Internet Policy Observatory

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Internet Governance Capacity Building in Post-Authoritarian Contexts

Telecom Reform and Human Rights in Myanmar

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Abstract

Myanmar is undergoing profound socio-political transitions, including rapid developments of its telecommunication infrastructures and related policy frameworks that involves both infrastructural and governance challenges. By focusing on the various stages of the connectivity building plan over the first 3 years since its launch in 2012, this paper explores how Myanmar is developing its internet policy capacity building, in the framework of the broader transnational internet governance debate. In particular, this paper addresses whether and how the new national telecom infrastructure and the related governance framework has been designed and implemented in respect of digital rights, notably freedom of expression and right of privacy. By process tracing the initiatives shaping the on-going connectivity building plan, the paper discusses the role of actors involved in this process, including civil society organizations, private companies, and foreign governments; whether we are witnessing any bottom up forms of internet governance practices; opportunities and eventual threats for citizens related to the implementation this connectivity plan; and finally, it tests and proposes a novel empirically driven theoretical framework aiming at expanding our understanding on the diffusion of global internet governance norms in developing connectivity in post-authoritarian contexts.

Keywords: *Internet Governance, Internet and Human Rights, Telecom Reform, Connectivity Building, Capacity Building,*

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1. Introduction

In the midst of rapid socio-political transitions, with one of the lowest internet and mobile subscriber rates in the world, Myanmar is building its telecommunications infrastructure, which involves opening its market to international mobile companies, engaging in national regulatory reform, and developing its internet policy capacity. Although the domestic connectivity plan is moving quickly forward, following decades of political repression several challenges need to be dealt from both an infrastructural and a policy perspective in order to secure an open and free digital environment. This paper explores the fast developing connectivity developments in Myanmar, paying particular attention to the opening of the mobile market to international companies, the launch of the new national telecom law, the policy developments securing digital rights, and how this is happening in the context of broader internet governance discourses.

Based on fieldwork conducted since 2013 and interviews with key actors involved in the telecom developments, including local civil society organizations, CEOs of new international mobile operators developing the digital infrastructure, and by tracing the process leading to a national telecom reform, this paper addresses these developments, paying particular attention to: 1) Understanding the role of the various actors involved in this process, scrutinizing in particular whether and how the government is still controlling the process; how national civil society organizations are able to influence such a process from the bottom up; and the role played by international actors, including international telecom companies, 2) how wider global internet governance norms are adapted to the Myanmar context via a top-down approach, or whether we can rather describe Myanmar as a bottom-up internet governance case, and finally, 3) whether this process is able to ensure a human rights-based development of national digital telecommunication infrastructure.

2. Context

According to international rankings, Myanmar is the country with the lowest number of internet users and mobile subscribers, followed only by North Korea: in 2011, the International Telecommunication Union (ITU) reported an internet penetration rate of 0.98% and 1.3 million mobile subscribers, representing 2.3% of the population. These mobile users subscribed to the only mobile company active in the country which, together

with its subsidiaries, is controlled by the state-owned Myanmar Post and Telecommunications (MPT).[2]

Traveling in Myanmar reveals that the observed telecommunications reality varies significantly from the official data available about Internet infrastructure and mobile penetration. In cities such as Yangon, Mandalay and Bagan, internet and open WiFi are already available, mobile phones shops are widely distributed over the country, ultimate generation Smart Phones are broadly used. Despite recent telecommunications improvements, Myanmar has just started to build its connectivity, and it is expected that obstacles will emerge as the country's progress advances. For instance, much of the infrastructure building will occur in Myanmar's vast rural territory. Armed groups control parts of this area, which is rife with landmines, making these remote sections of Myanmar even more inaccessible and concerning to mobile tower suppliers involved in infrastructure construction. Additionally, Myanmar will face challenges in creating and implementing telecommunication and regulatory reforms. In countries in political transition, increased connectivity, along with its benefits, has the potential to expose citizens to new threats of surveillance and control. A regulatory framework securing the respect of human rights, notably the freedom of expression and citizens' right to privacy, should thus accompany the development of Myanmar's telecom infrastructure. However, the scarcity of local internet policy development capability and limited number of civil society organization active in the country does not facilitate a contribution to the connectivity policy development from the bottom up.

1. Developing Internet Governance Capacity Building

Due to its isolation and lack of digital infrastructure, Myanmar has been excluded from the broader internet governance debate taking place internationally, leading to limited local internet policy competence and public opinion on how to develop a regulatory framework securing connectivity as a public good. The internal debate addressing the governance of such a process is therefore currently developing together with the building of the physical digital infrastructure. In this context, following decades of autocratic rule, key questions emerge about how to implement national internet governance norms securing the development of connectivity infrastructure in respect of basic rights for citizens. The

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[2] ITU Global ICT Statistics: http://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx

functioning of digital connectivity is usually ensured by evolving technical protocols, international standards and transnational regulations, which are constantly at the center of international negotiations, featuring multiple actors from the private sector, transnational non-state actors, governments, and civil society organizations (DeNardis, 2013; Mueller, 2010). The development and implementation of *"[…] shared principles, norms, rules, decision-making procedures, and programmes that shape the evolution and use of the Internet"* is thus defined as Internet Governance (Working Group on Internet Governance, 2005). This definition refers Internet Governance to all technical and policy discussions around the digital connectivity, and as result of this, internet governance debates cover broad and multidisciplinary dimensions. As a result of this, Internet Governance has been characterized by techno-determinist, on the one hand, and state-centric approaches, on the other (Bendrath, 2009; Eriksson & Giacomello, 2009). The firsts believe that since the decentralized architecture of the internet goes beyond national state borders, no single actor nor any centralized steering structure would have the full legitimacy to govern it (Drezner, 2008). Therefore, from a techno-determinist perspective, it is commonly held that no state or governmental institution are entitled to govern and set a universal regulatory framework of the Internet (Brown & Marsden, 2013; Mueller, 2010). Instead, Internet Governance is seen as ideally led by agreement between private companies and transnational non state actors, while states should play a rather limited role in such transnational negotiations (Mueller, 2010). This argument is drawn from the stream of scholarly relevant research and politics defining the internet as a cyber-ism, which stresses the apparent virtual nature of the internet. On the other hand, policy oriented streams of research argues that this idea is misleading: the internet is concrete when it comes to building its physical infrastructure, including backbones and internet exchange points among others, and its governance depends on actors that do not solely deal with cyber agendas, but function also in real life, such as state governments (Nye 2014). This is particular true when we refer to governments aiming to exercise their hegemony and control over the use of the Internet among their citizens. In the domain of mass surveillance, internet filtering and censorship, there is arguably a "return of the state" (Deibert & Rohozinski, 2010). Here, despite its transnational decentralized technical nature, the use of the Internet happens within legal frameworks applicable within national borders, giving legitimacy to national sovereignty over the Internet (Drake, 1993). Empirical evidence further supported these arguments more than a decade ago (Mueller, 2002), and more recent cases, such as the Arab Spring and the Whistleblowing Snowden case,

reinforce this tendency towards more state agency in Internet Governance (Calderaro, Gollatz, & Wagner, 2014).

In what follows, we address the role that the Myanmar Government plays in the development of national connectivity infrastructure and policy. In particular, this research takes this latter stream of scholarly relevant and policy oriented contributions in order to develop a better understanding of the connectivity building and the telecom reform happening in Myanmar. This case allows us to expand our understanding about how Internet Governance norms are contextualized in the connectivity building process taking place in Myanmar, and whether any bottom up internet governance practices can be detected.

3. Connectivity Plan

Already in the first months after the power shift in August 2011, the new Myanmar government identified the development of national connectivity as a key priority for modernizing the country. The various stages of the telecom reform reflect the double goal of the government: to connect the country urgently, while at the same time respecting international standards, aiming to secure the reform of the national telecom sector in a fair, open and transparent way.

Connectivity Developments and Telecom Reform in Myanmar

Licensing	2011	August	New government
	2012	January-July	Design the Call for Tenders
		August	Launch of the Call for Tenders
Telecom Law	2013	June	Announcement of the Awarded Companies
		July-November	Design of the Telecom Law
		November-December	Open Consultation
	2014	January	Licensing and start of the infrastructure building
		June-August	Rolling out of SIM-cards from new international operators
Independent Regulator	2015		Launch of the Independent Telecom Regulator
		November-December	General Election and New Government

Figure 1 - Timeline of the Telecom Developments in Myanmar

As described in Figure 1, the connectivity plan and telecom reform follows a sequence of different phases: from January 2012 to July 2012, before assigning the license and

launching the international competition, the Myanmar government set the bidding rules and designed the call for tenders. Once the rules were set, and following the launch of the international competition in August 2012, mobile operators were able to submit their proposals until January 25, 2013. As described in details below, in June 2013 the government announced the outcome of the competition, and awarded two companies licenses. However, given the lack of a national telecom law, mobile operators did not actually receive their licenses and were not therefore able to operate in the country and launch their services until the released of the law. The design of the telecom law did not commence until June 2013 and a draft version of the law was released for public consultation in November 2013. In January 2014 the government finally assigned the licenses, and operators started to work in the country.

Here, these various stages of connectivity building in Myanmar are clustered and described according to the following three-step approach influenced by three complementary yet parallel initiatives launched by the Myanmar government:

1) *Licensing*: A public open international competition for the assignment of telecom licensees, and their actual release;

2) *Design and release of a national telecom law*: Defining a set of rules guiding the development of telecom infrastructure, including licensing regulations, securing an open market, and protecting the freedoms of both investors and citizens;

3) *Establishing an independent telecom regulator*: Establishing a national telecom regulatory agency, independent from the Ministry and its political agenda, ensuring and monitoring therefore the application of telecom regulation.

This is the sequence of milestones characterizing the current connectivity plan in Myanmar, although, as explored in details below, the experience in implementing these initiatives in such a sequence is not necessarily most auspicious to follow. Below, we explore the connectivity plan along this three-step approach.

3.1 Licensing

Of Myanmar's three telecom development initiatives, licensing is the area that has seen most activity. To this day, the Myanmar Post and Telecommunications (MPT), a division of the Ministry of Communication and Information Technology (MCIT), is the owner of national communication infrastructures and only landline and mobile operator. Furthermore, it controls the entire internet infrastructure by controlling Yatanarpon Teleport (YPT), which is the only Internet Service Provider (ISP) in the county. In this preliminary stage of the connectivity building, the government did not aim to maintain its already operating state-controlled mobile operator competing in the domestic telecom market. In August 2012, therefore, the government opened up the internal telecommunication market by launching a call for tender with the aim to involve international telecom operators in order to enhance connectivity in the country. Among the more than 90 companies vying for the license, in April 2013 the government shortlisted 12 companies, including: several Asian telecom companies like: the Indian Bharti AirTel; the Singapore Telecommunications (SingTel); the Malaysian Axiata, one of the biggest Asian telco; the Vietnamese Viettel Group; a joint partnership between France Telecom-Orange and the Japanese Marubeni; and consortium of companies involving local partners like: a consortium led by Quantum Strategic Partners, whose principal investor is George Soros through his Soros Fund Management, partnering with the Jamaican Digicel, and the newly established Myanmari Bank Yoma Strategic Holdings; a consortium of both Japanese, KDDI and Sumitomo corporation, and the local Myanmar Information and Communication Technology Development Corp.; and single runner international companies like: the South Africa's Mobile Telecom Network (MTN) Group, the Swedish Millicom International Cellular mostly active in Latin America and Africa, the Qatari Ooredoo; and the Norwegian Telenor. Despite being shortlisted, Vodafone in partnership with China Mobile withdrew from the competition, after having evaluated that the investment was not sufficiently justified by their estimated benefits.

a) Awarding Criteria

Conditions for the submission of the bid seriously limited the number of companies matching the eligible criteria, excluding *de facto* single running domestic bidders.[3] Licenses have been therefore awarded to the companies obtaining the 2 highest combined scores.[4]

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[3] The evaluation process consisted of 1.500 points to be allocated across bidders. In particular, 1000 points were allocated in consideration of eight major criteria: 1) Quality of the Network development plan, including the infrastructure plan offered, and coverage of the network (325 points); 2) Strength of the technical plan (125 points); 3) Quality of the Marketing strategy, value added services and distribution commitment (125

As result, all Asian companies did not gain sufficient points, neither companies bidding in partnership with local partners. Finally, the two new mobile phones licenses were finally awarded to the Qatari company Ooredoo, and the Norwegian Telenor. Furthermore, once assigned the licenses to international operator, the Minister of Post and Telecommunication (MPT) has established a new partnership with the Japanese telecom company KDDI and Sumitomo corporation in order to transform the formerly state controlled mobile operator in a public-private mobile company able to compete as a newly licensed third operator. A forth and last mobile licenses expects to be assigned by 2016, and a new consortium joining local and international partners will become a new partly state-owned mobile operator.

Ooredoo, formerly Qatar Telecom (Qtel),[5] is a state-controlled mobile company that holds a monopoly on the mobile sector in Qatar. Additionally, Ooredoo Group controls the main mobile operators in Kuwait (Wataniya), Oman (Nawras), Tunisia (Tunisiana), Palestine (Wataniya), Maldives (Ooredoo), and Iraq (Asiacell). Algeria it is also transferring from its former national mobile operator Nedjma to Ooredoo Algeria, and in Asia Ooredoo is primarily active in Indonesia (Indosat).[6]

Unlike Ooredoo, the Norwegian state-controlled Telenor is already widely operative in Southeast Asia, controlling mobile operators in Bangladesh (Grameenphone), India (Uninor), Thailand (DTac) and Malaysia (DiGi). Telenor is also active in Sweden, Denmark, Hungary, and in the Balkan area, operating as Globul in Serbia, Montenegro, and Bulgaria.[7]

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points); 4) Foreseen tariff for all mobile services, including voice, data, and handsets (75 points); 5) Quality of the management of human resources, including its organization and plan to recruit and train local expertise (75 points); 6) Customer services and billing quality (50 points); 7) Corporate Social Responsibility of the company (50 points); 8) Robustness of the business plan and the financing plan (175 points). Finally, further 500 points were assigned to the company with the highest spectrum fee offer, assigning to the other bidders points proportionated to their offers.

[4] Telecommunications Operator Tender Evaluation and Selection Committee (2013). "Telenor Mobile Communications and Ooredoo selected as Successful Applicants in the Nationwide Telecommunications Licence Award Process", 27 June 2013.

[5] More information available at: http://www.ooredoo.com/en/company/who-we-are/our-global-team/ooredoo-qatar.html

[6] More information available at: http://www.ooredoo.com/en/section/who-we-are/our-global-team

[7] More information available at: http://www.telenor.com/about-us/global-presence/

Together, Ooredoo and Telenor have committed to connect more than 90% of Myanmar over the next 5 years. Despite the common commitment to expand connectivity to most of the country, their missions in Myanmar diverges in several other aspects, according to interviews conducted with company CEOs[8] at Ooredoo, and Telenor. Ooredoo have invested 15 Billion $ in the country, promising to develop a 4G high speed data transferring infrastructure, while Telenor has invested 3 Billion $ for its mission, with the aim to develop mostly a 2G voice infrastructure in rural area and a more geographical limited 3G data covering mostly urban area. Given the high resources invested, Ooredoo is also intensively engaged in campaigns with the scope to enhance the development of local know-how. By sponsoring the organization of public events and training initiatives (such as the so-called Hackatons), for example, Ooredoo aims to support the development of projects from the bottom up. Telenor is also targeting rural area by supporting initiatives aiming to overcome more traditional forms of digital divide.

b) Connectivity Development and Human Rights: the role of telecom companies

The development of a digital communication infrastructure in a country that has until recently demonstrated continued breach of the freedom of expression, some concerns about whether the country's connectivity building will happen in respect of human rights, notably the freedom of expression and right to privacy emerge. The international mobile operators Ooredoo and Telenor are therefore called to play a role on this matter by operating in respect of their corporate social responsibility. In this context, the 2013 Human Rights Watch report "Reforming Telecommunications in Burma: Human Rights and Responsible Investment in Mobile and the Internet" (Human Rights Watch, 2013) called for careful evaluation of the country's telecommunication policy development, and telecom development's potential consequences for digital freedoms. Additionally, in the context of internet governance, private companies are often heralded as having a positive influence on regulations that support online freedoms. Myanmar's current telecom situation, in which international companies are developing connectivity infrastructure while the country develops relevant laws and regulations, is a key case and an important process to be followed carefully.

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[8] Interviews to Ross Cormark (Ooredoo) and Petter Furberg (Telenor) consisted of *semi-structured interviews* conducted in both companies' headquarters in Yangon in February 2014.

According to both the "UN Guiding Principles on Business and Human Rights" (United Nations, 2011) and the EU Commission's "ICT Sector Guide on Implementing the UN Guiding Principles on Business and Human Rights" (European Commission, 2013) to prove their corporate social responsibility, telecom operators must create a public social responsibility policy that includes their commitment to respecting human rights. Ooredoo currently does not have a clear policy on corporate social responsibility related to freedom of expression and digital rights. In contrast, Ooredoo has in the past accepted the Qatari government's internet censorship request by blocking VoIP – Skype services in the country, and by using SmartFilter, an internet filter used also in autocratic regimes including Iran, United Arab Emirates, Oman, Sudan, and Tunisia, (Deibert, Palfrey, Rohozinski, & Zittrain, 2008) to block websites deemed inappropriate for the "national morality and customs." In Myanmar Ooredoo faces additional problems as its perception as a "Muslim" company has been negatively received by Myanmar's Buddhist leaders. [9] As internal religious tensions between the country's 90% Buddhist population and 4-8% Muslim minority have caused an increasing number of violent episodes and conflicts, Ooredoo faces a serious challenge in easing this potential conflict (International Crisis Group, 2013). At the same time, as already stressed above, Ooredoo has invested massive capitals in the country, and a good portion of this is allocated also to support the development of local know-how and facilitate the birth of new start up, and give visibility to other initiatives from the bottom-up. This campaign has so far been successful in overcoming the initial concerns.

Telenor has a publicly available and advanced policy for the protection of human rights. [10] Telenor is member of the Telecommunication Industry Dialogues, [11] a consortium of telecom companies, [12] which in March 2013 released a joint document on "Guiding Principles on Freedom of Expression and Privacy." (Telecommunications Industry Dialogue, 2013). The company also released a policy document, in which it publicly commits to protect its subscribers' freedom of expression and privacy, and to avoid the shutting down of its services. Telenor, however, does disclose that shutting down services may occur in

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[9] "Responding to Buddhist nationalists, Myanmar looks to restrict inter-faith marriage" Human Right Watch, 3 July 2014. Available at: http://www.hrw.org/news/2014/07/03/responding-buddhist-nationalists-myanmar-looks-restrict-inter-faith-marriage ;

[10] Available at: http://www.telenor.com/sustainability/human-rights/

[11] More information available at: http://www.telecomindustrydiaologue.org

[12] Including: Alcatel-Lucent, AT&T, Millicom, NSN, Orange, Telesoniera, Telefonica, Telenor, Vodafone

"extraordinary events" due to national security threats, without clarifying further which are the national security threats justifying this. New concerns raised in June 2014, when Telenor – the second largest telecom operator in Thailand – accepted the Thai military junta's request to stop its subscribers' access to Facebook.[13] Regarding the protection of users' privacy and disclosing information about its subscribers, Telenor links its policy to the "UN Guiding Principles on Business and Human Rights." (United Nations, 2011). The company, however, keeps doors open to disclosing customer information when a governmental request is considered appropriate, though the company does not specify what conditions are deemed appropriate.

In sum, in a context of political transition and, as described in details below, the lack of a national law regulating data retention in Myanmar, both Telenor and Ooredoo will have the opportunity to demonstrate their corporate social responsibility by securing freedom of its services and the privacy of its customers. However, although Myanmar assigned the mobile licenses in June 2013, both operators only received their licenses and permission to implement their mission on January 30, 2014. This delay was caused by the absence of a national telecom law in Myanmar required to set the rules for the licensing process and the conditions of the national telecom market. As a result, Ooredoo and Telenor launched their connectivity plans at the beginning of 2014, and started offering services in the summer of that year. In May 2015 Telenor counts 6.4 million subscribers, Ooredoo 3.3 million customers, and the already existing national mobile operator MPT partnering with the Japanese KDDI leads the market with its 10 million subscribers.

2.2 - Telecom Reform

Before fully developing connectivity, Myanmar had first set the rules for telecom infrastructure construction and safeguarding citizens' rights. Given the uncertain political climate and the need to establish necessary conditions for securing telecom developments, releasing a telecom law is a key priority that should have anticipated both the construction of connectivity infrastructure and the launch of mobile services.

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[13] The Citizen Lab, "Information controls during Thailand's 2014 Coup", July 9, 2014. Available at: https://citizenlab.org/2014/07/information-controls-thailand-2014-coup/

Discussions about the new telecom law slowed down the country's connectivity agenda, but its release was still a key preliminary priority, and a milestone of the connectivity development in the country. Moreover, as argued below, the process attached to the release of this law opened an unprecedented, innovative, transparent and inclusive process of reform in Myanmar, in line with best practices in telecom reform.

a) A multi-stakeholder approach in telecom reform

A draft version of a new telecom law was developed with the close support of the World Bank which is highly involved in the connectivity plan of the country,[14] and has been released and circulated to stakeholders, allowing us to draw some preliminary evaluations. Following one of the key "best practices" in telecom reform, the Myanmar government implemented the new telecom law through a public and inclusive process, which involves multiple actors and welcomes their recommendations. In particular, the government launched an open consultation on this law in order to facilitate a public debate on new regulatory laws, aiming to ensure a free and open telecom market.

The draft law was made available online in English[15] for public consultation from November 4th to December 2nd 2013. The publication of the law in English language made clear that the goal of the government was to enhance dialogues with international actors, creating an opportunity for third parties to access the law and submit their comments. However, given the fact that the law has not been published in Burmese dramatically limited the capability of national actors to take part in the consultation, and excluded most of the population from understanding and partaking in this telecom reform. As a result, 21 different parties, including international telecom companies (e.g. Ericson), mobile operators (e.g. Telenor, Ooredoo, KDDI, and Orange), international NGOs (e.g. Myanmar Centre for Responsible Business, LIRNEasia), local civil society organizations (e.g. MIDO), and foreign governments (namely the U.S. government), submitted their policy recommendations.[16]

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[14] "Myanmar Moves Toward Connectivity for All", World Bank, 6 February 2014. Available at:
http://www.worldbank.org/en/news/press-release/2014/02/06/myanmar-moves-toward-connectivity-for-all

[15] Available at: http://www.myanmarpublicconsultation.com/

[16] Available at: http://www.myanmarpublicconsultation.com/Nov2013/

Submitted comments generally acknowledged Myanmar's efforts to open a public consultation and make the development of a telecom law a more transparent and open procedure. Myanmar's initiative is indeed no small feat. After years of an autocratic regime, this transparent and inclusive process opens up new spaces of dialogues between governments, citizens, and international companies. Moreover, this created an opportunity for parties to publicly commit to and position themselves in Myanmar telecom reform discussion. This may be an opportunity to facilitate the eventual strengthening of synergies and collaborations among all actors, especially domestic ones, involved in this process. As the debate on internet freedom in Myanmar has just begun, this is an important first step in developing cooperation for future policy debates on telecom in the country.

b) Analysing the Telecom Law

With the release of the draft version of this law, the government has expressed its aims to establish a fair, open, and transparent national telecom market. The law sets rules concerning 5 key issues: 1. *Licensing*: Defining the process to be applied for each licensing category and identifying its criteria; 2. *Access and interconnection*: Setting the rules ensuring a liberal and free networked connectivity and facilitating access to infrastructure and services; 3. *Spectrum*: Describing the criteria for the management and assignment of radio spectrum, including a variety of service such as mobile voices, broadband, and WiFi; 4. *Numbering*: Defining the criteria for the allocation of numbering according to area and operators; 5. *Competition*: Setting the rules of the internal market competition.

The open consultation on the telecom law has been successful at creating open and transparent dialogue, and most stakeholders responded positively to the proposed version of the telecom law. Overall, concerning reactions on the telecom law, given the variety of actors involved in Myanmar's connectivity reform plan, reactions to expectations about this law and are equally diverse.

Amongst the *private companies* that submitted comments, recommendations differ depending on whether the company is an international mobile operator, such as Ooeredo and Telenor, or a hardware supplier, such as mobile towers suppliers. In particular, while mobile

operators primarily commented on the licensing procedure and the management of their services, mobile tower supply companies called for easier land assignment processes for tower construction. Land assignment for the construction of mobile towers is a key component of overcoming geographical barriers and extending network coverage, especially in rural areas. As discussed in more detail below, this is one of the major challenges that both the government and mobile operators need to face in the coming months. In particular, mobile tower builders demand a feasible plan making the assignment of lands smooth, which takes into account the general lack of a national register of land property. In addition to the fact that armed conflicts and landmines affect a significant part of the territory, the issue of building the physical infrastructure might constitute the major challenge for the tower building process, and it risks to seriously slow down the development of the connectivity infrastructure. At the same time, companies had no major concerns regarding the proposed telecom law, and came to a general agreement on the rules already included in the law, with only minor comments and recommendations.

Similar to industry stakeholders, *foreign governments*, namely the US, welcomed the telecom law and the transparent process of the open consultation. In a concise report, the US Government supports most of the points included in law, and encourages to take further initiatives to enhance a transparent and open national telecom market competition.[17]

In contrast, *civil society* and *non-governmental organizations* (NGOs) raised some disagreements on the draft law. Groups within this sector indicate that the law primarily pleases international investors, establishing obstacles for the development of bottom up local services by defining entry market conditions that big international companies can easily respect, but not local investors. In particular, civil society concerns illuminate that the law provides that parties able to offer infrastructure and hardware network platform, defined as Network Facilities Service, are automatically entitled to receive their license to provide downstream services. Stakeholders have expressed that local investors are hardly in the position to offer Network Facilities Service, creating unequal competition rule, making this

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[17] U.S. Government, 2013. "Comments on Telecom Law from U.S. Government". Available at: http://03861b4.netsolhost.com/Nov2013/wp-content/uploads/2013/12/19-US-Govt-comments.pdf

stipulation in the law a serious obstacle for the development of bottom up local online services.[18]

However, some have pointed out concerns, including the role paid by the World Bank. In a document signed by 61 civil society organizations, the World Bank is criticized for having failed in securing the right of freedom of expression and digital privacy even before launching a telecom reform.[19] In particular, given the leading role taken in the telecom development in Myanmar, the World Bank is called on to first secure digital privacy, regulating data retention, and secure the internet infrastructure before developing the telecom sector in the country as it is currently happening. Another major concern expressed by multiple parties involves the interconnection among national telecommunication bodies. In order to ensure a transparent and open telecom market, governments are supposed to withdraw from a regulatory role. According to best practices in telecom reforms (International Telecommunication Union, 2011), an independent regulator must take over this role. The distinction between an independent regulatory body and the government's role in regulation has not been established yet. As result, the Myanmar Posts and Telecommunications Department (MPTD) controlled by the MCIT still hold this role. The law designs a regulatory system composed of a complex hierarchical structure in which the government appears to be involved, especially in the licensing process. Here, although the licensing procedures are managed by the MPTD, its final outcome will be still communicate and finally evaluated by the MCIT. This hierarchical regulatory system proposed exposes the licensing process to several weaknesses including a complex bureaucracy machine, which will likely hinder its efficiency; and increased room for corruption. Most importantly, the proposed regulatory system maintains the central role of the Ministry of Communication and Information Technology, which could result in

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[18] MIDO, 2013. "Recommendations on Proposed Rules for Telecommunication Sector from Myanmar ICT for Development Organization". Available at: http://03861b4.netsolhost.com/Nov2013/wp-content/uploads/2013/12/12-Myanmar-ICT-for-Development-Organization-comments.pdf

[19] US Campaign for Burma "Civil Society Comments to World Bank Telecom Sector Reform Project in Burma" 21/01/2014. Available at:
http://uscampaignforburma.org/images/Civil_Society_Comment_on_the_World_Bank_Telecom_Sector_Reform_Project_in_Burma.pdf

political control over the national telecom market, and the services of mobile operators.[20] The establishment of an independent regulator is considered therefore key to the success of Myanmar's connectivity building, and is the last step of the country's three step approach to telecom reform.

3.3 - Independent Regulator

Concerns raised about the national regulator's lack of independence are justified, also considering that an established independent regulator is still absent. Currently the regulatory body in Myanmar is the state controlled Posts and Telecommunications Department (PTD), a department within the Ministry of Communication and Information Technology (MCIT). [21] Before the telecom reforms, the country's public monopoly on telecoms partially justified the PTD as a regulatory (International Telecommunication Union, 2011), however, given the opening of the national market, the urgency to establish a new regulatory independent body is commonly shared among civil society parties and international observers.

Defining the separation between a regulatory body and the government is commonly considered to be necessary to secure the independency and the neutrality of the telecom market, and protect international investors and the citizens of Myanmar. In the Telecommunications Regulation Handbook, the ITU (2011) posits that an ideal regulatory structure must be divided into three main functions (policy development, market development, and regulation) that are overseen by parties independent from each other. This regulatory framework includes:

1) The *government*, and its executive branch, which should hold a policy development function. In Myanmar, this is described as the second step in the connectivity process, and the government is indeed leading the discussion of the described telecom law;

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[20] LIRNEasia, 2013. Response to the "Public Consultation Issued by the Ministry of Communications and Information Technology of the Republic of the Union of Myanmar". Available at: http://03861b4.netsolhost.com/Nov2013/wp-content/uploads/2013/12/9-LIRNEasia-comments.pdf

[21] Available at: http://www.mcpt.gov.mm/mcpt/about-01.htm

2) *Private telecommunication operators* which are in charge of developing the market, and offering services to citizens. In Myanmar, this is described as the first step in the connectivity process, and is filled by both Ooredoo and Telenor.

3) A separate *regulatory authority* which should be in charge of monitoring and regulating the implementation of the telecom law, securing the efficiency of the market for investors, and the quality of services for citizens.

A separate regulatory authority, here identified as the third step in Myanmar's connectivity agenda, is still missing. Multiple parties calls on this to be the key priority in facilitating a transparent telecom framework that is independent from the government and the government's political agenda. The major current challenges in establishing an independent regulator is the lack of local competences to develop a national telecom regulator. The time required to launch an independent regulator would involve long training, which would slow down the implementation of the current connectivity plan. According to the time required to develop local know how, the draft law clarifies that the establishment of the regulatory body will happen within 2 years since the launch of the telecom law. Therefore, this expects to happen by 2016. As the existence of a regulatory body is important in securing the efficiency of other steps in the reform process, criticism is raised on the fact that the "step three" is happening inconveniently late. Furthermore, in the draft law, the process of establishing the regulatory body is not fully detailed, and clarifications must be further addressed.

An independent regulatory is perceived to be critical in Myanmar as the country's connectivity building and policy framework as highly controlled by the government who, at this point in time, still needs to work towards full accountability. This is not necessarily a threat to the Myanmar telecom framework and its subscribers, but it should be considered a serious weakness to the overall reform process. According to commonly shared concerns, and here discussed standard best practices in telecom reform, establishing an independent telecom regulator remains therefore one of the next challenges for Myanmar's connectivity development. However, as addressed below, many other challenges, and some with major priorities, need to be faced in order to further strengthen the connectivity building process in the country.

4. Next Infrastructural and Policy Challenges

Although the current connectivity building plan seems to be moving forward, this is anyway far from being finalized and several further challenges need to be faced in future stages of this connectivity agenda. We can group challenges that need to be further addressed in the on-going connectivity plan in Myanmar into two major perspectives: developing connectivity *infrastructure* and the *policy* governing it.

4.1 Infrastructure Implementations

Building Mobile Towers: Land Ownership, Landmines, and conflict areas

With its 676.000 Km^2, Myanmar is the second largest country in South East Asia, second only to Indonesia. Only approximately 7.000.000 out of its approximately 60.000.000 habitants live in the three major cities; the capital Nay Pyi Taw, Yangon and Mandalay. This data sheds light on how connecting Myanmar will consist of developing telecom infrastructures mostly in the widest rural territory of the country. In order to reach this goal, it has been estimated that approximately 8.000 mobile towers need to be built.[22] Unfortunately, both Ooredoo and Telenor did not agree on the sharing of the mobile towers, meaning that 8.0000 towers will be built by each company, rising the estimated final number of mobile towers to be built to 16.000.

In Myanmar the *land ownership* is not rigorously tracked by the government, and land owners cannot provide evidence of their ownership of the land. According to the new telecom law, the government is in charge to mediate between mobile towers builders and land owners, in order to finally release licences to build the mobile infrastructure. The lack of accountable documentation, and of a record of land property, will seriously slow down the capability of the government to release licenses to build mobile towers. This will likely delay the connectivity development in rural areas.

Moreover, *landmines* affect a significant part of Myanmar territory. Although clean-up campaigns have been launched, these territories are for the moment not secure, and therefore excluded from the connectivity plans of both international companies.

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[22] Figures gathered from interviews conducted in February 2014 with CEOs of Telenor and Ooredoo.

Finally, several armed conflicts are active in Myanmar, and several regions are not controlled by the national government. Since the democratization process started, ceasefires have been signed, although these territories are still controlled by armed groups. Building mobile towers in rural area consists of positioning them on the highest peaks of areas. In conflict regions these are however strategic points for military purposes, and therefore controlled by local armed groups. This makes mobile operators not able to build telecom infrastructure in these regions, without careful diplomatic actions by the Myanmar government in the ceasefire negotiations.[23]

Government monopoly on the Internet Infrastructure

This paper has mostly addressed what has been done concerning the development of mobile infrastructure. 4G and 3G services promised by Ooredoo and Telenor will increase the development of mobile data transferring and it will increase the internet services. However, internet infrastructure should develop also over further levels.

The MPT fully controls the internet infrastructure in different ways. In Myanmar there are no Internet Exchange Points (IXs) as such. However, such a function is substituted by a government-controlled national gateway which keeps the data flowing domestically and maintaining Myanmar independent from the Thai, Malaysian or Chinese infrastructure, functioning *de facto* as an IX. Given that the government controls the only IX of the country, it is also in the position to monitor all domestic data flows, exposing the national internet infrastructure to risk such as data filtering and violation of digital privacy. New ISPs entering the broadband market will have to grapple with this situation, until the government dismantles this control, or new IXs will be built. To this day, under such infrastructural conditions, the internet in Myanmar cannot be considered fully secure for its citizens.

At the same time, the broadband capability relies on only one submarine cable serving Myanmar. In order to increase the broadband capability of the country, in March 2014 the MPT joined the SEA-ME-WE-5 consortium which will in the next 2 years construct a new 20.000 Km submarine cable connecting over 17 countries between Europe and South East

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[23] See the Myanmar Peace Monitor for more details: http://www.mmpeacemonitor.org/

Asia. [24] With its 100Gbs technology, this will significantly improve the connectivity capability of the region, and this will be a major improvement in particular for Myanmar. However, also here, the fact that the Government will be the only controller of such infrastructure, force new potential ISPs aiming to offer their services in the country to buy the broadband through the Government, condition that does not create the base for more open and secure national internet infrastructure.

4.2 Policy Implementations

I have already discussed some of the criticism raised on the current telecom law, but some issues are not regulated in this law, calling for the implementation of new regulations.

Legislation for the governance of internet infrastructure

As mentioned above, new regulations should be implemented in order to decrease the government control of the national broadband in order to facilitate new ISPs entering the market, and secure their independency.

Right to Privacy

The new telecom law, and Myanmar legislation in general, also lacks of a regulation protecting citizen privacy, and data retention in general. The newly licensed mobile operators, namely Telenor, clarify their policy by stating that they secure the privacy of their subscribers in respect of local legislation. However, the lack of legislation in Myanmar does not help companies to respect their commitment, and it does not protect citizens. A new regulation concerning the right of privacy should therefore be developed.

Cybercrime laws

Regulation on cybercrime is included in the Electronic Transaction Law (ETL) released in 2004, namely before the democratization process and therefore the launch of the connectivity plan. The ETL was reviewed in October 2013, keeping however the definition of cybercrime vague, making most of online behaviours falling in the category of cybercrime, and therefore punishable. In order to avoid a misleading use of the law and

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[24] More detailed information available at:

http://www.telegeography.com/products/commsupdate/articles/2014/03/07/cable-compendium-a-guide-to-the-weeks-submarine-and-terrestrial-developments/

consequent abuses, the release of a new ETL should rather better define the borders of online behaviour which can be considered as violations.

Online Hate Speech

I have already mentioned how conflict between Buddhists and the Muslim minority is dramatically increasing, leading to episodes of violence across the country. In this regard, the spread of connectivity and the use of social media are creating new ways of circulating information, but also rumours and fake violent pictures, aiming to radicalize this conflict. On 2nd July 2014, following a rumour circulating on Facebook about a Buddhist woman raped by a Muslim, violent riots exploded in Mandalay, culminating in the death of two people. As a result, on the third day of riots, Facebook was shut down for almost 12 hours.[25] Although the internet penetration rate in Myanmar is still limited, internet users massively use Facebook, and the riots lends evidence of the impact that social media has on society. In this context, telecom operators and digital intermediaries are called to play a role in easing this potential conflict. We should expect that new initiatives will be taken to control the spread of online hate speech, and new regulations must be designed in order to avoid that shutting down internet services will be an easy practice in the name of stopping hate speech.

Corporate Social Responsibility

Myanmar is in transition, and has the opportunity to ensure that the development of telecom infrastructure goes hand in hand with implementing freedoms and digital rights for its citizens. Ooredoo and Telenor must play a role in both developing telecommunication infrastructures, and ensuring this development follows a new regulatory policy agenda that prides itself on removing limits to freedom of expression and enhancing digital freedoms. In the coming years, Myanmar has the opportunity to establish real and sustainable change, and Ooredoo and Telenor are called to properly address their dual responsibilities in this telecom development process.

Developing local know-how

The limited local competences involved in the domestic telecom policy process is a major obstacle for development of a debate open to multiple parties. As mentioned above, the

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[25] "Facebook Problems Coincide With Curfew in Burma", Irrawaddy, 4 July 2014. Available at: http://www.irrawaddy.org/burma/facebook-problems-coincide-curfew-burma.html

lack of local know-how has been an obstacle for setting an independent regulator, and prevents citizens from following developments. Lack of know-how also affects the government which fully depends on interventions of external actors like the World Bank. For these reasons, the development of local know-how, including both civil society organizations and high level expertise working hand in hand with companies and international institutions is a priority for enhancing public debate on telecom developments in Myanmar.

5. Conclusion

Given the limited time since the start of the democratisation process, the current national connectivity building plan is moving forward in an unprecedented way for Myanmar. This paper explores how this is happening from both an infrastructural and a policy perspective along a three step approach. Looking at connectivity building happening in Myanmar within the framework the broader Internet Governance discourse, this paper scrutinizes the role of the Myanmar government, together with other actors, in this process. Here, although the apparent commitment of the government to strictly follow commonly shared norms concerning telecom reform and connectivity building, the development of the digital infrastructure and its governance is still fully controlled by the government. As argued above, according to the commonly shared best practice in telecom reform and Internet Governance discourse, the hegemonic role of the government in Myanmar exposes the fast developing national digital connectivity to some fragility for the right of privacy and online free speech for the citizens. Between the techno-determinist and state-centric approach proposed above, typically characterizing telecom reform and connectivity building, the Myanmar case clearly fits in this latter stream of empirical cases. In a country still in political transition, following decades of autocracy and isolation, ITU best practices in Internet Governance hold that the government should withdraw from its controlling and monopolistic role. On another hand, new entered telecom companies have just started to operate in the country, and they will certainly have the opportunities to give evidence to the respect of their corporate social responsibility. The fact that international actors have been involved in the other steps of the national connectivity plan – notably the World Bank for the design of the telecom law – indicates that internet governance norms have been implemented mostly from external actors via a top-down approach. Local civil society organizations are monitoring the development of this process with limited resources, and are in the process of enhancing their capacity to react to the fast developing complex issues

discussed at the various levels of this connectivity process. The development of such a grassroots internet policy understanding is crucial to developing a systematic monitoring of such a process, and ensure a bottom-up perspective on such an going process.

The general election scheduled for the autumn 2015 may be a turning point for strengthening the democratic path already initiated in Myanmar. Approaching this critical event with an efficient telecom infrastructure and dramatically higher connectivity rate could facilitate the development of initiatives for mobilizing voters and supporting a fair and transparent election. In other words, as is commonly held, more connectivity can be an important tool for supporting the on-going democratic process. If telecom reform is finally fully implemented, mobile operators respect their corporate social responsibility, and the last key initiatives that need to be taken to secure a domestic internet connectivity from both infrastructural and policy level, we will be able to observe the quickest construction of telecom infrastructure ever taking place. This in turn, will potentially lead us to consider connecting Myanmar as an opportunity, rather than as new means of control, and an important tool to ensure positive democratization.

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