2003:Art.25). This means that in Egypt the provisions of USO may be given to operators through the awarding of the licence, which is monitored by the NTRA. This is, however, not further described in the law. The substance of USO is to be found in the 2005 regulation[2] published by the NTRA, which focuses on implementation, funding, scope and aims of USO (NTRA 2005). To complement the 2005 USO regulation, several documents and communications are useful, such as the 2006 USO publication released by the NTRA and several NTRA webpages dedicated to USO (NTRA 2006, 2014a, 2017b). Finally, an informal summary[3] was received directly by one of the NTRA employees during the field research (NTRA 2014b).

Based on these documents, it is possible to define the scope of USO in Egypt. In some ways, these definitions are similar to EU ones. In the 2006 NTRA publication, universal service is described as a right to all citizens, with the aim of promoting political, economic and cultural cohesion leading to economic development (NTRA 2006:2). The 2005 and 2006 USO publications underline the necessity to provide basic and affordable public

telecommunications services to all citizens in economically non-feasible regions, including access to public telecommunications networks being local, national or international, including fax and data services with speed rates that allow access to the internet (NTRA 2005, 2006:2). In this context, the possibility exists to create a fund (of up to 1 per cent of the totality of the companies' revenues) to cover infrastructure projects and compensate telecommunications companies (NTRA 2003:Art.9, 2005). However, Expert EG5 of the NTRA states that while USO contributions are mentioned in the telecommunications licences they were never requested by the government due to the amount of investment the telecommunications companies were already making in the sector. This changed after 2012, when the government asked for a participation of 0.025 per cent of the revenue (Expert EG5).

However, until 2014, USO policies in Egypt had not been implemented in practice. In the early 2000s, the implementation of USO provisions was left for the NTRA to decide. The telecommunications law entitles the NTRA, through allocated licences, to detail such requirements on to designated operators (NTRA 2014b). The 2014 communication underlines that the law provides leeway to the NTRA to include a number of provisions in the licence and may potentially introduce USO for the incumbent, in this case Telecom Egypt (NTRA 2014b). Nevertheless, Expert EG5 from Vodafone confirms that in Egypt, Telecom Egypt is not the USO provider, as no such USO provider exists in Egypt (Expert EG5). This was confirmed in the 2014 communication: "unlike what happens in EU countries (…), where the regulatory framework clearly defines content, features and scope of the universal service, as well as the procedures to identify the operator who is obliged to provide it, the Egyptian law does not impose direct universal service obligation" (NTRA 2014b).

In fact, the 2014 USO call followed a completely different model to existing systems based on direct or competitive allocation. The call was framed in the context of developing three smart IT cities in remote areas of Egypt, following what had been done in the suburbs of Cairo (i.e. Giza Smart Village), where major ICT actors (including telecommunications providers, the NTRA, ICT Ministry and IT companies, such as Hewlett Packard, Siemens, Microsoft and Oracle) share joint facilities (Abdulla 2007:42; SVC 2017). The results of the call to build smart IT cities in the South Sinai Governorate and the North Sinai Governorate were published in late 2014 (NTRA 2014a). Three bids were accepted to provide mobile telecommunications services by 2016 in three areas in South Sinai: Wadi

Feran was allocated to Vodafone Egypt, Sarabeet Elkhadem to Mobinil and Wadi Soaal to Etisalat Misr (NTRA 2017b).

This type of project, which is based on infrastructure-building of smart IT cities, is not a typical form of USO and does not conform to USO policies in the European sense, that is, direct allocation, or the Latin American sense, that is, competitive allocation (Expert EU20). In Egypt, the implementation of the USO project aims at the creation of smart cities, in very specific areas, to build technological clusters (Expert EG3). An expert of the NTRA mentions that USO is not only about the connection itself but about the *ecosystem* beyond the connectivity (Expert EG3). This echoes the 2011 National Broadband strategy equally emphasising the need to analyse the requirements of the broadband *ecosystem* in Egypt (NTRA and MCIT 2011:10).

It is interesting to note that the corporate sector in Egypt did, however, not consider the call as part of a USO plan. Expert EG5 from Vodafone mentioned that the call had been specifically aimed at providing mobile phone coverage to three cities in South Sinai, without mentioning the concept of USO (Expert EG5). The misunderstanding between the corporate sector and the discourse of the NRA shows a grey area between what the NTRA wishes to achieve (i.e. an ecosystem based on smart cities) and the argument backing the project externally (i.e. provision of mobile services in three cities of South Sinai as part of USO). This may originate from a lack of communication between the corporate sector and the policy-makers and may be a consequence of several years of political uncertainty.

*Product of Diffusion*

In the Egyptian case, the USO regulatory options of mobile and broadband services are thus not adequate to analyse the development of the sector. In the conception of smart cities, technological advances and connectivity are at the core, since the objective is to create technology and business clusters (SVC 2017). It is, however, not a typical form of USO. A national focus on developing smart cities is not specific to Egypt (see Sun 2016), but it is rare to link it to USO policies in any way. In this sense, the Egyptian perception of USO does not follow the regional trends in the field. It is difficult to conclude that Egypt got its inspiration from external USO models (including from the EU), since this model departs greatly from the existing ones (i.e. based on direct allocation or competitive tendering).

*Process of Diffusion*

Nevertheless, interaction with the EU model did occur and Egyptian policy-makers decided not to put the EU model forward since it was deemed unsuitable (Expert EG3). The expert from Vodafone also mentions that Egypt is a distinctive place in terms of population, as only 7 per cent of the land is inhabited, and thus it does not make sense to insist on coverage for the whole territory, specifically not in terms of the fixed infrastructure (Expert EG5). However, in a broader perspective, as Expert EG5 from Vodafone mentions, "Egypt is only in the first years of realisation of USO projects, and it is still too early to come to any conclusion" (Expert EG5). The fact that Egypt did not implement USO until 2014 does not mean it will not launch projects in this sector in the years to come. In the frame of this study, however, the development of USO regulation remains limited.

### *Spectrum Management in Egypt*

Policy diffusion in the Egyptian spectrum management case is also limited. This is due to several factors, including the control of the military over the regulatory authority, the availability of spectrum, which does not require urgent changes in management, and the delay in technological development, which does not allow for the adoption of EU trends. In this case, it appears that Egypt is aware of trends in the field. Egypt is also in line with international standards generally. However, the domestic context does not allow for significant policy changes to be made nor is there a regulatory will to do so.

The Telecommunications Regulation Law No. 10 deals with frequency spectrum management and usage licensing, stating that frequency spectrum is a limited natural resource (NTRA 2003:Art.49). The NTRA is the entity responsible for regulating and managing all matters related to it and shall set the frequency spectrum plan in accordance with the ITU (NTRA 2003:Art.50). The focus on spectrum and the establishment of broadband in Egypt has been substantial in the last decade. In 2004, the "Broadband initiative" was launched as part of the e-access programme of the Information Society Initiative announced in December 2003 by former President Hosni Mubarak at the WSIS in Geneva (MCIT 2003; NTRA 2007:1). It was then reviewed in 2006 and 2007, focusing on continuous improvement and adjustment of the service and the liberalisation of the sector (NTRA and MCIT 2011:10). It focused on several technical and infrastructure developments, and also aimed at spreading the awareness of the benefits of broadband to the public, in a similar way as with the USO projects (NTRA 2009:5).

One of the major characteristics of the Egyptian spectrum allocation system is the role of the military. In Egypt, the Ministry and regulators co-manage the spectrum together; however, a substantial amount of spectrum is controlled by the army, which makes it difficult to reform the sector. The Frequency Regulation Committee is headed by the NTRA spectrum regulation chairman and includes state representatives (i.e. the Ministry of Defence and Military Production, State facilities, Interior, ICT) and a representative of the Radio & TV Union (NTRA 2017a). The telecommunications Law No. 10 mentions that licences shall be issued with due consideration to the requirements of the Armed Forces and National Security Entities (NTRA 2003:Art.51). The law also mentions that the NTRA shall have the right to use all means to detect unauthorised frequency in coordination with the Armed Forces and National Security Entities (NTRA 2003:Art.55). In fact, the spectrum allocation process in Egypt is strongly politicised and transparency is thus limited (Abdulla 2013:59). The expert from Vodafone confirms the army control in spectrum allocation leading to a lack of transparency and accountability in spectrum regulatory practices (Expert EG5).

In Egypt, the digital switchover has not yet taken place. However, as with Jordan, there is limited spectrum shortage in Egypt. As such, there is less pressure to change the situation domestically, as is the case in EU member states, for example. The expert from Vodafone mentions that even in the context of military control of spectrum, and the lack of efficiency of the sector, there is no real issue, due to the availability of spectrum (Expert EG5). Spectrum is reasonably available for the main Egyptian stakeholders.

*Product of Diffusion*

In Egypt, technological neutrality and spectrum trading are discussed in the context of the broadband initiative. One of the heads of the NTRA mentions that spectrum management is a very important and complex sector, which needs urgent optimisation. This expert mentions that they do look at EU topics such as spectrum trading and technological neutrality, but they need to come out with a clear strategy of what they want to do with the resources and how to manage them first (Expert EG3). Expert EG5 from Vodafone confirms that current EU concerns, such as spectrum trading or technological neutrality, are not the priority in Egypt. Instead, issues such as auctions and frequency diagnostics are still ongoing (Expert EG5). Here, technological neutrality and spectrum trading are not among the Egyptian priorities, even if they are discussed domestically.

*Process of Diffusion*

There is interaction between the Egyptian model and other models. The NTRA 2007 publication mentions that Egypt has actively participated in all ITU sectors (NTRA 2007:9). The interaction with EU models was also observed; however, the sector is paralysed for several reasons. These reasons include the close government control in the field and the general instability of the climate in the country. Expert EG5 from Vodafone deplores the fact that Egypt is not following international agreements as it should. He mentions that "[w]e have been members of the WTO for years and we have obligations to deregulate the market, but we are now nine years late" (Expert EG5). For several experts of the Egyptian telecommunications sector, however the paralysis with spectrum policies is not due mainly to army control or the availability of spectrum but to the quality of infrastructure, which cannot cope with newer technologies. Expert EG5 mentions that to rent the infrastructure they pay ten times more than in the Netherlands and the service is minimal (Expert EG5). In this case, state monopoly is a problem in terms of infrastructure provision and may slow down policy changes (Expert EG5). Hence, government control in the field, linked with the general instability in the country and technological delay, has created the conditions for policy stagnation. Nonetheless, Egypt is a country with capacity to develop innovative reform (e.g. there is ongoing discussion to develop unified licences). Furthermore, the expert interviews revealed their commitment to proceed to the digital switchover by 2016. This is important as experts underlined the need to develop the infrastructure (i.e. the domestic backbone) to absorb the whole capacity of bandwidth and enlarge plans of broadband connection (Expert EG3).

Table 7.1 summarises the product and process findings for each subsector and regulatory option. It shows that policy adoption has taken place in Egypt. Nevertheless, adding the results of the product and process for

**Table 7.1** Observation of policy diffusion in Egypt

| | *Regulatory option 1* | | | *Regulatory option 2* | | | *Total (both options)* |
|---|---|---|---|---|---|---|---|
| | *Product* | *Process* | *Total 1* | *Product* | *Process* | *Total 2* | |
| Egypt: USO | – | ± | – | – | ± | – | – |
| Egypt: Spectrum | – | ± | – | – | ± | – | – |

Notes: + high policy adoption; ± medium policy adoption; – low policy adoption

each of regulatory options shows that the Egyptian cases have a low level of adoption for both USO and spectrum management. In consequence, it is not possible to discuss the second step of the framework of diffusion (i.e. the mechanisms of diffusion) in both cases. Hence, it is necessary that policy adoption has been straightforward (i.e. medium and high level of policy diffusion) in order to analyse how it took place. For both the Egyptian cases, only the first step of the framework (i.e. conditions of diffusion) is further discussed.

## State-Level Conditions of Diffusion

Under what conditions did policy diffusion take place in Egypt? Egypt is one of the largest MENA countries in terms of both population and economy. Throughout the twentieth century it was an example of avant-gardist institutional trends, such as bureaucratic expansion, trade and liberalisation (Ghoneim 2012). Nevertheless, the economic restructuring and privatisation efforts undertaken by the government in the 2000s did not live up to their promise and left Egypt languishing in a complex decade, which would be marked by phases of political and economic turmoil and paralysis. Egypt nonetheless remains a regional economic and political heavyweight (Rivlin 2013). It thus represents a case with less dependence on external actors than does Jordan. Table 7.2 illustrates these expectations. Egypt shows low levels of governance and market openness and political and market interconnectedness. This is in line with the previous findings, which concluded that policy diffusion is not taking place extensively in the telecommunications sector in Egypt (Hypotheses H1–H4).

The influence of Egypt in the MENA region since its independence in 1956 has been extremely important. Egypt had a key role as a political and economic leader in the MENA area as it supported the idea of a grand Arab Nation. In the 1950s and 1960s, it embodied the growth of the

**Table 7.2** State-level conditions of diffusion in Egypt

| *Governance openness* | *Market openness* | *Political interconnectedness* | *Market interconnectedness* | *USO* | *Spectrum* |
|---|---|---|---|---|---|
| – | – | – | – | – | – |

Notes: + variable is present; –variable is absent. For USO and spectrum: + high policy adoption; ± medium policy adoption; –low policy adoption

public sector and became the architect of the non-aligned movement, being the leader of a bloc of independent nations detached from both the North Atlantic Treaty Organization (NATO) and Warsaw Pact (Osman 2011:59; Rivlin 2013:95). Nevertheless, a suffocating bureaucracy contributed to the failure of the Grand Arab Nation project and led to a strategic re-orientation from the 1970s to the 2000s from the Soviet Union to the US doctrine (Osman 2011:77–79; Sluglett 2013). This realignment with the Western partners caused regional mistrust in Egypt and marked an intense regional switch of powers in the region. Nevertheless, from the mid-1970s, Egypt became a leading country in the Arab world experimenting with economic liberalisation and privatisation.

### *Governance Openness*

Egypt scores below the average level of MENA countries for governance openness, which underlines a strong tendency to keep power in the hands of a small number of key actors. In Egypt, regulatory and political power is particularly centralised with the political and military elite (Rivlin 2013). The current president, Abdel Fattah el-Sisi, is a former military chief, as have been several other presidents before him, including Hosni Mubarak, who was overthrown in 2011. In fact, if it is true that Egypt was the first country to start regulatory reforms, it was not the first one to implement them and it took almost two full decades for the process of restructuring and privatisation to be achieved (Ayubi 1995:339). Despite the country being a champion in initiating reforms and restructuring, the predominance of the state in Egyptian social, economic and political sectors has remained deeply marked, with the state following decentralisation and delegation purposes for its own sake (Ayubi 1995:340; Rivlin 2013:95). This shows a continued dominant role of the state, where delegation has not necessarily involved a retreat from the government, but a reshaping of its influence, which is here observed to have a lower level of governance openness than the regional average.

### *Market Openness*

Here again, Egypt scores below the MENA average. This is also expected due to a stronger hold over the market by a few parties in comparison with more liberal countries, such as Jordan. In a similar way as with Morocco and Jordan, the implementation of structural reforms in Egypt was accom-

panied by the fear of political risks involved with radical restructuring (Ayubi 1995:346). In fact, the reforms of the 1970s were defeated by food riots in 1977 and have affected Egyptian policy-making ever since (Rivlin 2001:101). Furthermore, in Egypt, former military and intelligence officers remained very close to the policies of the Infitah or "opening up," securing their role in the Egyptian state and economy (Marshall 2015). The promise of the emergence of a new upper class of merchants remained empty. Regime insiders (e.g. leading figures, political allies and friends) did extremely well, in a manner resembling the nomenklatura privatisations of the former Soviet Union, where insiders closely connected to the state apparatus gathered most of the benefits (Loewe 2013; Osman 2011:137). The price of maintaining the regime in power included expanding favours to the business, military and political classes, under a vast system of patronage, which heavily blocked private initiative in the 2000s (Rivlin 2013:117). This is illustrated here by a lower level of market openness than the regional average.

### *Political Interconnectedness*

Following the trend of both previous variables, Egypt scores below the MENA average in political interconnectedness. This is expected, as Egypt enjoys a stronger autonomous base than countries such as Jordan, and thus is less reliant on external countries, including for foreign aid, rent and labour remittances. Nevertheless, Egypt presents some features of rentier economies: oil revenues, the Suez Canal dues, remittances of Egyptians abroad, tourism and foreign aid are all forms of rent, which do not originate from the country's own productivity (Osman 2011:140). Furthermore, in the 1990s, Egypt was, unusually, forgiven debt,[4] which is sometimes argued to be a form of rent (Hinnebush 1993; Richards et al. 2013:249; Rivlin 2001:67–68). Nevertheless, the debt write-offs represented timely support from the Western community, and on average Egypt relies less on foreign aid for its domestic growth than countries such as Jordan. This is illustrated here by a lower level of political interconnectedness than the regional average.

### *Market Interconnectedness*

In this case again, Egypt scores below the MENA average. This result mirrors that of the three other variables, illustrating how Egypt is less vulner-

able, in terms of openness and interconnectedness, to external countries for its own development than is, notably, Jordan. FDI in Egypt is lower than in other regional countries, showing a lower level of market interconnectedness. In the 1990s, Egypt's economy underwent drastic reforms with the hope of combating high unemployment, fiscal and trade deficits. Egypt's economy did not, however, perform to expected levels. Following the years of privatisation from 1991 to 2004, Egypt engaged in reforms, with a new technocratic government put in place under President Hosni Mubarak. This produced a short recovery of economic reforms and success, notably with the deflation of the Egyptian pound that increased exports in 2003 (World Bank 2004). Nevertheless, Egypt has been less successful in attracting FDI than other countries in the region, which is illustrated here by a lower level of market interconnectedness, than regional average.

Therefore, since the 2000s, despite the economic restructuring and privatisation efforts undertaken by the government, Egypt has entered a complex decade, which has been marked by phases of political and economic turmoil and paralysis. The Egyptian case shows similarities to the Jordanian and Moroccan ones, in that adjustment measures and the liberalisation and privatisation of the economy occurred at similar periods. However, in the case of Egypt, the state remains closely involved in the economy. The processes of delegation, liberalisation and privatisation have been slow to be implemented, which is illustrated here by low levels of openness and interconnectedness.

Egypt thus presents lower levels of all state-level conditions compared to Jordan. As expected, Egypt was less likely to develop domestic policies that originated externally. This is confirmed in this study, where policy diffusion was low in both USO and spectrum management. Thus, in the case of Egypt, the second step of the framework, which develops the mechanisms of diffusion, cannot be explored. Egypt here represents a case of policy stagnation between 2000 and 2014. This does not mean that the country is not capable or willing to transform its policies, but it illustrates a period where policy changes have only been limited.

## Notes

1. A unified licence for both mobile and fixed phone services permits the licensee to offer a full range of services, via any technology platform. Ideally, in such cases, the spectrum allocated could be used for different services by

the same phone company. This change in authorisation regimes is notably due to the convergence of fixed and mobile services and technological advances, which have eroded traditional market boundaries. Neutrality and flexibility in authorisation regimes have become central to licensing (World Bank 2011:204). Unified licences are likely to produce a rebalancing of phone companies in Egypt. Once the unified licence is established, Telecom Egypt will be capable of competing with the three existing mobile phone companies, thus rebalancing the profits and market strategies of all existing stakeholders.

2. This regulation is published in Arabic and no official translation is available. Hence it was translated by a bilingual academic researcher specifically for the use of this research (NTRA 2005). It is available upon request.
3. It is available upon request.
4. More than USD 2 billion was written off in the 1990s (World Bank 2015). The Egyptian debt write-offs have been argued to be a political act by Western donors to reward Egypt for the Egyptian support for Kuwait and Saudi Arabia following the Iraq invasion of Kuwait (Rivlin 2001:67–68).

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CHAPTER 8

# Morocco

Morocco represents an intermediary case in between the two opposing sides of policy diffusion: the Jordanian case (i.e. high policy diffusion) and the Egyptian case (i.e. low policy diffusion). Policy diffusion is actually confirmed in the Moroccan case, as with the Jordanian case. It is high in the USO case and medium in the spectrum management case. Nevertheless, the Moroccan cases follow a different logic to that of Jordan. The Moroccan USO model illustrates a case of learning. It appears that while Morocco gets inspiration for its telecommunications policies from the EU, it is also strongly influenced by other non-EU countries, notably from Latin America. The development of USO policies based on the Peruvian example is a case for external non-EU inspiration that led to regulatory change. The Moroccan USO model even leapfrogs what has been done in the EU, by adopting competitive allocation based on a series of services including mobile and broadband technologies (Wavre and Freyburg 2017). Furthermore, in spectrum management, Morocco shows commitment to implement regulation on equal terms with the EU member states. This is illustrated here by a case of competition. Whereas the Jordanian cases showed the proximity of the Jordanian and EU models, the Moroccan cases show a will for emancipation from the traditional partner (here the EU).



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## Diffusion in the Telecommunications Sector

In Morocco, as in Egypt and Jordan, the telecommunications sector and the mobile phone subsector have experienced a thriving growth in mobile phone subscriptions, from 8.1 per cent in 2000 to 131.7 per cent in 2014 (World Bank 2017). Morocco's focus on ICT can be traced back to the late 1990s and early 2000s. In 1997, the main review of the telecommunications law was adopted. The Telecommunications Law No. 24-96 was then modified and completed so as to follow the advances of the sector (notably in 2001, 2004, 2007); further modifications were incorporated with punctual changes in 2011 and 2013 (ANRT 2011, 2013; MINCOM 2007).

Since the late 1990s the Moroccan ICT sector has received strong governmental support, including the creation of a sophisticated NRA. It developed to become a diversified and modern telecommunications network (ANRT 2010; Gentzoglanis 2003:94). In Morocco, this support coincides with a change of government leadership, in a similar way as with Jordan. King Mohammed VI succeeded his father King Hassan in 1999. His aspiration to develop ICT and commitment to liberalisation reinforced the growth of the sector (ANRT 2004). For instance, 2001 became a thriving year for the sector in Morocco, with the organisation of the E-Maroc Symposium in April, and the sale of 35 per cent of Maroc Telecom to Vivendi, a French conglomerate (ANRT 2004; Ibahrine 2004). The ANRT confirmed the "irreversibility" of the ICT development in Morocco to meet its full potential in a technologically booming and competitive international context (ANRT 2004).

Morocco has three mobile phone providers, as do Egypt and Jordan. Maroc Telecom, also known as Itissalat al Maghrib (IAM), is the incumbent operator. It was fully owned by the state until 2001 and operated in fixed line until the late 1990s. It started operating in mobile telephony in 1994 (ANRT 2007b). The second GSM licence was awarded in 1999 to Meditel, the second mobile operator (ANRT 2007a). A third licence was awarded to Wana (later known as Inwi) in 2006, in an effort to develop the telecommunications sector (ANRT 2004; World Bank 2014:129). The three operators were awarded 3G licences in 2006. In March 2015, the result of the call to award three 4G licences was released (ANRT 2015a, b). In fact, the Moroccan telecommunications sector since the early 2000s has developed at a similar pace to the European member countries. Morocco's attribution of 4G licences followed closely that of

other EU member states, such as France in 2011 (ARCEP 2011) and the UK in 2013 (OFCOM 2013). Furthermore, the decision to meet its regulatory commitment to the GE06 and turn off all terrestrial signalisation by 17 June 2015 (MINCOM 2015) illustrates the importance to Morocco of showing international competences and commitment to improve the sector.

### *Universal Service Obligation in Morocco*

High policy adoption is observed in the Moroccan USO model. In this case, the influence of the European model was observed. Nevertheless, this empirical research shows that other models were also discussed, such as the Peruvian one. In addition, it was made clear in the interviews that the Moroccan USO model had been modelled and shaped according to Moroccan needs and capacity. The USO model in fact includes both mobile telephony and broadband internet as opposed to the EU model. It is described by most Moroccan experts included in this research as an efficient mechanism adapted to the Moroccan context. Hence a focus on performance is apparent. It can be observed that policy adoption has taken place in this case, but it has not led to a convergence of policies with those of the EU, but to an adapted model based on different influences to fit the Moroccan context.

In Morocco, the USO provisions are mentioned in the Telecommunications Law No. 24-96 of 1997. They are defined in the first chapter (which defines terms used in the law) as a minimum telecommunications service consisting of standard quality to an affordable level. It further mentions that USO provisions shall be included in the licences of the incumbent (MINCOM 2007:Art.1.21). As such, at the launch of the 1997 Telecommunications review, Maroc Telecom, the incumbent fixed operator, was directly designated as the USO provider at national level.

However, this model based on one sole USO provider was soon reviewed and amended after it was realised that it was inefficient. An expert from the ANRT mentions that when liberalisation took place in Morocco in 1998, the ANRT realised that operators were covering the urban zones, which were the most profitable (Expert MO3, 2014; MINCOM 2007). Hence, Morocco changed its USO policy in 2004 and published Guidance Notes on USO in 2006 (ANRT 2006). Morocco decided to introduce a "pay or play" mechanism where operators may either contribute to a fund, managed by the Ministry of Finance, or they can participate directly in

projects developed by the ANRT, or the corporations themselves, and identified by the ANRT as eligible to implement USO. According to Expert MO5 from the ANRT, the Moroccan "pay or play" mechanism gives the choice to operators to decide on their actions, without going through a system of direct allocation.

In addition, the Moroccan USO policy created a special committee to supervise the USO programme. It is chaired by the Moroccan Prime Minister and consists of ministerial representation, including the ministries of telecommunications, interior affairs, finances, territorial planning and national defence. In addition, the President of the USO department at the ANRT and the General Director of the ANRT have a consultative voice (MINCOM 2005:Art.10.1). This committee meets once a term and may at all times consult any other Ministry if needed. Expert MO5 from the ANRT mentions that this represents a "Mini-Government," which shows the importance of the USO policies in Morocco (Expert MO5). An expert from the e-commerce Ministry underlines the high social responsibility of USO to answer the basic needs of integration and access of all citizens. He argues that this unique committee "plays a double role, as the social guarantor of citizens in precarious situations and the guarantor of USO as a whole" (Expert MO1).

USO provisions in Morocco are, thus, included in the social discourse and the need to provide basic health and safety services to the whole population. The creation of a mini-government and the attention given to providing a transparent and adequate service is an outspoken motivation behind the creation of the Moroccan "pay or play" project. Universal service is here treated as a social right, which is similar to the EU position (Batura 2016:54). This shows a similar institutionalised duty to provide USO to the citizens.

*Product of Diffusion*

Regarding mobile telephony, the Moroccan model developed very differently from the one in the EU, which only recommends focusing on fixed telephony services. According to an expert from the ANRT, the Moroccan USO directly aimed at increasing the GSM network[1] (Expert MO5). From 2004, a broad USO initiative took place in Morocco to analyse GSM penetration. A map investigating the available network infrastructure, including a detailed geographic analysis, was finalised in 2007. The PACTE project covering around 10,000 villages was then launched with an open call to all telecommunications companies to develop infrastructure

and coverage in these localities. A variety of projects and technologies (i.e. terrestrial and satellite, GSM, 2G and 3G) were approved by the ANRT and allocated to the main operators over four years. After the completion of the PACTE project, the coverage successfully reached 90 per cent (Expert MO5). Hence Morocco, by contrast with the EU, has applied technological neutrality in its USO programmes from the start. Expert MO5 mentions that due to technological neutrality, the USO PACTE project was described as "voice and telephony" services without reference to any specific techniques (Expert MO5).

Regarding fast and ultra-fast broadband, the Moroccan and the European models also differ. According to Expert MO5, the PACTE programme succeeded in bringing up to 90 per cent of coverage to the whole territory and to around 99 per cent of the populated areas (Expert MO5). This first phase focused on any type of communications services. However, since the completion of the PACTE programme, the ANRT has been receiving requests to obtain the 3G in every region and provide internet access, notably through mobile internet. Hence, increasing the quality of infrastructure and providing broadband is the focus of the next phase of the project (Expert MO5). An expert from Maroc Telecom argues that the USO in Morocco still has many years to go to develop and provide adequate infrastructure and services (Expert MO11). A review of the Telecommunications Law (No. 121-12) foresees the extension of USO to high-speed and very high-speed services, such as 3G (ANRT 2012; MINCOM 2014). This document was, however, still pending with the government at the time of the field research (Iraqi 2015).

*Process of Diffusion*

In the case of USO in Morocco, interactions across models have taken place. The "pay or play" programme was elaborated after a study in 2002 from a Canadian consultancy group, which presented several models to be followed. Among others, the Peruvian model was given as well as some European cases, particularly the French one. Expert MO5 mentions that the Latin American experience was key in the transformation of the USO system in Morocco. The Latin American model was already renowned at the World Bank and at the ITU, in particular the competitive auctions of Peru (Expert MO5). Competitive tendering became the key of the Morocco USO review. However, the role of the EU was also evident in the field research and most experts underline the use of both Latin American and European models to construct their tailor-made "pay or

play" mechanism (Expert MO5). The Moroccan experience got its inspiration from what had been done in Europe and broadened it to fit the Moroccan context (Expert MO3).

In the case of USO in Morocco, it is observable that both the product and the process have their origins in the EU model but have departed from it since the early 2000s. The evolution of the Moroccan USO model is linked to other non-EU models, such as the Latin American systems of competitive tendering. As such, while the EU model was considered and observed initially, it was not adopted without question. Expert MO3 from the ANRT mentions that the fixed telephony infrastructure was already well established in the EU countries, thus USO was less difficult to impose (Expert MO3). However, in Morocco the situation differs as around half of the population lives in the rural areas, where fixed infrastructure is almost non-existent. According to this expert, this represents a typical example of where the model is not transferrable as it exists (Expert MO3). The Moroccan policy-makers modelled the available systems according to their own needs, which, according to them, succeeded in guaranteeing better exploitation (Expert MO2).

### *Spectrum Management in Morocco*

Medium policy diffusion is observed in the Moroccan spectrum management model. In this case, it is apparent that close observation of the EU model is taking place. Several experts underline the alignment with regional (notably with neighbours), European and international norms, specifically because of the ITU Region allocation (Expert MO7). In spectrum management, the policy-makers emphasised their competences to challenge the most advanced countries in the field and underlined their timely development in line with international regulatory framework. Technological neutrality is included in Moroccan legislation. The issue of spectrum trading is followed by Moroccan policy-makers. Nevertheless, the practical implementation of spectrum trading is not yet fully incorporated in the law. Several experts mention that this reflection is followed by Morocco, as it is in Europe. However, in both cases, it is still in the early stages (Expert MO7).

The Telecommunications Law No. 24-96 mentions that the ANRT is jointly responsible to the Ministry of Communication for the management and the monitoring of spectrum. The ANRT is expected to participate in international, regional and domestic meetings to improve regulation and management of spectrum (MINCOM 2007:Art.29). The

ANRT is also to act as a delegate to the Ministry to manage and control the frequency allocations and licences (MINCOM 2007:Art.29). The mobile and fixed services, aeronautical, security and radio diffusion services are all managed by the ANRT. The only exception concerns the Audiovisual Regulatory Agency (HACA), which manages the TV and FM spectrum in coordination with the ANRT (MINCOM 2003:Art.5). In 2012, an agreement was signed between the ANRT and the HACA to ensure the assignment of frequencies in coordination with each other and with neighbouring countries. This agreement came as a step towards the transition to DTTB in Morocco (ANRT and HACA 2012). The DTTB plan was completed on 22 July 2015 with the approval of the Moroccan chamber of representatives for the Law No. 96-14 modifying and completing Law No. 77-03 regulating audiovisual communications. This modification of the audiovisual law aims at meeting the technological changes required by the GE06 agreement. The Moroccan ICT Ministry, MINCOM, mentions that this agreement reflects the commitment of Morocco to meet its transition deadline of 17 June 2015 for UHF and 17 June 2020 for VHF bands (MINCOM 2015).

In its spectrum management regulation, Morocco has shown commitment to embrace technological advances in parallel to the European peers and at the international level. Technological developments in the EU and in other countries are closely watched and assessed. Expert MO3 mentions that there is little delay between spectrum management in the EU and in Morocco. He gives 4G as an example and mentions that "[w]e are liberating our 4G spectrum. The call for tender will be in 2014. We have one year or one and a half year delay, but not more with the European countries" (Expert MO3). The call was finally published in 2015, with all three operators, Maroc Telecom, Meditel and Wana, being awarded 4G licences in the bands 800 MHz, 1800 MHz and 2.6 GHz (ANRT 2015a, b).

*Product of Diffusion*

Regarding technological neutrality and spectrum trading, Morocco is closely linked to innovative practices in the field. The ANRT underlines that in an effort to support the growth of the telecommunications sector, mobile operators may use several technologies to operate their bandwidth (ANRT 2004). In practice, however, tenders are often linked to a certain generation of mobile phones, which in some ways limits the scope of technological neutrality. For instance, the 2015 tender aimed specifically at the 4G licences. In such cases, the technologies linked to 4G may vary, but must nonetheless be linked to 4G standards. Spectrum trading is also

at the centre of discussion in the development of telecommunications in Morocco. The Moroccan government is not only engaged in the improvement of the mobile sector, it also supports the development of ultra-fast broadband internet, which depends on an efficient use of allocated spectrum. In 2012, the ANRT established a ten-year plan to develop high-speed broadband networks to the whole population (ANRT 2012). This document shows the determination of the ANRT experts in improving ICTs. However, several experts of the ANRT mentioned the limits of these reflections, in Morocco as well as in Europe. Expert MO7 of the ANRT mentions that "[t]here is a reflexion in Europe on unlicensed spectrum, spectrum sharing, and white spaces. It is a reflexion we also follow (…) however, it is important to first look at technical conditions and then assess how to translate it to our regulation (…) it is still at an early stage at the moment, even in developed countries" (Expert MO7).

*Process of Diffusion*

Interaction with other models is apparent in Morocco, specifically with European countries. An expert of the ANRT mentions that spectrum is a sector where the activity is almost identical among countries. He states that frequencies are "colourless, scentless. They propagate beyond borders. The use of these resources is the same everywhere" (Expert MO3) Furthermore, this expert states that there are international agreements and everybody must follow the ITU rules (Expert MO3). In spectrum regulation, Morocco relies specifically on certain countries for the development of its regulation. This is the case with France (Ayubi 1995:304; Fawcett 2013). The ANRT collaborates more closely with the French National Frequency Agency (ANFR)[2] compared to any other countries with which it also shares borders (and hence with which potential spectrum interferences can occur, such as with Spain or Portugal). Thus, in the case of spectrum management in Morocco, a noticeable parallelism to

**Table 8.1** Observation of policy diffusion in Morocco

| | *Regulatory option 1* | | | *Regulatory option 2* | | | *Total (both options)* |
|---|---|---|---|---|---|---|---|
| | *Product* | *Process* | *Total 1* | *Product* | *Process* | *Total 2* | |
| USO | + | + | + | + | + | + | + |
| Spectrum | ± | + | ± | ± | + | ± | ± |

Notes: + high policy adoption; ± medium policy adoption; –low policy adoption

what is taking place in Europe is observed. The European systems and regulatory innovations are closely watched, in particular the ANFR, which is a close partner to the ANRT for spectrum issues. Both technological neutrality and spectrum trading are discussed in the Moroccan case, even if spectrum trading is not yet completely detailed in the law so far. However, such policies are still at an early stage, even in EU countries.

Table 8.1 summarises the product and process findings for both subsectors and regulatory options. It shows that policy adoption has taken place in Morocco. When the results of the product and process for each regulatory option are added, the Moroccan cases show a high level of adoption for USO and medium level for spectrum management, which is similar to Jordan. Thus, it is possible to discuss the second step of the framework of diffusion (i.e. the mechanisms of diffusion) in both cases.

## State-Level Conditions of Diffusion

Under what conditions did policy diffusion take place in Morocco? The Moroccan case situates itself between those of Jordan and Egypt. Morocco is not as highly dependent on external countries as is Jordan nor does it present such a strong autonomous position, as does Egypt. The Jordanian context assumed high governance and market openness and economic and political interconnectedness. On the opposite side, the Egyptian context assumed lower levels of all four variables. The Moroccan case offers the potential to evaluate the different state-level conditions. Table 8.2 illustrates the variation in state-level conditions in Morocco. It is observed that Morocco scores low regarding all state-level conditions, similar to Egypt, except regarding governance openness. Nonetheless, based on previous findings, policy diffusion in Morocco takes place at medium and high levels, in a similar way to Jordan. This shows that the governance openness

**Table 8.2** State-level conditions of diffusion in Morocco

| *Governance openness* | *Market openness* | *Political interconnectedness* | *Market interconnectedness* | *USO* | *Spectrum* |
|---|---|---|---|---|---|
| + | – | – | – | + | ± |

Notes: + variable is present; – variable is absent. For USO and spectrum: + high policy adoption; ± medium policy adoption; – low policy adoption

variable has more explanatory potential than the other three variables to explain why policy diffusion takes place (H1 *governance openness*).

Morocco, along with other countries in the MENA area, has seen several challenges emerge in the post-independence era, including a high urbanisation rate, a high ratio of youth to total population and an increasing impoverishment of the population (Rousset 1990; Storm 2007). Morocco engaged with the IMF-sponsored structural adjustment programme in 1983, in a similar way to Jordan and Egypt (Jaidi 1992; Layachi 1999). Hence it follows in several ways the structural developments of Egypt and Jordan. In fact, Morocco is vulnerable to external actors, albeit to a lesser extent than Jordan, since it enjoys a more diversified economy than Jordan. It is the largest phosphate exporter in the world and is believed to possess around three quarters of the world reserves (FAO 2004). It holds controls over rich fishing water, has developed a sophisticated tourist industry and enjoys remittances from Moroccan workers abroad (White 2001). It also relies heavily on agricultural exports (World Bank 2017).

### *Governance Openness*

The level of governance openness in Morocco is above the MENA average, as it is in the Jordanian case. This shows that Morocco implemented delegation and regulatory adjustments in line with international standards in the field, leading to a higher level of openness to external influence. The role of the state diminished in Morocco after adjustment measures started in 1983; however, this does not indicate that the late King Hassan and the powerful state apparatus were willing to share power with an increasingly independent-minded parliament (1999:50). Nonetheless, in 1998, the appointment of the Prime Minister Abderrahmane Youssoufi and the succession of King Hassan, following his death, by his son Mohammed VI brought a new dimension to the country's organisation. The technocratic government in power has supported an additional focus on delegation (Richards et al. 2013:246). This is similar to Jordan, which experienced comparable changes of government in the late 1990s. While the new King did not relinquish the extensive power accumulated by his predecessor, a wider circle of people is now involved in decision-making (Rivlin 2013:190). The practical and efficient implementation of regulatory measures such as delegation and decentralisation, which took place in Morocco, is illustrated here by a higher level of governance openness than the regional average.

### *Market Openness*

By contrast, the level of market openness in Morocco is below the MENA average, like that of Egypt. This shows that in terms of privatisation and the organisation of the market, the Moroccan government still keeps a strong hold. Since the 2000s, the technocratic government in power has supported an additional focus on privatisation and the sale of government assets, albeit to a lesser extent than did Jordan (Richards et al. 2013:246). In Morocco, in a similar way as with Egypt, privatisation has often been politically connected, enhancing market shares of the owners and weakening domestic competition (Richards et al. 2013:246). As in Egypt, business and government elites have often been the primary beneficiaries of the economic reforms. This is the case, for example, of domestic conglomerates, such as the Omnium Nord-Africain (ONA),[3] which is part-owned by the Royal Family (Abdellatif 2014). The privatisation and liberalisation measures have been closely monitored by the state and its government apparatus, marking a change in the role of the state, but not its complete retreat from its economic system, which is here illustrated by a lower level of market openness than the regional average.

### *Political Interconnectedness*

The level of political interconnectedness in Morocco is also below the MENA average. Again, this is closer to the Egyptian results rather than Jordanian ones. In a similar way to Egypt, Morocco presents some features of rentier economy (e.g. debt write-offs, labour remittances), but not as strongly as Jordan. Morocco is thus less politically interconnected than Jordan. This does not mean that Morocco is not impacted by external developments. For instance, in the 1970s, as with Egypt and Jordan, several contextual difficulties accentuated Morocco's fiscal and budget deficit—notably the collapse of phosphate prices after 1976 and a contraction of tourism, due to the instability in the region (Layachi 1999:46; Richards et al. 2013:243). Furthermore, and in a similar way to Egypt and Jordan, in 1983, Morocco's debts and credits were rescheduled against the implementation of the IMF and World Bank's structural adjustment measures (Lofgren 2000; Sater 2007; Stevenson 2010), illustrating a certain degree of vulnerability. Nevertheless, these rentier features are less extensive than is the case in Jordan. This is shown here by a lower level of political interconnectedness than the regional average.

### *Market Interconnectedness*

The level of market interconnectedness mirrors the results of market openness and political interconnectedness. Like Egypt, Morocco again scores below the MENA average, which shows a lesser degree of interconnection regarding foreign investments than in the case of Jordan. With the implementation of the 1983 adjustment measures, the state slowly reduced its participation in all economic sectors of society and engaged in privatisation programmes (Malka and Alterman 2006:53). The government continued these measures well into the 1990s and pursued export-oriented trade with Europe by abolishing many price controls, reforming the capital market and shifting agricultural incentives (White 2001:133). Morocco received international praise for its implementation of the adjustment measures, albeit with limited domestic results, since growth did not follow (Cammett 2007; Richards et al. 2013:243). Nevertheless, Morocco, as with Egypt, has been less successful in attracting FDI and relies less on external investments for domestic growth than does Jordan, which is illustrated here by a lower level of market interconnectedness than the regional average.

The Moroccan case is interesting, as it represents an intermediary case between the Jordanian case, which shows high levels for all four openness and interconnectedness variables, and the Egyptian case, which shows low levels for the same variables. Based on the expectations, the Jordanian case, presenting high levels of all four state variables, was anticipated to present high degrees of adoption. The Egyptian case, in contrast, presenting low levels of all four state variables, was anticipated to present low degrees of adoption. Both scenarios were confirmed in the empirical results. Nevertheless, Morocco, with medium and high policy adoption, was expected to behave similar to Jordan (i.e. high levels of all four variables). However, Morocco only scores above the MENA average in governance openness, showing that this variable carries more explanatory value to explain the likelihood of policy adoption than the other three variables: market openness, political interconnectedness and market interconnectedness. This finding suggests that delegation and decentralisation measures (H1 *governance openness*) are essential to policy diffusion, more so than are market-related variables and the reliance on foreign aid, that is, political interconnectedness. It thus underlines the growing role of NRAs and NRA groupings in the telecommunications sector. NRAs have increasingly provided and shared cross-national expertise, which has led to efficient regulatory transformation, complementing best practice sharing at the IO level.

## Sector-Level Mechanisms of Diffusion

How is policy diffusion taking place in the Moroccan case? Medium to high policy adoption is observed in both Moroccan USO and spectrum management policies. As such, the second step of the framework focusing on diffusion mechanisms can be further analysed. In the case of Morocco USO, the observed mechanism is learning, that is, high domestic salience, limited international salience and no observation of sanction capacity. There is a commitment to adopt an adequate model that fits the domestic context. In the case of Moroccan spectrum management, the observed mechanism is competition, that is, high domestic salience, high international salience and no observation of sanction capacity. Here the Moroccan policy-makers challenge more advanced countries in the field and act in order to be considered as equal partners. In both cases, Morocco does not want to have external policies imposed, which is the case in coercion mechanisms and to a lesser extent in imitation mechanisms and challenges the traditional relation to the EU. Table 8.3 summarises the results for Morocco.

### *Universal Service Obligation: Learning*

*Domestic Salience*

In the case of USO in Morocco, domestic salience is visible. Much time, thought and resources have been deployed domestically in order to embrace an adequate model. In 2002, a consultancy was hired to provide a review of USO models worldwide. Several models were presented from Europe (specifically from France) and Latin America (specifically from Peru), where funds for universal access and services were renowned. It was not until 2004 that a new system was adopted, which included the creation of a USO governance committee, chaired by the Moroccan Prime Minister and consisting of ministerial representation, including the ministries of telecommunications, interior affairs, finances, territorial planning

**Table 8.3** USO and spectrum management in Morocco

| | *Domestic salience* | *International salience* | *Sanction capacity* | |
|---|---|---|---|---|
| USO | + | – | – | Learning |
| Spectrum | + | + | – | Competition |

Notes: + variable is present; – variable is absent

and national defence, the President of the USO department at the ANRT and the General Director of the ANRT (MINCOM 2005:Art.10.1). Domestic salience is specifically visible, as several Moroccan experts acknowledged the need to transform a policy that was inadequate for the Moroccan context. Several experts mention that the USO context in Europe was very different from that of Morocco and the EU system could not be applied as it was, with a unique focus on fixed telephony. Expert MO5 mentions that between 1998, when the liberalisation of telecommunications in Morocco occurred, and 2004, the USO system did not work at all: "[t]he USO were ill-defined and the realisation of the USO was given to the historical operator Maroc Telecom. Straight away Meditel [the second operator] said that it was not acceptable to withdraw money from them to give it to the incumbent operator, which was their main competitor" (Expert MO5). During the 2004 Moroccan regulatory review and the re-assessment of the USO, Expert MO5 mentions that the French case was presented. However, France designated a USO provider, France Telecom, and other operators need to compensate this USO provider via a universal service fund, which is not what they decided to apply in Morocco. They decided to stay closer to the market and use calls for tender (e.g. competitive tendering) to allocate projects, following the Latin American experience (Expert MO5).

*International Salience and Sanction Capacity*

In contrast, as expected in the sector of USO, international salience is low. Morocco has been influenced by what has been done in the EU and Latin America and used international platforms (i.e. ITU and the World Bank) to gain insights from certain models, but there is no international framework in the field pushing for a specific coordinated transnational model. International actors have only limited interest in enforcing a specific model, since the policies are limited to the territory which applies them, and they mostly deal with compensating a market failure and protecting consumers. Thus, no cross-national solutions need to be provided for USO to be domestically efficient. As expected as well, there is also no sign of sanction capacity in the USO sector.

The USO Moroccan case is particularly interesting, as the model started by approximating the EU USO model to then leapfrog the EU model and propose an adapted model based on the Latin American experience. This shows a certain level of contestation from Morocco towards the EU model. In fact, the EU showed interest in several instances in extending its USO model to Morocco, but this was not received positively by the

Moroccan policy-makers (Wavre and Freyburg 2017). This was the case during the NATP-II and NATP-III programmes and specifically through the creation of EMERG. The EU USO model was presented in the frame of both programmes. However, the interest of Morocco in this specific subject faded out early. The EU USO model was not adequate for the Moroccan project (Expert MO6). Finally, during the 2014 EMERG plenary in Jordan, it was agreed not to discuss USO further, as it is a case where EU regulation cannot be applied (Expert MO6).

Furthermore, Moroccan experts emphasised the development of Morocco as a leader for other countries, in particular African countries. An expert of the ANRT mentions that the Moroccan USO project is a success and the African countries come to Morocco to replicate the model (Expert MO3). Expert MO5 mentions that the Moroccan USO model "creates appetite among a certain number of countries" (Expert MO5). The Moroccan USO model thus represents a case for contestation of the EU model, where Morocco leapfrogged existing policies of the traditional EU partner. Furthermore, Morocco took this occasion to present its innovative model to further African countries and establish its reputation in the sector. The presence of domestic salience, in the absence of international salience and sanction capacity, attests to policy diffusion following learning mechanisms.

### *Spectrum Management: Competition*

*Domestic Salience*

In the case of spectrum management in Morocco, it appears that domestic salience is present. Attention is given to creating conditions to develop the market domestically, specifically by implementing technological neutrality. Spectrum management is by definition an internationally salient sector. Nonetheless, in the case of Morocco, compared to the Jordanian case, the international salience of spectrum is no burden for policy-makers. On the contrary, the country is committed to prove the level of sophistication of its experts at the national and international level, hence demonstrating the domestic salience of the sector. This is also illustrated by the transitions to the DTTB, which took place in Morocco in July 2015. Expert MO10 from HACA underlines the importance for Morocco to respect its GE06 engagement in the eyes of the international community (Expert MO10). Morocco is indeed one of the few countries of the MENA region to have respected the DTTB UHF switch-off in 2015.

Morocco is also part of the Radio Regulation Board (RRB), which is a committee of the ITU,[4] underlining the Moroccan sophistication in spectrum management. An expert of the ANRT argues that the RRB members represent their country; however, the elected members are chosen for their personal competences. Their position must be neutral and independent (Expert MO7). According to an expert of the Ministry of e-commerce, the fact that Morocco is part of the RRB has a double value. Firstly, the Ministry needed to approve the election. Hence, this represents a sovereign choice by Morocco to be part of this committee. Secondly, this nomination acknowledges competences and, in particular, gives the possibility of accessing further competences in the sector. For this expert, being part of this board allows the possibility of gaining very valuable international experience in order to solve potential future issues of Morocco regarding spectrum management (Expert MO1).

*International Salience*

In contrast with USO, spectrum management is linked to international salience. The very peculiarity of spectrum is that each country needs to coordinate with its neighbours to avoid interferences. Moroccan experts mentioned several times that most contacts take place with countries that are direct neighbours of Morocco. This is due to the need for coordination to avoid potentially harmful interferences. These meetings are mostly limited to coordination contact, and no further meetings are organised to discuss such issues. In fact, regional transgovernmental cooperation such as EMERG appears limited in bringing any practical recommendations, as the subject is too technical (Expert MO5). For instance, Morocco works with countries of the EU through other channels. In particular, the relationship with France is institutionalised through a bilateral partnership with the French National Spectrum Agency, ANFR (Expert MO7).[5] The ANFR and NTRA notably work to present joint positions during worldwide conferences. Furthermore, the presence of European corporations (specifically from France) in Morocco has strengthened the attention given to harmonising standards regionally. French companies own or have owned major shares in two of the mobile phone companies in Morocco,[6] justifying Morocco's attention to European standardisation processes. Most importantly, and as expected, the international salience of spectrum management is institutionalised in the ITU framework, allocating and managing spectrum worldwide. Morocco agrees and actively participates in both the coordination needs with neighbouring countries and the ITU demands.

*Sanction Capacity*

In this case, however, by contrast with Jordan, no sign of sanction was observed. Several Moroccan experts mentioned that being part of Region 1 together with the EU has often led Morocco to adopt European technological norms and practices. Expert MO7 mentions that "[t]he EU develops norms in relation to this [ITU Region 1] spectrum area, Morocco, as a member of this region, needs to take them into account" (Expert MO7). This has been the case with technologies bound to the Euro-Mediterranean geographical space, such as GSM. Nevertheless, in the case of spectrum, Morocco challenges the traditional order and sees the opportunity to be part of a sophisticated group of countries. Its participation in the RRB attests to this commitment to closely follow advances in the field.

The Moroccan spectrum management case is thus interesting, as it illustrates the mechanism of competition. In contrast to the Jordanian spectrum case, Morocco shows domestic and international commitment to follow advances in the field. In the spectrum case compared to the USO case, however, there is no sign of contestation of the European model. It appears that Morocco follows what has been done in the field and is closely involved with the ANFR, where they exchange best practices and defend joint positions at international conferences. The presence of French companies in Morocco and the close link between Morocco and France in the coordination of spectrum confirms the relationship between the harmonisation of standards and the cross-border presence of corporations. Nevertheless, in none of the expert interviews did the closeness with the EU or the presence of French corporations in Morocco represent a source of frustration or potential asymmetrical power, as it does in Jordan. On the contrary, experts underlined the opportunities linked with being among the leaders in spectrum management, at similar levels to European countries. The presence of domestic and international salience, without sanction capacity, attests to policy diffusion following competition mechanisms.

## Notes

1. GSM (*Global System for Mobile Communications*) is a European standard aimed for mobile telephony (Techopedia 2016).
2. In France, the ANFR manages the spectrum globally, in particular regarding international coordination. In addition, the ANFR works in coordination with the French ministries who manage some parts of the spectrum as well,

for their own needs, such as the ministries of defence, civil aviation or meteorology. In addition, it coordinates spectrum with the High Audiovisual Council for audiovisual spectrum needs and ARCEP for electronic communications (ARCEP 2014), similar to the Moroccan partnership between the ANRT and HACA.

3. ONA was dissolved in 2010 and is now part of the Moroccan National Investment Company (SNI). They own 69 per cent of Inwi, the third Moroccan mobile operator (World Bank 2014:129).
4. The RRB consists of 12 members who give advice on spectrum-related issues. They are elected by the Plenipotentiary Conference for a four-year mandate and meet up to four times a year. The RRB receives a mandate every time there is a conflict or a difficulty in interpreting certain rules. They approve rules of procedure and provide advice as requested by the various Radio communications bodies (ITU 2015).
5. Expert MO7 mentions that ANRF specifically organises meetings in preparation for the WRC with French-speaking countries where positions from the different areas are presented. France presents the opinions of France and of the EU member countries, while Morocco presents the opinions for Morocco and for Arabic- and African French-speaking countries (Expert MO7).
6. The French company Orange owns 40 per cent of the Orange Group in Morocco, after a change of ownership in 2010 (Meditel 2010:24). Vivendi, a French consortium, used to own 53 per cent of the shares of Maroc Telecom (IAM) until the sale of the shares in 2013 to Etisalat (IAM 2014:32, 2015:32).

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CHAPTER 9

# Comparative Analysis

Policy diffusion is present in all selected cases. Two cases of high policy adoption are observed for USO, in Morocco and Jordan. Medium policy adoption is observed for spectrum management in Morocco and Jordan. Finally, adoption in the two Egyptian cases of USO and spectrum management is low. Table 9.1 summarises the evaluation of the product and process of each regulatory option for the six case studies. It is observed that the policy process is often coded as equal to or higher than the product. This is easily explained by the fact that the telecommunications sector is a cross-border sector, which needs interaction for its efficient use and development. The product instead represents the incorporation of external ideas in the domestic policies. This is often more complicated to observe than the interaction itself, because external products are not automatically adopted in the domestic context. This confirms the importance of studying aspects of both the product and process to conclude whether policy diffusion has taken place.

Table 9.1 shows that policy diffusion takes place in the telecommunications sector in MENA countries. However, variation exists on a state level as well as on a sector level. Egypt scores lower than Morocco and Jordan in both sectors. This suggests a state difference between the three cases. Furthermore, the fact that neither USO or spectrum management were diffused in a clear and systematic way in Egypt poses a limitation on the use of the Egyptian cases for analysis. The second step of the framework, based on mechanisms of diffusion, can be explored only if policy diffusion



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**Table 9.1** Observation of policy diffusion

| | *Regulatory option 1* | | | *Regulatory option 2* | | | *Total (both options)* |
|---|---|---|---|---|---|---|---|
| | *Product* | *Process* | *Total 1* | *Product* | *Process* | *Total 2* | |
| Jordan: USO | + | + | + | + | + | + | + |
| Jordan: Spectrum | ± | + | ± | ± | + | ± | ± |
| Egypt: USO | – | ± | – | – | ± | – | – |
| Egypt: Spectrum | – | ± | – | – | ± | – | – |
| Morocco: USO | + | + | + | + | + | + | + |
| Morocco: Spectrum | ± | + | ± | ± | + | ± | ± |

Notes: + high policy adoption; ± medium policy adoption; – low policy adoption

has taken place in a straightforward manner, which is not the case for Egypt. Furthermore, it is shown here that in Morocco and Jordan, USO policies are more significantly adopted than spectrum policies. This suggests that a sector-level difference may be at play. Exploring this difference is the focus of the second step of the framework.

## Observation and Conditions of Diffusion

Figure 9.1 shows the four graphs representing the results of the state variable measurement for the three country case studies. The four graphs are presented jointly to provide a better visual understanding of the dynamics across the three countries and the four variables.

### *Governance Openness*

The three country case studies present similar types of governance and market systems. A wide bureaucracy, centralised power and the close presence of the military in decision-making are found to different extents in each country. In all three countries, power is centralised in only a few key figures. Both Morocco and Jordan are kingdoms and although both countries have engaged with parliamentary systems, the role of the kings, King Mohammed VI in Morocco and King Abdullah in Jordan, remains prominent. In Egypt the government is not a monarchy, but the relationship between the military and the political sphere is clearer than in many other countries of the MENA region. Egyptian President Abdel Fattah el-Sisi is

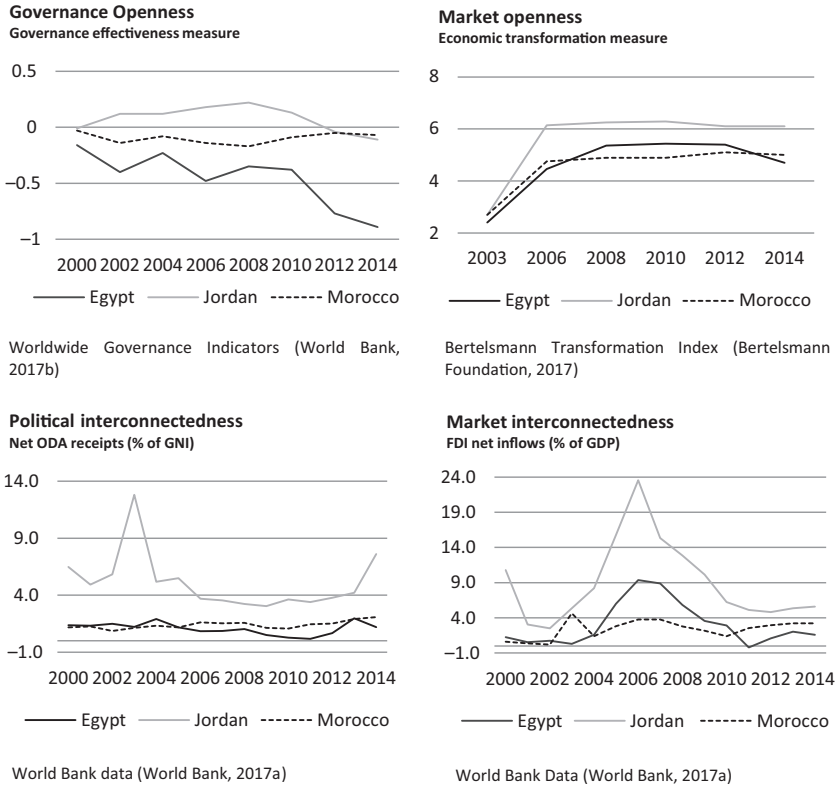


**Fig. 9.1** Comparison of state-level conditions of diffusion

a former military chief, as have been several other Presidents before him, including Hosni Mubarak, who was overthrown in 2011.

Large bureaucratic administrations, with prominent influence by the state and military apparatus, explain why the governance openness ratings of all three countries are relatively low (World Bank, 2017b). Hence, the centralisation of power among a handful of officials is a limitation to the implementation of delegation and decentralisation measures. Nevertheless, a large difference between the scores for Jordan, Egypt and Morocco is observed in Fig. 9.1. Jordan scores the highest, as least until 2012. This was expected here, as Jordan has been an example for the implementation of regulatory adjustment measures, including delegation and decentralisation

(Mofleh et al. 2008; Westrup and Al-Jaghoub 2007). Egypt has shown a much more intense concentration of power in the hands of the political and military elite. The results of Morocco are higher than Egypt and above the MENA average, which was also expected. Both Jordan and Morocco have been considered as best practice examples for the implementation of regulatory practices and benchmarks following adjustment measures (Boukhars 2011).

The first hypothesis stipulates that the more policy-making is decentralised, the more likely a country is to adopt a policy that originates from another country/ies (H1 *governance openness*). As such, Jordan and Morocco, which have adopted USO and spectrum policies that originated elsewhere at medium and high level, were expected to score above the MENA average in governance openness. The first graph of Fig. 9.1 confirms this expectation. Since they both score high in terms of governance openness, this shows the validity of the measure for analytical purposes, confirming the first hypothesis. This is interesting as it validates current research emphasising the role of NRAs and NRA groupings in policy-making and specifically as a tool for cross-border practice sharing (Harcourt 2008; Humphreys and Simpson 2008). This confirms that soft governance has become an essential tool for the diffusion of policies in the telecommunications sector.

### *Market Openness*

The three country case studies present similar timelines in terms of bureaucratic expansion, state-led economies and fiscal and budgetary crises. The 1980s and 1990s saw all three countries turning to international lenders such as the IMF and World Bank and engaging in restructuring measures. Morocco engaged with the IMF in 1983, Jordan followed in 1989 and finally Egypt engaged with adjustment measures in 1991. In the three country cases, these measures launched some degree of privatisation and a diminishing role of the state in the economy, embodied in the market openness variable.

The results of market openness in Egypt, Morocco and Jordan follow a similar trend. Starting with relatively lower results in 2003, the index saw an increase in all three countries from 2003 to 2006. This can be understood in the continuation of liberalisation and market measures that Egypt, Morocco and Jordan have undertaken following the restructuring of their economies in the late 1990s. The rise is particularly apparent for Jordan,

which has been a champion in privatisation and liberalisation measures since the 1990s. After 2006, however, the results stagnated and reached similar or lower levels than in 2012. Generally, the three countries suffered from their contextual difficulties, including a heavy role of the government in the economy, nepotism, unemployment and small space for individual innovation coupled with difficult political and security contexts (Bertelsmann Foundation 2017). This situation became more acute in the late 2000s.

The second hypothesis stipulates that the more the national market is privatised, the more likely a country is to adopt a policy that originates from another country/ies (H2 *market openness*). As such, Jordan and Morocco should have scored above the MENA average, but this is only the case for Jordan. This shows that market openness carries less explanatory potential than governance openness. Nevertheless, the market openness illustrates the development processes of emerging countries towards market systems and confirms expectations in both the Jordanian and Egyptian cases.

### *Political Interconnectedness*

The political interconnectedness variable echoes a specific rentier context in MENA countries. It embodies the vulnerability to political and economic developments abroad. Jordan is the main recipient of aid among the three countries. This is logical considering its rentier economy characteristics and its role as a buffer state in a politically unstable region. The lower results of Morocco and Egypt were also expected. Both countries present some rentier features (e.g. labour remittances, debt write-offs); however, their productive base is more diversified than that of Jordan. For both cases, it is expected that they are less dependent on foreign aid for their domestic growth than is the case in Jordan.

The scores of Egypt, Jordan and Morocco in political interconnectedness are not surprising and they follow the conclusions drawn from the two previous variables, governance and market openness. Jordan is the main recipient of aid among the three countries. Morocco's level of political interconnectedness is situated between that of Jordan and Egypt. Until 2005, the results of Egypt and Morocco are intertwined, but after that Morocco scores slightly higher than Egypt. In fact, Egypt relies proportionally less on foreign aid compared to both other countries. The level of political interconnectedness in Egypt was closer to nil in 2010 and rose

again after 2011, which paralleled the political upheavals in the MENA region and the hesitation of major lenders to provide foreign aid as long as democratic standards were not re-established, notably regarding fair and ethical elections in Egypt (Heydemann 2014).

The third hypothesis stipulates that the more a country is politically dependent on another country, the more likely it is to adopt a policy that originates from this country (H3 *political interconnectedness*). As such, Jordan and Morocco should have scored higher than the MENA average. Nonetheless, while the Jordanian and Egyptian cases confirm the expectation—that is, Jordan scores higher than average and Egypt lower than average—this is not the case for Morocco, which scores below average as well. In a similar way to the market openness variable, it thus appears that this variable carries less explanatory potential than governance openness to analyse under which conditions countries adopt policies that originated elsewhere.

### *Market Interconnectedness*

All three country case studies have seen the emergence of the private sector and the growth of FDI following restructuring measures of the 1980s and 1990s. Even if the promised levels of economic development following the adjustment measures did not take place as expected, a certain level of restructuring took place in Egypt, Jordan and Morocco. The still-heavy hand of the government and military in principal enterprises and the characteristics of patronage that define most MENA countries have been argued to impede the successful development of the private sector in the long run (Rivlin 2013:27). This explains why FDI in MENA countries was relatively low in the early 2000s, but increased until 2006 after successful technocratic measures were implemented in the MENA region, before declining again afterwards.

The scores of Egypt, Jordan and Morocco in market interconnectedness follow the patterns observed with the previous three variables. Once again, the levels of market interconnectedness in Jordan are higher than those in both Egypt and Morocco (World Bank, 2017a). This is related to previous arguments regarding the championing role of Jordan in supporting privatisation measures and the corresponding increase in FDI. As expected as well, the levels of Egypt are lower than those of Jordan. They are, however, higher than Morocco between 2004 and 2010. The scores of market interconnectedness in Morocco are again less prominent than expected.

The fourth hypothesis stipulates that the more a country is economically dependent on another country, the more likely it is to adopt a policy that originates from this country (H4 *market interconnectedness*): Jordan and Morocco should have scored higher than the MENA average. Nevertheless, in a similar way as with the market openness and political interconnectedness variables, this is not the case, and Morocco scores below average, like Egypt. Since Morocco was expected to score similar to Jordan, due to the medium to high level of policy adoption observed in USO and spectrum, this shows that this variable is not straightforward enough to explain conditions under which policy adoption is likely to occur. Nevertheless, the hypothesis on market interconnectedness holds for Jordan and Egypt and is useful when considering a trade approach to the vulnerability of countries to external actors and to show variation in the development of FDIs.

As a conclusion to the first step of the framework focusing on conditions of policy diffusion, it is observed in Fig. 9.1 that Jordan scores constantly higher than Egypt and Morocco. In all four indicators, governance openness, market openness, political interconnectedness and market interconnectedness, the higher levels in Jordan are clear. As Jordan is one of the countries where policy diffusion is more readily observable, this fits the assumptions that the higher the level of the four variables, the higher the level of policy adoption expected (Hypotheses H1–H4). This illustrates that Jordan presents higher rates of vulnerability to external actors than both Egypt and Morocco.

Furthermore, for all four variables, Egypt scores the lowest. However, the results are not always distinguishable from the Moroccan ones. Egypt scores particularly low with regard to the governance openness variable. This can be explained by different factors. The Egyptian state traditionally keeps a strong hold on both the government and the economy. In addition, the military in Egypt is very close to power. Having a military government, however, is not an absolute condition to conclude that governance openness cannot take place (Liu and Jayakar 2016). In the case of Egypt, several avant-gardist policies were adopted despite the country having a low level of governance openness. It is nonetheless an indicator of concentration of power under traditional forms of centralised governance, where delegation and deregulation may not take place as easily.

More importantly, the results concerning Morocco are mixed. Contrasting with the explicit results of Jordan, Morocco scores similar to

and sometimes lower than Egypt. This is not confirming the general assumptions that higher levels of all four variables show higher probability of policy adoption. Morocco has been regularly and frequently adopting policies that have originated elsewhere; however, it scores similar to and sometimes lower than Egypt in the other three variables: market openness, political interconnectedness and market interconnectedness. The governance openness variable stands out as an indicator to show the conditions under which policy diffusion may take place, which supports the first hypothesis (H1 *governance openness*): the more policy-making is decentralised, the more likely a country is to adopt a policy that originates from another country/ies. This is interesting for two main reasons. It confirms that policy diffusion takes place when governments implement delegation and decentralisation measures, thus showing the increasing role of NRAs and NRAs groupings for regulatory development, specifically in technical sectors such as telecommunications. Furthermore, it shows that in policy diffusion research, concerning semi-authoritarian countries such as Egypt, Jordan and Morocco, the governance openness variable is more relevant than variables on market vulnerability or political interconnectedness (as operationalised by foreign aid) to adopt policies that originated externally (see Guaaybess 2013).

## Mechanisms of Policy Diffusion

The second step of the framework aims at disentangling mechanisms of diffusion, based on the sector's characteristics. The assumption is that in sectors such as USO, where there is only limited international salience, adopting states are free to implement policy changes with only minimal external pressure. In such cases, learning and imitation may take place. By contrast, in sectors where international salience is high, as is the case in spectrum management, the adopting states are mostly going to engage in policy changes through mechanisms of competition and coercion, where external pressures are higher. The results of this last part of the analysis support these expectations. Table 9.2 shows the results for the only four case studies, where medium and high policy diffusion was observed: USO and spectrum management in Jordan and Egypt.

It is illustrated that, as expected, USO policies follow mechanisms of learning (i.e. in Morocco) and imitation (i.e. in Jordan). In the case of USO in Morocco, the development of the policy became almost an international statement showing the commitment of Morocco to improving its

**Table 9.2** USO and spectrum management in Jordan and Morocco

| | *Domestic Salience* | *International Salience* | *Sanction capacity* | |
|---|---|---|---|---|
| USO (Morocco) | + | – | – | Learning |
| USO (Jordan) | – | – | – | Imitation |
| Spectrum (Morocco) | + | + | – | Competition |
| Spectrum (Jordan) | – | + | + | Coercion |

Notes: + variable is present; – variable is absent

national connectivity. The policy-makers gathered energy and information to provide a specific model fitting the domestic context, which corresponds to a case of learning. In the case of USO in Jordan, it was observed that imitation took place instead of learning. This is the consequence of a domestic choice to follow a perceived external leader in the field, in this case the EU.

As expected as well, spectrum management policies follow competition (i.e. in Morocco) and coercion (i.e. in Jordan). In the case of spectrum management in Morocco it was observed that competition was the stronger mechanism, as the Moroccan policy-makers were motivated to prove their competencies when compared to others at an international level. This resulted largely in competition mechanisms. In the case of spectrum management in Jordan, however, an additional aspect existed as policy-makers underlined the need to follow the decisions made by the main actors in the field, the EU in this case, and the minimal role that Jordan could have in influencing policies. This corresponded to subtler power relationships that are part of the variable of sanction capacity. Mechanisms of coercion were observed in this last case.

### *Domestic Salience*

The assumptions linking learning and competition to the presence of domestic salience are confirmed. In the case of Morocco, policy-makers have shown commitment and resources to develop policies in USO (i.e. linked to learning mechanisms) and spectrum management (i.e. linked to spectrum management). This is different in the case of Jordan, which adopts USO policy from the EU, despite its inadequacy in the Jordanian context (i.e. mechanism of imitation). In this case, there was limited

domestic salience. In spectrum management, the Jordanian case also shows limited domestic salience, since policy-makers mostly complained of their lack of capacity to challenge international rules forced on them, without having the will to do so (i.e. mechanism of coercion).

### *International Salience*

The assumptions linking competition and sanction to the presence of international salience are confirmed. In this study, it was argued that USO is a sector not characterised by international salience, which signifies that learning and imitation mechanisms would be at play for the most part. This has been confirmed for the Moroccan USO and Jordanian USO cases. As far as spectrum is concerned, the opposite was argued. In this subsector, major economic and political interests regulate the field. This supposes that international salience is at play and linked mainly to competition and coercion mechanisms, which was indeed confirmed. In the case of spectrum management in Morocco, competition mechanisms were observed. The country defied international actors in the field with the adoption of sophisticated regulation, showing the capacity and will to be considered as an equal partner. In the case of spectrum management in Jordan, coercion mechanisms were observed, as the country regretted its lack of leverage to stand up to the established rules and its consequent need to implement domestically the decisions of more powerful actors.

### *Sanction Capacity*

In this study, sanction capacity is linked to the mechanism of coercion and no other mechanisms, since it was argued that sanction could only result from an external imposition, and thus could not be the consequence of a voluntary mechanism, as is the case in learning, imitation and competition. Sanction capacity was only observed in the Jordanian spectrum management case and thus resulted in the observation of the mechanism of coercion. As expected, sanction capacity was only observable in the presence of international salience. In the case of Jordan, it was observed that powerful actors have the capacity to enforce policy decisions through their membership within regional and international regulatory bodies (Martin 1992). Nevertheless, sanction capacity must not be understood only in terms of hard coercion (e.g. political or economic sanctions) but also in

terms of soft coercion where power struggles force certain countries to adopt policies that they would otherwise not have considered.

Soft coercion in the telecommunications sector has not been discussed extensively in the literature. In fact, not many international bodies possess a legal sanctioning power. The World Bank does not have sanctioning power in telecommunications regulation, but it does have the capacity to lay down conditions in exchange for aid (Rivlin 2001:82). The WTO, in contrast, has a dispute settlement mechanism (DSM), which represents the potential to allow sanctions. Nonetheless, in this study, the DSM mechanism of the WTO was never mentioned, either as a potential or a real constraining mechanism. This corroborates previous research. While the DSM represented a breakthrough of the WTO system to restrain states' sovereignty, its validity has been questioned (Drake and Noam 2000; Rodine-Hardy 2013:43).

Egypt, Jordan and Morocco are members of the WTO and have signed different types of commitments to the Telecommunications services agreements (WTO 1997c, 2000). Nonetheless, Jordan and Morocco[1] have never acted as complainants or respondents through the DSM. Egypt[2] had four cases as a respondent, none of which concerned the telecommunications sector (WTO 2017b). In fact, in telecommunications only four cases took place, which were all actioned by the EU or US[3] (WTO 2017a). Out of these four cases two were solved by the action of the DSM, one was settled bilaterally and one remained pending. This shows that the DSM is preferred as an institutional tool for dispute settlement for these two major actors (i.e. the US and EU), whereas for countries such as Jordan, Morocco and Egypt, this method is not used. It is furthermore observed that the DSM was not often applied to the field of telecommunications (i.e. only four cases exist in total). In short, this suggests that the WTO telecommunications framework may well have become a forum for expert discussion and best practice exchanges, as has the World Bank's (see Rodine-Hardy 2013:43–44). This certainly illustrates that MENA countries, and specifically Egypt, Jordan and Morocco, do not feel pressured by the existence of the DSM.

The role of the ITU, however, appears more ambiguous in the empirical analysis. Several experts share the opinion that the ITU does not possess much power in terms of sanction capacity. They mention its key role to provide information and advice regarding telecommunications regulation, but not as a coercive body. An EU expert argues that the ITU is a "gentleman's agreement," which functions by consensus in a stable

framework, and mentions that it would be very damaging if certain countries did not follow the regulatory framework or even adopted counterpositions. The result of this is the signature of each measure or treaty after long discussions and consensus (Expert EU21). At most, the ITU could simply fail to register and thus protect certain signals (Expert EU6). This suggests that the ITU plays a key role as an information network, with no sanctioning power for membership and no strict enforcement mechanism for harmonisation (Rodine-Hardy 2013:33).

Nevertheless, this study suggests that the ITU may also display much subtler forms of power struggle. The ITU does not possess sanctioning power as an institution. However, its role in allocating spectrum and agreeing on standards is central to the sector, revealing large governmental and business interests. Its members can be persuasive in order to reach a specific outcome. The role of alliances and the use of persuasion within the ITU were underlined by several experts (Expert EU21, EU6). It was specifically observed in the case of Jordan, where experts deplored the fact that they had no other choice but to rally to decisions made by more powerful actors. This suggests that the ITU is a forum where regulatory enforcement can take place, in addition to its role as a best practice sharing and information network.

As a conclusion to the second step of the framework focusing on mechanisms of diffusion, it is interesting to observe the attention paid by both Jordan and Morocco to their position as part of the international community. Both countries signal in different ways their commitment to improve the telecommunications sector by adopting regulatory change. The adoption of a policy thus becomes instrumental, as it aims to improve the reputation of a country at the international level (Mattli 1999; Weyland 2006:4). The specific role of USO in terms of international attention was observed during the field research. One of the experts of a private consultancy based in Brussels mentioned that USO policies carry a positive image in the eyes of the international community. The example given by USO policies to protect citizens carries legitimacy and spreads good reputation (Expert EU20). This was confirmed in the context of USO in Jordan and Morocco, where policy-makers, and specifically members of the ICT ministries, underlined the value of developing USO as a signal to the international community that the country is improving the welfare of the citizens (Expert MO1).

An interesting distinction between the two countries is the different approach that they take towards policy change. Jordan is committed to the

EU model and shows its goodwill by implementing EU policies in the field, even if they are not always suitable for the Jordanian market. In this case, approximating the EU is a clear and outspoken commitment that was reiterated by several experts (Experts JO2, JO3 and JO6). Morocco, however, shows another strategy. It proves to the worldwide community that it is committed to telecommunications innovation by proposing advanced practices that are leapfrogging the EU models. In addition, the Moroccan experts underlined their will to become regulatory leaders in the telecommunications sector for regional partners and notably for African ones (Expert MO3). The focus on not being seen as followers of the EU regulation is extremely strong among Moroccan experts. The USO "pay or play" mechanism attested to this capacity and commitment to develop ambitious programmes going beyond what the EU does in the field. This corresponds to the concept of leapfrogging policy-making, which refers to cases where policies emerging in the global South supersede international benchmarks (Wavre and Freyburg 2017).

Cases of leapfrogging policy-making are not discussed extensively in research (Singh 1999; Steinmueller 2001). Nevertheless, in the policy diffusion literature, convergence is not seen as the only outcome of policy diffusion (Beckert 2010; Knill 2001; Ladi 2011). Divergence may as well take place as a result of policy diffusion. Leapfrogging policy-making represents such a case of divergence. Here, the regulatory policies adopted go beyond the expected benchmarks. This shows that, contrary to outdated assumptions that reduce MENA countries to policy-adopters inspired by the more developed EU partners, these countries have risen as influential sources of regulation worldwide. Not only is Morocco a case for emancipation and self-assertion but it also represents an example to follow for other regional countries, such as African states, and eventually for EU member states themselves.

## Notes

1. Morocco has one complaint ongoing (2017) with Turkey: Anti-Dumping Measures on Certain Hot-Rolled Steel from Turkey (WTO 2017c).
2. (1) In 2000, complaint by Thailand (Import Prohibition on Canned Tuna with Soybean Oil). (2) In 2003, complaint by Turkey (Definitive anti-dumping measures on Steel Rebar from Turkey). (3) In 2005, complaint by US (Measures affecting imports of Textile and Apparel Products). (4) In 2006, complaint by Pakistan: Anti-Dumping Duties on Matches from Pakistan (WTO 2017b).

3. (1) In 1995 a case was actioned by the EU against Japan claiming that telecommunications equipment between Japan and the US had been inconsistent. The case was settled bilaterally (WTO 1995).

   (2) In 1997 a case was actioned by the US against Belgium concerning the provision of commercial telephone directory services (WTO 1997b).

   (3) In 1997, a case was actioned by the EU against the Republic of Korea, claiming that the Korean telecommunications sector discriminated against foreign suppliers. It was resolved in 1997 (WTO 1997a).

   (4) Finally, a case was actioned by the US against Mexico, concerning Mexico's commitments and obligations under the GATS with respect to the basic and value-added telecommunications services. It was settled in 2005 (WTO 2005).

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CHAPTER 10

# Conclusion and Further Research

This study focused on the regulation of the telecommunications sector in MENA countries. It used the literature of policy diffusion to observe the policy reforms in three countries: Egypt, Jordan and Morocco. The focus was on two theoretical aspects of policy diffusion: the conditions of diffusion and the mechanisms of diffusion. To analyse variations in adoption, the telecommunications subsectors USO and spectrum management were considered. Common knowledge assumes that MENA countries have a tendency to adopt policies originating from Europe due to former colonial rule and ongoing close linkages between the regions. However, this research suggests that inspiration may well come from other non-European countries, which present more similar socio-economic contexts to MENA countries. As such, this study takes the relationship between EU and MENA countries into account to uncover whether the EU has indeed played a role as a policy diffuser in the telecommunications sector in Egypt, Jordan and Morocco, but pays attention to influences originating from non-EU countries as well. This is the case of Latin American countries, such as Chile and Peru, which have broadly influenced the policy developments of USO in Morocco.

## Theoretical and Empirical Findings

This study contributes in various ways to policy diffusion literature. It firstly identified and clarified methodological tools to observe policy diffusion empirically. The observation of policy diffusion was implemented



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through the use of the product and process of diffusion. The selection of two regulatory options for the subsectors under review allowed for the transformation of policies to be traced over time, and for their interactions with other models worldwide to be observed. Furthermore, the two-step framework based on conditions and mechanisms of diffusion sheds light on state and sector variables surrounding the process of policy adoption. The use of three country cases, Egypt, Jordan and Morocco, in two subsectors of telecommunications permitted the exploration of different adoption strategies in a setting where EU influence was expected. Nevertheless, more research would be required to extend the framework to a greater number of countries and/or other regions. This would allow a more detailed explanation and comprehensive analysis of the role of state and sector for policy diffusion in general and in telecommunications research.

### *Conditions of Diffusion*

The findings concluded that USO in Morocco and in Jordan presented characteristics of high policy diffusion. Spectrum management in Morocco and Jordan displayed medium policy diffusion. Finally, USO and spectrum management in Egypt resulted in low policy adoption. Several observations were given based on Table 9.1. Firstly, it showed that in both policy sectors Egypt did not score as high as Morocco and Jordan, proposing that a state-level variation might be expected in this case (i.e. first analytical step discussing the conditions of diffusion). In the four remaining cases, it was observed that USO followed higher levels than spectrum management. This suggested that a variation with the telecommunications sector might be expected (i.e. second analytical step discussing the mechanisms of diffusion).

Based on the results of the observation of diffusion, the study hypothesised that the higher the degree of governance and market openness, political and market interconnectedness, the higher the probability of policy diffusion (Hypotheses H1–H4). Based on Fig. 9.1, several observations were made bringing noteworthy empirical and theoretical insight. The four graphs showed that, as expected, the results of Jordan were high for all four state-level variables, confirming the hypothesis that the higher levels of the four variables led to higher levels of policy diffusion. The results for Egypt confirmed the hypothesis that lower levels of all four variables show lower levels of policy adoption. However, the Moroccan case only partially confirmed the hypothesis and expectations. In several

instances, Morocco scored similarly to Egypt, the only straightforward difference being that of governance openness. These results suggested that this variable is more appropriate to discuss the conditions under which countries adopt policies that have originated from elsewhere (H1 *governance openness*).

The importance of the governance openness variable is significant in countries such as Jordan, Morocco and Egypt, which are characterised by sustained government control in policy-making. This brings an interesting nuance to the debate in policy diffusion focusing on the government rather than the market as a reason for change (see Elkins et al. 2006; Meseguer and Gilardi 2009; Schmitt 2014). In semi-authoritarian countries such as Jordan, Morocco and Egypt, it appears that policy-making is more closely linked to government variables than to market variables (see Guaaybess 2013). Furthermore, this corroborates previous research that links NRAs and NRA groupings to policy transformation, specifically in technical sectors such as telecommunications (Harcourt 2008; Humphreys and Simpson 2008; Michalis 2007).

### *Mechanisms of Diffusion*

In cases where policy adoption was clearly observed (i.e. medium and high level), the second step of the framework, focusing on mechanisms of diffusion, was applied. This concerned the Jordanian and Moroccan USO and spectrum management cases. Neither of the Egyptian cases were used for further analysis, due to their low level of adoption. This study argued that four main combinations of three sector variables (i.e. domestic salience, international salience and sanction capacity) shed light on which mechanisms of diffusion had been at play during the adoption process. It notably argued that sectors presenting low levels of international salience (i.e. low needs for transnational coordination in managing a specific sector) were more likely to present learning and imitation mechanisms. By contrast, sectors presenting high levels of international salience (i.e. high needs for transnational coordination) were more likely to present competition and coercion mechanisms. This was confirmed by the empirical cases. Both USO cases, which are linked to low levels of international salience, corresponded to learning (i.e. USO in Morocco) and imitation (i.e. USO in Jordan). Both spectrum management cases, which are linked to high levels of international salience, corresponded to competition (i.e. spectrum management in Morocco) and coercion (i.e. spectrum management

in Jordan). Nevertheless, the design of this study aimed at distinguishing between two sectors presenting opposite degrees of international salience (i.e. USO vs spectrum management), more research would generally be needed to include a greater number of sector cases and more variation within the sectors, to validate and uncover further empirical findings.

*Jordan: Imitation and Coercion*

In the case of Jordan, policy adoption mostly followed mechanisms of imitation and coercion. The empirical analysis shows that following what the EU does in the telecommunications field is a direction embraced willingly by the Ministry and the NRA. Several experts mention their interest and support in following the decisions taken by the EU.

This is visible in the case of USO, where the Jordanian policy is almost identical to the EU one. The imitation of EU policies in USO can be motivated by the fact that in such a non-risky policy field as USO, policy adoption is an ideal starting point to demonstrate support for the traditional partner (in this case the EU). It is an ideal opportunity to demonstrate commitment and compliance with European agreements (see Wavre and Freyburg 2017). Lacking, or at least hiding, any outspoken emancipative ambitions (i.e. unlike Morocco), Jordan uses EU USO policies as an example of support for EU cooperation.

In the case of spectrum, the EU example is also put forward. Here again, laws are adopted based on the traditional partner's example. In a similar way to USO, the policies are not suitable for the Jordanian context, and neither were they motivated by domestic necessity (i.e. no spectrum crowding). This again shows the interest of Jordan in applying EU decisions in the field as a sign of commitment. Nevertheless, the Jordanian spectrum case sheds light on another aspect of policy-making in the ICT sector. Coercion is visible here in a subtle and informal manner. For instance, alliances within the ITU and the power (or lack thereof) to stand against leaders in the field shed light on asymmetrical power relationship and sanction capacity. The Jordanian experts underline the impossibility for them to lead policy-making within the ITU, as well as that the only option for them is to follow what is decided by the EU (i.e. as part of the same ITU Region 1), suggesting soft coercion in this case.

*Morocco: Learning and Competition*

In the case of Morocco, policy adoption has mostly followed cases of learning and competition. Both mechanisms have been argued to follow

the presence of domestic salience, showing the commitment of Moroccan policy-makers to develop policies domestically. This confirms that Morocco is following a path towards achieving a "historical economic and technological leap" through the development of an ICT industry of national merit (Kettani and El Mahdi 2011:174). USO and spectrum management in Morocco reveals an apparent commitment by policy-makers in the country to innovate and implement sophisticated policies. It is observed here that Morocco shows commitment to emancipate itself from the traditional partner (i.e. the EU).

In USO, the adopted model is inspired mostly by the Latin American experience and leapfrogs what the EU has been doing in the field. The Moroccan USO case shows the capacity for Morocco to innovate beyond what the EU has done in the field. In a non-risky field (politically and economically), such as USO, Morocco has taken a chance to show an independent decision-making capacity free of the traditional one-way regulatory approximation based on EU regulation (see Wavre and Freyburg 2017).

In spectrum management, policy-makers commit to coordinating frequencies among equal partners. Policy-makers underline the limited delay of Morocco compared to EU advances in the field. This case shows that Morocco is up to date with its international commitment. Moroccan policy-makers are even members of the ITU's RRB, showing competences at international level. Both practices of (1) contestation of the EU model (i.e. USO) and (2) establishing equal capacity (i.e. spectrum management) are embodied in a logic of emancipation from the traditional (EU) model. This is further exemplified in the telecommunications sector by the will of Morocco to become a regulatory leader for regional partners and notably for African ones[1] (Expert MO3).

## The Regulatory Rise of the Global South

The selection of three developing countries of the MENA region, Egypt, Jordan and Morocco, offers theoretical and empirical value to analyse the states' vulnerability to external actors in policy diffusion. It links questions of technological, political and economic development to policy-making. From a global regulatory perspective, minimal research has been carried out that tackles regulatory flows beyond the traditional North–South and North–North flows (Bauer 2010:9). One of the aims of this study is to bring empirical insight to challenge the traditional regulatory view. The use of three MENA countries as policy-adopters, as opposed to policy-

givers, allows for empirical observation of whether the North–South trend still holds nowadays, but, more importantly, it allows for empirical observation of whether this flow has evolved over time and whether it confirms the emergence of new regulatory trends such as South–North or South–South flows.

This study took a critical point of view regarding the regulatory flows originating from the EU and transposed to the MENA countries. Due to the historical and current institutionalisation processes between EU and MENA countries, common assumptions hold that the EU will be the main source of influence for Egypt, Jordan and Morocco. This view nevertheless needs a more differentiated approach. While the EU is indeed an important reference point in the telecommunications sector for MENA countries, other influences have played their part in developing the MENA telecommunications policies. This was observed for the USO case in Morocco, where inspiration came from Latin America, proposing a case of functional contestation to the EU model. In fact, since the EU USO model did not fit the Moroccan domestic context, Morocco implemented another model based on several influences, going beyond the assumption that the EU is the sole source of regulatory inspiration for MENA countries specifically.

Furthermore, this study brings insight into the emergence of new regulatory trends in telecommunications policies. During the field research, it was observed that contrary to the idea that European countries are more advanced than MENA ones, several experts, including European ones, questioned traditional power organisation and underlined the increasing importance of Southern countries in the field (Expert EU6). Hence, in countries where the fixed network is less developed, advanced telecommunications services based on wireless technologies have directly been acquired, leapfrogging countries using more traditional technologies (Expert EU6). Two aspects which could reveal potential for further research are the role of changing technologies, which present opportunities for worldwide regulatory changes beyond traditional ITU clusters (i.e. ITU Regions 1, 2 and 3), and the resistance of developing countries within the ITU against traditional power relationships. Both aspects are shortly introduced below.

### *International Convergence of Mobile Standards*

The development of the telecommunications sector is closely linked to the advances of sophisticated technology. Technical standards matter for a variety of reasons, notably for corporations to enjoy economies of scale and

expand their markets to other countries using similar standards (Gruber and Koutroumpis 2013). Nonetheless, technological standards do not always lead to new possibilities, since the choice of certain technologies may paralyse the successful development of newer technologies that would sometimes have been more innovative and efficient (Crouch and Farrell 2004; David 2001). Yet, since the 1990s, the advancement of digital mobile communications has reduced technological constraints, with the consequence of redesigning alliances across regions of the world. For instance, developing countries, which have shown a delay in developing their fixed technologies (e.g. fixed telephony, facsimile) compared to most advanced countries in the field (e.g. EU member states), have found in mobile technologies a solution to provide ICT access to a greater number of citizens at less cost (Singh 1999; Steinmueller 2001). In certain cases, the lack of fixed infrastructure has become a chance for emerging economies to embrace more innovative technologies and regulations than the traditional systems themselves.

While until recently mobile standards were closely linked to certain regions (notably ITU Regions), which supported the creation of regional standardised ICT landscapes, technological developments are putting the "standardisation" alliances under pressure. Mobile technologies are increasingly embracing larger capacity and coverage and may redefine the established geographical limits. Specifically, the increasing capacity of standards took the next level with the development of the 4G (also referred to as LTE and LTE advanced[2]) and Fifth Generation (5G). 4G developed from the experience of 2G and 3G to include a series of high-quality voice and video services, coupled with high data-rate quality. LTE and more precisely LTE advanced are increasingly used worldwide and may lead to an internationally converged and harmonised 5G (Agilent 2011; Chin et al. 2014; Rohde and Schwarz 2015).

The capacity to cover larger regions, beyond the ITU's regional band allocation, could redefine traditional power relationships. In such cases, standardisation processes between the EU and MENA regions may become redundant and the norms put forward by the US Federal Communications Commission, that is, ITU Region 2, or Asian region, that is, ITU Region 3, may increasingly become relevant for countries of the ITU Region 1 as well (Experts EU6, MO7). Furthermore, advances in technologies offer opportunities for less advanced countries (e.g. from sub-Saharan Africa or MENA regions) to catch up with international standards directly. This confirms that telecommunications regulation in the EU–MENA region is likely to come under increasing pressure in the years to come, representing a promising field of research.

### *Challenging the ITU Hierarchy*

Furthermore, this study has uncovered new trends within the ITU itself, which seem to shake the traditional forms of power relationship in between ITU Regions. Within the ITU, creating alliances is the main strategy to advance certain agendas. In the ITU Region 1, EU countries have traditionally exerted a strong influence in decision-making (Experts EU6, EU21). Nonetheless, African and MENA countries have recently started to challenge the existing balance of power (Expert EU6). The 2012 World Radio Conference (WRC-12) was a key juncture, where the resistance of African and Middle Eastern countries was felt. African and MENA countries called for the allocation of the 694–790 MHz band to mobile services to meet the growing broadband demand. The item was actually not on the WRC-12 agenda, and it came as a surprise for the European counterparts. African and MENA countries argued that the band was already allocated in ITU Regions 2 and 3 for mobile service, and thus a harmonised allocation would improve the use of worldwide systems (El-Moghazi et al. 2013:24).

European countries opposed these proposals due to their current allocation of 694–790 MHz bands to terrestrial broadcasting services (Ala-Fossi and Bonet 2015). Moreover, large investments had already been made in Europe in the transition to digital broadcasting (Lamy 2014; Stirling 2012). Following the WRC-12, the frequency band was associated with mobile allocation and Resolution 232 called for a technical study to take place during WRC-15[3] (ITU 2012b). The WRC-2015 confirmed the mobile allocation to the band aligning itself to the rest of the world and hence supporting the African countries' position (Digital TV 2015).

The decision on the 694–790 MHz band confirms a change in the balance of power within the ITU. The proposition of the African and MENA countries was taken seriously by all members of ITU Region 1, as no one wished to risk market dismantlement (El-Moghazi 2015). This situation recalls the importance of harmonisation in the field of telecommunications: large economic interests depend on the standardisation of technologies. The WRC-12 confrontation between different members of ITU Region 1 illustrates a noticeable transition, with African and MENA countries becoming stronger actors in policy-making and the European countries reconsidering their spectrum plans. This is a further indicator showing the emergence of Southern countries as central actors in international telecommunications regulation. Nevertheless, more research would be

required to analyse whether this trend is holding over time. Furthermore, it is not clear to what extent traditional industrial powers, such as the EU, are aware and take into account innovations proposed by countries of the Global South.

## Telecommunications Policies and Politics in Developing Countries

This study offers a close insight into the regulatory development of telecommunications policies in Egypt, Jordan and Morocco. For each country, a close assessment of regulatory transformation from the early 2000s to 2014 is given. This is useful to get a practical understanding of how telecommunications regulation in each country has been developed, paralleling the impressive rise in ICT usage among the population (specifically in mobile telephony). Furthermore, discussing two regulatory options for USO and spectrum management sheds light on existing debates of both subfields. On one hand, this study questions the validity of USO and gives ideas on how to develop USO to match the requirements of developing countries. As such, competitive allocation based on reverse auctions, where companies can propose projects of USO instead of directly contributing to a fund to reimburse the official USO provider, represents an innovative way to develop ICT based on domestic requirements. On the other hand, with the rise of mobile telephony, spectrum has been at the core of debates to understand how best to allocate this resource. Regulatory options such as technological neutrality and spectrum trading are two of the various possibilities intending to reshape spectrum use and adapt regulation to its market and social needs.

Setting the frame of USO and spectrum policies in Egypt, Jordan and Morocco is novel, as research often disregards this region, specifically to analyse technical policy sectors. However, these countries represent fascinating pools of information to understand how the telecommunications infrastructure develops. This is necessary in a region that is marked by a huge increase in the use of ICT. Having a closer insight into telecommunications policies in the MENA region is even more interesting when considering the numerous debates surrounding free media, state control and censorship in the region (Dabbous 1994:70; Lynch 2006:37; Rivlin 2013:26).

In fact, the focus on developing the ICT sector is remarkable in semi-authoritarian countries, where conflicting interests are observed between

developing ICT on one hand and controlling the access to information on the other (Guaaybess 2012; Zarwan 2005:2). Hence, the role of regulation to support or minimise censorship and state control is of tremendous importance and justifies academic attention. While this study illustrates a possibility to analyse the regulatory developments of ICT infrastructure in developing countries, it does not discuss the political issue of ICT for authoritarian control. More research is needed to uncover the exact relationship between the governments' technical options for ICT control and their use thereof.

## Notes

1. Several experts underlined alliances based on the shared French language, which acts as a vector for experience-sharing, for example, with Senegal, Mauritania, Ivory Coast, Cameroon, Benin, Congo, Burkina Faso (Experts MO2, MO3).
2. LTE is the evolution from both the GSM and UMTS, and also from CDMA2000 networks. This standard was developed by the Third Generation Partnership Project (3GPP) hosted in the ETSI headquarters (3GPP 2015). 3GPP is a consortium based on seven organisational partners, from Asia, Europe and North America producing technical specifications. 3GPP also includes more than 370 individual member companies, market representation partners and observers (3GPP 2009).
3. The decision was part of the revision of the ITU-R Radio Regulations Article 5. A footnote (5.312A) was included in the reviewed 2012 Radiocommunications Regulation mentioning that in the ITU Region 1, the use of the band 694–790 MHz by the mobile, except aeronautical mobile, service is subject to the provisions of Resolution 232 of WRC-12 (ITU 2012a).

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# Appendix Interview Codes

| *Type* | *Name* | *Interview code* |
|---|---|---|
| *European Region* | | |
| EU experts | DGs ECHO, DEVCO, Trade, Research and Connect | EU1–EU7 |
| | European External Action Service (EEAS) | EU8–EU13 |
| NRAs experts | BAKOM, Switzerland, AGCOM, Italy; ANACOM, Portugal | EU14–EU16 |
| Private consultants | Regulaid, The Netherlands | EU17 |
| | ECC/ECO, Denmark | EU18 |
| | Cullen International, Belgium | EU19–EU20 |
| International bodies | International Telecommunications Union, Switzerland (ITU) | EU21 |
| | European Broadcasting Union (EBU) | EU22 |
| *Egypt* | | |
| Government experts | Ministry of Communications and Information Technology (MCIT) | EG1 |
| | National Telecommunications Regulatory Authority (NTRA) | EG2–EG4 |
| Companies | Telecommunications operators (Vodafone) | EG5 |
| EU delegation | EU Delegation in Cairo (EEAS Egypt) | EG6 |
| *Jordan* | | |
| Government experts | Ministry of ICT (MOICT) | JO1 |
| | Telecommunications Regulatory Commission (TRC) | JO2–JO8 |
| Companies | Telecommunications operators (Umniah, Zain and Orange) | JO9–JO11 |
| EU delegation | EU Delegation in Amman (EEAS Jordan) | JO12 |

(*continued*)



V. Wavre, *Policy Diffusion and Telecommunications Regulation*,
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(continued)

| *Type* | *Name* | *Interview code* |
|---|---|---|
| *Morocco* | | |
| Government experts | Ministry of Communication (MINCOM) | MO1 |
| | National Telecommunications Regulation Agency (NTRA) | MO2–MO7 |
| | High Authority for Audiovisual Communication (HACA) | MO8–MO10 |
| Companies | Telecommunications operators (Maroc Telecom) | MO11 |
| EU delegation | EU Delegation in Rabat (EEAS Morocco) | MO12 |

Notes: Interviews carried out by author from 15 September 2013 to 21 December 2013 and from 18 June 2014 to 10 July 2014 in the European Region and from 4 February 2014 to 15 April 2014 in the MENA region

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# Index[1]



[1] Note: Page numbers followed by 'n' refer to notes.



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