MAPPING MULTISTAKEHODERISM IN INTERNET GOVERNANCE IN LEBANON

IMPLICATIONS ON THE INTERNET AND ECONOMIC DEVELOPMENT

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Key Words

Abstract

The study presented in this thesis investigates the causal relationship between Internet governance and economic output in Lebanon. It addresses the controversy surrounding concepts of multistakeholder Internet governance and the Lebanese government's monopoly regime. It seeks to investigate and engage with issues that are of rising importance to the vitality of the Internet, which is becoming more central to economic and social development around the world. Specifically, it highlights the importance of multistakeholder participation in Internet governance and examines the implementation of such an approach in practice.

The purpose of this study is twofold. On one hand, it attempts to answer a relatively straightforward question: does Internet governance spur Internet development and economic advancement? Intuitively, it seems clear that broadband Internet with good governance engenders economic growth. Here, the researcher presents the evidence generated by the literature regarding the debate over Internet governance and the impact of the Internet on the economy, examining some empirical studies and investigating case studies that illustrate how multistakeholderism is applied in practice at a national level.

On the other hand, this study examines empirical evidence the researcher has gathered in Lebanon; this evidence addresses current Internet infrastructure and Lebanese stakeholders' views on the process of multistakeholder Internet governance. Some researchers in this area have focused on a direct relationship between broad Internet and economic growth, however, no study has investigated the effect of Internet governance on economic performance. This study attempts to develop a model of multistakeholder Internet governance, (MIG-L), that helps explain the origin of Internet governance and points toward theories linking the structure of the proposed model to the performance of the Internet and the economy.

The literature on governing the Internet suffers from insufficient attention to the governance dynamics and influences within countries and limited appreciation for the micro-level political and social roots of governance. By raising some yet unexplored issues in the debate, this thesis aims to contribute to efforts to better understand the dynamics of multistakeholderism at a national level and to leverage a more pragmatic

model of multistakeholder Internet governance. The pragmatic epistemological approach offered in this mixed-methods research is consistent with interpretations of contemporary institutional scholars like Coase as well as those of liberal economists like Stigler, Posner and Peltzman.

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List of Abbreviations

ccTLD	country code Top Level Domain
DNS	Domain Name System
GDP	Gross Domestic Product
IANA	Internet Assigned Numbers Authority
ICANN	Internet Corporation for Assigned Names and Numbers
ICT	Information Communication technology
IGF	Internet Governance Forum
ITU	International Telecommunication Union
IP	Internet Protocol
ISOC	Internet Society
ISP	Internet Service Provider
ITU	International Telecommunication Union
OECD	Organisation for Economic Cooperation and Development
RIR	Regional Internet Registry
WGIG	Working Group on Internet Governance
WSIS	World Summit on the Information Society

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Chapter One: Introduction

The United Nations once dealt only with governments. By now we know that peace and prosperity cannot be achieved without partners involving governments, international organizations, the business community and civil society. In today's world, we depend on each other. (Kofi Annan, 1999)

1.1 Setting the Scene

The Internet is well integrated in everyday working, personal and family lives. The need for proper, well-formulated and widely acceptable governance is required (Pimenidis, 2009). As of June 2018, more than half of the world's population (4.2 billion) has gained access to the Internet (Internet Worlds Stat, 2018). The Internet's potential for supporting social and economic development has been recognised, as has its potential for enhancing the free flow of information and ideas around the world. However, the Internet's growing pervasiveness has also placed increasing strain on its governance systems (Spuy, 2017).

In light of this growing importance of information communication technology and the Internet revolution, the International Telecommunications Union proposed the idea organising a World Summit on the Information Society (WSIS) under the auspices of the United Nations. The World Summit on the Information Society (WSIS), which was held in Geneva in 2003 and in Tunisia in 2005, has recognized information and communication Technology (ICT), with Internet as the main pillar, as transformational technologies and as important enablers for social and economic development (WSIS, 2015a). The WSIS declared its challenge to harness the potential of information communication technology (ICT) to promote sustainable development, especially the United Nation Sustainable Development Goals (WSIS, 2015b).

No doubt, Internet governance is one of the most pressing public policy issues of our time. Some estimates put the economic contribution of the Internet as high as 4.2 trillion US dollars (Dean et al., 2012), and the Internet of Things (IoT) could result in upwards of 11.1 trillion US dollars in economic growth and efficiency gains by 2025 (James et

al., 2015). The Internet is more than a platform for innovation and access to information; it acts also as a system of national wealth-generation. Yet across multiple levels, the Internet's basic functionality is under strain. Pimenidis (2009) explains that governments, businesses and citizen groups have to stay vigilant in protecting themselves and the network to ensure that they continue enjoying the benefits of using the Internet for a long time to come.

Recent development literature perceives the Internet as having a vast potential for inclusive growth and socio-economic development (Dalberg, 2013). As the "knowledge economy" continues to transform our society, broadband Internet access is an essential component of infrastructure for economic development (Shidler et al., 2007). According to Katz (2012), broadband Internet is a contributor to economic growth on several levels, and no one doubts today that computing in particular and ICT in general have significantly contributed to economic growth in the industrialized world.

Unarguably, the literature agrees that Internet spurs countries' economic development. However, good governance is also indispensable for such development. In this context, many scholars and researchers have confirmed the positive link of improved quality of governance and economic growth (Keefer, 1997; Campos and Nugent, 1999; Kaufmann et al. 1999a and 1999b; Mehanna et al., 2010; Han et al., 2014).

Governments and businesses recognise and embrace the enormous opportunities the Internet can create in nurturing the development of a healthy Internet ecosystem, one that boosts infrastructure and access, builds a competitive environment that benefits the country's economy. The economic rationale is clear: field studies have estimated that developing countries could benefit from Internet technologies to increase their GDP by 1.5 to 3 percent by removing the barriers holding back Internet development (World Bank, 2009; McKinsey Global Institute, 2011a; Boston Consulting Group , 2014). According to a McKinsey Global Institute report published in 2011, the Internet accounted on average for 3.4 percent of GDP across the large economies that make up 70 percent of global GDP, where the Internet's total contribution to global GDP is bigger than the GDP of Spain or Canada.

As the Internet economy has matured, developing countries, including Lebanon, started to face particular challenges hindering its development. While the countries of the digital frontier, Western Europe and the United States, demonstrate consistent Internet

development and digitisation, some Middle Eastern countries such as the United Arab Emirates, Qatar, and Bahrain have made great progress, while others such as Kuwait, Egypt, and Lebanon are lagging behind (Mckinsey Digital, 2016).

In essence, each country needs to identify which challenges affect its digital economy, and thereby develop relevant solutions. In Lebanon, ICT is still lagging behind due to several inefficiencies, including government monopoly, political motivation, hindered privatization, and inadequate competition. Additionally, the sector faces other challenges like a deficient regulatory framework, and it is exposed to substantial uncertainty due to destabilizing security issues (BankMed, 2014). Another major issue faced by the ICT sector in Lebanon is the lack of competitiveness due to the government's tight control over the sector (BLOMINVEST, 2016).

In this context, Dean (2016) explains that successful countries have taken a comprehensive multistakeholder approach to addressing the challenges that hinder their Internet development. Similarly, DeNardis and Raymond (2013) elucidate that efforts to study and practice Internet governance start from the premise that the Internet is governed by an innovative, unusual (perhaps unique) 'multistakeholder' model. Therefore, this thesis is an exercise in re-conceptualizing and re-framing the traditional multistakeholder Internet governance model to make it more explicit and applicable in Lebanon, linking it to the country's Internet development and economic growth.

This thesis questions the governance of the Internet. Without prior agreement on Internet governance upstream, there can be little agreement on Internet- and economic growth downstream. To make this argument, this research concentrates on definitional and conceptual issues and then presents empirical materials and case studies that are illustrative and exemplary.

This research questions and challenges the current monopoly governance of the Internet in Lebanon and argues that a multistakeholder Internet governance can drive Internet development and the country's economic growth. While Lebanon discusses Internet- and telecommunications goals for 2020 that should have been achieved in 2013, the loss estimated is between 5 and 7 billion USD of economic growth by 2020 (Maharat, 2016).

It is important to note that this study uses the terms "Information Communication Technology" (ICT) and "Telecommunications" interchangeably as they constitute the

core of the Internet. However, the Internet comprises the central focus of this research due to its importance in connection to all types of technologies. The Internet in its broad meaning has had such a massive impact on almost all aspects of life as it connects humans and machines so that information can be distributed, shared and accessed effortlessly from anywhere.

1.2 Background of the Study

The literature on Internet governance exists due to the significance and importance of the technology, as well as its effect on all aspects of life. The reliance of individuals and governments on the Internet increases. Whilst many national economies in developed countries have been the greatest beneficiaries of this technological revolution, developing countries are still lagging behind.

Until recently, Internet governance has generally been considered to be a prerogative of developed economies such as the United States and the European Union. However, the World Summit on Information Society (WSIS) meetings convened in Geneva in December 2003 and in Tunis in November 2005 were a turning point. Moreover, what makes this topic so engaging and controversial is that some countries are pushing to expand the influence of national governments while others are calling for a multistakeholder model of Internet governance. At the global stage, Russia, China, India and some of the Arab countries call for member states to take over Critical Internet Resources (CIRs). The United States of America and the European Union oppose this proposal, stressing that they believe that Internet governance must be multistakeholder-driven and hence Internet policy should not be determined by member states but by citizens, communities, and broader society (DeNardis & Raymond, 2013). Yet, the issue of multistakeholder Internet governance is globally and nationally not settled and still a subject of active negotiation among the different stakeholders.

From a micro-level perspective, the need to investigate the concept of multistakeholder Internet governance on a national level is more than an academic problem. Internet governance varies from one country to another, notably with respect to the roles of governmental and non-governmental stakeholders. In opposition to other stakeholders calling for a bottom-up, open and inclusive governance model, some governments are requesting and pushing for more state-controlled Internet governance. In some countries, management of the Internet is in the hands of governments and regulators,

whilst other countries allow for private and non-profit sector involvement. In Lebanon, as in many other developing countries, Internet infrastructure, policy and regulations are solely under government jurisdiction.

Academically, the controversy surrounding Internet governance starts with the definition of "the Internet." The way the Internet is defined reflects different perspectives, approaches, and policy interests (Kurbalija, 2014). To Hofmann et al. (2017), the general concept of governance in Internet governance is still disputed, and the shortcomings of the founding days of Internet governance research are still noticeable today, as Van Eeten and Mueller's (2013) recent criticisms attest.

Newly-emerging and under-developed economies have started seeing the potential of the Internet from the perspective of economic development, and they have wanted to catch up to the developed countries by endorsing the advantages of multistakeholderism. An examination of cases of multistakeholder governance reasonably begins with governance of the Internet because of the rising importance of Internet coordination and oversight to economic, political and social life (Raymond & DeNardis, 2015).

1.3 Research Problem

As the Internet has become increasingly central to societies and economies, governments and other stakeholders have started jostling for greater involvement in the challenges of Internet governance.

The notion of multistakeholder participation in Internet governance is therefore not only in need of a realistic assessment, but it must also adapt to meet new challenges as the Internet becomes more central to knowledge societies. Failure to address some of these challenges could have negative consequences for the future of the Internet and its ability to support sustainable development (Spuy, 2017).

To better understand Internet governance, more or less interdependent processes and practices need to be resolved. The question is how governance should be defined under the conditions of distributed collective action, overlapping authorities, and competing rationalities and goals (Hofmann et al., 2017).

Some hints towards an answer can be found in Brousseau et al.'s (2012) notion of 'heterarchical governance' or a 'networked heterarchy' (p. 16), which is characterized by the absence of a hierarchy and a unified legitimate order. Starting from the observation that fragmentation and a lack of central control do not imply anarchy or the absence of rules, Brousseau et al. (2012) suggest looking at Internet governance as multiple orders, which create a need for internal coordination. The networked heterarchy consists of public and private organisations, which interconnect through various forms of mutual recognition and mutual legitimation.

In the contemporary world, we have to accept that there is a shift in the social and economic dynamics of governments. However, there are many flaws in this pluralist and liberalist approach. Some governments, for instance, increasingly insist on "cyber sovereignty" over other stakeholder groups whilst ostensibly supporting multistakeholder approaches (Limbago, 2017). This thesis recognises the principle of national sovereignty, yet the challenge of defining the limits thereof adds further complexity to the issue of Internet governance. Internet governance is in this tangled terrain.

1.4 Research Aim and objectives

Given the context of the study and the overview of the research problem, there seems to be an imminent need and opportunity to better understand multistakeholder Internet governance at national level. This will help the government and policy-makers in Lebanon understand how to shape their policies and governance institutions to ensure the most appropriate and efficient use of Internet resources. This would also enable other stakeholders to understand how the Internet is actually governed and encourage them to collaborate with government.

By raising some yet unexplored issues in the debate, this thesis aims to contribute to efforts to better understand the dynamics of multistakeholderism at national level and to leverage more inclusive and transparent models of Internet governance. Specifically, this study seeks to develop a conceptual model for comprehensive multistakeholder Internet governance in Lebanon and to link it to Internet development and the country's economic growth based on relevant theories and literature.

To this extent, the study investigates the current governance structure of the Internet in Lebanon and argues that, whilst a more suitable governance model is set to drive the development of the Internet, the reality of the actual monopoly regime is hindering Internet development and the country's economic growth. Accordingly, the objectives of this study are as follows:

- To explore the history of the debate over multistakeholderism and Internet governance and the impact of the Internet and its governance on economic growth, thus contributing to the actual literature;

- To carry out an empirical investigation on the current Internet governance model in Lebanon, explore its impact on Internet infrastructure and services, and survey the Lebanese Internet stakeholders' perceptions and thoughts on multistakeholderism and Internet governance;

- To develop a conceptual multistakeholder Internet governance model for Lebanon and empirically associate its structure to Internet development and economic growth.

1.5 Theoretical Background

The theoretical backdrop of this research is eclectic in nature as Internet governance is a complex topic underpinning multiple disciplines. In order to better understand the complexity of the issue, this section intends to convey a broader understanding of different theories that are relevant to this contemporary debate. It uses a pragmatic approach in examining and analysing the empirics to explain multistakeholderism and Internet governance.

The research posits that the role of actors is not well known and cannot be easily defined. Wilson (2005) argues that the micro-level motives, social origins, choices and behaviours of those who design Internet governance are too often left implicit and under-theorized. Thus, this research seeks to compliment Wilson's argument by investigating and examining the actual governance regime and propose a new multistakeholder structure for Internet governance. This structure will help develop a

multistakeholder conceptual framework, trace the social origins of governance, and point toward theories linking the structure to a new regime of Internet governance.

Although regime theory is usually considered a part of political science and international relations theory, it has strong roots in institutional theory. As defined by regime theory, which falls within the neo-liberal institutionalist camp, regimes are sets of implicit or explicit principles, norms, rules, and decision-making procedures around which actors' expectations converge in a given area of international relations (Krasner, 1983). From this perspective, the institutional theory focuses more on informal norms and values within agencies and political-administrative systems (Selznick, 1957), which guide and restrain the collective activities of a group (Keohane & Nye, 2000).

It is agreed that multistakeholder models continue to contrast sharply with the model of governmental organisations, which reserve decision-making power exclusively to states (Cammaerts & Padovani, 2006; Hintz, 2007; de La Chapelle, 2008). Supporters of multistakeholderism argue that it offers a framework for re-conceptualising the relationship between different actors. However, multistakeholderism raises serious issues of legitimacy, representativeness and accountability (Bendiek & Wagner, 2012).

Within the wider context, the research aims to question and challenge the current governance structure and argues that, while Internet governance through multistakeholderism could sustain a stable Internet for economic development, the reality is that regressive state regimes regulating and governing the Internet have obstructive effects on the Internet economy. The effort of the research to demonstrate that Internet governance provides a significant challenge for state-centric theories of governance and an opportunity for a multistakeholder regime will lead to an examination of the stakeholder theory (Freeman R. , 2010).

1.6 Proposed Conceptual Model

Building upon the reviewed literature and the theoretical backdrop of this study, this thesis suggests reframing the model of multistakeholder Internet governance in countries where government opposition to this model makes the implementation of multistakeholder participation difficult and even impossible. Accordingly, this research proposes a new conceptual model, Multistakeholder Internet Governance Lebanon

"MIG-L", taking into consideration the government's reservations and stakeholders' expectations.
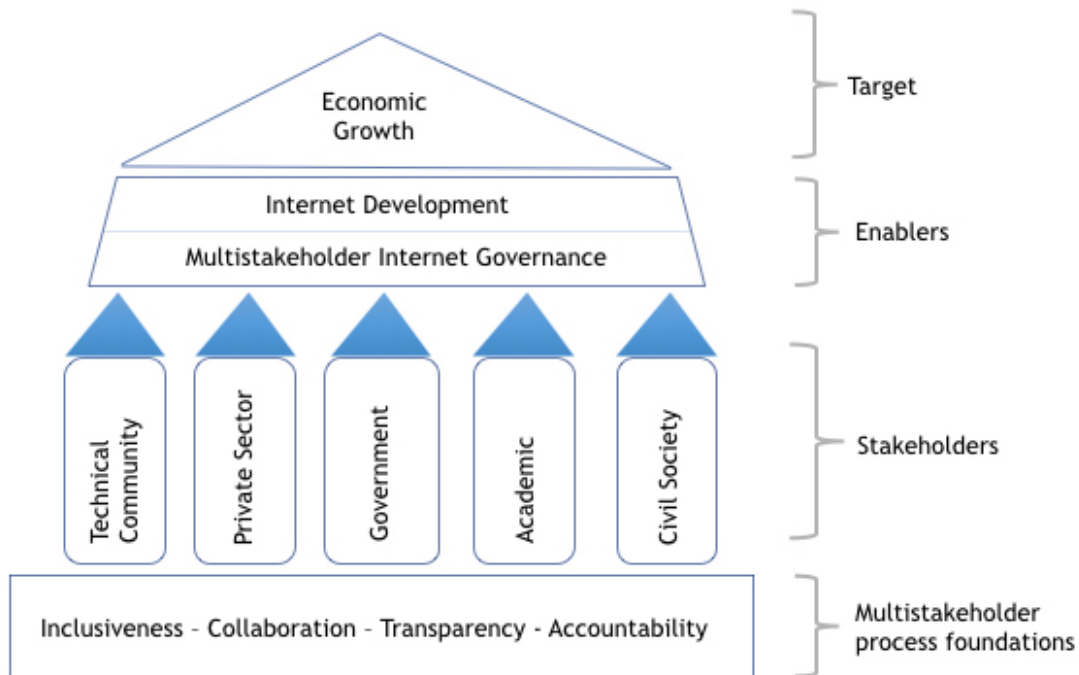
Figure 3.1: MIG-L conceptual Model

The proposed model "MIG-L" is a useful heuristic that directs scholarly attention to the social interactions between stakeholders that negotiate governance outcomes. Conceptually, "MIG-L"' refers to persistent networked interactions of individuals across five defined stakeholder groups - government, the private sector, academia, civil society and the technical community - linking its structure to Internet development and economic growth. "MIG-L" will be presented and discussed in chapter 3.

1.7 Research Methods and Analyses

A pragmatic epistemological approach is used for this mixed-methods research (qualitative and quantitative), the methodological lens of which employs a concurrent data collection. The quantitative data will be collected using an online survey, while the qualitative data will be gathered using semi-structured interviews. Hence, being pragmatic, the researcher has the flexibility to choose the approach and research design that best meet the research aim and objectives. Tashakkori and Teddlie (2010), Morgan (2007) and Patton (1990) convey the pragmatic importance of focusing attention on the

research problem in social science research and then using pluralistic approaches to derive knowledge about the problem.

Although many designs exist in the mixed-methods field, a convergent parallel-mixed method will be used in this research insofar as it collects diverse types of data to provide a more complete understanding of multistakeholder Internet governance and its impact on a country's economic growth. This is a form of mixed-method design in which the researcher converges and/or merges quantitative and qualitative data to provide a comprehensive analysis of the research problem (Creswell, 2013). To back up the initial quantitative survey, the study includes a survey in order to reach a large population and to follow up with purposeful interviews with decision makers to obtain their specific views about Internet governance.

To strengthen the study's findings, qualitative-method research with a purposive sampling technique will be used on the assumption that doing interviews provides a more complete understanding of the topic of contested Internet governance than collection of quantitative data alone. Purposive sampling leads to greater depth of information from a smaller number of carefully-selected cases, whereas probability sampling leads to greater breadth of information from a larger number of units selected to be representative of the population (Patton, 2002).

Using a questionnaire in the survey is appropriate, since we are aiming to reach a large, dispersed Internet community and gather data from a larger sample. The broad participation categories in the study's online survey are those defined by the Working Group on Internet Governance (WGIG), including government, the private sector, academia, civil society, the technical community and international organisations (WGIG, 2005). On the other hand, interviews targeted decision-makers from the above-identified stakeholders' groups to get in-depth information and verify the statistical results.

In this design, both forms of data were collected at the same time, although the quantitative and qualitative data collection are presented separately in chapters 6 and 7, respectively. The analysis and interpretation combine the two forms of data to seek convergence or similarities among the results. Maxwell (1997) defined purposive sampling as a type of sampling in which ''particular settings, persons, or events are deliberately selected for the important information they can provide that cannot be

gotten as well from other choices'' (p. 87). Here, the researcher uses a side-by-side comparison approach. This comparison will be seen in the discussion presented in chapter 7, where the researcher will report the quantitative statistical results and qualitative findings that either confirm or disconfirm the statistical results.

Finally, this research will also draw on and bring together information from a range of sources, principally from statistics, documents and reports published by reputed governmental, national and international organisations. Sometimes, the researcher intentionally uses some other form of data in a supportive role (Rogers, et al., 2003)

1.8 Expected Contributions

As the Internet grows exponentially, so do the complexities of Internet governance and its architecture. Internet governance has not been a static process, and the opportunities and challenges it creates demand the attention of interdisciplinary research and collaboration. Moreover, the present research serves as an investigation of the impact of Internet governance on Internet development and economic growth from the perspective of national development.

The research expects to contribute in a number of ways to the body of knowledge of the field. It contributes to the knowledge base of national Internet governance, particularly with regards to the social origin and interaction of different stakeholders. Also, this research contributes to the literature on Internet governance and multistakeholderism by integrating data from a developing country into empirical generalisations of the findings where economic implication is also significant contributions in such a context. Therefore, this research aims at making a secondary contribution to this growing literature by investigating the lacunae of research on national Internet governance, studying its implication on Internet development and national economic growth and identifying areas for further research.

From a theoretical perspective, this research uses a comprehensive approach to gain a better understanding of multistakeholder Internet governance, and the conceptual model is validated by the qualitative and quantitative findings. Therefore, the research contributes to an understanding of the nature of generalisability of the theories by extending their tenets into the Internet governance at a national level.

1.9 Thesis Outline

This thesis adopted the doctoral thesis structure suggested by (Perry, 1998). The thesis proceeds by exploring the international views and debate on Internet governance that pave the way to the national level, which is the focus of this research. After identification of the problem, the research proposes a conceptual model supported by the literature and a theoretical framework to be validated empirically. The outline and the organisational patterns of the 8 chapters are as follows:

Chapter 1 – Introduction: This chapter sets the scene, offering an introduction to the issue of Internet governance and Internet's impact on the economy. It also specifies the objectives, context, theoretical backdrop, conceptual framework, methodology and contributions of the research as well as an outline of the thesis.

Chapter 2 – Literature Review: This literature review examines the theoretical approaches and empirical research that have sought to explain drivers and barriers for Internet governance and its impact on economic growth. This chapter includes a consideration of the literature on the contemporary topic of Internet governance and multistakeholderism; it provides an overview of the topic and of its current understanding by the different stakeholders and two case studies from Kenya and Brazil. It also conveys an understanding of different theories that are relevant to the contemporary debate over Internet governance. Additionally, this chapter gives an overview of the political and economic environment of Lebanon and provides a brief overview of current Internet infrastructure and governance. It also examines the impact of the Internet on the economy by reviewing different studies on the topic, linking empirically the development and the good governance of the Internet to the country's GDP.

Chapter 3 - Conceptual Framework: This chapter reframes the traditional model of multistakeholder Internet governance by proposing a new conceptual model mapping the social interactions among stakeholders and linking it to the Internet and economic performance.

Chapter 4 – Methodology and Research Design: This chapter describes the methodology and framework used for this mixed-methods research (qualitative and quantitative

approaches). It explains the methods of investigation and the target population, and it justifies the mixed-methods approach for this research.

Chapter 5 - Quantitative Data Analysis: This chapter presents the data analysis of the quantitative strand to answer the research questions. This chapter covers the data collection, data analysis procedures and the descriptive statistics.

Chapter 6 - Qualitative Data Analysis: This chapter explores the qualitative findings through thematic analysis focusing on common evidence from the in-depth interviews in context, supported by informants' quotes.

Chapter 7 – Findings, Discussion and Conclusions: This chapter synthesises the overall findings, bringing the findings of chapters 5 and 6 together into a coherent discussion and conclusion This chapter discusses the in-depth findings reinforced by key informants' quotations on the topic in question, validating the proposed conceptual model and some theoretical arguments while contradicting others. This Chapter also presents a summary and conclusion of the study as well its outcomes. It concludes with research impacts, strengths and limitations of the study and suggestions for future research.

Chapter 2: Literature Review

2.1 Introduction

This literature review examines the theoretical approaches and empirical research that seek to explain drivers and barriers for Internet governance and its impact on economic growth.

The review will first examine the political and economic environment of Lebanon that directly affects Internet governance. It provides a brief overview of the current monopoly governance, regulatory frame and status of infrastructure. It also examines some ICT indicators to understand the obstacles hindering Internet development; it is not about indices and rankings; it is rather about the assessment of the situation.

Second, the chapter will review literature on the contemporary topic of Internet governance and multistakeholderism, providing an overview of the topic and its current understanding. Specifically, this chapter explores the controversial concepts 'multistakeholder' and 'governance', which have been developed in the World Summit on the Information Society (WSIS) held in 2003 and 2005. These concepts continue to make the debate engaging and controversial, politically and academically, on a national and global level. According to Kurbalija (2014), the controversy surrounding Internet governance starts with its definition: the way the Internet is defined reflects different perspectives, approaches, and policy interests.

Third, in order to analyse the impact of Internet governance on the economy, this chapter will look at different empirical studies on the economic impact of Internet governance and examine empirical research and studies linking the development of Internet and good governance to economic growth. It will also examine two case studies from Brazil and Kenya as examples of multistakeholder participation in Internet governance at a national level.

The final section of the literature review aims at conveying an understanding of different theories that are relevant to the contemporary debate over Internet governance. The extant literature is designed to explore the theoretical foundation that underpins Internet-governance studies and that is used in this study. The effort of the research to

demonstrate that Internet governance provides a significant challenge for state-centric theories of governance and an opportunity for a multistakeholder regime will lead to a study of the stakeholder theory (Freeman R. , 2010).

2.2 Understanding the Lebanese Telecommunication and Internet Market

The ministry of telecommunications (MoT) has a monopoly over fixed and mobile networks, in addition to voice and Internet international gateways. The current law that governs the Internet is the old telecom law issued in 1959. Several political, regulatory, technical and administrative problems are hindering the development of the Internet in Lebanon, mainly the non-implementation of the new telecom law 431, ratified in 2002, and the takeover of responsibility for the Telecommunication Regulatory Authority (TRA) by the ministry of telecommunication.

Despite the progress made in the last two years in increasing international bandwidth and initiating the deployment of Fibre optic networks to provide fast and reliable Internet, the Internet speed is still far to congregate the global average. Additionally, illegal Internet services have resulted in the disruption of legal ones and deprived the economy of an essential financial resource.

2.2.1 Political Overview

The Lebanese Republic (Lebanon) is situated between (Palestine and Israel) in the south, Syria in the northeast and the Mediterranean Sea in the west. The country gained its independence in 1943 after 23 years of French mandate (since 1920) beginning after World War I. In 2016 it reached a population of 6 million, spread over a relatively small area of 10,452 square kilometres (4,036 miles) (World Bank, 2009) (World Bank, 2017).

Figure 2.0: Lebanon map and national flag

The country suffered a civil war between 1975 and 1991; the political and ethnic antagonists signed a national reconciliation agreement in 1989. Since then, the 128 Lebanese representatives (deputies) in parliament have been selected in a flawed democratic process privileging political and religious considerations in elections. Similarly, the cabinet of ministers is formed on religious, political and ideological considerations. Lebanon is the only country in the Middle East with a population consisting of Christians and Muslims, distributed evenly, comprising 18 ethnicities/sects. Thus, the framework of Lebanese society is one of the most complicated and divided in the world. Since the civil war, Lebanon has been and is still entrapped in conflicts involving its country's neighbours, Israel and Syria. The country has hosted around 600,000 Palestinian refugees in special camps around the country. To exacerbate and further complicate the situation, Lebanon has also seen several large influxes of Syrian refugees in recent years: The United Nations has confirmed that over 1.5 million Syrians who escaped the civil war in Syria are sheltered in Lebanon. Deep division between political leaders has rendered the presidency vacant many times over the years. In October 2016, after a two-year vacancy in the office of the president, the political impasse ended with the election of President Michel Aoun and the formation of a government of national unity headed by Saad Hariri.

2.2.2 Economic Outlook

Lebanon's economy recovered from 16 years of destructive civil war that ended in 1991. Economic growth in the country remains subdued. Following a sharp drop in 2011, growth edged upward briefly to 2–3 percent but has now slowed once again. The International Monetary Fund (IMF) estimated that Gross Domestic Product (GDP) increased by 1 percent in 2015, and it projected a similar growth rate in 2016 with a public debt-to-GDP ratio of 138 percent in 2015, which recorded a GDP of USD 50.9 billion (IMF, 2017).

The ICT sector is considered the fastest-growing sector of the economy and holds a lot of potential for development. It contributed USD1.3 billion in 2013 and is estimated to reach USD1.6 billion in 2016, hence contributing more than 3 percent of gross domestic product (GDP) (BLOMINVEST, 2016). The increasing demand for Internet access seems to be transforming the Internet market's dynamics in Lebanon. According to the Ministry of Telecommunications (MoT), the number of broadband Internet subscribers doubled from 480,000 to 1.24 million between 2013 and 2015. Similarly, mobile Internet users hit 2.92 million in 2016 as compared to 2.02 million in 2015.

The IMF team visited Lebanon in November 2016 and suggested in its 2017 report that Lebanese authorities need to promote sustainable growth by implementing new policies and regulations and addressing the economy's most pressing bottlenecks, starting with electricity and Internet. According to the IMF report, for Lebanon to realise the full potential of its human capital, various stakeholders need to work together to create a conducive institutional and business climate, starting from strengthening infrastructure; frequent electricity outages and slow internet are a major hindrance for firms (IMF, 2017). Similarly, the latest world bank update on the Lebanese economy indicated that the protracted Syrian crisis and the slow pace of structural reforms are critical impediments to achieving potential growth. Significant macro-financial risks remain (World Bank, 2017).

2.2.3 Telecom Market Overview

The telecommunication and Internet sectors have been subject to decay for many years, dragging Lebanon back from its leading position in the region to one of the least developed markets. There is no ICT ministry or any other institution in charge of the

Internet in Lebanon, while the telecommunications infrastructure constitutes the backbone of the Internet.

The Ministry of Telecommunications (MoT) has a monopoly over fixed and mobile networks, in addition to voice and Internet international gateways. OGERO (Organisme de Gestion et d'Exploitation de Radio Orient), which was established in 1972 and is owned 100% by the government, is in charge of the operations and maintenance of the fixed telecom network in the country. As for the mobile market, the two state-owned mobile networks have been operated under management contracts since 2004. Accordingly, the current laws and regulations applied to the Internet and ICT sector are those correlated directly to both the old telecom law issued in 1959 and to the new partially implemented telecom law 431 ratified in 2002.

In 2000, after the period of civil war and, later, reconstruction, Lebanon decided to liberalise its telecommunications market by privatising state-owned telecommunications entities and opening up the market to private sector investment and competition. Under this context, a new law was ratified in 2002, Telecom law 413, to address these ambitious goals. Internet reform was a major part of the overall reform agenda, a move which has been put on hold under successive governments due to political conflicts. For several years, even the telecom and Internet sector faced hardship due to the political rhetoric between some telecom ministers and OGERO management coming from two different political camps. The disputes reached a point where OGERO refused to comply to the ministers' directives.

In 2016, the increasing demand for Internet access and the negligence and carelessness of the public operator OGERO to respond these demands, opened the door for a grey market, where the authorities discovered four unlicensed Internet Service Providers (ISPs) supplying illegal Internet services from Cyprus and Israel at reduced prices. According to the Lebanese Minister of Finance, this caused a loss of USD200 million for the country's treasury.

2.2.4 Regulatory Framework

As mentioned earlier, the current laws that govern the Internet and telecommunication sector are the old telecom law ratified in 1959 and the new partially implemented telecom law 431 ratified in 2002.

The Ministry of Telecommunications (MoT) still applies legislative decrees 126 and 127 issued on 12 June 1959 to manage and administer the telecom and Internet sector in Lebanon. The two decrees state that the Lebanese government, represented by the ministry of telecom, holds the exclusive right to offer both telecom services, including internet. The decrees also define licensing to use local and international telecom and Internet services, as well as the prices of these services. These were amended as needed to ensure business continuity.

As for the new telecom law 431, its main objective was to reform the sector by creating separate entities for regulation and operation, respectively. The new law was to establish the Telecommunications Regulatory Authority (TRA) as an independent regulatory agency; however, appointments to its board were to be approved by the government. The TRA's defined role is to a liberalise, privatise, regulate and develop the sector by promoting competition and protecting the rights of users. After five years, the board was inaugurated by government decree on 21 February 2007. In June 2011, the ministry of telecommunications confiscated the powers of the TRA, making itself the sole body authorised to set new rules and guidelines for the sector. The TRA became void and the government did not appoint any new board members. From the operation side, law 431 was to create a joint public-private operator, LIBAN TELECOM, to operate, maintain and develop the networks. Unsurprisingly, due to political and religious conflicts, the board of "Liban Telecom" was never appointed.

Licensed Internet Service Providers (ISPs) and Data Service Providers (DSPs) offer internet access and are also allowed to operate certain wireless access infrastructure. The public operator OGERO is licensed as both a DSP and an ISP, and currently holds the biggest market share and a monopoly on the Internet International gateways. Remarkably, the country has more ISPs than it needs: 43 licenced ISPs and 10 DSPs operate under interim licenses, renewable on an annual basis. However, not all licensed ISPs and DSPs are operational; the concerned players have claimed that OGERO didn't provide them with the needed connectivity to its network.

It is worth noting that to this day, there are no laws or legislation protecting consumers; there are only some exceptional, government-issued directives related to the quality of the service and pricing.

2.2.5 Infrastructure

The current infrastructure still relies on old copper cable, and the Internet provided today is the best possible given the current infrastructure. Today there is a plan to install Fiber optic technology in homes across the country. This plan was announced by the telecom minister in July of 2015 as part of the 'telecom 2020 vision'. At the time of writing, the debate, involving all parties, on how to use the USD 100 million budget approved by the council of ministers to deploy the Fiber network is at a standstill.

Nevertheless, in an effort to involve the private sector, the ministry of telecommunication, OGERO, ISPs and DSPs signed a memorandum of understanding (MoU) in January 2006, to deploy Internet broadband technology to bring DSL technology to Lebanon, with a gentlemen's agreement that OGERO would not abuse a dominant market position. OGERO commercially launched the DSL services in May 2007 and started providing broadband Internet services. However, the high Internet speed did not reach many distant areas due to the limitation of the existing network and failure to upgrade and install new equipment. Furthermore, OGERO has exclusivity in the provisioning of international Internet bandwidth to Lebanon, where it holds a market share of 65% as Internet service provider (ISP).

Despite the progress made in the last two years in increasing international bandwidth and initiating the deployment of Fibre optic network to provide fast and reliable Internet, Internet speed is still far to congregate the global average. According to Ookla index 2017, Lebanon ranked 126th out of 200 countries in terms of Internet download speed, with an average speed of 4.94 Mbps (Megabits per second) compared to the global average of 40.71 Mbps (Ookla, 2017).

2.2.6 Benchmarking

Several international organisations have published reports and studies deploying different methodologies to measure and compare ICT/Internet development and its impact on national economies. In order to shed more light on the current infrastructure status in Lebanon, this thesis reviews two recent studies published by the International Telecommunications Union (ITU) and the World Bank:

1. The ICT Development Index (IDI): prepared by the International Telecommunication Union (ITU), the technology arm of United Nations (UN), measuring ICT infrastructure and use.

2. The Network Readiness Index (NRI): prepared by the World Bank, measuring the impact of ICT development economically and socially.

ICT Development Index

The ICT Development Index (IDI), which was published by the International Telecommunication Union (ITU) in 2016, is a composite index that combines 11 indicators into one benchmark measure comparing developments in ICT between countries and over time. The IDI aggregates quantitative indicators for Access, Use and Skills in the large majority of world economies, including Lebanon. According to the report, the ICT development process, and a country's transformation into an information society, can be conceived as following three stages as illustrated in Figure 2.1:
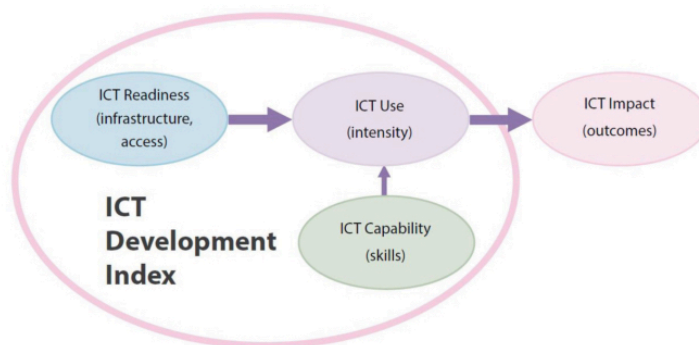
Figure 2.1: The 3 stages in the evolution towards an information Society

- **Network infrastructure and Access (ICT readiness):** This sub-index captures ICT readiness and includes five infrastructure and access indicators: fixed-telephone subscriptions, mobile-cellular telephone subscriptions, international Internet bandwidth per Internet user, households with a computer, and households with Internet access.

- **Use (ICT intensity):** This sub-index captures ICT intensity and includes three intensity and usage indicators: individuals using the Internet, fixed-broadband subscriptions, and mobile-broadband subscriptions.

- **Skills (ICT Skills):** This sub-index seeks to capture capabilities or skills which are important for ICTs. It includes three proxy indicators: mean years of schooling, gross secondary enrolment, and gross tertiary enrolment. As these are proxy indicators, rather than direct measures of ICT-related skills, the skills sub-index is given less weight in the computation of the IDI than the other two sub-indices.

The IDI results ranked Lebanon 7th in the region and 66th globally (See Table 2.1).

Economy	Regional rank 2016	Global rank 2016	IDI 2016	Global rank 2015	IDI 2015	Global rank change 2016-2015
Bahrain	1	29	7.46	28	7.42	-1
United Arab Emirates	2	38	7.11	35	6.96	-3
Saudi Arabia	3	45	6.90	38	6.88	-7
Qatar	4	46	6.90	43	6.78	-3
Kuwait	5	53	6.54	48	6.45	-5
Oman	6	59	6.27	58	6.04	-1
Lebanon	7	66	5.93	61	5.91	-5
Jordan	8	85	5.06	89	4.67	4
Tunisia	9	95	4.83	95	4.49	0
Morocco	10	96	4.60	98	4.26	2
Egypt	11	100	4.44	97	4.26	-3
Algeria	12	103	4.40	112	3.74	9
Palestine	13	106	4.28	103	4.12	-3
Syria	14	122	3.32	120	3.21	-2
Sudan	15	139	2.60	134	2.56	-5
Mauritania	16	151	2.12	154	1.90	3
Yemen	17	155	2.02	151	1.96	-4
Djibouti	18	161	1.82	160	1.73	-1

Table 2.1: Lebanon scored 66th in the ICT Development Index (IDI)

Exploring and analysing the IDI report, the result of the assessment for Lebanon can be summarised as follows:

The IDI report indicated that Lebanon was among the dynamic economies worldwide in terms of IDI values and rankings in the period between 2010 and 2015. Between 2015 and 2016, however, while all countries in the region saw some improvement, Lebanon, with 5.93 points (within a possible range from 0 to 10), dropped five places to 7th among the Arab countries and to 66th globally.

More precisely, the report showed that Lebanon ranked 66th with 6.57 points according to the IDI access sub-index and 53rd with 5.51 points according to the IDI use sub-index. In the IDI skills sub-index, Lebanon ranked 110th with 5.46 points (IDI, 2016). These figures showed that Lebanon performs less well in the use sub-index than in the

access sub-index. The imbalance suggests that strong demand for services is not currently matched by adequate high-quality infrastructure and that policy intervention to stimulate the supply side of the market may be required.

Another key finding of the IDI report is that the high cost of ICT services remains one of the main barriers to ICT uptake in Lebanon. Thus, monitoring prices is critical for developing policies that aim to make ICT services affordable for all citizens. According to the IDI report, a number of developing countries offer low prices (less than USD 10 per month) for monthly subscription, entry-level fixed broadband Internet. The IDI figures, however, showed that Lebanon ranked 73rd globally, with an average monthly cost of USD 17.51. As for the mobile broadband services, Lebanon ranked 83rd, with monthly fees of USD 11 as compared to USD 5 in other Arab countries (ITU, 2016).

Network Readiness Index

The second study to be examined is the Network Readiness Index 2016 (NRI-2016), initiated by the World Economic Forum (WEF) in 2001 to assess countries' ability to capitalise on the digital revolution and their preparedness. The study invites policymakers, business leaders, civil society leaders, academics, and the public at large to consult the performance of their countries in the Global Competitiveness Index and, together, identify the main challenges and barriers to growth facing their economies. Covering 139 economies, the Global Competitiveness Index (NRI-2016) measures national competitiveness, which is determined through examination of the set of institutions, policies and factors that determine the level of productivity. Examining the NRI-2016 study, it rests on whether a country possesses drivers that are necessary for digital technologies to unleash their potential, and on whether these technologies are actually impacting the economy and society (WEF, 2017). The drivers are grouped within four sub-indices as shown in Figure 2.2:
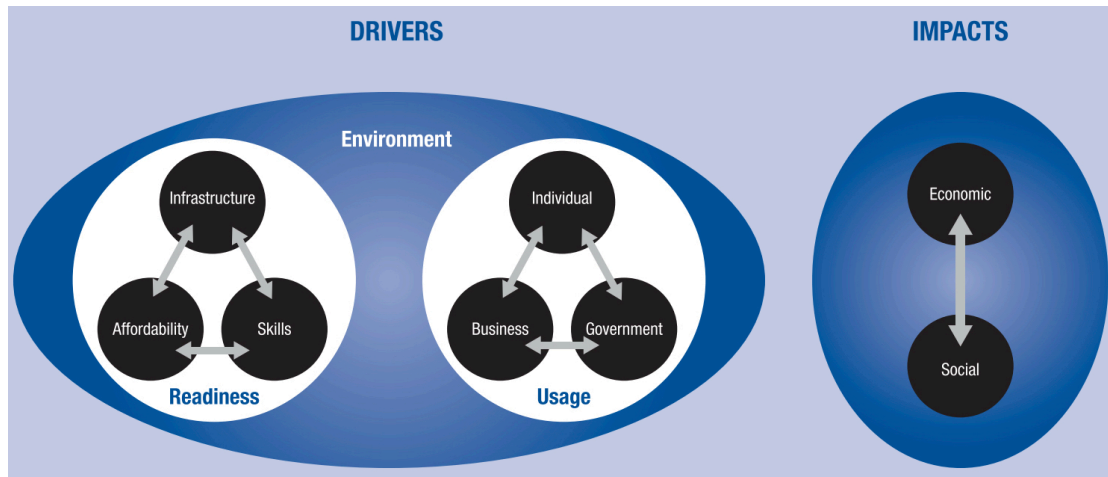
Figure 2.2: The 3 stages in the evolution towards an information Society

- Environment: Political and regulatory environment (9 indicators) and the environment of business and innovation (9 indicators)

- Readiness: Infrastructure (4 indicators), Affordability (3 indicators) and Skills (4 indicators)

- Usage: Individual usage (7 indicators), Business usage (6 indicators) and Government usage (3 indicators)

- Impact: Economic impacts (4 indicators) and Social impacts (4 indicators) (WEF, 2016).

The study reported that Lebanon still ranks 88th globally. Table 2.2 shows Lebanon's rank in the Networked Readiness Index.

Rank	Country/Economy	Value	2015 rank (out of 143)	Income level*	Group†
71	Moldova	4.0	68	LM	EURAS
72	Brazil	4.0	84	UM	LATAM
73	Indonesia	4.0	79	LM	EDA
74	Seychelles	4.0	74	HI	SSA
75	Serbia	4.0	77	UM	EDE
76	Mexico	4.0	69	UM	LATAM
77	Philippines	4.0	76	LM	EDA
78	Morocco	3.9	78	LM	MENAP
79	Vietnam	3.9	85	LM	EDA
80	Rwanda	3.9	83	LI	SSA
81	Tunisia	3.9	81	UM	MENAP
82	Ecuador	3.9	n/a	UM	LATAM
83	Jamaica	3.9	82	UM	LATAM
84	Albania	3.9	92	UM	EDE
85	Cape Verde	3.8	87	LM	SSA
86	Kenya	3.8	86	LM	SSA
87	Bhutan	3.8	88	LM	EDA
88	Lebanon	3.8	99	UM	MENAP
89	Argentina	3.8	91	HI	LATAM
90	Peru	3.8	90	UM	LATAM

Table 2.2: Networked Readiness Index for 2016

Under the "usage" sub-index, the study shows that Lebanon is doing best in individual usage (46th place), scoring 5 points (out of 7); followed by business usage (97th place), scoring 4 points; and finally government usage (124th place) with 3 points. (WEF, 2016).

Additionally, the impact sub-index shows that the Economic and Social impact of ICT has been slight in Lebanon, which ranked 83rd and 114th, with 3.1 and 3.3 (out of 7) points in these measures, respectively. This suggests that there is work to be done on infrastructure and the network in order to improve access for Lebanese citizens. In the criteria of "regulatory environment," which falls under the "environment" sub-index, Lebanon ranked in the bottom half of the list, holding 126th place with a score of 3 points (out of 7). Here, rational reforms are needed to improve the regulatory environment. In the radar chart 2.1 (Figure 2.3), the blue line shows Lebanon's econoomic score in the 10 pillars that make up the 4 sub-indices.
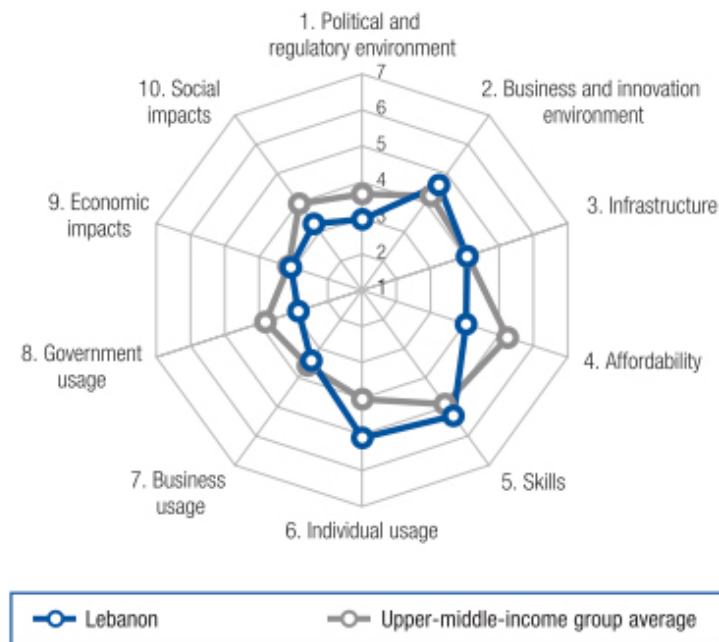
Figure 2.3: Radar chart of Lebanon's economic performance

One of the key findings of the NDI-2016 is that digital technologies are unleashing new economic and social dynamics that will need to be managed differently to deliver long-term and broad-based gains. The finding stressed that a resilient digital economy calls for new types of leadership, governance, and behaviours. A critical ingredient for the success and sustainability of the emerging system will be agile governance frameworks that allow societies to anticipate and shape the impact of emerging technologies and react quickly to changing circumstances (WEF, 2016).

2.2.7 Missed Opportunities

As the debate continues on the illegal Internet services and the misappropriation of public funds to deploy the national Fibre optic network, Lebanon continues to miss opportunities to develop its Internet infrastructure. According to BLOM Investment Bank (2016), the ICT contributed USD 1.3 billion in 2013 and USD1.6 billion to the country's GDP in 2016, hence accounting for more than 3 percent of Lebanon's GDP.

In 2009, at the request of the Lebanese Finance Ministry, the World bank published a study investigating the impact of Internet broadband on the country's economy. In this study, the World Bank used an econometric model projecting that there is a direct

correlation between Internet broadband and GDP. The study indicated that, in 2008, a 10 percent increase in Internet broadband penetration would result in a 1.2 to 1.5 percent increase in GDP in Lebanon, equivalent to USD 348 to USD 435 million per year, in addition to an annual fiscal contribution of USD 78 to USD 98 million per year resulting from additional growth on a recurring basis. This indicated that the Lebanese treasury could receive, on average, an extra USD 500 million per year if the government considered the World Bank study (Table 2.3).

	1.2 % increase in GDP	1.5% increase in GDP
Contribution to GDP	USD 348 m	USD 435 m
Fiscal contribution	USD 78 m	USD 98 m
Total Contribution	USD 426 m	USD 533 m

Table 2.3: Impact on Lebanon's GDP for each additional 10% increase in Internet

The economists who developed the model implicitly provide some notion of the costs of not investing in Internet broadband. The benchmarking and best practice examined by this study showed that Lebanon is lagging behind its neighbours in delivery of broadband Internet networks and services, and that, as a result, Lebanon's local telecommunications market is not growing as fast as others. Moreover, the study showed that Lebanon is paying certain opportunity costs for not providing higher capacity and more competitively priced broadband Internet services (World Bank, 2009).

Remarkably, the study predicted the current gloomy situation of the Internet, stating that, "if regional competitors do invest in broadband while Lebanon does not, then Lebanon will miss out on the associated accelerated growth rates. As the benefits of the general-purpose technology unfold in regional competitors it is conceivable that the existing long-term growth rate of Lebanon may be threatened, heralding the possibility of economic stagnation or even decline" (p. 42).

2.3 Multistakeholder Internet Governance

The setting offered here is to trace comprehensively the history of the World Summit on Information society (WSIS) and the Internet Governance Forum (IGF) as the multistakeholder venues for the origin of and the debate over Internet governance. With the advent of the World Summit on Information Society (WSIS) and the creation of the

Internet Governance Forum (IGF), the field has become much more diverse (Hofmann et al., 2017).

The potential of the Information Communications Technologies (ICTs) to eradicate poverty and improve the life of citizens in developing countries has made it a top priority in the agendas of different decision-making bodies at national and international levels. The concern was that the poor are excluded from much of the world's information and that no one has even begun to outline a solution to the problem. Kofi Annan, an ex UN secretary general, asserted that ICT offers an unprecedented opportunity for less developed countries to 'leapfrog earlier stages of development' (Annan, 2000). This perspective is in line with Wresch (1996), who claim that ICTs can be mechanisms that enable developing countries to 'leapfrog' stages of development. This is the process of expanding human capabilities and access to opportunities in social, economic and political arenas, therefore improving the overall quality of life. In response to this concern, United Nations General Assembly adopted resolution number 56/183 in January 2002, as a possible framework to organise the 'World Summit on the Information Society' (WSIS) to bridge the 'Digital Divide' between the developed and developing countries (ITU, 2006).

Despite the fact that the first phase of the World Summit on the Information Society (WSIS), held in Geneva in 2003, ended with an agreement on the declaration of principles and a plan of action, it left unsolved more controversial issues, including questions on Internet governance and related issues. Therefore, and in order to resolve this issue, the United Nations decided to establish the 'Working Group on Internet Governance' (WGIG) in 2004. The WGIG report published in 2005 indicated significant progress in the main issues relating to the structure of Internet governance and the role of the stakeholders. It also identified a vacuum within the context of existing Internet governance structures, since there is no global multistakeholder forum to address Internet-related public policy issues. Therefore, it concluded that there would be merit in creating such a space for dialogue among all stakeholders (WGIG, 2005) (Appendix D).

Responding to the WGIG recommendation, the UN general secretary Kofi Annan announced the creation of the Internet Governance Forum (IGF) at the second phase of the World Summit on the Information Technology (WSIS) held in Tunis in 2005. The

IGF's mandate was fixed to a five-year process, aiming at facilitating and allowing for a wider global dialogue on Internet policy principles in an open multilateral, multistakeholder, democratic and transparent process – Paragraph 73 of the Tunis Agenda - (WSIS, 2005b) (Appendix C). The mandate was renewed for another five years until the end of 2015 and was extended for additional 5 more years until 2020. This is the venue where international agencies, governments, Internet professionals, business and civil society organizations explore, on equal footing, the development of the Internet and its interaction with other areas of public policy. The IGF constitutes a challenge and an opportunity for stakeholders with diverse views to enhance cooperation among all involved parties under the main objective, which is the constructive evolution of the Internet and its use. It is an opportunity to share ideas, views and practical experiences (IGF, 2017).

However, moving forward, different participants have had divergent visions and hidden agendas. These hidden agendas are increasingly driven by a coalition of states with common interests. From one side, the countries known as 'non-democratic states' such as Russia, China and the Arab states requested and pushed for more state-control while the advanced industrial countries and other democratic states had different views and pushed for a bottom-up, open, inclusive multistakeholder governance model. During the World Summit on the Information Society (WSIS) in 2003 and 2005, a coalition of states including Russia, China and the Arab states had driven the explicit rule-making agenda at the international level (Clement, 2013).

This debate was demonstrated at the International Telecommunication Union Plenipotentiary Conference (ITU PP-14) held in Busan in November 2014 –the present researcher attended as a member in the Lebanese delegation. Russia and India, supported by China and several emerging countries, endorsed a proposal calling for ITU, the agency that is the technical arm of UN, to take over Internet resources (numbering, naming, and addressing). The United States of America and European delegations firmly rejected the proposal. Overall, ITU PP-14 resulted in no major changes for the ITU's role in cyber security – controversial, expansionary proposals were either stopped or watered down during the conference (Shackelford et al., 2015). A precedent to this heavily political debate had taken place at the World Conference on International Telecommunications (WCIT) held in December 2012 in Dubai, where disputes hinged on whether the principles, norms and regulations of Internet governance should be

handled by ITU. The United States and European countries couldn't agree, stressing that Internet policy must be multistakeholder-driven and hence that Internet policy should not be determined exclusively by member states but by citizens, communities, and broader society (Kramer, 2012). Those opposed to this position aimed to preserve the status of the 'Internet Corporation for Assigned Names and Numbers' (ICANN), which is in charge of Internet resources, and questioned whether the ITU should be involved in the business of Internet governance at all. The question of the proper role of the state in Internet governance was left unresolved, and the end of the conference brought no solutions to this intractable problem (Marchant & Robertson, 2015).

The Internet's constant evolution and its economic, political and social importance raised the stakes of the discussion on the future of the Internet and made any discussion clearly unsustainable. In 2013, the leading Internet organisations met in Montevideo to warn against the undermining of the trust and confidence of Internet users globally due to the 'Snowden' revelations of pervasive monitoring and surveillance (ICANN, 2013). One result of the Montevideo meeting was the organization of the NETmundial conference, which was held in Brazil in April 2014. It was defined as the 'Global Multistakeholder Meeting on the Future of Internet Governance' (ICANNwiki, 2014). The Netmundial meeting produced a set of principles and a roadmap for the evolution of the Internet that were endorsed by most participants but were once again rejected by countries on the other extreme of the continuum: China, India, or Russia. These countries preferred a UN-led government-centric approach to Internet governance (Corwin, 2014). One of the NETmundial Internet governance principle states: "Internet governance should be built on democratic multistakeholder processes, ensuring the meaningful and accountable participation of all stakeholders, including governments, the private sector, civil society, the technical community, the academic community and users. The respective roles and responsibilities of stakeholders should be interpreted in a flexible manner with reference to the issue under discussion" (NETmundial, 2014). Even though Internet governance has been a debate for more than thirteen years, it is still a contested topic among governments globally, and among stakeholders nationally.

To understand the term 'multistakeholder Internet governance', it is important to know what the terms 'Internet', 'governance' and 'multistakeholder' mean.

2.3.1 The Internet

The Internet is a network of networks (Mathiason, 2009) that enables communication between networks on a global (Muller et al., 2007) and mostly public (MacLean, 2004) scale.

The argument for the use of the term "Internet" is enhanced by the rapid transition of global communication towards the use of the "Internet protocol" (IP) as the main communication technical standard for information where it can be captured, processed, shared, displayed and stored. This is in line with the definition of Duncombe & Heeks (1999) who described ICTs as electronic means of capturing, processing, storing and disseminating information. Similarly, Chowdhury, 2000 explains that ICT encompass technologies that can process different kinds of information (voice, video, audio, text and data) and facilitate different forms of communications among human agents, among humans and information systems, and among information systems. The already ubiquitous Internet continues to expand at a rapid rate, not only in terms of the number of users but also in terms of the technology and services that it offers, notably, social media, voice over Internet protocol (VoIP), the Internet of Things (IoT) and cloud storage. These technologies and services form the ICTs.

2.3.2 Governance

The concept of governance reflects a broad understanding of ordering processes transcending the actions of governments (Rosenau & Czempiel, 1992). State-centric models of command-and-control have been deemed outdated and incapable of accounting for the complex interactions between the state and society (Jessop, 2003; Mayntz, 2003). The governance perspective has highlighted pluricentric regimes and rationalities, cooperation and competition, new sites and tools of ordering. The state is no longer understood as the 'control centre of society' (Mayntz, 2003, p. 29), but as one actor among others. As a result, the boundaries between rule-makers and rule-takers are blurring. Not only soft laws, such as informal agreements, memorandum of understandings, and codes of conduct, but also technical standards and other forms of expertise have become prominent in the literature on governance (Feick and Werle, 2010, p. 525).

The concept of governance is analytically valuable, because it comprehends ordering processes and de-essentialises the role of public authority. It represents a significant shift in the analysis of rule-making with a focus on 'structured interaction' (Colebatch, 2006), interaction of various regulatory structures (Bora and Münte, 2012), cooperation and negotiation (Levi-Faur, 2013), coordination (Schuppert, 2008), conversation and discursive manifestation (Flyverbom and Bislev, 2008).

In the debate over Internet governance, controversy has arisen over the term 'governance' and its various interpretations. The United Nations Working Group on Internet Governance (WGIG), mentioned earlier, formulated the following working definition of Internet governance: "Internet governance is the development and application by governments, the private sector, and civil society, in their respective roles, of shared principles, norms, rules, decision-making procedures, and programmes that shape the evolution and use of the Internet" (WGIG, 2005). A careful examination of the definition reveals that it clearly underpins regime theory. The founder of regime theory, Stephen Krasner, notes that "regimes can be defined as sets of implicit or explicit principles, norms, rules, and decision-making procedures around which actors' expectations converge in a given area of international relations. Principles are beliefs of fact, causation, and rectitude. Norms are standards of behaviour defined in terms of rights and obligations. Rules are specific prescriptions or proscriptions for action. Decision-making procedures are prevailing practices for making and implementing collective choice" (Krasner, 1983, p. 2). Still, this broad definition does not resolve the question of different interpretations of the term "governance".

Furthermore, this confusion was highlighted by the way the term 'governance' was used by some international organisations. For example, the term 'good governance' has been used by the World Bank to promote the reform of states by introducing more transparency, reducing corruption, and increasing the efficiency of administration. The World Bank defined governance as "a concept of governance [that] captures the manner in which power is exercised in the management of a country's economic and social resources for development" (World bank, 1992). In this context, the term "governance" is directly related to core government functions.

Another terminological confusion was exacerbated by the translation of the term 'governance' into other languages. In Spanish, the term refers primarily to public

activities or government (gestión pública, gestión del sector público, and función de gobierno). The reference to public activities or government also appears in French (gestion des affaires publiques, efficacité de l'administration, qualité de l'administration, and mode de gouvernement). Portuguese follows a similar pattern when referring to the public sector and government (gestão pública and administração pública) (Kurbalija, 2014)

2.3.3 Internet Governance

The field of 'Internet governance' has formed its topics and boundaries through a path-dependent process (Van Eeten & Mueller, 2013). The term was originally used to denote the institutional and policy problems related to the global coordination of the Critical Internet Resources (CIRs): Internet Protocol addresses (IPs) and Domain Name System (DNS). Critical Internet Resources (CIRs) was defined by Weber (2010) as a central theme in Internet governance research and in global debates over control of the Internet. Internet protocols (IPs) are the fundamental resource required for the exchange of information over the Internet while Domain Name System (DNS) establishes the domain name space in the same way that the Internet Protocol establishes the Internet address space. The encounter with those problems culminated in the creation of the Internet Cooperation for Assigned Names and Numbers (ICANN) in 1998 to manage the Critical Internet Resources (CIRs). This innovation prompted the development of a research literature that critically assessed the ICANN as a multistakeholder institution (Mueller, 2009; Hofman, 2016).

The next step in the evolution of the field was prompted by the World Summit on Information Society (WSIS). The Working Group on Internet Governance (WGIG) was charged to develop a definition of Internet governance. The definition moved beyond ICANN and included a much wider range of policy issues and players, applying the term to any and all shared principles, norms, rules, decision-making procedures, and programs that shape the evolution and use of the Internet (Drake, 2005). The WSIS definition points out that Internet governance involves many actors: "Internet governance is the development and application by all stakeholders in their respective roles, of shared principles, norms, rules, decision-making procedures, and programs that shape the evolution and use of the Internet" (WGIG, 2005) . Likewise, Bygrave (2009) notes that governance 'embraces more than government' (p. 2) and links the variety of

actors to plural modes of governance. While Bygrave (2009) understands governance as 'government plus', Mueller (2010) portrays it as something 'weaker than government' (p. 8) that 'denotes the coordination and regulation of interdependent actors in the absence of an overarching political authority'.

Few of the international political conflicts that took place in the WSIS were resolved. This failure led the United Nations and world's governments to be involved in the Internet Governance Forum (IGF), which was designed to provide a non-threatening, non-binding venue for multistakeholder dialogue. According to paragraph 61 of the Tunis agenda for WSIS, the Internet Governance Forum (IGF) is a forum formed under the auspices of the United Nations to provide a transparent, democratic, and multilateral process of dialogue on Internet governance policy, with the participation of governments, the private sector, civil society and international organisations, in their respective roles (WSIS, 2005b). The field of Internet governance studies has been profoundly shaped, if not defined, by this path.

Even though the IGF in particular is an effective middle-ground facilitating the discussion between different stakeholders, its commitment to multistakeholderism is questionable (Drake, 2011). The role of the IGF is to cultivate multistakeholderism by building bridges of trust and confidence and practical partnerships between the stakeholders. However, the IGF poses a great challenge, because a variety of cultures have to interact constructively. It is a forum which brings together governments (who are accustomed to the courteous protocols of inter-governmental discussions); businesses (which look for practical results from such meetings); NGOs, consumer rights groups and human rights activists (who want to give voice to their concerns loudly and clearly); internet specialists (who are familiar with structured approaches to consensus building in their technical processes); and the media (which is there to cover the proceedings and to participate as a stakeholder). Furthermore, for the dialogue to work, participants need to adjust their expectations to consider this diversity of cultures present in the forum. Thus, if Internet governance is to be justifiably and legitimately manageable, there must be as much listening as talking in a multistakeholderism ecosystem.

Academically, the field of Internet governance is highly interdisciplinary: it includes work from the perspective of institutional economics, political science and international

relations, communication and information studies, sociology and law. However, most of the work in this field falls into three categories: policy and institutional analysis of the ICANN and the Regional Internet Address Registries; exploration of various aspects of the WSIS and the IGF; and multistakeholderism and the relationship between private sector self-governance and intergovernmental organisations (Van Eeten & Mueller, 2013).

The controversy surrounding Internet governance starts with its definition. This controversy is not merely linguistic pedantry -the way internet governance is defined reflects different perspectives, approaches, and policy interests (Kurbalija, 2014). In the last few years, Internet governance has attracted growing attention from interdisciplinary scholarship. It has been described as an emerging academic field. Yet, what is Internet Governance?

2.3.4 The Internet and the Dilemma of its Governance

As the influence of the Internet continues to expand, debates about Internet governance have become ever more contentious, and the stakes are high (Bradshaw et al., 2015).

The debate about the most appropriate approach to Internet governance continues to evolve. Until recently, the debate has seen a rough division into three camps: those favouring the continuation of a multistakeholder approach that originated organically from entities forming the technical community, as the Internet was created and further developed following commercialization; those favouring a migration to international institutions based, for example, in the United Nations; and a third camp comprising countries favouring a strong governmental model with states exercising sovereign control over their countries' portion of the Internet, accompanied where necessary by international treaties (GCIC, 2016) .

The WGIG definition compromised specific issues, ranging from infrastructural issues and management of critical Internet resources, to regulatory frameworks and developmental aspects (WGIG, 2005). This has been illustrated in all IGF agendas from the one held in 2006 in Greece to the latest one held in Geneva last year. Discussions have been held under different themes connected to the Internet, such as infrastructure and access, critical resources, public policy and regulations, Cybersecurity, freedoms

and innovations and enhanced multistakeholder Internet governance for economic growth and development (IGF, 2017).

From this perspective, and among other existing literatures and texts, these issues among others are used to classify arguments on Internet governance, but most of them have limitations (Nye, 2014; Castro & Atkinson, 2014; DeNardis & Raymond, 2013; Maclean, 2004). Nye (2014) observes that a large cyber regime complex exists to address many issues that constitute Internet governance, and he lists seven related issues, namely, standards, crime, war/sabotage, espionage, privacy, content control and human rights. Likewise, Castro & Atkinson (2014) identify eight issues, namely, content regulation, intellectual property, data, commerce, cybercrime, network operations, network performance, and equity and access. Similarly, DeNardis (2014) lists six issues, namely, control of critical resources, setting Internet standards, access, and architecture-based IP rights enforcement. Also, MacLean (2004) uses a "governance matrix" to attempt to map some of the issues that arise on this broad view of the Internet governance universe. This matrix arrays governance tools, ranging from "hard" to "soft", the main categories of which have historically attracted international governance on the other such as: exchange of information and communications, usage of common resources, development of networks, and applications of technology for economic, social, cultural and political purposes. Murray (2006), however, offers an examination of "cyberspace public policy", which is supported by his analysis based on different models. Consequently, if Internet governance is to be manageable, must the problem be simplified? On this respect, calls have been made to simplify Internet governance through greater cooperation and coordination and by allocating responsibility to relevant organisations (Kapur, 2005; Castro & Atkinson, 2014). Thus, the question to be asked is: What Internet issues need to be governed, and by whom? "A question such as who should control the Internet, the United Nations or some other organisations, makes no sense whatsoever. The appropriate question involves determining what is the most effective form of governance in each specific context" (DeNardis, 2014). We can argue that the example of the United Nations is not a very encouraging one, as there have been many cases in which the organisation has been dominated or even controlled by one of the leading nations. Furthermore, could we eventually trust a non-government organisation to control the Internet; and if so, how independent can that be?

As the Internet spread rapidly, some world governments questioned whether the bottom-up form of governance is adequate to deal with the increasingly complex issues that needed attention. At a very basic level, these are questions of legitimacy, in the sense of requiring the consent of the governed. But there were also questions about whether the governance model truly considered the necessarily broad range of inputs, and whether the outputs were effective in achieving the goals that [the governed] care about (Scharpf, 2004).

In 2010, the BBC World Service conducted a global poll, which found that 53% of respondents agreed that the Internet should be free from any government regulation (BBC, 2010). To highlight the difficulties in establishing a unified approach to governing the Internet, the poll for example indicated that 72% of Mexicans respondents feel that governments should not regulate the Internet at all, while Australians' and Canadians' primary policy concern with regards to the Internet was fraud and privacy. This shows that the term Internet governance has not been interpreted in a coherent manner and that, conversely, it has been employed with different meanings resulting in different implications, not only for the process of governing itself but also for the role government plays in governance.

Authors take different positions on governments' role when examining the structure of Internet governance. In the famous Declaration of the Independence of Cyberspace, Barlow (1996) criticises governments' attempts to govern the Internet through legal processes and declares that cyberspace is naturally independent of tyrannies, with no elected government or legal order from the real world. Other authors with similar opinions also concede that the Internet is decentralised and can be governed by the private sector, and they suggest a bottom-up structure with government interventions (Mclaughlin & Pickard, 2005; Kleinwächter, 2006). Negroponte (2004) provides a similar but more idealistic suggestion, claiming that the present structure of Internet governance is not healthy, and that the solution is to treat the Internet as an independent nation that belongs to everyone, even to make it a member of the United Nations.

Conversely, Sunstein (2001) emphasises the importance of governments to Internet users and corporations, arguing that it is governments that create and maintain the relatively free environment for the Internet. Moreover, Drezner (2004) disputes the globalization literature that advocates a self-governing Internet dominated by private

actors, claiming that states are still the primary actors for Internet governance in the global context. In the same line, Netanel (2000) believes that unlimited cyberspace will free majorities to trample upon minorities and harm civil society in several ways.

Accordingly, we can argue that each of the two opposing schools mentioned above is biased and unconvincing. While governments' involvement in Internet governance has been controversial, privatised governance creates a different set of concerns. So, which is the best model of Internet governance? The argument here has been that no single model provides the solution. Internet governance is a complex task requiring a complex set of regulatory mechanisms. As a result, this thesis argues that an optimal system of governance would be a combination of regulation by the national government and rational reforms involving the private sector and technical and academic communities, in addition to civil society, to secure a sustainable and cutting-edge Internet of the third millennium. This new framework can be seen as a way to in the location of authority (Rosenau, 2007).

2.3.5 Where is Multistakeholderism in Internet Governance?

There are very significant efforts underway that constitute a new phase in the ongoing development of multistakeholder Internet governance. The most notable of these was set in motion in 2014, when the US government announced its intention to transition its stewardship of the Internet Assigned Numbers Authority (IANA) functions to the multistakeholder community (GCIC, 2016). The global coordination of the Domain Names, Internet Protocols and other Internet protocol resources is performed as the Internet Assigned Numbers Authority (IANA) functions.

The IANA is a key element in how the Internet operates and, since the WSIS, it has been a focus of those who objected to the original governance mechanisms of the Internet. The IANA stewardship transition, completed on 30 September 2016, fulfilled a vision of multistakeholder governance. It is a powerful illustration of the multistakeholder model and an affirmation of the principle that the best approach to address challenges is through bottom-up, transparent, and consensus-driven processes (ISOC, 2016).

The main source on the emergence of multistakeholder Internet governance could be assigned to Milton Mueller's "Ruling the Root" (Mueller, 2002). Mueller analyses the multistakeholder process as a competition between different interest groups, the various

stakeholders. According to Mueller, there were eleven stakeholders in Internet governance that participated in the debate of the 1990s (Mueller, 2002; table 8.1). All of them had clear and expressed interests. The debate between these stakeholders resulted in the creation of a new governance regime. While Mueller acknowledges the victory of a dominant coalition in the negotiations, the multistakeholder view emphasises the plurality of interests and the openness of the political arena. This view tends to present actors that have very different resources as being on an equal footing. This is in line with Barnes et al. (2003), Newman et al. (2004), Newman (2007) and Ballamingie (2009), who argue that the multistakeholder model is more than just a public consultation process of the sort routinely held by democratic states it claims, rather, to share decision-making power with non-state actors. Thus, the multistakeholder model continues to contrast sharply with the model of intergovernmental organisations, which represent only states and reserve decision-making power to states exclusively (Cammaerts & Padovani, 2006; Hintz, 2007; de La Chapelle, 2008; Padovani, 2005; Weber & Grosz, 2009).

The multistakeholder approach remains the dominant view of Internet politics even if the categories differ from one author to another (Mathiason, 2009). As such, the multistakeholder model could credibly be considered an innovative governance concept, part of a wider global debate about rethinking governance in a globalised world. However, the multistakeholder concept has never been fully developed and is only beginning to be critically studied or evaluated (Raymond & DeNardis, 2005). Additionally, it raises serious issues of legitimacy, representativeness and accountability (Bendiek & Wagner, 2012). This can be seen in the Geneva Declaration at the first phase of WSIS (2003), in which governments traced their own role in the administration of Internet policy. They did not consult the other stakeholders when they made this decision and did not include the other stakeholders in the discussions when they developed this list of roles and responsibilities; rather, they unilaterally relegated all other stakeholders to subordinate roles. Thus, neither the private sector nor civil society has the appropriate procedures for selecting representatives in a way that will lend these representatives the legitimacy to participate.

Internet governance was not the first field to explore multistakeholder models of governance. The earliest work on various models of participatory democracy that led the way for multistakeholderism can be found in the work of Elinor Ostrom (1991) on

models of economic governance, and some other relevant work has been done in the field of sustainable development (Wiener, 2000). Hemmati (2002) explains that multistakeholder processes have been used for decades to address problems in a variety of areas including biotechnology, corporate conduct, energy, gender inequality, tourism, labour, mining, paper and sustainability. She notes that multistakeholder processes inform decision makers on issues, generate support for decisions, identify solutions to problems and encourage stakeholders to take ownership of issues. It has been effective in many social, political, economic and technical contexts, especially when the problems that have arisen are new, fast-changing and complex with important social and cultural dimensions.

Multistakeholder participation and governance mechanisms may be a 'rather recent invention', but they have a longer tradition as an 'organizing principle and political practice (Hofmann, 2016, p.29). Nonetheless, multistakeholderism in Internet governance refers most directly to Paragraph 34 of the Tunis Agenda in the second phase of WSIS: "A working definition of Internet governance is the development and application by governments, the private sector and civil society, in their respective roles, of shared principles, norms, rules, decision-making procedures, and programmes that shape the evolution and use of the Internet" (WSIS, 2005b, p. 6). The wording "in their respective roles" was a perfect example of what diplomats usually describe as constructive ambiguity: agreements on terms that conceal a disagreement of substance (de La Chapelle B. , 2011).

Some observers have expressed concerns about what they see as the primary or too 'prominent' listing of 'governments' in the definition (DeNardis, 2014, p. 38). Others argue against the subsequent inclusion of technical and academic communities, saying that these should have been recognized as cross-cutting and not distinct stakeholder groups (Doria, 2014). Some have further pointed out that categorising stakeholders is not useful without scrutinising the diverse interests that diverse stakeholders have in the outcomes of multistakeholder processes (Belli, 2015) and that the classification is inadequate because it obscures diversity, perspectives, priorities, and conflict of interests within and amongst stakeholder groups (Souter, 2017).

Accordingly, one could argue that this attempt to identify and define a new field of regulatory issues on global and national levels is more concerned with making

multistakeholderism attractive -due to its consensus-reaching process- than with mapping the emerging notion of Internet governance (Antonova, 2007). Indeed, at all IGFs, some participants still confided that the definition had not grasped the multitude of stakeholder expectations and that they feel uncomfortable with what governance means when applied to Internet. This constructive ambiguity has become one of the great impediments to the success of the multistakeholder model.

Kummer (2013), who served as an executive coordinator for the IGF Secretariat, describes multistakeholder governance as a vehicle for policy dialogue where all stakeholders take part on an equal footing via a process that is open, inclusive and transparent. He added that, while multistakeholder participation in the WGIG and IGF meant and means that all stakeholders participate on an equal footing, it is also clear that in most organisations, whether intergovernmental or not, some structures are in place to facilitate decision-making processes. Here, another ambiguous contested term rose up: "on an equal footing"? Does this mean that all stakeholders have the same authority? Do they have equal access to decision-making processes and deliberations? This can be challenging given the inequality in the power experienced by the different stakeholders. Esterhuysen (2011) argues that the world, of which the Internet is a part, is not an equal place. There are vast differences in access to resources and power, between countries, and within countries. Governing bodies and processes need to recognise these differences and try to address them to achieve legitimacy over time. Liddicoat and Doria (2012) explain that while there is no single multistakeholder model, it is a form of participatory democracy that allows all of those who have a stake in a policy to take part in crafting that policy. While the composition of the stakeholder groups may vary, when used in reference to Internet governance, the stakeholders generally include governments acting in behalf of their citizens or of the global public good as they understand it, the private sector commercial organizations that reflect the businesses that affect and are affected by the Internet, the Internet technical community that is responsible for the development and maintenance of the network itself, and academics.

Structurally, multistakeholder governance is produced by variation on at least two dimensions: the types of actors involved and the nature of authority relations between actors (Raymond & DeNardis, 2015). According to these dimensions, in order to qualify as multistakeholder governance, at least two classes of actors must be involved, even if not directly, in carrying out a coordinating function or in regulating or technologically

constraining such a function indirectly. This is similar to what Ruggie (1992) called the nominal or thin definition of multilateralism proposed by Keohane (1990). Ruggie argues that multilateralism misses the qualitative dimension of the phenomenon that makes it distinct and that the issue is not the number of parties but rather the kind of relations that are instituted among them. While multilateralism admittedly combines a wide variety of actors, multistakeholderism differs in the authority relations between actors. The conclusion of this argument is that several scenarios of multistakeholderism exist depending on the relationship between the actors. Adopting this stance, further research is needed to maximise the applicability of these different multistakeholderism scenarios to empirical cases.

While the benefits of multistakeholder governance have been identified, multistakeholderism should not be perceived as a sweeping solution to all governance issues, and its limits and risks should always be considered. Esterhuysen (2011) clearly stated that he doesn't believe multistakeholder participation, as outlined in the WSIS principles, has reached that stage and that he doesn't think we should strive for such a stage. Additionally, Zelenika & Pearce (2013) argue that Internet governance represents innovative forms of governance that are being put in place by multilateral groups. Given the fact that multilateralism has met with severe disapproval and faced many challenges, it is remarkable and important to weigh the potential for democratic governance that may be of great importance in future. In the same line, Drake (2011) argues that the scope of stakeholder participation remains too narrow; while there has been much debate in recent years about the "democratic deficit" in multilateral institutions, multistakeholderism unquestionably faces its own challenges with respect to participation, authority and accountability.

Governments are not equally supportive of the sort of multistakeholder participation that is common in Internet governance processes. While 171 governments participate in ICANN's Governance Advisory Committee, some of these believe that the role of governments under ICANN's bylaws is too limited and that governments should have the ultimate decision-making authority on key issues. There are concerns about the unequal representation in core Internet governance institutions, such as ICANN, ISOC and IETF (Hampson & Jardine, 2016).

Therefore, the concept of multistakeholder Internet governance is still very vague, and the roles and responsibilities of different actors are yet to be defined. One of the most problematic aspects of the multistakeholder approach is the very meaning of "participation" in political processes and the underlying vision of governance (Padovani, 2005). It is clear that power sharing and working relations between governments and non-governmental actors are changing. However, there are issues, especially with the degrees of representation. This thesis recognises that the actual literature on multistakeholderism raises definitional complications and that further research is needed to study the applicability of these different definitions to empirical cases.

2.3.6 Governance Beyond Developing Governments

In the large context, a considerable number of developing countries view the Internet as dominated by the wealthy developed countries. In their view, due to a lack of capital and expertise, they are excluded from any meaningful participation, and this situation is no longer acceptable especially when their national interests are on the stake (DOTF, 2002). For the developing countries, a UN intergovernmental organisation such as the ITU would be an answer to their concern, not only to guarantee their sovereignty, but also to offer them relatively greater opportunities for participation. However, whether these developing countries are in a position to make use of these opportunities for participation is another matter entirely. Schmidt & Raymund (1998) explain that studies on ITU's standardisation activities show that it is the developed industrial countries that normally set the tone. Moreover, ITU, which is handling the global coordinating responsibility of radio spectrum and geostationary satellite orbit allocation, traditional telephony standards and telecommunications development, has many shortcomings. Its meetings are generally closed, and its reports are generally sealed except to its sector members. Additionally, the ITU is a treaty organisation; if nations ratify treaties, they commit to implementing them. If the ITU were to control the Internet, it could decide that ratifying nations had to apply its standards while non-ratifying states applied other standards. Accordingly, ITU can't be considered as a multistakeholder organisation, although this could change.

For their part, developed countries have defended the existing governance arrangement. In response to demands for an intergovernmental solution, they have countered with the

"multistakeholder approach," which was becoming increasingly popular in the course of preparations for WSIS. For them, this open participatory multistakeholder approach complements the Internet's tradition and structure better than any other form of intergovernmental approach. Perhaps the most clear-cut example of multistakeholder governance involving multiple types of stakeholders is ICANN, which involves participants from corporations, governments and civil society. Thus, considerable Internet governance scholarship such as Mueller (2002) and Antonova (2008) focus on the governance functions over critical Internet resources enacted by ICANN and the form of multistakeholderism that has arisen in it. Even this relatively clear example of multistakeholder governance has been subject to criticisms ranging from claims of insufficient civil society participation, insufficient government authority, too much US government oversight; questions about legitimacy; and concerns about its contractual relationship with the United States government. However, since the U.S. government relinquished its oversight of the Internet Assigned Numbers Authority (IANA) to the global Internet community in 2016 (while keeping IANA under ICANN authority), some of these criticisms have disappeared.

This discourse on multistakeholder Internet governance reflects longstanding international tensions about administrative control of the Internet, and these tensions have failed to define what is acceptable multistakeholder governance for any particular function. After several decades of experience with multistakeholder initiatives outside of the Internet, the political science community has begun to question whether self-regulation is sufficient to ensure the proper management of vital resources and protection of workers or whether a direct role for governments is warranted (Locke, 2013). The question remains whether the rise of multistakeholder Internet governance implies the dissolution of governments' authority and the empowerment of other stakeholders. Even though multistakeholderism is subject to power struggles, these stakeholders are not equal, and the viability of multistakeholderism is not determined by its inclusiveness alone but arguably by the level of authority. This raises a further question as to whether multistakeholder governance will be well-suied for Internet governance. Mathiason (2008), Mueller (2010), Brousseau et al. (2012) and DeNardis (2014) explain the various tasks of Internet governance and associated taxonomies that lead to the conclusion that there is no unitary system that oversees and coordinates the Internet. Accordingly, some tasks are carried out by private industry, some tasks are

overseen by the ICANN and some administrative jurisdiction resides within sovereign states or multilateral governmental coordination.

2.3.7 From Global to National Internet Governance

Currently, many organisations are involved in coordinating Internet related issues globally. Some of these organisations are private and others are intergovernmental, and each has unique strengths and contributes in its own way to the success of the global Internet today.

Gordenker & Weiss (1995) define international governance as efforts to bring more orderly and reliable responses to social and political issues that go beyond the capacities of states to address individually. Moreover, Hintz (2007) argues that while a crucial rationale for the concept is its 'global' approach, global governance does not just transfer policy-making from one level (nation-state) to the next (global) but rather involves qualitative changes. Therefore, to enable a robust global governance environment, it is critical that actors can cooperate by being able to speak a "common language." In the technology context, this can mean a common set of standards. In the governance context, it means a mutually understood ontology of Internet-related issues and responses (Kurbalija, 2014b). Therefore, the global Internet governance ecosystem thus requires interoperability, that is, the ability for diverse social, political, organizational, legal and technical systems to meaningfully work together and collaborate around setting this common ontology. However, Raymond & Smith (2013) argue that the Internet has never been an ungoverned space; in fact, the internet would not and could not exist if it were.

Just as basic functioning in the real world requires scarce natural resources, such as water and energy, the Internet's basic functioning requires a set of critical virtual resources. Critical Internet Resources (CIRs) are a central theme in Internet governance research and in global debates over control of the Internet (Weber, 2010). The terminology of CIRs in the context of Internet governance usually refers to Internet-unique logical resources rather than to the physical, infrastructural components of the network. This theme of control over Internet resources is not unique to Internet governance. New technologies create new scarce resources. Battles over new scarce resources have historically been an issue of information and communication technology policy, whether electromagnetic spectrum allocation for broadcasting as mentioned by

Douglas (1987) or bandwidth allocation in net neutrality debates as stated by Wu & Yoo (2007).

What may be unique about Internet resources, and in particular IP addresses, is that they are completely global rather than geographically bounded resources and require central coordination because of the technical criterion of each resource serving as a globally unique identifier. Thus, CIRs must meet a technical requirement of global uniqueness, requiring some central coordination, a condition at the heart of debates over who controls these resources and how they are distributed. In contrast, there are no coordination requirements for the physical infrastructure. DeNardis (2009) investigated the current debate that involves the question of what type of market intervention or government regulation might be necessary, if any at all. Unlike many other types of technological resources, CIRs have never been exchanged in free markets or directly regulated by sovereign governments.

The WSIS was influential not only in creating the IGF, outlining a working definition for Internet governance, and recognising the importance of multistakeholder participation, among other things. It also stimulated multistakeholder approaches for Internet-policy formulation at national levels (Adam et al., 2007). As such, the multistakeholder governance at the national level could credibly be considered an innovative concept, part of a wider global debate about rethinking governance in a globalised world (Mueller & Wagner, 2014).

At the national level, the principal challenge has been to develop a strategy to gather and effectively coordinate support from governments and non-governmental actors such as the private sector, academic and civil society that often have the necessary expertise to deal with Internet governance issues. According to Mueller and Wagner (2014), after WSIS many countries have managed to develop sufficient institutional capacity on the national level to follow global Internet governance negotiations. Some of these countries such as Brazil have developed an innovative national structure for following the Internet governance debate. While the Brazilian model is often taken as a successful example of a multistakeholder approach, the Lebanese efforts in this area have failed. But the multistakeholder concept has never been fully developed (Hintz 2007), and it raises serious issues of legitimacy, representativeness and accountability (Bendiek and Wagner 2012).

Nevertheless, Internet governance practices vary from one country to another, notably with respect to the roles of government. In some countries, the management of Internet is in the hands of governments and regulators while others allow private sector involvement. It is obvious that government involvement in Internet governance is both necessary and inevitable, but the level and nature of this involvement remain questionable.

As the WSIS definition points out, Internet governance involves many stakeholders including governments. Interestingly, the acknowledged plurality of stakeholders is used to support opposing conclusions on the means of governance. Bygrave (2009) focuses on binding laws enhanced by other means, whereas Mueller (2010) observes an overall loss of regulatory authority. Feick and Werle (2010) offer a plausible reading of these contradictory views, describing Internet governance as 'patchworks of partly complementary, partly competing regulatory elements in the form of legal rules and ordinances, mandatory and voluntary technical standards and protocols, international and national contracts and agreements, and informal codes of conduct and "netiquette"' (p. 525).

Furthermore, it is important to mention that Internet governance has been seen as a new way to spread democracy and freedom of expression, since it offers more chances for people to put pressure on and watch their governments rather than just being watched. According to Shannon (2003), participation is the cornerstone of democracy. Yet, participation alone cannot be considered without understanding the type of participation process within governance. However, democracy is still the object of conflicts across the globe, and there are a number of governments that have been branded as enemies of the Internet since they tend to illegally monitor and filter the Internet to interdict freedom of expression. According to Wu (2010), Egypt's disconnecting of the Internet in January 2011 represents the most extreme form and has triggered wide debates about state-controlled "kill switches".

Much literature has focused on authoritarian states, documenting how countries such as China and Iran started to build national firewalls and sophisticated filtering systems (Deiber et al., 2008; Clayton et al., 2006). Autocratic regimes and some developing countries are arguing the case for more official control of the Internet to protect citizens

and control crime. Those that have been accused of illegally filtering the Internet argue that they are doing so to protect their citizens from the worst evils like child pornography or even the threat of terrorist acts. This last point has been quite frequently cited as a means of justifying almost any illegal attempt to control the Internet by governments, insofar as it blends the issue of sophisticated terrorism into the lives of citizens. Much attention has been paid to the filtering of Internet access by authoritarian regimes such as China or Iran (Boas, 2006; Deibert et al., 2008).

Akdeniz (2010) argues that, although all democratic countries protect freedom of expression through a series of national and international legal instruments, each country holds a margin of appreciation to introduce speech-based restrictions to its laws. Moreover, Brown & Marsden (2013) claim that countries have differing human rights approaches. For example, in some countries such as those in Europe, freedom of expression has never been an inalienable right but is balanced against other rights, such as the respect of privacy or public order (Zeno-Zencovich, 2009). Internet traffic and online content are always subject to over-regulation in the Middle East, Russia, China, Iran and some other countries, which ignore any regard for freedom of speech and claim the need to protect and defend its internal stability, the safety of its citizens and sovereignty. Wagner (2012) claims that in authoritarian regimes, the government is generally directly involved in controlling Internet traffic.

Taking into consideration the importance of the issues discussed at the national level, the question to be posed is: Why have Internet governance scholars and researchers failed to acknowledge the importance of governance and its related issues at the national level and have instead focused their research elsewhere, at a global level, adapting their approaches accordingly? The answer might be that it is much easier for them to define the Internet as a global phenomenon, since there are relatively few detailed studies of national Internet governance. Instead, global institutions like the ICANN and ITU occupy centre stage (Levinson, 2003).

In addition, formalised institutions have explicit rules and procedures, which render the object of study readily available for empirical analysis while other areas of the Internet are often informal and thus more difficult to investigate. We can argue that the lack of a coherent conceptualisation of Internet governance at the national level has discouraged research on this issue. For example, there are numerous studies on the participation of

civil society in the WSIS, on how state and non-state actors share power at IGF, and on the ICANN's structure and processes (Froomkin, 2003; Klein, 2004; Kleinwächter, 2004; Palfrey, 2004; Koppell, 2005). In other words, the field conceives Internet governance as taking place at these institutions rather than conceptualizing Internet governance and studying where and how it is actually taking place. The exclusive study of these formalised institutions that are officially designated as sites of 'multistakeholder Internet governance' presents us with a biased perspective.

2.3.8 Code of Good Governance

In this code of governance, the term "Internet governance" refers to 'the development and application by governments, the private sector and civil society, in their respective roles, of shared principles, norms, rules, decision-making procedures, and programmes that shape the evolution and use of the Internet.' It was defined in the Tunis Agenda on the Information Society and agreed on at the World Summit on the Information Society (WSIS) in Tunis in 2005 (WSIS, 2005b).

While Bygrave (2009) understands governance as 'government plus', Mueller (2010) portrays it as something 'weaker than government' that denotes the coordination and regulation of interdependent actors in the absence of an overarching political authority. Although actors are diverse in role and character, their multistakeholder participation, open discussion and decision-making have emerged from the way in which the Internet has developed. This was mentioned in the "WSIS principles", included in the Tunis Agenda outcome document of the World Summit on the Information Society, which declared that the management of the Internet should be multilateral, transparent and democratic, with the full involvement of governments, the private sector, civil society and international organizations" (WSIS, 2015a).

In 2010, the Council of Europe and the United Nations Economic Commission for Europe published a code defining good governance practice as building upon the experience of the many entities concerned with Internet governance in order to reinforce transparency, information and participation. Improving governance and providing citizens across states and across the globe with improved services ensure less corruption, the safeguarding of democratic values and the promotion transparency and accountability in a government's actions (Pimenidis, 2009). The code of good practice is built largely upon principles of transparency and information-sharing, of

multistakeholder participation and of open discussion and decision-making. It is intended as a framework of principles and guidelines which will help these entities to maintain and improve transparency, inclusiveness and accountability as the Internet continues to grow in range, diversity and importance. The ways in which these principles and guidelines are implemented will vary according to the roles and circumstances of the different entities concerned (CE & UNECE, 2010). It stipulates that:

1. Internet governance decisions and decision-making processes concerned with Internet governance should be open, transparent and inclusive.

2. Internet governance entities and processes should enable and encourage all those who wish to participate in processes and decisions concerning Internet governance to make contributions with the expectation that their views will be considered.

3. Internet governance entities should actively foster participation in their work by all those who are or may be affected, or consider themselves affected, by the decisions that they make, including individuals and organisations from all stakeholder communities and world regions.

4. Any individual or organisation should be able to initiate ideas for debates about Internet policy; standards development, coordination or administration; and the governance and structure of Internet governance entities. They should also be able to take part in such debates.

5. Opportunities to participate in the work of entities concerned with Internet governance should be widely publicised, with the aim of ensuring that all those who wish to participate are aware of them. Internet governance entities should recognise that the quality of access may affect the ability of potential participants to engage with them and facilitate the participation of those adversely affected by poor connectivity.

6. To facilitate inclusiveness and engagement, Internet governance entities should produce and disseminate clear information about modes of participation in their policy, standards, coordination and administration processes. They should recognise that lack of familiarity and expertise may prove barriers to

participation and should offer induction opportunities for new participants in both physical and online meetings.

7. Internet governance entities should strive to make participation in decision-making independent of physical location, ability to travel to physical meetings and financial resources. Efforts to achieve this should include offline and other mechanisms that meet the needs of particular communities, as well as remote online participation.

8. Internet governance entities should seek to extend these principles into areas of dialogue and joint policy-making with other governance bodies, including those whose concerns lie primarily outside the Internet.

This thesis endorses these principles and suggests that stakeholders concerned with Internet governance should regularly review their information, participation and governance arrangements, in the light of this code of governance. Methods of achieving this objective may include peer review and other assessment methods, where Internet governance entities make public the outcomes of such reviews.

2.4 The Impact of the Internet on Economic Growth

There is a growing body of literature suggesting a direct link between economic growth and the adoption of new technology (Heeks, 1999). This is reflected in the study by Roller & Waverman (2001), the results of which have shown a strong relation between investment in ICT infrastructure and productivity growth. According to Altig and Rupert (1999), Internet access is correlated with growth performance.

Recent literature on international perceives the Internet as holding a vast potential for inclusive growth and socio-economic development (Dalberg, 2013). Not only could it increase productivity and contribute to the overall GDP of an economy, but it could also help connect remote populations to markets, promote citizens' access to social services, expand educational opportunities, create platforms for innovation and increase people's freedoms and access to government services (Madon, 2000). According to the World Bank (2014), cross-country data on Internet penetration and economic development suggests a strong positive correlation between percentage of Internet users and PPP GDP per capita. It should be noted that the economic impact of different Information and Communication Technologies (ICTs) has been studied for some time and that these

models have shaped the emerging framework for analysing the effect of broadband (Roller and Waverman 2001).

In this context, the Communications Outlook report published in 2009 by the Organisation for Economic Co-operation and Development (OECD), noted: "New broadband Internet infrastructure investments are good targets for economic stimulus spending because many projects can be initiated relatively quickly, are labour-intensive, can minimise economic leakages, and may promise stronger marginal impacts on supply and productivity than investing in established networks such as electricity, gas, water and transportation". Basically, developing countries have lower technological penetration than the developed countries, and hence, technological innovation will have more a significant impact on their economies (OECD, 2009). However, according to the "return to scale" theory, the impact of telecommunications infrastructure on the economic output is maximized once the infrastructure reaches a critical mass point, generally associated with developed countries' levels of penetration. As a result, we initially observe increasing returns on growth (Roeller and Waverman, 2001; Shiu and Lam, 2008). While Roeller and Waverman (2001) associate "critical mass" with near universal voice telephony penetration, we are starting to identify this phenomenon for broadband as well.

Nevertheless, many studies have sought to identify and understand the economic benefits of the Internet. A macro-level econometric analysis performed by the World Bank (2009) reports that a 10% increase in broadband and a 10% increase in wire line Internet penetration are associated with a 1.38% and a 1.12% increase in GDP growth, respectively.

The next section will review some empirical studies attempting to quantify the contribution of Internet connectivity at all levels of economic development and to establish that the Internet is a dynamic tool for stimulating growth.

2.4.1 Studies on the Economic Impact of Broadband Internet

There has been a considerable amount of empirical work on the economic impact of broadband Internet on development and growth. The methodologies that have been used vary on issues like data availability and different econometric specifications. The broad

outcome of these studies concludes a positive and significant link between Internet and growth.

An early study by the World Bank (Qiang et al. 2009) used a cross-sectional analysis to examine the impact of various ICTs, including fixed broadband, on GDP growth during the period 1980 until 2006 for 120 developing and developed countries. The framework is based on the endogenous growth model (Barro, Economic Growth in a Cross Section of Countries, 1991):

$$GDP8006 = \alpha 0 + \alpha 1 \times GDP80 + \alpha 2 \times (I/GDP)8006 + \alpha 3 \times PRIM80 + \alpha 4 \times BBPEN 8006 + \alpha 5 \times SSA + \alpha 6 \times LAC + \mu$$

where GDP8006 is the average growth rate of real GDP per capita in US\$ between 1980-2006, GDP80 is per capita GDP in 1980, I/GDP8006 is the average ratio of investment to GDP between 1980 and 2006, PRIM80 is the primary school enrolment rate in 1980, BBPEN8006 is the average fixed broadband penetration and SSA and LAC are dummy variables for countries in Sub-Saharan Africa and Latin America and the Caribbean (LAC) respectively.

The study concludes that a 10-percentage point increase in fixed broadband penetration would increase GDP growth by 1.21% in developed economies and 1.38% in developing ones.

This model has been updated using recent data (Scott, 2012). The same model is used but with data for 86 countries for 1980–2011. The results were essentially the same as before, with a 10-percentage point increase in fixed broadband generating a 1.35% increase in per capita GDP for developing countries and a 1.19% increase for developed countries. The results suggest that that broadband Internet has the highest GDP growth increase (Figure 2.3).
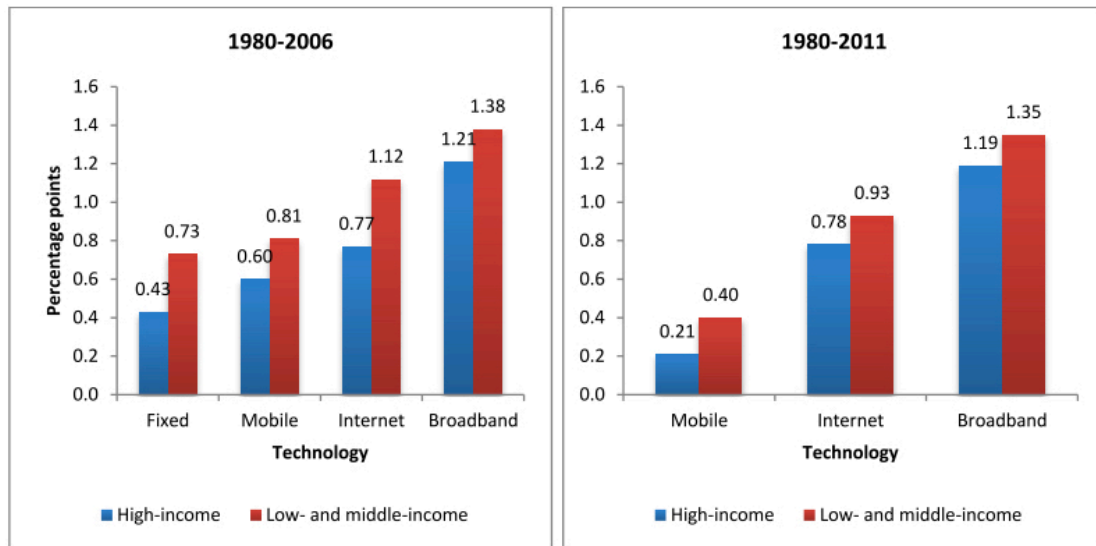
Figure 2.3: GDP growth impact from 10-percent point increase. Source: Qiang et al. (2009) and Scott (2012)

Similarly, Koutroumpis (2009) found that broadband penetration has a significant impact on GDP growth ranging from 0.26% to 0.85% for each 10-percentage point increase in penetration. The research covers 15 European Union countries based on data collected for the period 2003 to 2006 with 60 observations. Using a macroeconomic production function, variables are transformed to logs with the following equation:

$$log(GDP_t) = a_0 + a_1 \times log(K_t) + a_2 \times log(LF_t) + a3 \times log(PEN_t) + a4 \times log(EDU_t)$$

where t is time, GDP is Gross Domestic Product in millions of euros, K is stock of investment in millions of euros, LF is Population with full or part time work aged between 15 and 64 in millions, PEN is fixed broadband penetration and EDU is Population with tertiary education per 100 population aged between 25 and 64.

In 2018, Koutroumpis replicated the model he used in 2009 and updated its findings using an OECD panel of countries for the period 2002 to 2016. In this study, he presents the econometric framework that mimics the way broadband affects the national economy. Building on the work of the previous study, the dataset used in this study consists of annual observations from 35 countries for the fifteen-year period between 2002 and 2016. The results confirm previous findings and reinforces our understanding of the impact of broadband on the economy (Koutroumpis, 2018). The result revealed that a 10-line increase from 10 to 20 lines per 100 people yields 1.40%. This estimate is in line with previous findings by Qiang (2009) and Scott (2012).

Another more optimistic study deploying a non-linear model found that a 10 percent increase in fixed broadband penetration triggered an average increase of 3.19 percent in per capita GDP. The study examined the broadband economic impact in Latin American and Caribbean (LAC) countries (Zaballos & Lopez-Rivas, 2012). The data covers 26 LAC countries for the period between 2003 and 2009 with the economic impact calculated for three different periods: 2003–05, 2003–07 and 2003–09. The non-linear model was specified as:

Y1 = Z - Z1 + Z2 - Z3 - Z4 + Y - Y2

Where Y1 is GDP per capita, Z is the constant, Z1 is the interest rate spread, Z2 is the interest on new debt, Z3 is multilateral debt, Z4 is net official development aid and Y is fixed broadband penetration per 100 inhabitants.

In conclusion, a variety of models has been designed to measure the impact of broadband Internet on the economy with different formulas and variables. In general, despite the methodology and whether it is cross-country or single country, each study examined found broadband Internet to have a positive economic impact (Table 2.4)

Study	Increase in GDP per 10 percentage point	Number of Studied Countries
Qiang et al. (2009)	1.21% - 1.38%	120 (Worldwide)
Koutroumpis (2009)	0.26% - 0.85%	15 (EU)
Scot (2012)	1.35%	86 (Worldwide)
Zaballos and Lopez (2012)	3.19%	26 (Latin America and the Caribbean)
Koutroumpis (2018)	1.40%	35 (Worldwide)

Table 2.4: Summary of broadband Internet impact studies

However, the study of the economic effects of Internet broadband presents several methodological challenges. Katz (2012) has lightened these challenges along three avenues:

- The macro-economic perspective founded on the Harvard economist Robert Barro's endogenous technical change model 13, which analyzes the aggregate impact of broadband on economic development. In this case the guiding question is: what is the contribution of broadband to GDP growth, productivity and employment?

- The microeconomic perspective at the level of the firm, emphasising the contribution of broadband to business process efficiency and sales growth. The key issue here is to understand the return on broadband and IT investment at the firm and sector level.

- The qualitative perspective, choosing the case study as its primary analytical tool.

Nevertheless, the evidence accrued by these three bodies of research supports the hypothesis that Internet broadband has an important economic impact (Katz, 2012).

2.5 The Impact of Governance on Internet and Economic Growth

As presented above, the literature agrees that the Internet spurs countries' economic development and growth. However, good governance is also indispensable for such development. Many scholars and researchers have confirmed the positive link of improved quality of governance on economic growth (Keefer, 1997; Campos and Nugent, 1999; Kaufmann et al. 1999a and 1999b; Mehanna et al., 2010; Han et al., 2014).

Much of the research of the International Monetary Fund (IMF), the United Nations, and the World Bank shows that good governance leads to economic growth. The World Bank's World Governance Indicator project shows that the Middle East and the North Africa region always rank below the average. This World Bank project seeks to measure the quality of governance using six metrics: Voice and Accountability, Political Stability, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption. These metrics are measured both by a Governance Score that ranges from -

2.5 to +2.5, and a Percentile Rank relative to nations worldwide. For instance, Kaufman and Kraay (2002) evaluate the World Governance Indicators over the period 1996 to 2002 and find a positive relationship between per capita income and quality of governance.

Furthermore, Han and el. (2014) analyse the governance gap and its effect on economic growth. Among many other results, the study shows that Middle Eastern and North African countries with a surplus in political stability, government effectiveness, and corruption control are observed to grow faster than those with a deficit in these indicators by as much as 2.5 percentage points annually. The study implies that governance matters to economic growth.

Given the previous background, these findings point to the importance of good Internet governance for economic development. However, the relation between Internet and its governance is a complex process with diverse and multidisciplinary components. Consequently, the challenge is making these components interact and work in a combined and interplayed framework. Granovetter (2005) and UZZI (1996) argue that strong bonds form the basis for people's identity, business interests and professional associations and that networks contribute to economic development. A low degree of embeddedness in local social structures of governance, on the other hand, may lead to isolation, lack of trust and knowledge-sharing and a pure profit-oriented approach. Thus, the weak governance framework in the developing countries is an obstacle for the rapid and successful exploitation of Internet, which in return significantly reduces the potential of an economic growth. This is in line with the work of Chauvet and Collier (2004) that find developing countries with poor quality of governance will lead to less economic growth.

The design of such a governance model should rely on country-specific know-how and governance diagnostic tools to identify specific priorities. And understanding the political and economic forces shaping policymaking and law making (which vary from setting to setting) is key to identifying realistic and country-relevant strategic priorities (Kaufmann & Kraay, 2004). Although many of these strategic priorities may appear purely technical, they have important social, political and economic consequences. The Boston Consulting Group report (2014) specifies that the barriers that hold back Internet development are related to infrastructure, access, cost, and outdated regulations and

policies and that they are imposed by governments through restrictions of various forms (BCG, 2014). Appropriately, successful countries have taken a comprehensive multistakeholder approach to addressing the challenges that hinder their Internet development (Dean, 2016). Therefore, decisions made in the realm of multistakeholder Internet governance can play a significant role in economic growth.

Similarly, the World Bank study (2009) emphasises that good governance through implementation of suitable laws, adoption of new regulations, and competition policies will enable participation by the private section and others to overcome lagging sector development. This approach is to be propelled by both structural and regulatory reform to unlock the potential benefits and services of Internet broadband, thus enabling the country's economic growth.

In this context, this thesis examines 2 successful case studies from Brazil and Kenya, in which multistakeholder participation has been interpreted and implemented in diverse instances of Internet governance.

2.5.1 Brazilian Multistakeholder Internet Governance Model

Brazil has developed a multistakeholder Internet governance model in a way that truly engages different sectors, including civil society, government, academia and business. Its model remains a concrete example for any country seeking to build an effective multistakeholder governance body (Almeida, 2017).

The Brazilian story is about a powerful coalition of pro-monopolist statist interests opposed by a counter-coalition with diametrically opposed ideas about Internet governance. Specifically, the state enterprise leaders insisted that their monopoly should be legitimised and extended to the Internet market, and they wanted to restrict legitimate participation in policy making to the usual suspects – themselves and a few trusted ministry officials who also favoured state monopolies (Wilson, 2005).

The central part of Brazil's Internet governance ecosystem is the Brazilian Internet Steering Committee (CGI.br), which was created by Interministerial Ordinance 147 on 31 May 1995 (NIC, 2018). The Brazilian government established the Brazilian Internet Steering Committee (CGI.br) as a multistakeholder governance body. The CGI.br board has 21 members: nine from government organizations, four from civil society, four from

the private sector and four from the academic and technical communities. Government members are appointed, and all other members are elected by their respective communities. No single sector, even government, has a majority of votes on the board (CGI.br, 2018). Two years later, Brazilian telecommunications legislation defined the internet as a "value-added service" different from the telecommunications infrastructure. This innovative approach allowed the internet to grow quickly in Brazil.

The purpose of the Brazilian Internet Steering Committee (CGI.br) is to coordinate and integrate all of the country's internet service initiatives, as well as to promote technical quality, innovation and dissemination of available services. The CGI.br constitutes an internet governance model for societies to effectively participate in decisions involving network implementation, management and use. Based on the principles of multilateralism, transparency and democracy, the CGI.br has been democratically electing representatives from civil society since July 2004 to participate in discussions and to debate priorities for the internet together with the government.

The main responsibilities of the Brazilian Steering Committee are to:

- Establish strategic guidelines related to the use and development of the internet in Brazil;

- Recommend standards for technical and operational procedures for the internet in the country;

- Establish guidelines to orient relations between the government and society in the execution of the Domain Name System registration activities, in the allocation of Internet Protocol (IP) addresses and in the administration of the country code top-level domain;

- Propose research and development programmes related to the internet and economy;

- Promote statistical studies and recommend procedures, norms, technical and operational standards for network and internet services security, as well as for its growing and adequate use by society; and

- Participate in national and international technical fora for internet governance.

Conceptualized in 2007, the "Bill of Rights" for Brazilian internet users "Marco Civil" was drafted using an open multistakeholder process through which members of the public, government, global and local internet companies, civil society and others engaged in negotiations over the legislation's text. The Marco Civil Law No 19.965 published in 2014 is distinctive due to its substance and the way it was created to protect the internet's key principles (CGI.br, 2018).

2.5.2 The Kenyan Multistakeholder Model of Internet Governance

The World Summit on Information Technology (WSIS) was influential not only in outlining a working definition of Internet governance and recognising the importance of multistakeholder participation. It also stimulated a multistakeholder approach for Internet policy formulation at a national level (Adam et al., 2007). This is found in Kenya's delegation to WSIS that included non-governmental stakeholders who contributed prominently to the deliberations.

Kenya is widely regarded as one of the most vibrant Internet governance communities in Africa. ICTs have contributed substantially to the growth of Kenya's economy, reportedly having been responsible for up to one quarter of its gross domestic product (GDP) over the past ten years (Munyua, 2016).

In the early 2000s, it became clear that Kenya needed a new national ICT policy framework that would not only deepen liberalisation efforts but would be more capable of addressing new challenges in the sector. Yet the civil society and private sector stakeholders who could work with and lobby government for such a framework were pulling in different directions (Adam et al., 2007).

Kenya saw the creation of not only the world's first national and regional IGF initiatives but also a multistakeholder platform for deliberation on policy and other developments pertaining to the ICT, the Kenya ICT Action Network (KICTANet) (Souter & Kerretts-Makau, 2012). Participants from the media, business, civil society, academia, and development sectors were invited to an initial meeting in October 2004 where the KICTANet was created as a loose alliance with the specific aim of developing an ICT policy framework for the country. According to Adam et al. (2007), KICTANet was specifically designed to welcome multistakeholder participation due to the 'perceived strength and effectiveness in joint collaborative policy advocacy activities, which would

be based on pooling skills and resources' (p. 26) as opposed to wasting resources in 'competing, overlapping advocacy' (Munyua, 2016; p. 213).

The Ministry of Information and Communication in Kenya invited KICTANet to participate officially to draft an ICT policy and to organize a national multistakeholder workshop to finalise the policy. The KICTANet submission on the draft policy was used as a working document by the Ministry, and the Kenya ICT Policy was finally approved by the country's Cabinet in March 2006 (Adam et al., 2007), thereby 'heralding the beginning of a new form of policy-making, which was more participatory and collaborative in nature' (Munyua, 2016; p. 213). Today, KICTANet has almost 4000 members and continues to help organise the national Kenya IGF along with a new annual Kenya School of Internet Governance.

2.5.3 Missing Multistakeholder Efforts in Lebanon

 The slow growth performance in many developing countries, especially Middle Eastern and North African countries, has been disappointing over the last decade (Emara & Chiu, 2016). Mehanna, Yazbeck, and Sarieddine (2010) study the relationship between governance and economic development in 23 countries in the Middle East and North Africa region. The study shows that improving governance is the main challenge facing the MENA countries including Lebanon, where voice and accountability, government effectiveness, and control of corruption would exert the strongest economic impact.

Since the second half of the 1980's, growth and development studies have started to shed light on the importance for economic growth of improving institutions of governance. In the absence of a stable government in post-conflict Lebanon, multistakeholder partnerships have been critical to the buildup of the country's core Internet infrastructure (Almeida, 2017).

The necessity for a multistakeholder body to assist in the amalgamation of different and competing interests was highlighted by Fadi Shehade, ex CEO of ICANN, during a reconnaissance visit to Beirut in February 2013. The different stakeholders engaged in long sessions of critical thinking on governance structure outcome, impact and alternatives and, while they acknowledged that multistakeholder governance will introduce complex processes with insecure outcomes, they made a conscious decision that multistakeholder governance is a strategic and preferred option for Internet

governance in Lebanon. On June 2nd, 15 months later, Fadi Shehade returned to Beirut to celebrate with Lebanon the launching of LINC from the Ministry of Economy and Trade (ISOC, 2015). However, LINC failed to take place as a bottom-up, non-profit Private Public Partnership that aims to govern and operate the (.lb) country code top-level domain registry and to fill the long-standing gaps in Internet governance in Lebanon.

Various attempts have been made to coordinate Lebanon's digital policies, but no comprehensive strategic plan for the digital economy exists to date. Different strategies were coordinated with the ICT Coordination Office. However, the Lebanese government did not adopt the strategies, except for bits and pieces of the action plans executed in silos (WEF, 2017).

2.6 Theoretical Framework

Internet Governance raises complex and interlaced issues, and an overwhelming number of methodological and theoretical approaches are used to study and analyse the governance process. However, with the advancement of multistakeholderism as a model in Internet governance, there is a need to explore other approaches and determine how some concepts of governance such as regulation and stakeholder participation are related to the Internet governance process.

This thesis asserts that regulation is one of the main pillars for a healthy and competitive business environment that will boost Internet and economic development through lowering the cost of economic transactions for government and businesses. As a result, this chapter provides a critical overview of the Cost Transaction theory and the debate over state regulatory theories. Furthermore, and to better understand the important role of regulation and government involvement, this thesis investigates the economic, public interest and regime theories, arguing that multistakeholder Internet governance is part of an appeal on the part of the Internet community in response to ineffective or unfair business practices by the government.

2.6.1 Transactional Cost Theory and Economic Development

To understand how the Internet and related digital technologies impact development and economic growth, it is important to understand and capture the nature of this relationship.

Transaction cost theory was developed by Ronald Coase in 1930 to explain why firms produce certain products, services or activities internally while others are produced and sold at the external market. According to transaction cost theory, a firm's cost consists of production costs and transaction costs. Production costs are associated with productive activities, while transaction costs are associated with the economic activity of the firm (Masten, 1982). Fittingly, Canbäck (1998) defines transaction costs as costs associated with the economic activities within the organisation through arm's length transactions.

For Coase (1937), transaction costs are the cost of carrying out transactions through exchanges in the open market. Coase realised that using the price mechanism incurred a number of additional costs, such as the effort of finding buyers or suppliers, negotiating contracts and enforcing them. Hence, most of the Coasian transaction costs stem from the costs of acquiring and sharing information. Many years later, the Internet has vastly reduced these costs, with major implications for market exchanges among individuals, businesses and governments. Internet and digital technologies have dramatically expanded the information base, lowered information costs, and created information goods. This has facilitated searching, matching, and sharing of information and contributed to greater organisation and collaboration among economic agents, influencing how firms operate, how people seek opportunities, and how citizens interact with their governments (World Bank, 2016).

Therefore, by reducing information costs, the Internet greatly lowers the cost of economic and social transactions for the public and governments. However, according to the World bank (2009), regulatory reform as well as structural reform are needed to unlock the potential benefits of Internet. In the context of Lebanon, one of these reforms will be the full implementation of the new Telecom law (law 431) ratified in 2002, adopting privatisation and liberalisation of the telecom market in addition to rational reforms related to Internet development. In the offline world, such reforms require some form of regulation to protect the public interests, to be discussed in the next section.

2.6.2 Economic & Public Interest Theories

In the 1950s, economic theory provided a variety of reasons for regulation using Public Interest theory, which stated that regulation was a government response to public demand for intervention due to ineffective or unfair business practices.

According to Public Interest theory, one of the main reasons for economic regulation was to correct market failures, which prevent markets from operating in the public interest, such as market power by private interest, natural monopoly, and information problems as described in the works of Breyer (1982), Noll (1989) and Ogus (1994). Another reason is the protection of rights, often labelled "social regulation", which came at a much later stage, and referencing such issues as equity, the correction of past or possible future unfairness and the protection of public interests in such fields as health, safety, and the environment (McGowan & Wallace, 1996). One of the main concepts in this perspective is that regulatory rules are supposed to enhance justice and fairness within the private sphere in which they intervene (Baldwin & Cave, 1999). Therefore, government agencies were viewed as being set up to protect consumers against monopoly power, inadequate information and other such issues. (Baldwin ey al, 2012).

Nevertheless, the liberal economists criticised the notion that regulation was motivated by public interest. They argued that government regulation is the result of the selfish actions of politicians and bureaucrats, in alliance with self-interest groups. According to Edelman (1964), attempts by governments to regulate industries tended to be symbolic politics, which appease consumers by providing them with symbolic regulation, rather than actually regulating industry to provide concrete benefits. He also accused political elites in a representative democracy of utilising symbols and myths to secure and maintain the support of the politically 'unaware' masses (Wilson, 1980).

The theory of regulation was, however, re-invigorated by the neo-classical revolution, described as the 'Chicago School' of regulatory policy and developed mainly by three economists: Stigler, Posner and Peltzman. These liberal economists believed that markets operate effectively and can be perfectly self-sustaining, whereas politics was imperfect, serving narrow particularistic interests and compulsive in nature (Stigler, 1971; Posner, 1971 & Peltzman, 1976). Peltzman (1976) went even further, arguing that governments were able to act against the wishes of large economic interests.

2.6.3 State Theory and the Changing Role of Government

The debate regarding the changing role of the state within a globalised world context is not new (Rosenau, 1990; Camilleri & Falk, 1992; Ohmae, 1990; Strange, 1996; Held et Al., 1999). These discussions are centred on the influences of the external economy on states' behaviour as actors and highlight the fact that such influences alter the economic

substance of states in essential ways due to states' choices as actors and to a misconception of the nature of what had previously been believed to be predominantly national economies (Sorensen, 2004).

One of the schools of thought related to State theory is the theory of 'Retreat of State', which is reflected in the works of Sorensen (2004), Held et Al. (1999). The 'Retreat of State' theory argues that the changing role of states in dealing with external influences should be seen as a serious threat to the power and autonomy of the state. The theory proposes that non-governmental stakeholders and markets are stronger than states. This theory argues that states are becoming weaker due to more power being shifted towards other actors. The thesis agrees with Wallington, Lawrence and Loechel, who argue that governance is about governments seeking to govern more effectively, rather than to govern less: "it is to improve the efficiency of public and private sector investment, and to better ensure the delivery of on-ground outcomes" (Wallington et al., 2007, p. 3).

Due to the economic and political changes that have occurred, a new concept has emerged: that of the regulatory State. This notion was recognised by Sunstein (1990), Majone (1994), Braithwaite (2000), McGowan and Wallace (1996), Loughlin and Scott (1997) and Moran (2001), to name but a few. The main purposes of the Regulatory State are to improve the efficiency of the economy, promote competition, and protect consumers and citizens. Braithwaite addresses the fact that such a regulatory state should be compared to the new regulatory state, which he describes as seeking to accommodate the growing pluralism of modern governance. Similarly, Scott labels this era the 'post-regulatory state', which is very similar to Braithwaite's 'new regulatory state'. This includes self-regulation, soft regulation, framework regulation, responsive regulation, governance, and networks between public and private organisations (Knill & Lenschow, Modes of regulation in the governance of the European Union: towards a comprehensive evaluation, 2004).This will lead us to explore the changing role of the government in theories.

Bell and Hindmoor (2009) argued that embedded states, those intertwined in complex governance arrangements, can meta-govern effectively, stating that governments have enhanced their capacity to achieve goals by developing closer relationships with non-state actors. According to them, the six core elements of meta-governance includes: steering, effectiveness, resourcing, democracy, accountability and legitimacy.

Moreover, Chhotray and Stoker (2009) in 'Governance in Theory and Practice' strongly implied that governance is not so much about theory as about practice. This thesis agrees with this understanding, thus emphasising the empirics of Internet governance to describe the practice of governance is essential. Hence, governance is a regime that not only considers management of resources, people or institutions, but also ponders how relationships among different stakeholders impact their effectiveness and influence the process of development in their countries. Thus, an Internet governance regime is complex as it involves many issues, actors, mechanisms, procedures, and instruments, which will be explored in the next section.

2.6.4 Regime and Institution Theory in Governing the Internet

As defined by regime theory, which falls within the neo-liberal institutionalism camp, regimes are sets of implicit or explicit principles, norms, rules, and decision-making procedures around which actors' expectations converge in a given area of international relations (Krasner, 1983). Participants in regimes may include either state or non-state actors which may be respectively described as international or transnational regimes or a mixture of both (Yong, 1999). Recall, from the Introduction the United Nations Working Group on Internet Governance (WGIG) definition of Internet governance: "Internet governance is the development and application by Governments, the private sector, and civil society, in their respective roles, of shared principles, norms, rules, decision-making procedures, and programmes that shape the evolution and use of the Internet" (WGIG, 2005, p. 3). The WGIG definition follows the pattern of frequently used definitions in the regime theory. WGIG is here, implicitly, identifying Internet governance as a regime. And that is exactly what it is: a regime in which both state and non-state actors participate in governance (Franda, 2001).

The Internet governance regime is complex as it involves many issues, actors, mechanisms, procedures, and instruments. Recognition of Internet governance as a regime is not limited to the United Nations; it is also accepted by scholars such as Spar (1999), who considers it a private international regime. Similarly, Franda (2001) argued that the parameters of regime governance are shaped by a wide variety of private business firms, governments, universities and scientific, professional and epistemic communities spread across the globe.

As the Internet operates in different political and regulatory environments, it necessitates new ways of governance that lead to institutional changes. Predicting the future of the structures that will govern the Internet is difficult because of the rapid changes in technology, political and economic dynamics, and the social evolution that is affecting government and non-governmental actors. While the explanations are complementary, it seems likely that liberal institutionalist and cognitive regime theories will provide better tools for understanding those changes than oversimplified theories of hegemonic transition (Nye, 2014).

Institutions and institutional processes that shape organisations and businesses are most often studied within the organisational field in which they are embedded. DiMaggio and Powell (1983) define organisational fields as those organisations that, in aggregate, constitute a recognised part of institutional life, key suppliers, resource and product consumers, regulatory agencies, and other organisations that may influence the way organisations do things. The organisational fields are the basis for the diffusion of innovation or new practices across different actors. These innovations and new practices can be adopted due to coercive pressure/isomorphism (formal and informal pressures by other organisations on which the organisation is dependent), mimetic isomorphism (wanting to do what others are doing due to uncertainty –risk avoidance) and normative isomorphism (based on the accepted norms) (DiMaggio & Powell, 1983). When investigating Internet governance, the focus would be on the Internet community and entities that are most involved in the Internet or share the same values.

According to Fligstein (2001), organisational fields are influenced by institutions in three ways: by the societal practices/regulatory institutions which may influence the construction of the field through laws, regulations and infrastructure/technology; by embedded power relations between groups, which is adhered to according to local knowledge; and by actors within the field that have cognitive structures that utilise cultural frames to analyse the meanings of the actions of others. Institutional theory and organisational fields can, therefore, be used to examine how organisational, societal and local actors build consensus around the meaning of emerging issues, such as 'Internet governance', and thus lead to these practices being accepted (Scott Marshall et al., 2005).

One way to understand how such normative and cultural cognitive institutions may influence economic behaviour and innovation in a cluster is to examine how connections or social networks among individuals in a community influence economic development (Putnam, 2000). Granovetter (1985) and Uzzi (1996) show how strong bonds may lead to high voluntary participation and civic engagement and is stronger in more homogenous societies and emerges through long historical processes, leading to dense interpersonal networks. These strong bonds form the basis for groups of people's identities, business interests and professional associations and networks, and, thereby, contribute to economic development. A low degree of embeddedness in local social structures of Internet governance, on the other hand, may lead to isolation, lack of trust and knowledge-sharing and a pure profit-oriented approach. Stakeholder theory provides significant advantages due to its key theoretical approach to Internet governance, which will point us to multistakeholderism.

2.6.5 Stakeholder Theory and Governance

The extant empirical literature on stakeholder theory is generally supportive of a positive relationship between stakeholder-oriented management and performance, which is almost always measured in terms of financial returns. Most of this empirical literature took stakeholder performance as the independent variable, with economic performance as the dependent variable (Berman et al., 1999; Choi & Wang, 2009; Hillman & Keim, 2001).

This thesis underpins this perspective and asserts the argument, found in stakeholder literature, that the more stakeholder interests are overlapped or joined, the better the performance is (Dyer & Singh, 1998; Freeman, 1984; Freeman, Harrison & Wicks, 2007).

In the academic field, multi-stakeholder terminology evolved as part of the branching out of stakeholder theory. But what aspects of stakeholder theory are most relevant to Internet governance? According to Health and Norman (2004), stakeholder theory of governance is about how specific stakeholder groups should exercise oversight and control over management (e.g. which groups should be represented on the board, and how the board should function). In this context, Kofi Annan, the ex-Secretary General of the United Nations, established a Working Group on Internet Governance (WGIG) as a response to open issues over control of Internet resources left unresolved at the

World Summit on Information Society (WSIS) held in 2003 (Stauffacher & Kleinwachter, 2005). The working group, which included 40 participants from governments, the private sector, and civil society, was charged with developing a definition of Internet governance, which it devised as follows: "Internet governance is the development and application by Governments, the private sector and civil society, in their respective roles, of shared principles, norms, rules, decision-making procedures, and programmes that shape the evolution and use of the Internet" (WGIG, 2005, p. 3). This definition, adopted by the different stakeholders, including governments, has led both scholars and practitioners to resolve that the Internet is an example of multistakeholder governance.

Nevertheless, it is inappropriate to speak of the multistakeholder model for Internet governance as though there were a single system of governance (DeNardis & Raymond, 2013). Hence, one common question is: how should the Internet be governed? The short, common answer is: there is no unitary entity that can govern the Internet. This thesis is convinced that tasks such as regulations and policies are to be carried out by governments and that other tasks such as investment and development are to be handled by the private sector and other stakeholders, each in its area of expertise.

2.7 Conclusion

The literature reviewed in this chapter leads to some major conclusions. First, in the Internet governance debates, there has been a great interest in upholding traditional multistakeholder governance that seeks to balance governmental power with that of other stakeholders. But finding this appropriate balance of powers is technically and institutionally complex and unmanageable; in some areas, it may be appropriate to have less governmental involvement, while other areas fall within the traditional jurisdiction of government. According to Kooiman (2003), the multistakeholder approach can be conceptualised as a mode of governance that involves actors of different natures (governmental and non-governmental), expressing different interests, in a political process characterized by interaction among actors and interconnection among levels of authorities.

From a theoretical rational perspective, the role of the government is to be changed to respond to governance requirements by empowering other stakeholders, while still

keeping its facilitator role. Therefore, we can argue that the need to revise the multistakeholderism and governance concepts is more than an academic problem. Although part of literature on Internet governance promotes multistakeholderism as the model of choice, it does not directly address the question of how multistakeholder Internet governance does or should occur in practice. For scholars and practitioners of Internet governance, the argument advanced here is valuable in that it calls into question the idea that an Internet governed in a multistakeholder manner is increasingly threatened by the resonant divergence between governments, the private sector and civil society.

Second, the literature agrees that the Internet spurs countries' economic development and growth; however, good governance is also indispensable for such development. Many scholars and researchers have confirmed the positive link between improved quality of governance and economic growth (Keefer, 1997; Campos and Nugent, 1999; Kaufmann et al. 1999a and 1999b; Mehanna et al., 2010; Han et al., 2014).

Moreover, the 2 case studies from Brazil and Kenya investigated by this thesis showed the impact of multistakeholder participation outcomes on Internet development and economic performance. It is clear that there is no unique 'multistakeholder Internet governance' approach, because the Internet governance ecosystem is made up of different governance models in varying degrees. Examination of these case studies has shown that in a multistakeholder model mechanisms must learn to work alongside or in relation to other approaches to dialogue and in a transparent way. Thus, we can argue that some governance functions are performed in ways that are clearly not instances of multistakeholderism; still less are such functions performed in a coordinated way.

Third, empirical evidence was reviewed on the impact of broadband Internet on the economy with different formulas and variables. In general, despite the methodology and divergence between cross-country and single-country approaches, every study examined by this thesis found a positive economic impact from broadband Internet. However, the literature fails to link the relationship between Internet governance and economic growth. From a theoretical perspective, our knowledge on the impact of Internet governance on the economy is very limited. While the extant literature on the Internet mostly showed its positive impact on economic performance, the literature fails to relate economic performance to governance.

Forth, Internet governance has proved to be a crucial matter and of great importance on the political level, and thus it is discussed at the highest diplomatic levels. Whether democratic or autocratic, governments want a voice in Internet governance nationally and globally. Some governments are concerned about national security issues that threaten state stability. Others are concerned about human rights and freedom of expression. Still others insist that decreasing the digital divide is fundamental to realising the full benefit of the Internet. For these reasons, the political debate on Internet governance is still engaged.

Chapter 3: Conceptual Framework

3.1 Introduction

The WSIS stimulated multistakeholder approaches for Internet policy formulation at national levels (Adam et al., 2007). As such, multistakeholder governance at the national level could credibly be considered an innovative concept, part of a wider global debate about rethinking governance in a globalised world (Mueller & Wagner, 2014).

As discussed in the previous chapter, several examples of multistakeholder inclusion already exist at the national level. Although it does not seem easy for governmental decision-making processes to open themselves to participation by other stakeholders, it is important to stress that stakeholder participation is already a reality. Indeed, the aforementioned examples highlight that multistakeholderism is not a mere slogan and can be utilised to propose concrete solutions, which can be adopted or exploited by national policymakers as well as international organisations.

In this context, this chapter presents the 'Multistakeholder Internet Governance – Lebanon' (MIG-L) as a conceptual model underpinned by the reviewed literature, derived from qualitative findings and endorsed by quantitative results illustrating the reality and dynamics between Lebanese stakeholders, and it links Internet governance to economic growth in an empirical setting.

This research frames its work with reference to the working definition of Internet governance, developed by the United Nations World Summit on the Information Society (WSIS) in the Tunis Agenda and underpinning the regime theory: "A working definition of Internet governance is the development and application by governments, the private sector and civil society, in their respective roles, of shared principles, principles, norms, rules, decision-making procedures, and programmes that shape the evolution and use of the Internet" (WSIS, 2005b).

3.2 Proposed Model

The literature on the Internet governance debate, i.e., the debate between scholars insisting on the effective role for governments in governance (Bell & Hindmoor, 2009; Goldsmith & Wu, 2006; Scharpf, 1994; Dunsire, 1996; Jessop, 1997) and others supporting stakeholders' involvement (Murray, 2006; Netanel, 2000; Barlow, 1996; Lessig, 1999), suggests the need to develop a multistakeholder model with a new approach, taking into consideration governments' reservations and stakeholders' expectations through re-negotiation of the relationship and interaction between these different stakeholders in a multistakeholder environment.

According to Wilson (2005), Internet governance comes from a social formation, which consists of patterned interactions among elites in four sectors of the economy, with individuals seeking to maximize their material and ideational interests by restructuring selected rules of the game that most affect their access to and control over the scarce services and goods provided by new information and communication technologies. The proposed model (MIG-L) illustrated in figure 3.1 adopts Wilson's interpretation and shows multistakeholder Internet governance as a social interaction between different stakeholder groups -governmental, private, academic, civil and technical (stakeholders)-carried out by the shared principles of multistakeholderism (foundations) and linking multistakeholder Internet governance and Internet development (enablers) to Economic growth (target).

The conceptual model for the present study is presented in Figure 3.1. The relevant independent variables in the model are the government, the private sector, civil society, technical & International organisations and the academic community. The dependent variables are multistakeholder Internet governance and growth economy.
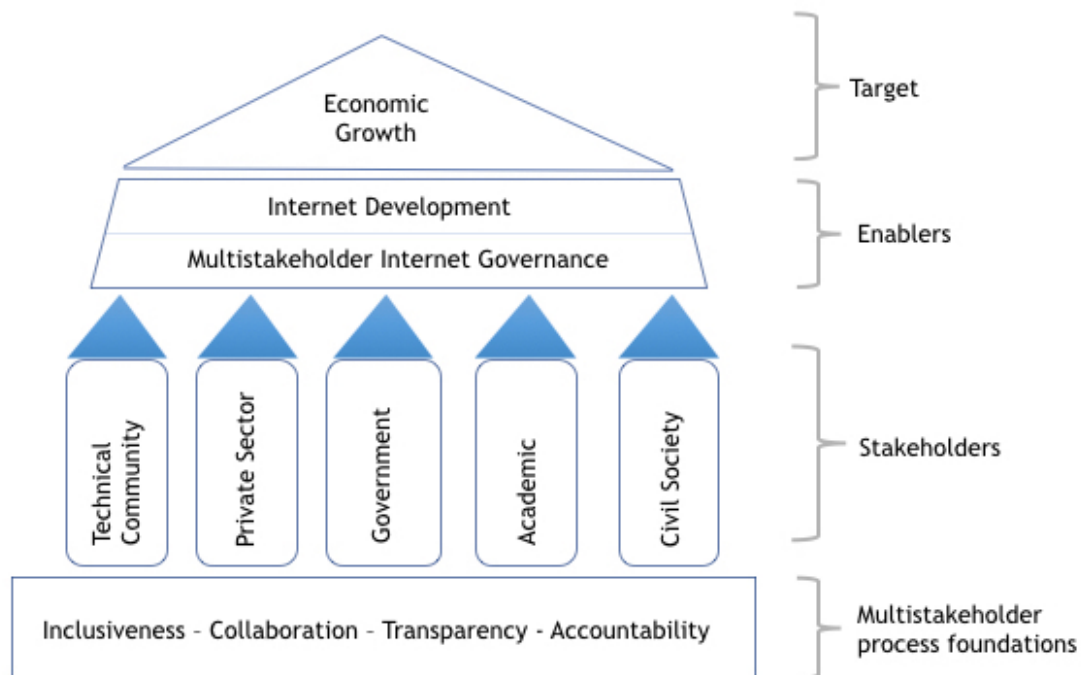
Figure 3.1: MIG-L conceptual model

This model is characterised by balanced, multidirectional and sustainable relations among stakeholders, wherein they are able to discuss and collaborate in an open, transparent environment to reach common agreements on Internet governance. However, would different stakeholders have an equal voice in this model of multistakeholder participation? More pointedly, what model to be applied to achieve effective governance?

Liddicoat and Doria (2012) explain that while there is no one single multistakeholder model; it is a form of participatory democracy that allows all of those who have a stake in a policy to take part in crafting that policy. While the traditional model of multistakeholder Internet governance suggests a balanced relationship between the stakeholders' groups, this research propose a conceptual model ("MIG-L") with a new re-negotiation between the government and other stakeholders. The proposed model advocates the involvement of non-governmental stakeholders, but government still retains the capacity to 'steer at a distance' within the model. Governments are the representatives of citizens within their borders and hold a wide variety of constitutionally legitimate powers (Hirst & Thompson, 2000). Additionally, public sector leaders represent institutions with authority, legitimacy and stability, elements sorely needed during the transition (Wilson, 2005).

The qualitative and quantitative findings revealed that the government in Lebanon is the key actor for all Internet-related issues, hence the need to reconsider the government's role and its relationship with other stakeholders. The evidence presented here underpinned by the reviewed literature confirms that governments remain the primary actors in world politics; their preferences on regulatory issues have their origins in domestic politics (Drezner, 2004). Therefore, "MIG-L" proposes that the government remain the primary actor, especially regarding issues related to national security. However, it is not the only actor -other stakeholders can contribute through their varied expertise - in their respective roles - in a multistakeholder participation environment.

Drawing on the literature reviewed in the earlier chapter, the proposed conceptual model illustrated in Figure 3.1 proposes a complementary diagram (Figure 3.2). The diagram provides a rationale for stakeholders' interactions and for the results expected to flow from the multistakeholder participation.
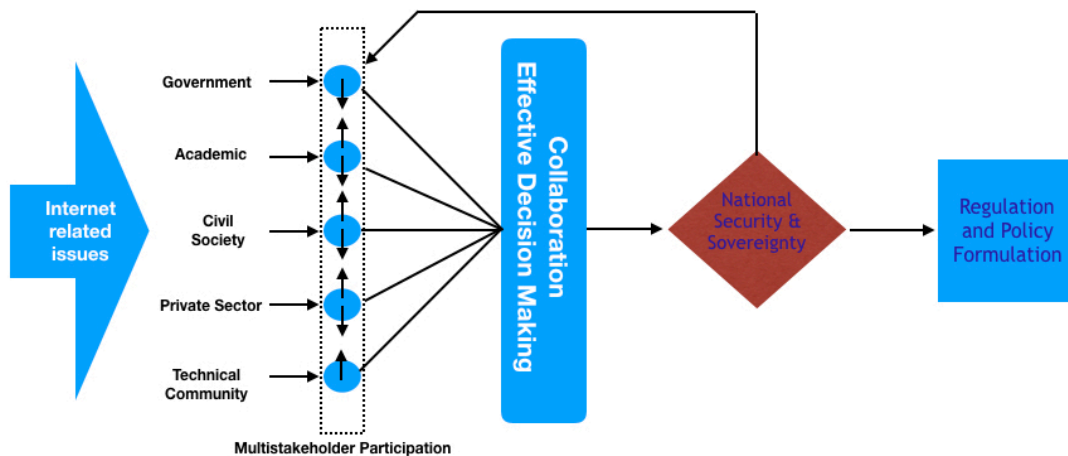
Figure 3.2: Diagram of multistakeholder participation

4.2.1 Multistakeholder Process Foundations

Multistakeholderism in Internet governance refers most directly to the words " in their respective roles" in Paragraph 34 of the Tunis Agenda in the second phase of WSIS held in Tunisia in 2005: "A working definition of Internet governance is the development and application by governments, the private sector and civil society, in their respective roles, of shared principles, norms, rules, decision-making procedures, and programmes that shape the evolution and use of the Internet" (WSIS, 2005b, p. 6).

Hemmati (2002) notes that multistakeholder processes inform decision makers on issues, generate support for decisions, identify solutions to problems and encourage stakeholders to take ownership of issues. It has been effective in many social, political, economic and technical contexts, especially when the problems that have arisen are new, fast-changing and complex with important social and cultural dimensions. With the Internet becoming the 21st century global infrastructure for commerce and communication, a new regime of governance is emerging with inclusiveness, openness, transparency, and accountability as attributes of authority (Antonova, 2007).

These attributes are endorsed by the findings of this research and reflect the Internet Society (ISOC) approach for multistakeholder Internet governance where ISOC recognised four attributes for successful multistakeholder decision-making:

-Inclusiveness is the basis of legitimacy in collaborative decision-making. Those significantly affected by a decision should have the chance to be involved in making it. Inclusiveness is not just an admirable goal but an essential part of an effective process. The less inclusive a process is, the less likely it is to engender the trust and support of those outside of the process.

- Transparency of inputs, process, and decision-making is fundamental to the Internet. The global technical community has long practiced a publicly archived process for developing technical standards. Transparency is also essential legitimacy as it can document that all stakeholders were heard.

- Collaboration is the process of two or more people or institutions coming together to achieve a common goal. The Internet is the outcome of the collaborative efforts of different actors. It benefits from an increasing number of actors teaming up and working together.

- Accountability is when decision-making power is transferred from a principal (e.g. the citizens) to an agent (e.g. government). There must be a mechanism in place for holding the agent to account for its decisions and, if necessary, for imposing sanctions, ultimately by removing the agent from power (ISOC, 2016).

The proposed multistakeholder model suggested by this thesis is not about balancing these attributes but rather ensuring that a framework exists where each stakeholder understands his/her responsibility to act not only in their own interest, but also in the

interest of the Internet ecosystem as a whole. In essence, the process should result in outcomes that are win-win rather than zero-sum games. National security and a healthy Internet environment are mutually reinforcing in the long run. All stakeholders must recognise and act on their responsibility for a stable, resilient, advanced and secure Internet in collaboration with all others, or no one will be successful.

4.2.2 Stakeholders: MIG-L Social Interaction Origin

In line with Wilson's (2005) views that Internet governance comes from a social formation that consists of patterned interactions among elites, 'MIG-L' illustrates and explains the origin of "Internet governance" that involves diversity of stakeholder groups. Here, multistakeholderism in Internet governance refers directly to the WGIG definition and to Paragraph 49 of WSIS Declaration of Principles (WSIS, 2003), which states that the management of the Internet encompasses both technical and public policy issues and should involve all stakeholders and relevant intergovernmental and international organizations. In this context, stakeholder groups are: government, the private sector, academia, civil society, the technical community and International organisations.

However, the most central element of multistakeholder governance is the definition of the responsibilities of various classes of stakeholders to participate effectively in and influence the evolving governance systems. Here the contested aspect of the WSIS definition – and of multistakeholder approaches more generally – is the term 'in their respective roles'. "MIG-L" accepts the definition given by WSIS to different roles and responsibilities that are defined in paragraph 35 of the Tunis Agenda, which affirms that Internet governance concerns both technical and public policy issues and 'should involve all stakeholders'. It delineates roles and responsibilities for each stakeholder group. The 'sovereign right' of policy authority for international Internet-related public policy issues belongs to States, while the private sector should continue to have an 'important role' in developing the Internet in 'technical and economic fields'. International organizations are tasked with the development of Internet-related technical standards and relevant policies, while civil society should continue to play an 'important role in Internet matters, especially at community level' (WSIS, 2005b).

Lebanon is considered a fertile environment for Internet governance as there are many Lebanese experts involved in the Internet technical community and in international

organisations such as the Internet Society (ISOC), Regional Internet Registry (RIR), the Internet corporation for Names and numbers (ICANN), the World Bank and United Nations agencies. As the technical community is deeply involved in Internet operation, standard-setting and development, this community could make a permanent and valuable contribution to the stability, security, functioning and evolution of the Internet.

As for the government, and as highlighted earlier, while there is no unified policy for Internet governance in Lebanon, the government is the only body responsible for implementing regulations and policies for the Internet, and nothing can be done without its consent. The term 'government' is unambiguous in this case, since the Internet is actually administrated by the council of ministers, the ministry of telecommunications and the sole public operator, OGERO.

Lebanese civil society is very dynamic, and its presence and participation in the global Internet governance scene has increased drastically. Its main focus is monitoring government compliance and the enforcement of laws. Hence, it is important to promote collaborative dialogue and partnership between the government and civil society.

The private sector is the main pillar of the Lebanese economy. The private sector was the first to introduce internet service in Lebanon, and it helped to develop the ICT sectors and allowed the banking, health, educational, university and manufacturing industries to develop. Nevertheless, the private sector also seeks access to political resources, with the aim of influencing governance mechanisms and regulations. However, the final decision rests ultimately in the hands of the politicians, whose interests inform the government's verdict.

The high ranking scored by Lebanon in the world bank and International Telecommunications Union studies assessed in this thesis is owed mainly to the advanced academic system and knowledge purchasing. The primary motivation to interact with epistemic academic is to share and disseminate knowledge. While the main role is engaging in research and innovation, Lebanese academics can also be helpful in policy-making and the formation of regulations.

4.2.3 Enablers

Under the monopoly system, active and direct participation in setting policies was narrowly restricted to the telecommunication ministry officials and their counterparts in

the government. Since who sits at the table helps determine who gets what services under what terms, the "MIG-L" approach is conceptualised as a mode of governance that involves actors of different natures (governmental and non-governmental) expressing different interests, in a political process characterized by interaction among actors and interconnection among levels of authorities (Kooiman, 2003). For Souter (2017), multistakeholder approaches tend to be favoured either because supporters want a change in governance (usually by diluting the power of governments and/or companies) or they want to improve the Internet by adding diversity and expertise and by encouraging consensus-building on the issues being governed.

In Internet governance, particular attention has been paid to internet development. In this light, the development of the Internet has turned out to be more similar to that of the telecommunications infrastructure. Thus, the practical challenge in the current search for a suitable form of Internet governance is generating a binding and legitimate regulatory capacity for a dynamically-evolving infrastructure, amidst intensified conditions of transnationalism and decentralisation (Hofmann, 2005).

4.2.4 Target

According to the Organisation for Economic Co-operation and Development (OECD) report (2009), new broadband infrastructure investments are good targets for economic stimulus spending because many projects can be initiated relatively quickly, are labour-intensive, can minimise economic leakages, and may promise stronger marginal impacts on supply and productivity. Hence, there is a direct link between economic growth and the adoption of new technology (Heeks, 1999). This is reflected also in the study by Roller & Waverman (2001), whose result showed a strong relation between investment in ICT infrastructure and productivity growth. According to Altig and Rupert (1999), Internet access is correlated to the economic growth performance.

The argument of the neo-institutional economists is that improving indicators of 'good governance' is a necessary condition for creating the institutional conditions of lowering transaction costs. Thus, a competitive market is conducive to increasing efficiency in the allocation of resources and the pace of economic growth (Mira & Hammadache, 2017). Several econometric studies of Kaufmann and Kraay (2003), Hall and Jones (1999), Knack and Keefer (1997) and Barro (1996) show that the variables of good governance such as control of corruption, stability of property rights and democracy are

closely correlated with variables such as GDP growth rate per capita, investment and human capital development. These studies show that improved indices of "good governance" have positive effects on economic growth and provide long-term convergence with the so-called developed countries (Mira & Hammadache, 2017).

Khan (2004) illustrates the results of good governance among countries in slow- and rapid-development indices obtained during a panel of econometric studies of the IRIS centre at Maryland University and the World Bank, the empirical results of which reveal a strong correlation between good governance and GDP growth rate.

Suitably, the "MIG-L" model proposed by this thesis correlates Internet governance and economic performance in line with Khan's findings and the general pattern illustrated in figure 3.3.
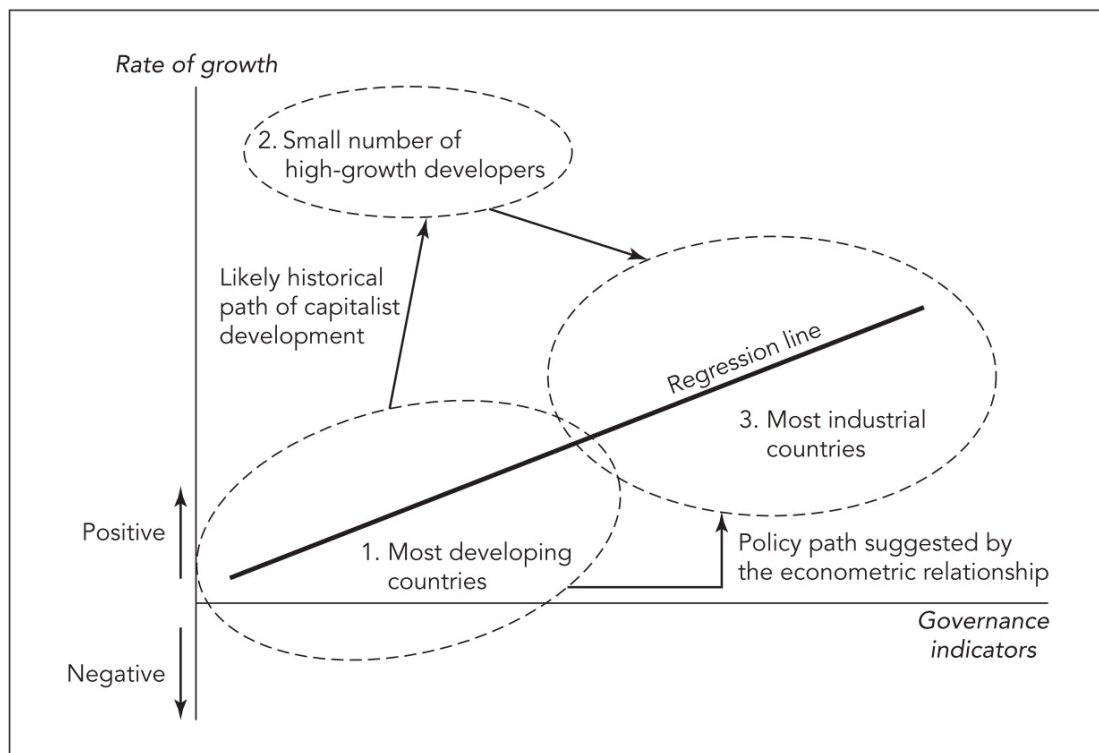
Figure 3.3: Governance impact on economy growth. Source Khan (2004)

4.3 Critical Success factors

But what about the approach that makes the governance process adaptable, robust and sustainable? And how can we make sure that the multistakeholder Internet governance process is successful and continues to evolve?

Economists have recently devoted considerable attention to the impact of social structure and networks on the economy (Zuckerman, 2003; Dutta and Jackson, 2003). The concept of the organizational field has been extensively dealt with in the literature on institutional theory, in which it is used to examine how organisational, societal and local actors build consensus around the meaning of emerging issues, such as 'Internet governance', and thus lead to acceptance of certain practices (Marshall et al., 2005). Underpinning the Institutional theory, Granovetter (1985) and Uzzi (1999) show how strong bonds may lead to high voluntary participation and civic engagement, which form the basis for people's group identity, business interests and professional associations and networks and, thereby, contribute to economic development. Therefore, the stronger the multistakeholder structure, the better the performance of the Internet governance process.

In the wider context, all stakeholders need to move toward the optimal area to achieve not only resiliency but also sustainability. The more resilient the 'MIG-L' is, the faster Internet development in Lebanon will be. Hence, and in line with Khan's (2004) findings and the general pattern of the impact of governance on the economy illustrated in figure 4.4, "MIG-L" predicts that more vigorous governance contributes to a higher GDP (Figure 3.4).
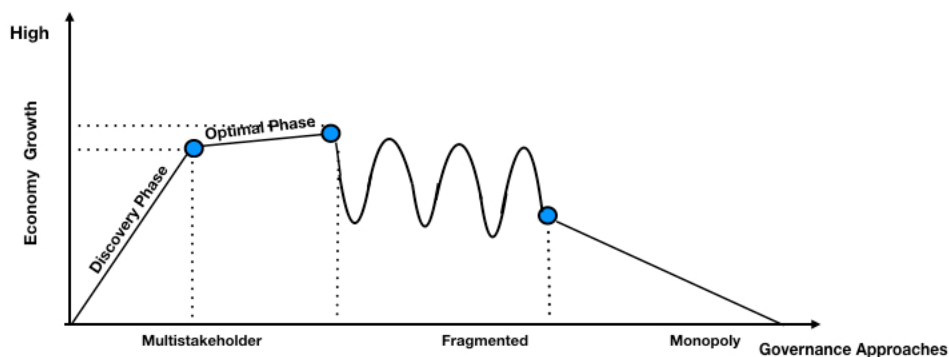
Figure 3.4: Economic performance Scenario

To reach the optimal area and achieve a robust MIG-L, decisions should be taken through the interaction of participating interests, rather than the exercise of power by a single sector, interest group or even representatives of a simple majority position. Evidently, such interaction has proved successful in many cases (Spuy, 2017). Looking at stakeholders' positions related to power and authority, the research findings revealed that the government is the sole player with full authority but has no expertise, while the private sector, academics and the technical community are a reservoir for knowledge and expertise but have no authority (Figure 3.5).
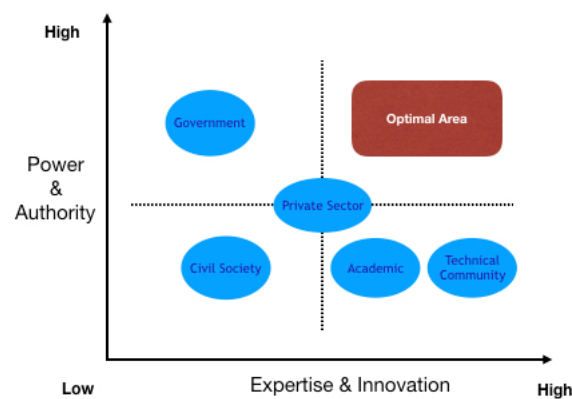
Figure 3.5: Reaching the optimal area of multistakeholder Internet governance structure

Figure 3.5 illustrates the research findings on stakeholders' positions related to power and authority and helps to clarify where expertise and interest lie and to identify gaps of participation. Not surprisingly, the distribution of power between social factions and classes provides a good historical explanation of the pace and direction of institutional change in many countries (Bardhan, 2000).

However, the multistakeholder approach is challenged by risks. Among the challenges is the ascendant phenomenon of unilateral decision-making. Sometimes this is by individual states; sometimes it is by Internet companies working in a silo on their terms and services (Spuy, 2017). Hence, the re-negotiation between the government and other stakeholders underpinned by the code of good governance suggests several important key assumptions. First, that all stakeholders will play a role in Internet governance in their areas of expertise or authority but not everyone will decide on everything. "MIG-L" suggests that all stakeholders will have either direct or indirect involvement

depending on the needed expertise, shaping the governance ecosystem in a context in which the Internet grows to become a key enabler to achieve inclusive and sustainable development for all. Second, it emphasises that principles, norms, rules and decision-making procedures must be transparent and respected and implemented by all. Third, Internet governance is concerned not only with the Internet's infrastructure and administration, but also with its evolution and use, so that Internet governance is inherently oriented toward the future and the impact on economy and society.

The research findings and data analysis show that Lebanese stakeholders come from different backgrounds with different ideologies forming small groups of the social network that consists of businessmen and politicians to monopolise power. Khan (2004) explains that development is an ugly and conflict-ridden process because the social structures involved are rapidly changing, new classes are emerging, and new wealth is being accumulated at historically unprecedented rates. He asserts that social conflicts are intense and that stable and productive political constituencies on which viable democracies can be based are often absent. The absence of democracy increases the chances that small groups can continue with their socially damaging rent-seeking (Olson, 2000; North, 1990).

Therefore, failing the code of good governance, "MIG-L" will be challenged with unilateral decision-making risk (fragmented approach), which is illustrated above in Figure 3.4. In the context of fragmented governance (scenario 2), "MIG-L" shows how creating fragmented governance may lead to instability and deterioration of the governance process outcome as different stakeholders engage in the manipulation of public policy and economic conditions as a strategy for promoting group interest and increasing profits. Far from being a service provider, the state is an instrument in the hands of contending classes, groups, and political entrepreneurs, each attempting to capture resources and steer the transformation in specific directions (Khan, 2004).

Comparing the multistakeholder approach to a monopolistic approach, the two approaches give contradictory and divergent results. The findings of this research revealed that, while the Lebanese government does deliver public services, the service delivery model does not enable any economic growth. Historically, the critical area of state failure has been the absence of adequate institutional and political capacity in the governments of developing countries to assist in and accelerate dynamic transformation.

Without strategies to enhance this role of the state, sustained progress on service delivery is also unlikely (Khan, 2004).

It can be concluded that the above presented conceptual developments were inspired by a real shift in the Internet governance regime, from the kind of unequal distribution of power associated with representative democracy to a more accessible, inclusive and collaborative decision-making process (Antonova, 2007).

4.4 Conclusion

A conceptual model for multistakeholder Internet governance is developed for this study to investigate the direct and indirect relationships between Internet governance and economic growth.

With the advancement of multistakeholderism as a governance model, determining a suitable governance model turns out to be challenging. This may require multifaceted theoretical and conceptual tools that the researcher hopes this study can help in providing.

While the extant literature on the Internet mostly shows the positive impact of the Internet on economic performance, the literature fails to relate economic performance to governance. Accordingly, underpinning the theoretical framework set, this chapter attempted to reframe the traditional multistakeholder Internet governance framework in developing a new conceptual model mapping the social interactions among stakeholders and linking it to economic growth.

The new conceptual model "MIG-L" proposed here, stages multistakeholderism as social interaction among the five Lebanese stakeholder groups; government, private, academic, civil society and technical community. It reframes the traditional model of multistakeholder Internet governance, where government opposition to this model makes the implementation of multistakeholder participation difficult and even impossible. Pointedly, the conceptual model attempts to link Internet governance to economic growth in correlating its multistakeholder participation structure to economic performance. The model predicts that the stronger the MIG-L structure is, the better the Internet and economic performance will be; the weaker the MIG-L is, the weaker the performance will be.

Chapter 4: Methodology and Research Design

4.1 Introduction

The previous chapters identified knowledge gaps and relevant research and studies on Internet governance and its impact on Internet and economic growth. This chapter locates the study within the appropriate research paradigm and justifies the selection of methodology, design and procedures for the research. Both quantitative and qualitative data are useful to examine and understand Lebanese views on multistakeholder Internet governance and what drives and hinders its impact on economic growth.

This chapter will present the conceptual framework for the study wherein quantitative and qualitative data will jointly provide rich and complementary information. This mixed-methods research uses a pragmatic epistemological approach as a paradigm with a methodological lens to collect data employing a concurrent parallel design. An online survey was used to generate data for the quantitative strand while semi-structured interview was used to generate data for qualitative strand.

As mentioned in chapter one, the aim of this research is to investigate Lebanese perceptions and thoughts on multistakeholder Internet governance and the latter's implications for Internet development and economic growth. Accordingly, the analysis examines and explores the relationship between the different stakeholders, reflecting their views on Internet governance through quantification and in-depth investigation. The quantitative findings examine and generate insights on stakeholders' relationships and on the causal relationship between Internet governance and development and economic growth. The findings explore the interpretation of the phenomena and validate the conceptual model. Hence, this research incorporates both quantitative and qualitative triangulation of data.

4.2 The Research Framework

Researchers start a project by setting a framework stating certain claims with assumptions about what they will learn and how they will learn it during their inquiry.

These claims coalesce into what are called paradigms (Lincoln & Guba, 2000); philosophical assumptions, epistemologies, and ontologies (Crotty, 1998); or research methodologies (Neuman, 2000). Philosophically, researchers make claims about what is knowledge (ontology), how we know it (epistemology), how we write about it (rhetoric), and the processes for studying it (methodology) (Creswell J. W., 1994).

Crotty (1998) established the groundwork for a research design framework with four questions to be considered:

1. The epistemology or the theory of knowledge embedded in the theoretical perspective.
2. The theoretical perspective or the philosophical stance that lies behind the methodology in questions (e.g., positivism/post-positivism, interpretivism, critical theory, etc.).
3. The methodology, strategy or plan of action that links methods to outcomes (e.g., experimental research, survey research, ethnography, etc.).
4. The methods, techniques and procedures that we propose to use (e.g., questionnaire, interview. focus group, etc.).
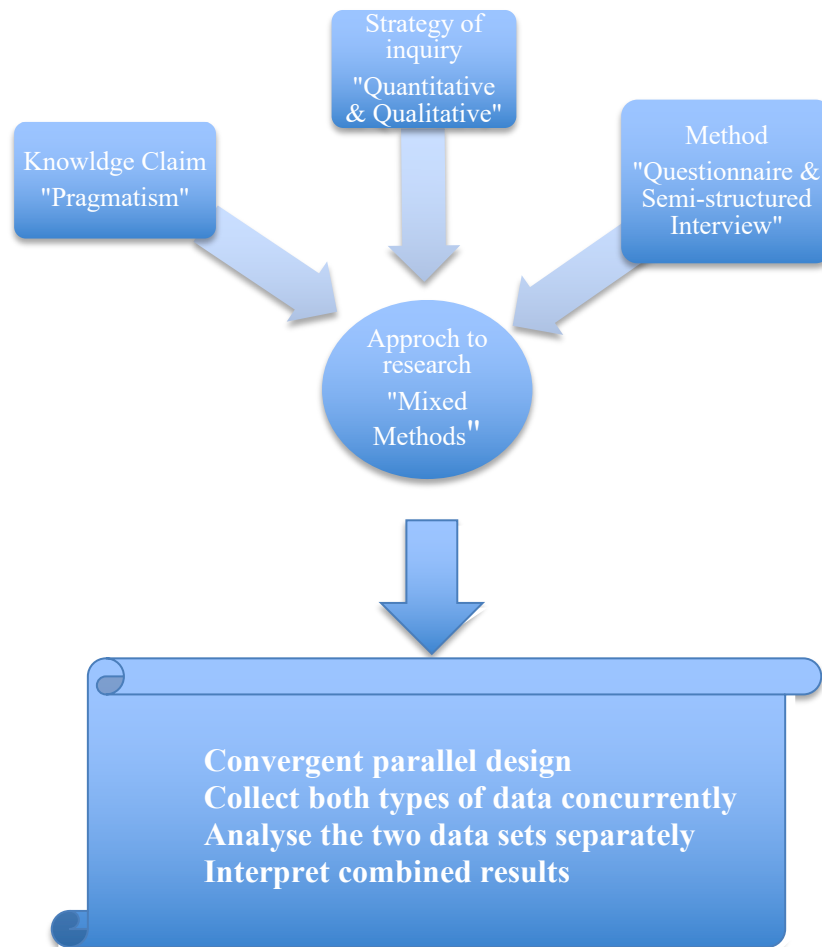
Figure 4.1: Research design framework

These four questions show the interrelated levels of decisions that go into the process of designing a research project. Suitably, this research design adopted Crotty's model conceptualised in Figure 5.1.

Figure 4.1 displays how the knowledge claim (theoretical perspectives), strategy of inquiry (methodology), and method converge to form the researcher's framework for this research. By applying "pragmatism" as a knowledge claim, "quantitative and qualitative" as the strategy for inquiry and "survey and semi-structured interview" for the research method, we can identify that the approach to inquiry is mixed: quantitative and qualitative.

4.2.1 *Pragmatism as Knowledge Claim*

Pragmatism derives from the work of Peirce, James, Mead, and Dewey (Cherryholmes, 1992). As a philosophical underpinning for mixed methods studies, Morgan (2007), Patton (1990), and Tashakkori & Teddlie (2010) conveyed importance the importance of pragmatism for focusing attention on the research problem in social science research and then using pluralistic approaches to derive knowledge about the problem. According to Cherryholmes (1992), pragmatists believe that we need to stop asking questions about reality and the laws of nature; they would like to simply change the subject (Rorty, Pragmatism Without Method, 1991).

For pragmatists, an ideology is true only if it works and generates practical consequences for society. Hence, pragmatists focus not on whether a proposition fits a particular ontology, but whether it suits a purpose and is capable of creating action (Rorty, 1998). Hence, being pragmatic, the researcher has the flexibility to choose the approach and research design that best meet his need, the research aim and objectives. Pragmatism is a thoughtful alternative for the researcher who seeks mixed methods, different assumptions and different forms of data collection and analysis. Pragmatists do not see the world as an absolute unity. In a similar way, mixed methods researchers look to many approaches to collect and analyse data rather than using one of the traditional approaches (quantitative or qualitative) (Creswell, 2009).

In this way, this research promoted and adapted Creswell views on mixed methods, asserting that pragmatism opens the door to multiple methods, different worldviews, and different assumptions, as well as to different forms of data collection and analysis in the mixed methods study (Creswell, 2009).

4.2.2 *Strategy of Inquiry (Methodology)*

This research uses a mixed methods approach incorporating both quantitative and qualitative data. In this research, empirical findings show the level of significance of the Internet stakeholders' relationships and views on Internet governance and its impact on Internet development and the economy. The qualitative information, on the other hand, explores interpretation of the phenomena. Therefore, this research approach is described as a convergent methodology, 'multimethod' (Campbell and Fiske, 1959), convergent validation or what has been called 'triangulation' (Webb et al., 1966).

Mixed methods research is becoming increasingly recognized as the third major research approach or paradigm. According to Johnson et al. (2007), mixed methods research adopts a pragmatic method and system, based on a view of knowledge as being both socially constructed and based upon the reality of the world we experience and live in. Johnson et al. (2007) describe how Campbell and Fiske's (1959) article on 'multiple operationalism', introducing the idea of triangulation, is sometimes viewed as pioneering the use of mixed methods. This encouraged other researchers to examine multiple approaches to data collection in their studies and prompted others to mix methods, and soon approaches associated with field methods such as observations and interviews (qualitative data) were combined with traditional surveys (quantitative data) (Sieber, 1973).

The present research deployed a quantitative survey using a probability sampling technique to reach a large population and a qualitative interview with a purposive sampling technique involving interviews of decision makers and business figures from the different stakeholder groups. The aim is to obtain stakeholders' specific views and hear their voices about Internet governance and then cross-validate results from the quantitative survey with qualitative findings. Hence, using multiple methods, the results triangulate, converge or corroborate one another, strengthening the validity of the findings (Greene et al., 1989).

Seeking convergence across different methods, different types of mixing data emerged. For example, the results from one method can help develop or inform the other method (Greene et al., 1989). Alternatively, one method can be nested within another method to provide insight into different levels or units of analysis (Tashakkori & Tedllie, 1989). This led to the development of procedures for mixed methods strategies of inquiry; the adoption of numerous terms found in the literature, such as multimethod, convergence, integrated, and combined; (Creswell, 1994) and the shaping of procedures for research (Tashakkori & Teddlie, 2010). While the quantitative research involves deduction, hypothesis testing and statistical analysis, the qualitative focuses on induction, exploration and qualitative analysis.

Mixed methods have been defined as the collection or analysis of both quantitative and qualitative data in a single study in which the data are collected concurrently or sequentially, are given a priority, and involve the integration of data at one or more

stages in the process of research (Creswell et al., 2003). According to Johnson and Onwuegbuzie (2004), a mixed methods mode of inquiry makes use of induction (to identify patterns), deduction (to test theories and hypotheses) and abduction (to uncover and rely on the best explanations for understanding one's results).

For this research, a convergent parallel-mixed method is used to collect diverse types of data to provide a more complete understanding of multistakeholderism and Internet governance and the impact thereof on Internet development to achieve a country's economic growth. Here, the researcher collected both quantitative and qualitative data at the same time during the study and then integrated the results and findings in the interpretation of the research investigation in chapter 7. It is a form of mixed method design in which the researcher converges or merges quantitative and qualitative data to provide a comprehensive analysis of the research problem (Creswell, 2013).

This combination of the two research methods is not only to validate, contradict or develop theories but also to achieve triangulation through integrating the quantitative results with in-depth interview findings. Greene et al. (1989) identify five main rationales behind using mixed methods: triangulation, complementarity, development, initiation, and expansion. Additionally, combining the quantitative and qualitative research methods overcomes the limitations in each of the methodologies used alone. Hence, using multiple methods, the results converge or corroborate one another, strengthening the validity of the findings. The quantitative strand is discussed in chapter 5 and the qualitative approach is discussed in chapter 6.

However, some voices have criticized the use of mixed methods. For example, Bryman (2007) argued that there is still considerable confusion concerning how mixed methods findings can be integrated. Moreover, Giddings (2006) was more antagonistic: "mixed methods are nothing more than positivism dressed in drag" (p. 198). Besides, from a practical and cost perspective, integrating interviews or participant observation into a quantitative study costs more and increases the time required for both participants and the researcher. According to Krahn et al. (1995), collecting both quantitative and qualitative data can be expensive.

4.2.3 *Research Methods*

As discussed in the previous section, there is a consideration of literature on research methods that advocates the use of mixed methods. This mixed research used qualitative and quantitative research methods to collect data employing a concurrent parallel design where both an online survey was used to generate data for the quantitative strand and semi-structured interviews to generate data for qualitative strand.

Quantitatively, there are number of reasons for using an online survey in this research, principally, such a survey allows the researcher to reach a large and dispersed community at a low cost, and it gathers data from larger sample than would be possible using any other technique. This data collection technique is considered appropriate for this research as it facilitates the exploration of various actors' experience. According to Babbie (1990), surveys use questionnaires for data collection, with the intent of generalising from a sample to a population.

Hence, an online survey (Appendix A) was deployed using Monkey Survey platform. The questionnaire design of the survey was critical and important as it affects the response rate and provides the appropriate data needed for the research. Inadequate design will not only discourage respondents from taking part but could also increase measurement error (Oppenheim, 1992).

In this online survey, closed-ended questions were applied in two categories: dichotomous and multiple dichotomous. Closed questions can be attitudinal as well as factual (Oppenheim, 1992). The multiple dichotomous questions provide a list of possible responses and allow the respondent to select a response from the list. On the other hand, the dichotomous question allows the respondent to choose from two possible responses: "yes" or "no". The Likert Scale was also used, allowing respondents to select a choice that best demonstrates their level of agreement with a given statement.

At the end of the survey, two open-ended questions were used to give more space and flexibility for respondents to express their views and reflections on the strengths and weaknesses of multistakeholderism, and how multistakeholder Internet governance can best support Lebanon's economy.

From the qualitative approach, a purposive sampling technique was used more to provide a more complete understanding of the contested topic of Internet governance

than to verify findings from the quantitative survey. Purposive sampling leads to greater depth of information from a smaller number of carefully selected cases, whereas probability sampling leads to greater breadth of information from a larger number of units selected to be representative of the population (Patton, 2002).

Therefore, a purposive interview was deployed targeting governmental and business figures, decision makers and experts to obtain their views and hear their voices about Internet governance. In this approach, a purposive sampling technique was used on the assumption that interviews provide a more complete understanding of the contested topic of Internet governance than does quantitative data alone; moreover, they are believed to verify findings from the survey. Purposive sampling leads to greater depth of information from a smaller number of carefully selected cases, whereas probability sampling leads to greater breadth of information from a larger number of units selected to be representative of the population (Patton, 2002). Thus, for this qualitative approach, several elites were selected for semi-structured in-depth interviews.

4.3 Convergent Mixed Methods Research Design

The research design selected for this study is a convergent mixed-methods design to examine the same phenomenon: Internet governance and its impact on the economy. As the conceptual model (Figure 3.1) illustrates, this research proposes an empirical setting to investigate the theoretical relational path of Internet governance drawn from the literature and to link it to economic growth. The conceptual framework seeks to quantify the data (Malhotra, 2002) for the purpose of explaining the causal relationships. The approach for this investigation is explanatory and comprises quantitative research tools and techniques. However, for further conceptual validation, qualitative information might be worthwhile in any research approach. Therefore, qualitative information is gathered so as to generate in-depth insights. Accordingly, the proposed research incorporates both quantitative and qualitative triangulation of data where empirical findings show the level of significance of the relationship and qualitative information explores interpretation of the phenomena.

4.3.1 Quantitative Strand

Quantitative research is looked upon by Morales (1995) as supporter to positivism and encroached on hypothetical-deductive processes and objectives. Just like any other

research, quantitative or positivist research has its own expectations. However, Reichardt and Cook (1979) assert that quantitative research has no room for any personal matters or natural occurrence -it only focuses on finding out the exact truthfulness or the main cause of a phenomenon.

Knowledge, understanding and keeping track of human experiences are some of the fundamental things that quantitative research believes in. According to Stanfield (2006), scientific principles should be observed, and failure to observe these principles can cause the researcher's findings and the researcher to be overlooked. This research approach provides a concrete answer to the research question scientifically, which is defined in an objective way and measured through statistical tools and techniques (Rosner, 1990).

However, Leedy and Ormrod (2005) argue that positivism is criticised by the interpretivist for ignoring the role of the human actors when it comes to the constructing reality. In addition, critical theorists attack the positivists' claims of generalization, their view of the world as a closed system, and their tendency to ignore the world's complexity; Scott and Usher (2011) note that positivism can be criticised on the grounds that it fails to understand some of the most essential concepts. Additionally, this research approach limits the objectivist approach and is not suitable for subjective experiments or information where statistical analysis is not required for detailed discussion of the situation (Beedles, 2002).

The following sections discuss the targeting population, sampling and response rate, survey design and data validity and reliability.

4.3.1.1 Targeting Population

As emphasised, it was imperative to select appropriate knowledgeable key respondents who are involved and engaged with the Internet through verification of their relevant details (Skarmeas et al., 2002). In identifying the key informant, Campbell (1955) suggested that the key informant would not be chosen for statistical representativeness; instead, he or she would be chosen because they possess special qualities. More specifically, the key informant should have a role that makes him or her knowledgeable regarding the issues under the study.

Internet actors as defined in Article 29 of the working group on Internet governance (WGIG) and by the Tunis WSIS Declaration include national governments, international organisations, the business sector, civil society, and the technical and academic communities (WGIG, 2005; WSIS, 2005). Accordingly, the targeted participants were all actors (stakeholders) form these stakeholder groups involved in Internet development and its policy in Lebanon.

Therefore, an effort was made to access the appropriate individuals among these stakeholder groups. In line with the research objectives of this study, the most fitting individuals expected to be knowledgeable in Internet governance were the ones who participated in WSIS and who are involved in Internet Governance Forum (IGF) and Telecommunications International Communication Union (ITU) meetings.

The researcher's educational and professional background gave him an opportunity to participate in and attend some national, regional and global meetings related to the Internet including the International Communication Union (ITU) and the Internet Governance Forum (IGF) meetings. This made it easier for the researcher to establish a well-defined mailing list for the online survey consisting of Lebanese and other stakeholders working and involved in Information Communications Technology, including the Internet.

4.3.1.2 Sampling and Response Rate

This research is a unique empirical study on multistakeholder Internet governance and its impact on the economy from the perspective of national development. The primary plan of this research is to study multistakeholder Internet governance at a regional level for Arab countries, gathering and exploring information about different practices and understandings of Internet governance in order to solicit an acceptable common model.

However, examination of the different existing Internet governance models in the different Arab countries in the Middle East Region found that each country defines and understands the Internet governance differently; where their priorities intersect relate differently to government and governance. Another important challenge was ensuring the receipt of replies from and follow-up with participants in the study, taking into consideration the geographical aspect and the critical political situations that most Arabic countries currently face. Therefore, the researcher decided to select and study a single national context. The rationales for selecting Lebanon as a context were the

researcher's Lebanese nationality, his previous work in the Internet industry and his interactions with the Lebanese Internet community. According to Amine and Cavusgil (1986), the collection of data in a fairly homogeneous environment is expected to further facilitate the control of plausible impacts arising from uncontrollable external variables.

As the context has been set, a good problem statement is necessary to identify the population relevant to evaluating program impacts. Here, the population is composed of the individuals that are involved and interested in Internet development and thus, are the focus of the evaluation. A probability sample was used.

For Gay & Diehl (1992), the number of respondents acceptable for a study depends upon the type of research involved; for descriptive research the sample should be 10% of the population. However, Glenn (1992) argues that if descriptive statistics are to be used (e.g. mean, frequencies), then nearly any sample size will suffice. For him, a good size sample of 200 to 500 is needed for multiple regression, analysis of covariance, or log linear analysis, which might be performed for more rigorous state-impact evaluations. Similarly, Roscoe (1975) suggested approaching the problem of sample size with the rule of thumb that samples of 30 or more are recommended for experimental research involving the measurement of the effect of an independent variable (IV) on a dependant variable (DV). Roscoe's simple rule indicated that samples larger than 30 ensure the researcher the benefits of the central limit theorem (Roscoe, 1975; Abronavic, 1997).

Mitchell (1989), argues that the survey response rate should be calculated as the number of returned questionnaires divided by the total sample who were sent the survey initially. A recent study in a developing country context extracted 203 usable responses with a response rate of 17% (Shamsuddoha, 2004).

Therefore, this research attempts to yield approximately 200 or more valid samples that will satisfy the statistical recommendations. From a sample list of 1800 contacts, 316 responses were received, setting the response rate at 18.6%.

In examining the response rate for each question in the survey, it was found that the average missing data rate was 10%. Bennett (2001) argued that statistical analysis is likely to be biased when more than 10% of data are missing.

4.3.1.3 Survey design

The questions in the survey covered four main parts. The first part of the survey intended to produce demographic data of the stakeholders participating in the online survey. The second part of the survey was to gather opinions and reflections on the status of current Internet infrastructure and information on who is in charge (actual governance model). The third part investigates the perceptions of Lebanese stakeholders on Internet governance and multistakeholderism and their level of involvement and participation in Internet policy and regulation. The fourth and final part of the survey carried out an empirical investigation of the implications of multistakeholder Internet governance on the country's economic growth.

This online survey was deployed using Monkey Survey platform. The questionnaire design of the survey was critical and important as it affects the response rate and the appropriate data needed for the research. Inadequate design will not only discourage respondents from taking part but could also increase measurement error (Oppenheim, 1992).

The online survey consisted of closed-ended and open-ended questions; the latter could be attitudinal as well as factual (Oppenheim, 1992). Multiple dichotomous, dichotomous and Likert scale questions were deployed, allowing respondents to select a choice that best demonstrates their level of agreement with a given statement. At the end of the survey, two open-ended questions were used to give more space and flexibility for respondents to express their views and reflections on the strengths and weaknesses of multistakeholderism and the ways multistakeholder Internet governance can best support Lebanon's economy.

4.3.1.4 Data Collection

Online data collection has advantages and challenges. The benefits in reduced cost, ease of data entry, format flexibility, and ability to access different populations make this type of data collection extremely appealing. Nevertheless, as with any survey method, measurement errors, low response rates, and possible non-representativeness of the sample must be addressed. In this mixed-methods research, the qualitative data should cover these gaps. Hence, using multiple methods, the results triangulate, converge or corroborate one another, strengthening the validity of the findings (Greene et al., 1989).

Data was obtained by means of an online survey (questionnaire), a series of pre-defined questions that was deployed and self-administered on Monkey Survey. The online survey stayed open for five months (October 2016 – February 2017), asking questions under four thematic areas:

- The actual Internet infrastructure status and who is in charge,
- The degree of involvement of different stakeholders in Internet policy,
- Multistakeholder Internet governance,
- The impact of Internet governance on economic growth.

Three hundred sixteen (316) individuals from the five pre-defined stakeholder groups participated: 42 respondents from the government, 108 from the private sector, 83 from academia, 41 from the Technical community and International organisations and 34 from civil society. The use of the questionnaire is based on the basic underlying assumption that the respondent will be both willing and able to give truthful answers (Burns, 2000).

The most basic and fundamental part of any research findings using a quantitative method (in this case the questionnaire) is data that is supposed to be analysed and produce results to be compared to the hypothesis or outcome derived from the literature review. Data were analysed using the Statistical Package for Social Sciences (SPSS) to determine if correlation exits between the five independent variables (government, private organisations, civil society, technical & International organisations and the academic community) and the two dependent variables (multistakeholder Internet governance and economic growth). The research uses various frequency tables, bar diagrams and charts to analyse and present the data

The data was collected and analysed under four thematic sub-areas as follows:

- Thematic area I: "The status of Internet infrastructure and who is in charge" was analysed using frequency, means and standard deviation exploiting questions 5, 6, 7, 8 and 10.
- Thematic area II: The importance of multistakeholderism for Internet governance was analysed using frequency, means, standard deviation and ANOVA test exploiting question 9.

- Thematic area III: The degree of the level of involvement of different stakeholders in Internet policy was analysed using frequency, means and standard deviation exploiting questions 11, 12, 13 and 17.

- Thematic area IV: The impact of Internet governance on economic growth was analysed using frequency, means and standard deviation using questions 14, 15, 16 and 18.

4.3.1.5 Data Validity and Reliability

Several content assessment methods have been described in research methods literature (Nunnally, 1978). According to him, one common method requires respondents to categorise or sort items based on their similarity so that experts in the domain can construct definitions. For this research, a pilot questionnaire and face-to-face validity were administered by a selected group of participants during the Arab Meeting Advisory Group (AMAG) of the Arab Internet Governance Forum (Arab IGF) at the United Nations (UN) house in Beirut. AMAG is the advisory committee for the Arab IGF consisting of experts in Internet governance. This pilot contributed to useful supplementary findings in that it demonstrated that the questionnaire content and approach were valid. Because researchers are so close to their own work, the next step is to get other people to comment, particularly if they are subject experts in relation to the concept being measured (Nunnally, 1978). The content validity of the questionnaire was also supervised by two academic scholars from Beirut, Lebanon and Stockholm, Sweden.

Reliabiliy may be calculated in a number of ways, but the most commonly accepted measure in field studies for assessing a scale's internal consistency is Cronbach's alpha, which tells how well the items measure the same construct (Price, 1997). According to Black (1999), reliability is an indication of consistency between two measures of the same thing but is never perfect. Internal reliability is measured by Cronbach's alpha test, which calculates the average of all split-half reliability coefficients. An alpha coefficient varies between 1 (perfect internal reliability) to 0 (no internal reliability). In the social and business sciences, it is rarely above 0.90.

The reliability test was assessed using the Cronbach scale reliability procedure in SPSS. Under this procedure, the overall reliability of the scale had Cronbach's alpha values

greater than .70, indicating a satisfactory level of reliability (Nunnally, 1978). The Cronbach's alpha was maintained between 0.848 and 0.727.

4.3.2 Qualitative Strand

Researchers using a qualitative research design generally engage in exploring, describing and understanding the personal and social experiences of participants and trying to capture the meanings that particular phenomena hold for them. According to Smith and Dunsworth (2002), qualitative research is an attempt to understand a small number of participants' lived experience or views of the world rather than trying to test a preconceived hypothesis on a large sample. This is also consistent with Creswell (1998), in which the qualitative approach is a subjective approach to finding an answer to the research question; difficulties of generalisability, however, are another result of the findings (Beedles, 2002).

4.3.2.1 Selection of Participants and sampling

The researcher deployed a purposive sampling for the qualitative strand of this research. Purposive sampling leads to greater depth of information from a smaller number of carefully selected cases, whereas probability sampling leads to greater breadth of information from a larger number of units selected to be representative of the population (Patton, 2002). Maxwell (1997) defines purposive sampling as a type of sampling in which, ''particular settings, persons, or events are deliberately selected for the important information they can provide that cannot be gotten as well from other choices'' (p. 87).

Rigorous attention was paid to selecting the appropriate informants for the in-depth interviews. The targeted participants for this research were all stakeholders (individuals) belonging to the Lebanese Internet community who are interested and involved in the development and governance of the Internet in the country. Kayrooz and Trevitt (2005) suggest that the background, values and role of the researcher is important for understanding how the researcher relates to the subject matter and people studied. The researcher is a member of the Order of Engineers in Lebanon, a member of the working group for the creation of the Lebanese Internet Center (LINC) and member of the Technical Cooperation Working Group for Arab Internet Governance Forum (TCWG-AIGF). Since 1999, the researcher has also been a lecturer at the Lebanese university, giving lectures on Information Management Systems for master's students. In addition, working and interacting with hundreds of experts and professionals has

given the researcher substantial confidence in selecting the appropriate interviewees for the qualitative inquiry.

Following the WSIS definition, these stakeholders were categorised under five different stakeholder groups: government, private organisations, civil society, technical & International organisations and the academic community. As a result, 11 individuals were identified from the five stakeholder groups. The stakeholders' profiles are as follows:

- Government: the Lebanese Prime Minister's office and the Telecommunication Regulatory Authority.

- Private sector: Chief Information Officer (COO) of one of the biggest companies in technology and service providers, and Chief Executive Officer (CEO) of one of the biggest Internet Service providers (ISPs).

- Technical community and International organisation: Internet Corporation for Assigned Numbers and Names (ICANN), Internet Society (ISOC) Lebanon Chapter, and Economic and Social Commission for Western Asia (ESCWA) – United Nations (UN).

- Academic: The leading American University and Research Centre (Number one university in the Middle East Region), and the Balamand University.

- Civil society: An end user and a representative from the "Women in Technology" civil association.

There are no rules governing sample size in qualitative inquiry. Sample size depends on what you want to know, the purpose of the inquiry, what's at stake, what will be useful, what will have credibility, and what can be done with available time and resources (Patton, 1990). The size of the sample of this qualitative interview was determined by informational considerations. As the purpose of this qualitative part is to maximise information, the researcher intended to collect two samples from each stakeholder group that gave reasonable coverage of the phenomenon. The researcher observed that no new information was gleaned from new sampled units and that additional interviews ended in information redundancy.

According to Patton (1990), the power of purposive sampling lies in selecting information-rich cases that manifest the phenomena of interest in a way that facilitates greater insight into the theoretical construct underlined in the proposed study. As the aim of this research looks at Internet governance and its impact on Internet development and economic growth, representatives from government and International organisations, business figures, academics and experts were considered as major candidates for purposive sampling. This selection enabled a general sample representation from all Internet stakeholders, validating theoretical arguments proposed in this thesis.

4.3.2.2 Interviews

This research followed Hagan's (1986) view that the interview is a path for understanding the participant, and the researcher should have certain flexibility rather than be constrained by restrictions. Pollio et al. (1997) refer to Hagan's (1986) views on conducting interviews and add that understanding the participant's perspective is not simply a matter of finding a neutral phrase to use; rather, it requires the interviewer to explore the meaning of the terms for the interviewee. Therefore, clarifying questions can and should be asked without attempting to determine the direction of the interview. However, with certain interviewees, it may be impossible to identify questions of non-threatening nature for the participant because there may be personal or political factors.

As mentioned earlier, eleven participants were selected for semi-structured in-depth interviews. According to Malhotra (1993), the semi-structured interview allows the interviewer to uncover a specific list of hidden issues of research interest. Similarly, Moustakas (1994) explains that the purpose of the interview is to deduce a comprehensive story of the individual's experiences of the phenomenon under investigation. The questions were used for the collection of respondent's views and feedback, for clarification of terms and variables, and for elaboration on specific topics of importance that were not sufficiently covered by quantitative questionnaires (Luna-Reyes and Andersen, 2003). To achieve this, a semi-structured interview was conducted (Appendix B).

4.3.2.3 Data Collection Procedures

This research used a semi-structured interview that used a pre-determined set of open questions to gather in-depth information and to explore themes. Qualitative studies produce a lot of data depending on the research topic and design, but not all of it is

meaningful. Hence, the researcher undergoes a process of data reduction, reducing and transforming the raw data to identify and focus on what is meaningful. According to Krathwohl (1997) and Miles & Huberman (1994), it is the job of the researcher to comb through the raw data to determine what is significant and transform the data into a simplified format that can be understood in the context of the research question.

Through this process, the researcher was able to identify patterns and relationships observed within and across stakeholder groups. Regardless of what display format the researcher chose, it should help him arrange and think about the data in new ways and assist him in identifying systematic patterns and interrelationships across themes and/or content (Miles & Huberman, 1994).

Furthermore, in a mixed-method design, the researcher converges or merges quantitative and qualitative data to provide a comprehensive analysis of the research problem (Creswell, 2013). To achieve this objective, the qualitative data for this research will be collected and examined under the same four thematic sub-areas used in the quantitative data analysis in chapter 6. Accordingly, the findings will be categorised under the following titles:

- The actual Internet infrastructure status and who is in charge,
- The degree of involvement of different stakeholders in Internet policy,
- Multistakeholder Internet governance,
- The impact of Internet governance on economic growth.

4.3.2.4 Findings Validity

Several tactics or strategies have been deployed by different authors working with qualitative research methods to enhance the truthfulness or validity of qualitative findings (Crabtree & Miller, 1999; LeComple & Goetz, 1982; Morse 1991and Corbin & Strauss 1990)

For LeCompte and Goetz (1982), validity in qualitative research is concerned with the accuracy and truthfulness of findings, whereas reliability is concerned with the consistency and repeatability of the informant's accounts as well as the investigators' ability to collect and record information accurately (Selltiz et al., 1976).

One of the major critical strategies for producing trustworthy and believable findings in qualitative research is triangulation. Triangulation refers to integrating qualitative and quantitative data (Amaratunga & Baldry, 2001), validating convergence and reliability of data. The present research incorporates both quantitative and qualitative triangulation of data with the major goal of circumventing the personal bias of the researcher and overcoming the deficiencies intrinsic to single-investigator, single-theory, or single-method study, thus increasing the validity of the study (Denzin, 1989).

4.4 Conclusion

This chapter locates the study within the appropriate research paradigm and justifies and describes the selection of methodology, design and procedures for the research. It discusses and justifies the selection of participants and data collection, and, finally, it assesses validity and reliability of the method and data selected.

Brannen (2005) argues that an interviewing approach which allows interviewers to probe and the interviewees to give narratives of incidents and experiences is likely to result in a more holistic picture of people's understandings than a conventional survey analysis would provide; such an approach also allows interviewees to elucidate the meanings that research participants attribute to their practices and actions. Thus, this research used mixed methods, collecting both quantitative and qualitative data to best understand the problem. Accordingly, this research surveyed a large number of individuals and interviewed a few elites to obtain their views and hear their voices on Internet governance in Lebanon.

This research deployed a mixed-methods approach with pragmatism as a knowledge claim. It employed a concurrent parallel design for data collection as a strategy of inquiry, gathering both numeric and textual data, and thus findings emerged from both quantitative and qualitative research methods. This also incorporates triangulation by integrating qualitative and quantitative data. Jick (1979) argues that triangulation may be used not only to examine the same phenomenon from multiple perspectives but also to enrich our understanding by allowing for new or deeper dimensions to emerge.

Although many designs exist in the mixed-methods field, the present research used the convergent parallel-mixed method to collect diverse types of data and provide a more complete understanding of multistakeholerism and Internet governance and its impact

on Internet development to achieve a country's economic growth. In this mixed-methods research, both forms of data were collected and analysed at the same time. This data analysis of the quantitative strand will be discussed in chapter 5 while the qualitative findings will be explored in chapter 6. As a result, Chapter 7 will compare and triangulate the quantitative statistical results with the qualitative findings supported by key informants' quotations.

Chapter 5: Quantitative Data Analysis

5.1 Introduction

In this convergent parallel mixed-methods research design, both forms of data (quantitative and qualitative) were collected at the same time; the findings are combined and interpreted in chapter 7. An online survey (Appendix A) was used to collect the quantitative data for descriptive statistical analysis on the participants' views about multistakeholderism as a suitable model for Internet governance, and the impact of Internet governance on the country's economic growth.

In chapter 4, research methodology and research design are discussed in detail. This chapter presents data analysis of the quantitative strand to answer the research questions that were organised under four related thematic sub-areas. Data were analysed using the Statistical Package for Social Sciences (SPSS) using descriptive statistics for quantitative survey.

5.2 Survey Analysis Procedures

The quantitative data is collected and analysed under four thematic sub-areas as follows:

- Thematic area I: "The status of Internet infrastructure and who is in charge" was analysed using frequency, means and standard deviation exploiting questions 5, 6, 7, 8 and 10.
- Thematic area II: The importance of multistakeholderism for Internet governance was analysed using frequency, means, standard deviation and ANOVA test exploiting question 9.
- Thematic area III: The degree of the level of involvement of different stakeholders in Internet policy was analysed using frequency, means and standard deviation exploiting questions 11, 12, 13 and 17.
- Thematic area IV: The impact of Internet governance on economic growth was analysed using frequency, means and standard deviation using questions 14, 15, 16 and 18.

Data is analysed using the Statistical Package for Social Sciences (SPSS). Descriptive statistics were applied to the survey questions using the frequency distribution and means for each response. The mean provided the central tendency for each area studied,

while the frequency distribution is the count of responses associated with different values of a variable.

For comparative analysis and statistical significance detection, cross tabulation with Pearson's Chi-Square and ANOVA tests were used to determine if correlation exists between the five independent variables (government, private organisations, civil society, technical & International organisations and the academic community) and the two dependent variables (multistakeholder Internet governance and economic growth). Cross-tabulation is the merging of the frequency distribution of two or more variables in a single table (Malhotra, et al., 2002) to provide more clarity of interpretation and greater insights into complex phenomena. Accordingly, statistical significance was used as a tool to examine the relations between the variables based on the alpha level (P-value 0f 0.05) to investigate any difference in stakeholders' views regarding the subject-matter. Hence, if P-value is less than 0.05, significant difference does exist, whereas, if the P=value is larger than 0.05, significant difference does not exist.

However, to apply Pearson's Chi-Square and ANOVA tests, their pre-determined assumptions should be met. For Pearson's Chi-Square tests, the following assumptions were met: The P- value <0.05, no more than 20% of cells with expected count less than 5 and no expected count less than 1. As for ANOVA, the researcher respected and applied the assumptions of independence, normal distribution and homogeneity of variance. In general, it is said that the Central Limit Theorem "kicks in" at an N of about 30 (Mordkoff, 2011). In other words, as long as the sample is based on 30 or more observations, the sampling distribution of the mean can be safely assumed to be normal. According to Mordkoff (2011), the second known property of the Normal Distribution says that, given random and independent observations (from a normal distribution), the sample mean and sample variance are independent. The only distribution for which this is true is the normal distribution. Therefore, we assume that populations are normal.

5.2.1 Demographics

The targeted participants for this questionnaire were all individuals that are involved and interested in the Internet and its governance in Lebanon. These individuals were categorised under five different stakeholder groups: government, private organisations, civil society, technical & International organisations and the academic community. The first four questions in the survey are related to demographic concerns: gender, age, area

of residence and industry. The researcher used nominal scale as it serves as label or identification.

The sample of this research is composed of 234 males (74.3%) and 81 females (25.7%) collected from the overall 316 responses obtained (Table 5.1). The researcher avoided multiple responses by single individuals/computers by configuring the online survey to accept only one survey response per IP address.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	M	234	74.1	74.3	74.3
	F	81	25.6	25.7	100.0
	Total	315	99.7	100.0	
Missing	System	1	.3		
Total		316	100.0		

Table 5.1: Repartition by gender

Here, the demographic information reported confirms the gender equity problem, which is a universal issue in the Information Communication Technology sector (ICT). Lebanese women face huge obstacles in this area, and this was clearly witnessed in the weak participation in the 3rd Arab Internet Governance Forum held in Beirut in November 2014. The Forum was a men's land; gender distribution was 72% Male and 28% Female (Ben Youssef, 2014).

The second question inquired about the area of residence of respondents. Mount Lebanon governorate came first, with one hundred thirty stakeholders representing 41.3% of the participating population. This makes sense, as Mount Lebanon governorate hosts the majority of ICT industry participants and occupies around 20% of Lebanon's total territory, spanning the country along the Mediterranean coast between Lebanon's North Governorate and South Governorate. Beirut, the capital of Lebanon, came second, with one hundred thirteen participants representing 35.9%; the North governorate contributed thirty participants, the South governorate six participants and Bekaa governorate 4 participants to the participating population (Table 5.2).

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Beirut	113	35.8	35.9	35.9
	Bekaa	5	1.6	1.6	37.4
	Mt Lebanon	130	41.1	41.3	78.4
	North	30	9.5	9.5	87.9
	South	6	1.9	1.9	89.8
	Outside Lebanon	32	10.1	10.2	100.0
	Total	316	100.0	100.0	

Table 5.2: Repartition by area of residence

Table 5.3 displays the age distribution, indicating that more than 80% of the respondents were under 50 years of age, matching worldwide statistics on the age distribution of internet users (Statista, 2017).

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-25	80	25.3	25.6	25.6
	25-50	179	56.6	57.2	82.7
	50-64	49	15.5	15.7	98.4
	64+	5	1.6	1.6	100.0
	Total	313	99.1	100.0	
Missing	System	3	.9		
	Total	316	100.0		

Table 5.3: Repartition by age

The last demographic question of the survey asked the participants to identify the stakeholder group to which they belong. The private sector came first, with one hundred eight participants (34.6%). Through this high participation, the private sector sought to raise its voice towards the uncountable issues and problem with the government due to the unfair competition and lack of transparency.

The second largest stakeholder group among the participants was the academics, with eighty-three participants (26.6%), followed by the government, with forty-two participants (13.5%), technical and International organisations (13.1%) with forty-one participants, and social society, with thirty-four participants (10.9%). The 4 non-identified participants were eventually not included in the analysis. The repartition by stakeholder groups is presented in the table 5.4.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Academic	83	26.3	26.6	26.6
	Civil Society	34	10.8	10.9	37.5
	Government	42	13.3	13.5	51.0
	Private Sector	108	34.2	34.6	85.6
	Technical Community & Int. Organisations	41	13.0	13.1	98.7
	Other	4	1.3	1.3	100.0
	Total	312	98.7	100.0	
Missing	System	4	1.3		
	Total	316	100.0		

Table 5.4: Repartition by stakeholder groups

To conclude, the descriptive statistic for the demographic data shows that the sample of this research consisted of three hundred sixteen participants (316) with more than 80% above 50 years old, covering the whole country and representing well the five pre-defined stakeholder groups.

5.2.2 The actual Internet infrastructure status and who is in charge

The aim of this part of the survey was to gather opinions and reflections on the current status of Internet infrastructure and the actual governance process. Data were obtained from questions 5, 6, 7 & 8 that were designed to cover this thematic area. A 5 points (very poor, poor, satisfactory, good and very good) Likert type questions scale was used for questions 5, 6 & 7. The respondents selected the choice best demonstrating their level of agreement on the management of Internet domain names, deployment of Internet address version 6 (IPv6) and connectivity status. Connectivity constitutes the main pillar for Internet development, and IPv6 deployment gives an indication of network advancement. The domain name industry also plays an important role in the digital economy. A multiple dichotomous question with a list of possible responses was used for question number 8 to allow the respondent to select the entity that oversees the Internet infrastructure in Lebanon.

Question	Stakeholder Group	N	Mean	Std. Deviation	Minimum	Maximum
How would you assess domain name management in Lebanon?	Academic	81	2.44	.880	1	5
	Civil Society	34	2.09	.753	1	4
	Government	40	2.58	1.035	1	5
	Private Sector	106	2.52	1.080	1	5
	Technical Community & Int. Organisations	41	2.63	.888	1	5
	Other	4	3.00	.000	3	3
	Total	306	2.48	.966	1	5
How would you assess the deployment of Internet Protocol version 6 (IPv6) in Lebanon	Academic	78	2.00	.837	1	5
	Civil Society	33	1.73	1.069	1	5
	Government	40	2.18	1.083	1	4
	Private Sector	102	1.93	.893	1	5
	Technical Community & International Organisations	40	1.70	.648	1	3
	Other	4	1.75	.500	1	2
	Total	297	1.93	.901	1	5
How would you assess the Internet connection in Lebanon?	Academic	80	1.62	.786	1	4
	Civil Society	34	1.82	.576	1	3
	Government	41	2.02	.935	1	4
	Private Sector	108	1.73	.860	1	5
	Technical Community & International Organisations	41	1.83	.771	1	4
	Other	4	1.75	.957	1	3
	Total	308	1.77	.817	1	5

Table 5.5: Descriptive analysis for questions 5, 6 & 7

Within this study, management of Internet domain names had a total mean of 2.48 with standard deviation of 0.966, the deployment of Internet Protocol had a total mean of 1.93 with standard deviation of 0.901 and internet connection had a total mean of 1.77 and standard deviation of 0.817. The descriptive analysis is presented In table 5.5.

The interpretation of these data shows that the mean of the management of the domain names scored slightly below average. However, the results showed a poor deployment of IPv6 and a connectivity with a mean low below average.

As for the entity in charge of Internet infrastructure, it is apparent that respondents are aware of the main key Internet players in the country; in addition, they have a general idea concerning the heavy involvement of the Lebanese government. As table 5.6 shows, the government scored 171 responses (55.3%), followed by the private sector with 91 responses (29.4%), academic institutions with 59 responses (19.1%) and individuals with 40 responses (12.90%).

Question 8	Choices	Responses		Percent of Cases
		N	Percent	
Who do you think is in charge of the Internet infrastructure including country code Top Level Domain (ccTLD) in Lebanon?	Academic Institutions	59	14.30%	19.10%
	Government	171	41.40%	55.30%
	I don't know	40	9.70%	12.90%
	Others	12	2.90%	3.90%
	Private	91	22.00%	29.40%
	Individuals	40	9.70%	12.90%
Total		413	100.00%	133.70%

Table 5.6: Descriptive analysis for question 8

5.2.3 Involvement of different stakeholders in Internet policy

This thematic area analysis the level of involvement of the different stakeholder groups contributing and participating to Internet policy and regulation in Lebanon. Question 9 used 4 points (very difficult, difficult, easy and very easy) Likert type questions scale to obtain the data. The respondents selected the choice best demonstrating their level of agreement on how easily the different stakeholder groups can be involved in Internet legislation and regulation.

The answers of the respondents on this question were exported and coded to SPSS for analysis and examined using descriptive statistics deploying frequency, means and multivariate ANOVA to assess whether there is statistical significance difference towards the perception of level of involvement in policy and regulation of the different stakeholder groups: government, the private sector, academia, civil society and the Technical community.

The results revealed that respondents are aware of the heavy involvement of the Lebanese government in Internet policy and regulation: the government recorded the highest score with 182 out of 306 responses (59.5%) that the government can easily participate and contribute to Internet policy and regulation. Inversely, the results collected show that civil society, with 224 out of 302 responses (74.1%), scored the highest negative score compared to other stakeholder groups in how easily it can participate in Internet policy and regulation. The private sector scored 175 responses (58.7%), the technical community 187 (61.9%), and academia 196 (65.8%). In this perspective, the level of involvement of government in Internet regulation and policy scored the highest, with a mean of 2.71, followed by the private sector with a mean of 2.33. Academia scored a mean of 2.14, and the technical community scored a mean of 2.24, and the degree of involvement for civil society scored a mean of 1.92.

Analysing the data in table 5.7, a statistical significance difference was detected within the stakeholders' perception towards government involvement and participation in Internet policy with $p=0.03 < 0.05$. Another statistical difference was also detected within the stakeholders with respect to their perception towards academic participation in setting Internet policy with $p=0.03 < 0.05$. This is linked to how strong and beneficial the relationship of different stakeholders with government is. It depends on the level of coordination, political convergence or divergence and/or personal interests.

		Sum of Squares	df	Mean Square	F	Sig.
How easy is for the mentioned different stakeholders to contribute and participate in the Internet policy and regulation in Lebanon? - Government	Between Groups	20.155	5	4.031	3.710	.003
	Within Groups	322.703	297	1.087		
	Total	342.858	302			
How easy is for the mentioned different stakeholders to contribute and participate in the Internet policy and regulation in Lebanon? - Private Sector	Between Groups	6.604	5	1.321	1.901	.094
	Within Groups	200.840	289	.695		
	Total	207.444	294			
How easy is for the mentioned different stakeholders to contribute and participate in the Internet policy and regulation in Lebanon? - Technical Community	Between Groups	5.324	5	1.065	1.426	.215
	Within Groups	218.817	293	.747		
	Total	224.140	298			
How easy is for the mentioned different stakeholders to contribute and participate in the Internet policy and regulation in Lebanon? - Academic	Between Groups	13.434	5	2.687	3.652	.003
	Within Groups	212.587	289	.736		
	Total	226.020	294			
How easy is for the mentioned different stakeholders to contribute and participate in the Internet policy and regulation in Lebanon? - Civil Society	Between Groups	7.249	5	1.450	2.094	.066
	Within Groups	202.825	293	.692		
	Total	210.074	298			

Table 5.7: Descriptive analysis for question 9

5.2.4 Multistakeholerism and Internet governance

The aim for this third thematic area is to investigate Lebanese perceptions and thoughts on multistakeholderism and Internet governance. The dichotomous questions 11 and 12 allowed the respondents to choose from two possible responses: "yes" or "no". Question 11 examined the familiarity of the respondents with Internet governance while question

12 investigated whether multistakeholderism is a suitable model for Internet governance in Lebanon. As for the extent to which Internet governance matters, question 13 in the survey (a multiple dichotomous question) provided a list of possible responses and allowed the respondents to select among: national, regional and global levels. For this thematic area, an open-ended question was used at the end of the survey asking the participants to share their views on the strengths and weaknesses of multistakeholder Internet governance.

The answers of the respondents were coded to SPSS for analysis. The answers were examined using descriptive statistics deploying the means to record the data tendency and univariate ANOVA to assess if there is statistical significance among the five stakeholder groups with regards to the multistakeholder Internet governance as model to administrate the Internet in Lebanon.

The objective of the question number 11 was to check the knowledge and familiarity of the stakeholders with Internet governance. The descriptive data in table 5.8 showed that there is sufficient awareness with Internet Governance, with around 80% of participants answering that they are familiar with the term.

		Frequency	Percent	Valid Percent	Cumulative Percent
	Yes	245	76.3	79.3	79.3
Valid	No	63	19.9	20.7	100.0
	Total	308	96.2	100.0	
Missing	System	8	2.6		
	Total	316	100.0		

Table 5.8: Are you familiar with the term "Internet Governance"?

For the question 12, related to multistakeholderism as a model for Internet governance in Lebanon, the descriptive analysis in table 5.9 shows that 82.3 % of the stakeholders are confident that the multistakeholder framework is suitable for Internet governance for Lebanon.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	250	78.2	82.3	82.3
	No	56	16.8	17.7	100.0
	Total	306	94.9	100.0	
Missing	System	10	3.1		
Total		316	100.0		

Table 5.9: Is multistakeholderism a suitable model for Internet governance?

Looking at the mean that each stakeholder group scored, the descriptive statistic in table 5.10 shows that civil society's choice for the multistakeholder process had scored a mean of 1.06 with a standard deviation of 0.339, followed by the private sector with a mean of 1.14 and a standard deviation of 0.346, the technical community and international organisations with a mean of 1.20 and a standard deviation of 0.405, academia with a mean of 1.22 and a standard deviation of 0.416, and the government with a mean of 1.28 and a standard deviation of 0.456.

				95% Confidence Interval for Mean	
	N	Mean	Std. Deviation	Lower Bound	Upper Bound
Academic	78	1.22	.416	1.12	1.31
Civil Society	34	1.06	.239	1	1.14
Government	39	1.28	.456	1.13	1.43
Private Sector	102	1.14	.346	1.07	1.21
Technical Community & Int. Organisations	40	1.20	.405	1.07	1.33
Total	297	1.18	.381	1.13	1.22

Table 5.10: Descriptive analysis for question 12

The data in table 6.10 shows that civil society is the most supportive of multistakeholderism, followed by the private sector. Unsurprisingly, the government is less supportive of such a process.

The ANOVA test (table 5.11) was not significant, with $p=0.098$, which means that stakeholders agree that multistakeholderism is a suitable model of the Internet governance in Lebanon.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.343	5	.269	1.880	.098
Within Groups	41.553	291	.143		
Total	42.896	296			

Table 5.11: Stakeholders agreement on multistakeholderism

As for question 13, related to the level at which Internet governance matters, the descriptive data in table 5.12 showed that 63% of the respondents selected that Internet governance matters at both levels: the national and the global.

		Frequency	Percent	Valid Percent	Cumulative Percent
	National	29	9.2	0.5	10.5
	Global	49	15.5	17.7	28.2
	All of the above	199	63.0	71.8	100.0
	Total	277	87.7	100.0	
Missing	System	39	12.3		
	Total	316	100.0		

Table 5.12: At what level does Internet governance matter?

The interpretation of the above descriptive data shows that the majority of the respondents were familiar with Internet governance and had awareness of the multistakeholder process. In general, respondents viewed multistakeholder governance as a suitable model for Internet governance in Lebanon.

Furthermore, the objective of the open-ended question in the survey was to get in-depth information from the Lebanese stakeholders on the strengths and weaknesses of multistakeholderism in the realm of Internet governance. Given the variety of stakeholder perspectives, many appraisals emerged from the answers. However, the key strengths and weaknesses that emerged from the responses are highlighted and summarised in table 5.13.

Strengths	Weaknesses
Representation	Time and money Consuming
Quality of Services	Different Interests
Better Decisions	Unbalanced power
Development	Political Interferences
Democracy	Ineffective under current regime
Transparency	Government Influence
Independence	Unqualified stakeholders
Attract Investments	Security and privacy issues
	Complicated model

Table 5.13: strengths and weaknesses in multistakeholder process

In general, respondents viewed the multistakeholder process as representative, inclusive of all stakeholders and the optimal choice for enhancing quality of services and making better decisions. Furthermore, the stakeholders viewed multistakeholder Internet governance as an efficient way to promote development and democratic values. Respondents also expressed their confidence that multistakeholder governance will be an opportunity for transparency and investment attractiveness (see figure 5.1).

Figure 5.1: Strengths of multistakeholder process

As for the weaknesses, a significant number of respondents questioned the utility of such a time-consuming process. Additionally, several respondents expressed their concerns over diverging interests, unbalanced powers and authorities, political interference and government obstruction. The respondents also raised another concern about the possible risk of involving unqualified stakeholders and the cost of such a process (see figure 5.2).
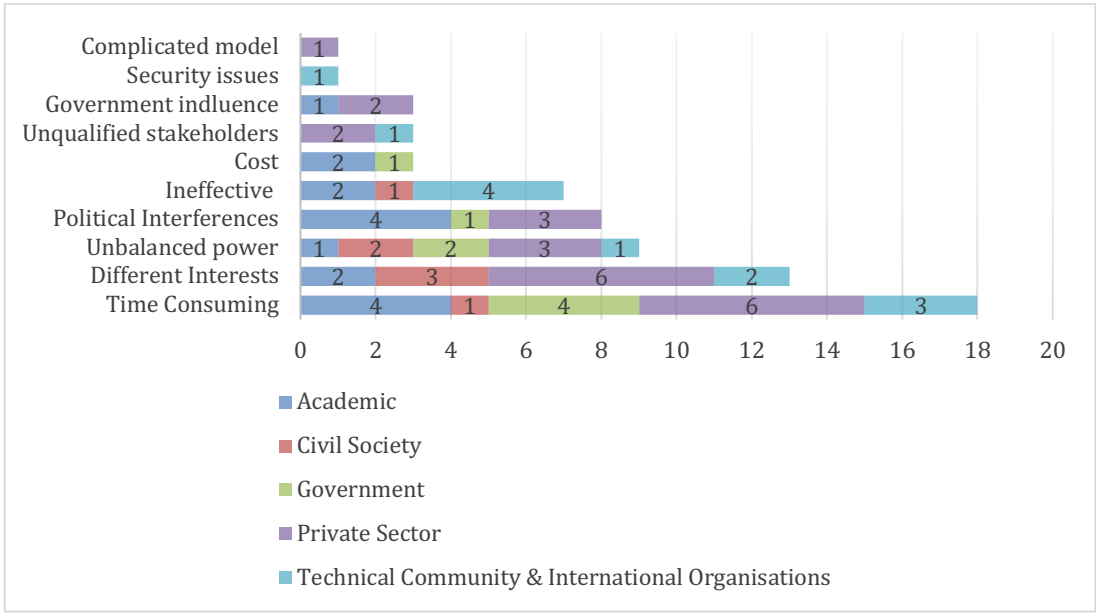
Figure 5.2: Weaknesses of multistakeholder process

5.2.5 The impact of Internet governance on economic growth

The fourth and the final thematic area of this research carried out empirical investigation about multistakeholder Internet governance with regard to the country's economic growth. From this perspective, how and to what extent the different stakeholders see multistakeholder Internet governance as a tool to achieve development and economic growth.

Here, the data is obtained from analysing questions 14, 15 and 16. A 5 points Likert type questions scale was used for question 14 with 1 indicating greatest importance and 5 least importance. The respondents selected the choice best demonstrating their level of agreement on the degree of impact of Internet governance on individual, business, governmental and economic levels. Questions 15 and 16 used a multiple dichotomous question with a list of possible responses and statements mapping out stakeholders' views on the factors that made Internet governance important and how they viewed the future role of governmental and non-governmental players.

The methods that were applied in the previous thematic areas were applied here. The answers of the respondents on these three questions were exported and coded to SPSS for analysis. The answers were examined deploying descriptive statistics using the frequency, means and ANOVA test to detect any statistical significance in the perception of the stakeholders related to Internet governance as a main driver of economic growth and how they viewed the future role of governmental and non-governmental players.

On the issue of the future role of government and non-governmental stakeholders, the majority of the respondents (65.1%) support a decrease in government control (table 5.14) and greater space for other stakeholders (88.5%) (table 5.15).

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	26	8.2	10.0	10.0
	Disagree	65	20.6	24.9	34.9
	Agree	104	32.9	39.8	74.7
	Strongly Agree	66	20.9	25.3	100.0
	Total	261	82.6	100.0	
Missing	System	55	17.4		
	Total	316	100.0		

Table 5.14: Government should be less involved

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	5	1.6	1.9	1.9
	Disagree	25	7.9	9.5	11.5
	Agree	123	38.9	46.9	58.4
	Strongly Agree	109	34.5	41.6	100.0
	Total	262	82.9	100.0	
Missing	System	54	17.1		
	Total	316	100.0		

Table 5.15: Non-governmental actors should be more influential

On the question of the importance of multistakeholder Internet governance as an economic driver, table 5.16 shows that 89 % of the respondents agreed that Internet governance is of great importance for economic growth.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	9	2.8	3.5	3.5
	Disagree	17	5.4	6.6	10.2
	Agree	149	47.2	58.2	68.4
	Strongly Agree	81	25.6	31.6	100.0
	Total	256	81.0	100.0	
Missing	System	60	19.0		
Total		316	100.0		

Table 5.16: Multistakeholder Internet governance as economic driver

However, as shown in table 5.17, a statistically significance difference was detected between the stakeholder groups on the issue of the level government involvement, with p= 0.025 < 0.05. Here, we can argue that stakeholders evaluated the involvement of the government based on the intersection of their interests with the government. The more the stakeholder is involved with the government, with which he or she shares mutual interests and benefits, the more he or she resists government withdrawal from the scene.

		Sum of Squares	df	Mean Square	F	Sig.
Do you strongly agree, agree, disagree, or strongly disagree with the following statements: Government should be less involved	Between Groups	11.075		2.215		
	Within Groups	213.883	253	.845		
	Total	224.958	258			

Table 5.17: Significance difference in level of government involvement

The open-ended question (number 17 in the survey) asked the participants about their views on the ways multistakeholder governance can best support Lebanon's economic growth. The results represented in figure 5.3 include: economic and financial performance, better representation and quality services, more regulation and control, fair competition and more transparency and efficiency.
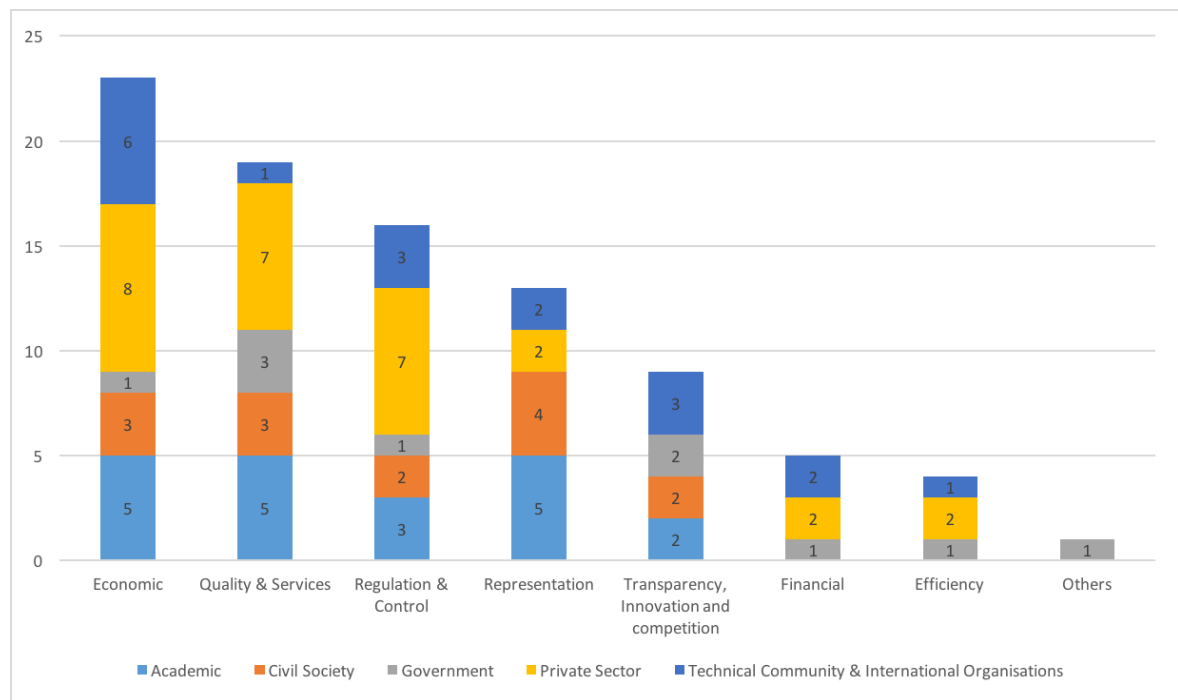
Figure 5.3: How can multistakeholder Internet governance best support the economy?

5.3 Conclusion

An online survey was used to collect the quantitative data for descriptive statistical analysis with the aim to uncover Lebanese views and opinions about the multistakeholder process in the realm of Internet governance and its impact on the country's economy. The sample of the quantitative strand of this research is composed of 234 males (74.3%) and 81 females (25.7%) collected from 316 responses. The targeted participants belong to the Lebanese Internet community who are involved and interested in the Internet. These individuals were grouped under five different stakeholder groups: government, private organisations, civil society, technical & International organisations and the academic community.

The first part of the survey covered questions intended to produce demographic data of the stakeholders participating in the online survey. The second part of the survey was to gather opinions and reflections on the current status of Internet infrastructure and who is in charge (actual governance model). The third part concerns the perceptions of the Lebanese stakeholders and their level of involvement in contributing to Internet policy and regulation in Lebanon. The fourth and final part of the survey carried out an

empirical investigation on the implication of the Internet and its multistakeholder governance for the country's economic growth.

Data were coded and analysed using the Statistical Package for Social Sciences (SPSS) and then categorised under four thematic areas: the actual status of Internet infrastructure and who is in charge, the degree of involvement of different stakeholders in Internet policy, multistakeholder Internet governance, and the impact of Internet governance on economic growth. Descriptive statistics were applied to the survey questions using the frequency distribution means for each response. The mean provided the central tendency of each area studied, while the frequency distribution is the count of responses associated with different values of a variable. For comparative analysis and statistical significance detection, cross tabulations with Pearson's Chi-Square and ANOVA tests were used.

The analysis shows that Internet connectivity in Lebanon is below average and supported by weak infrastructure. On the question of entities involved in infrastructure, participants were aware of the main Internet players in the country and had a general idea concerning the heavy involvement of the Lebanese government. A statistically significant difference was detected in stakeholders' perceptions of participation by government and academia, respectively, in setting Internet policy. This was due to the stakeholder's level of coordination with the government and political issues.

The descriptive data showed that the majority of respondents were familiar with Internet governance and aware of the multistakeholder process. In general, respondents viewed multistakeholder governance as a suitable model for Internet governance in Lebanon. On the issue of the future role of government and of non-governmental stakeholders, a majority of respondents support decreased government control and greater space for other stakeholders. However, a statistically significant difference was detected between the stakeholder groups related to the preferred level of government involvement.

Concerning participants' views of the importance of multistakeholder Internet governance as an economic driver, 89% of respondents agreed that Internet governance is of great importance for economic growth. Asked how multistakeholder governance can best support economic growth in Lebanon, the participants' responses included: economic and financial performance, better representation and quality services, more regulation and control, fair competition and more transparency and efficiency.

Chapter 6: Qualitative Data Analysis

6.1 Introduction

This mixed-methods research employed a quantitative online survey to reach a large population and qualitative purposive interviews to answer the research questions, provide a more complete understanding of the contested topic of Internet governance and to verify findings from the survey. Qualitative research is primarily concerned with gaining direct experience with a setting and is intrinsically an exploratory endeavour (Mann, 2003). Therefore, a purposive interview was deployed targeting political and business figures and experts to obtain their views and hear their voices about Internet governance, backing the quantitative survey. To achieve this objective, a semi structured interview was conducted with 11 interviewees with the following questions:

1. How would you assess the following Internet governance-related issues in Lebanon: access to the Internet, affordability of the Internet, availability of local Internet content, cyber security and privacy, regulation and policymaking by government, Broadband policy and connectivity, and Domain name management?

2. Who are the decision makers and what are the decision-making processes that influence the evolution and use of the Internet in Lebanon?

3. How is the Internet governed in Lebanon currently?

4. How easy is it for different stakeholder groups to participate and contribute in Internet policy and governance in Lebanon? How do they interact with one another?

5. What are the principal issues of Internet governance in Lebanon?

6. What is your understanding of Internet governance?

7. What does the term "multistakeholder" mean to you?

8. How important and effective will national Internet governance environment be for you as a stakeholder? Challenges and opportunities?

9. Do you think there are efficient and effective mechanisms in place at the national level to address the Internet-related challenges you have identified above?

10. Is the Internet important for Lebanon's development and economic growth?

11. In your opinion, how can multistakeholder Internet governance best support Lebanon's Internet and economic development?

6.2 Interview Analysis Procedure

The interview's questions were used for the collection of respondents' views and feedback, for clarification of terms and variables, and for elaboration on specific topics of importance that were not enough covered by quantitative questionnaires (Luna-Reyes & Andersen, 2003).

According to Malhotra (1993), the semi-structured interview allows the interviewer to uncover a specific list of hidden issues of research interest. Similarly, Moustakas (1994) explains that the purpose of the interview is to deduce a comprehensive story of the individual's experiences of the phenomenon under investigation. Hence, this research used a semi-structured interview that combined a pre-determined set of open questions to gather in-depth information and explore themes.

Qualitative studies produce a lot of data depending on the research topic and design, but not all of it is meaningful. Hence, the researcher undergoes a process of data reduction, reducing and transforming the raw data to identify and focus on what is meaningful. According to Krathwohl (1998) and Miles & Huberman (1994), It is the job of the researcher to comb through the raw data to determine what is significant and transform the data into a simplified format that can be understood in the context of the research question.

Through this process, the researcher grouped the qualitative data into meaningful patterns that would help to answer the research questions. Regardless of what display format the researcher chose, it should help him arrange and think about the data in new ways and assist him in identifying systematic patterns and interrelationships across themes and/or content (Miles and Huberman, 1994).

The researcher was able to identify patterns and relationships observed within and across the stakeholder groups. These themes may be directly evolved from the research questions or gleaned from the data as the study was conducted (Taylor-Powell & Renner, 2003). In this research, themes have been evolved from both the research questions and gleaned from the data. After identifying themes, the researcher compressed, categorised and organised the data into textual tables and charts to facilitate interpretation and drawing of conclusions.

To use quotes more effectively and to facilitate presentation, the interviewed stakeholders' profiles are coded according to their categories and summarised below in table 6.1.

Stakeholder Group	Organisation type	Job Title	Code
Government		Office of Prime Minister	Gov1
Government		Telecommunication Regulatory Authority	Gov2
Private Sector	Technology Provider	Chief Operating Officer - COO	PS1
Private Sector	Internet Service Provider	Chief Executive Officer - CEO	PS2
Technical Community	Internet Society ISOC	President - Lebanese Chapter	TC1
Technical Community	Internet Corporation for Assigned Names and Numbers - ICANN	Engagement Manager	TC2
Academic Community	University and Research Centre	Chief Information Officer and Lecturer	AC1
Academic	University	Professor and IEEE vice president	AC2
Civil Society	Women in Technology	Founder and Member	CS1
Civil Society	Consumer	End User	CS2
International Organisations	United Nations (UN)	Director of ICT Administration - Economic and Social Commission for Western Asia (ESCWA) - UN	IO

Table 6.1: Interviewed stakeholders' profiles and codes

Furthermore, in a mixed-method design, the researcher converges or merges quantitative and qualitative data to provide a comprehensive analysis of the research problem (Creswell, 2013). To achieve this objective, the qualitative data for this research will be collected and examined under the same four thematic sub-areas used in the quantitative data analysis in chapter 5. Accordingly, the findings will be categorised under the following titles:

- The actual Internet infrastructure status and who is in charge,
- The degree of involvement of different stakeholders in Internet policy,
- Multistakeholder Internet governance,
- The impact of Internet governance on economic growth.

6.2.1 The Actual Internet Infrastructure Status and Who is in Charge

The first two questions of the interview gathered opinions and reflections on the current status of Internet infrastructure and who is in charge. The first question was treated quantitatively, while the other had a qualitative character. According to Brannen (2005), a fieldwork method may include a quantitative approach so that data on particular items are collected systematically. Suitably, a 5-points Likert type question scale (1-very poor, 2-poor, 3-satisfactory, 4 -good and 5-very good) was used to assess the first question on the current infrastructure. The respondents selected the choice best demonstrating their level of agreement on: access to the Internet, affordability of the Internet, availability of local Internet content, cyber security and privacy, regulation and policymaking by government, Broadband policy and connectivity, and Domain name management. Table 6.2 shows the mean of the two informants' responses from each stakeholder group (from 1 to 5).

Sector	Access to the Internet	Affordability of the Internet	Availability of local Internet content	Cyber security, data protection and privacy	Regulation and policymaking by government	Broadband policy and connectivity	Domain name management
Academic	3	2	1.5	1.5	1	1	2.5
Civil Society	1	1.5	1	1	1	1	3.5
Government	3.5	2	2	1	1	1	1.5
Int. Organisations	3	2	2	2	4	2	4
Private	2.5	2.5	2.5	1.5	1.5	1.5	2
Technical	3.5	3	1	1.5	1.5	2.5	3.5

Table 6.2: Assessment of Internet infrastructure by the informants

Figure 6.1 gives more insight into table 6.2, where the respondents assessed the current Internet infrastructure in Lebanon. Informants assessed the availability of local Internet content, broadband policy and connectivity as below average. The findings also revealed

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that the current infrastructure is vulnerable to cyber security threats and lacks data protection and privacy laws. In term of access, affordability of the Internet, and domain name management, the informants assessed the current infrastructure status as average; the one exception was civil society, who gave infrastructure a negative evaluation. Furthermore, the findings revealed that all stakeholders, except the informant from International organisations, perceived that government is not doing its job in the areas of regulation and policy.
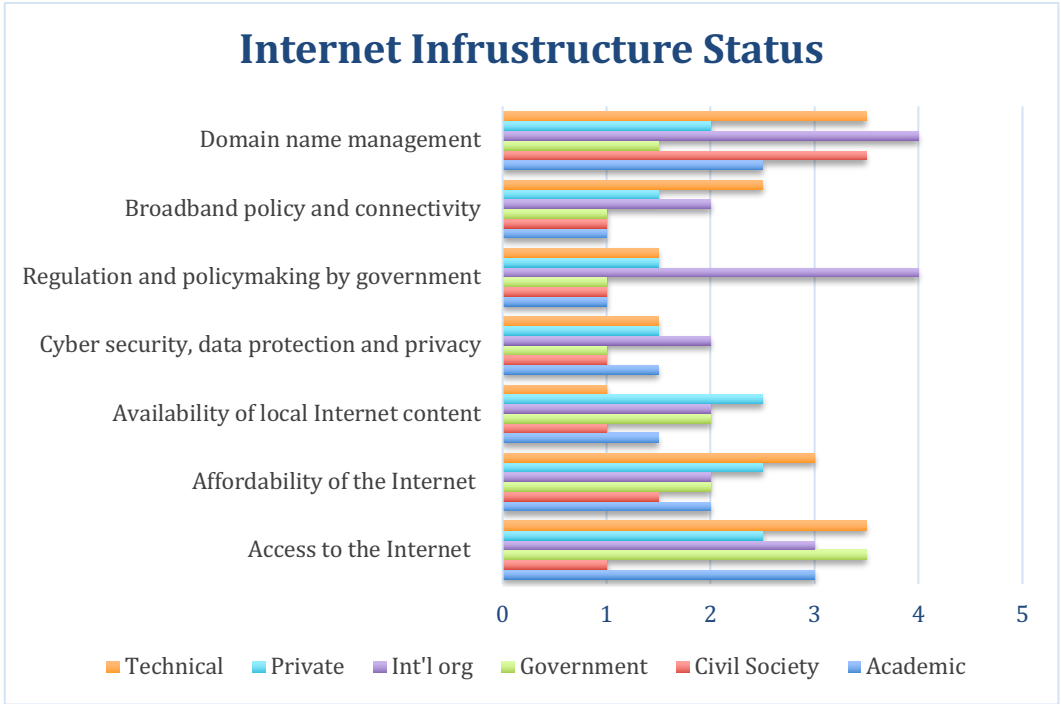
Figure 6.1: stakeholders' assessment of the Internet infrastructure

The in-depth findings from the qualitative interviews showed that this undesirable situation is due to the limited bandwidth of current, long-standing and government-owned infrastructure. It was found that OGERO (the telecom and Internet public service provider) has exclusivity in providing International bandwidth to Lebanon and owns and operates all landline and mobile networks. On this point, TC1 elaborated that:

> *Ministry of Post & Telecommunications/OGERO provides the international connectivity and Internet backbone infrastructure. It allocates the waveband frequencies, authorises or blocks services and sets the prices.*

The findings revealed that the ministry of telecommunications through OGERO, the public operator, owns exclusivity to the landline networking infrastructure and the

provisioning of international Internet capacities. It was found also that, while OGERO holds the biggest market share as an Internet service provider (ISP), private ISPs comprise the main share of the country's biggest institutions and organisations, in addition to some governmental institutions such as the Ministry of Finance, Customs and Internal security. PS1 further expressed that:

> *Internet service providers and data service providers find themselves trapped to get the necessary bandwidth allowing them to access all subscribers including their customers in the whole country providing them with high quality service and fast internet.*

From a regulatory perspective, it was revealed that all stakeholder groups were convinced that the lack of updated regulation and policy had a significant negative impact on the actual infrastructure and development of the Internet. Supporting this, the statement from PS2 emphasised that:

> *The infrastructure is weak, under development, lagging by 5-10 years. That is even if it is developed under current efforts and regulations, cannot catch-up with evolving worldwide standards.*

Supporting this argument, AC2 commented:

> *In the lack of the application of the Telecom liberalisation law and the absence of the Telecommunication Regulatory Authority (TRA) active role, the ministry of telecom is the body that has the major influence over the status quo evolution and the operation of the Internet.*

Focusing on political conflicts as a reason behind the complete non-implementation of Telecom law 431, manifested in the inactive Telecommunication Regulatory Authority (TRA) and the non-establishment of the private-public operator 'Liban Telecom', the participants explained the current unhealthy Internet ecosystem. TC1 stated that:

> *I participated and supported the development and ratification of framework that was supposed to liberalise, regulate and develop telecommunications in Lebanon (Law 431 ratified in 2002). Law 431 led to the establishment of the Telecommunications Regulatory Authority (TRA) as an independent public institution but the TRA role was neutralized for political reasons.*

This statement highlighted the heavy political influence in the country. Supporting this statement and elaborating on the government's role, the CS1 expressed that:

> *The TRA processes included mandatory consultations, but now the
> TRA is dismantled, so the government does what it wants.*

Gov1 expressed her views regarding telecom law 431, acknowledging its importance and admitting its neutralisation:

> *In fact, the telecom law number 431 that was issued in year 2002
> that entails establishing a public-private operator "Liban
> Telecom", privatising the mobile sector and creating an
> independent regulatory authority (TRA) was a good step ahead, but
> it has not been fully implemented.*

The civil society stakeholder highlighted what the government left unstated: why the telecom law is still not fully implemented. CS2 commented on the issue, stating:

> *For political conflicts and religion consideration, "Liban Telecom"
> did not show the light.*

Whereas, TC1 highlighted that:

> *The "TRA" role was neutralized by the sitting Ministers and the
> incumbent public operator, OGERO.*

Findings from the second question revealed additional insight on who governs the Internet in Lebanon currently. There was a consensus (73% of total responses) that the government governed the internet through its agencies and institutions. The in-depth interviews disclosed more detailed information. Table 6.3 shows that 33% of the respondents indicated that the government is in charge, 20% specified that OGERO (the public operator) is in charge, 13% stated that the ministry of Telecommunications is in charge, and 7% of the responses stated that the Telecommunication Regulatory Authority is in charge.

Who governs the Internet in Lebanon currently?	Government	Private	Academic	Civil Society	Int. Organisation	Technical	Percentage
Government		2	1			2	33%
OGERO	1		1				20%
Ministry of Telecom	1			1			13%
Telecom Regulatory authority	1						7%
American University of Beirut		1				1	13%
Unclear				1	1		13%
Grand Total	3	3	2	2	1	3	100%

Table 6.3: who governs the Internet in Lebanon currently?

CS1 Commented on government control stated:

In Lebanon, we have a "double whammy": We have total control of the internet by the government, but the government is not managing this well at all.

Similarly, AC1 approved the above statements by explicitly stating:

Currently, it is the government – and it is driven by pretty local politics.

As showed in figure 6.2, one private and one technical community interviewee identified that the American University of Beirut (AUB) is involved in Internet governance in Lebanon. This can be explained by the role of AUB in handling the country code Top Level Domain (.lb). Additionally, for one civil society and one International organisation informant (13% of total respondents), it was unclear who governs the internet.
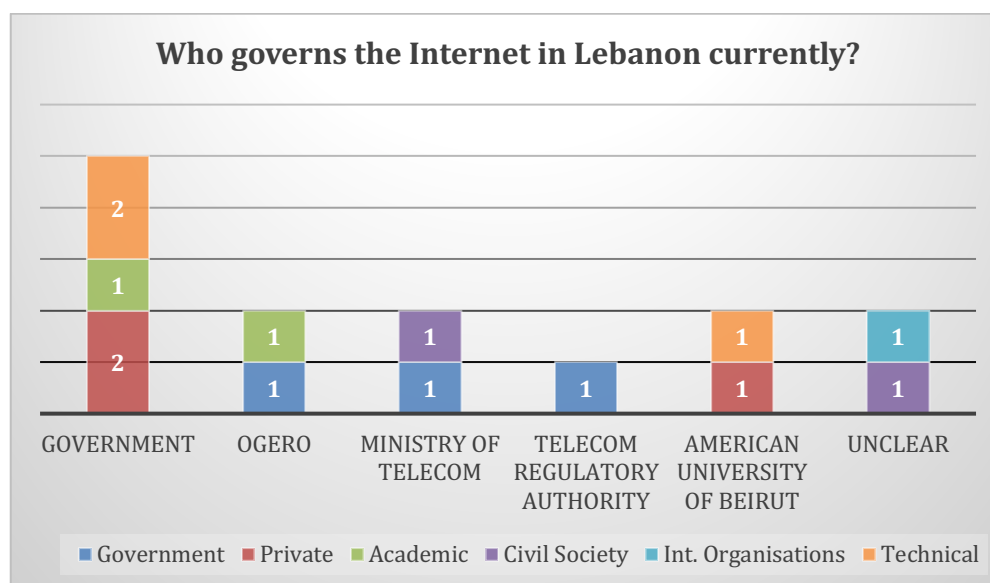
Figure 6.2: Who governs the Internet in Lebanon

6.2.2 The actual involvement of different stakeholders in Internet policy

On the question of how the Internet is governed in Lebanon currently, the majority of respondents answered that it was a monopoly, with 23%, 20% noted a lack of strategy and laws, and 17% noted weak infrastructure. Political interests and lack of coordination scored 10% each, followed by lack of transparency, accountability, and corruption, with a score of 7% each (See table 6.4 and figure 6.3).

How is the Internet governed in Lebanon currently?	Government	Private	Academic	Civil Society	International Organisations	Technical	Total	Percentage
Government Monopoly	1	1	2	1		2	7	23%
Lack of strategy and law	1	1	1	1	1	1	6	20%
Weak Structure	1	1	1		1	1	5	17%
Political Interests		1	1	1			3	10%
Lack of coordination			1	1		1	3	10%
No transparency		1		1			2	7%
Corruption	1			1			2	7%
No Accountability				1		1	2	7%
Grand Total	4	5	6	7	2	6	30	100%

Table 6.4: How the Internet is governed in Lebanon currently?
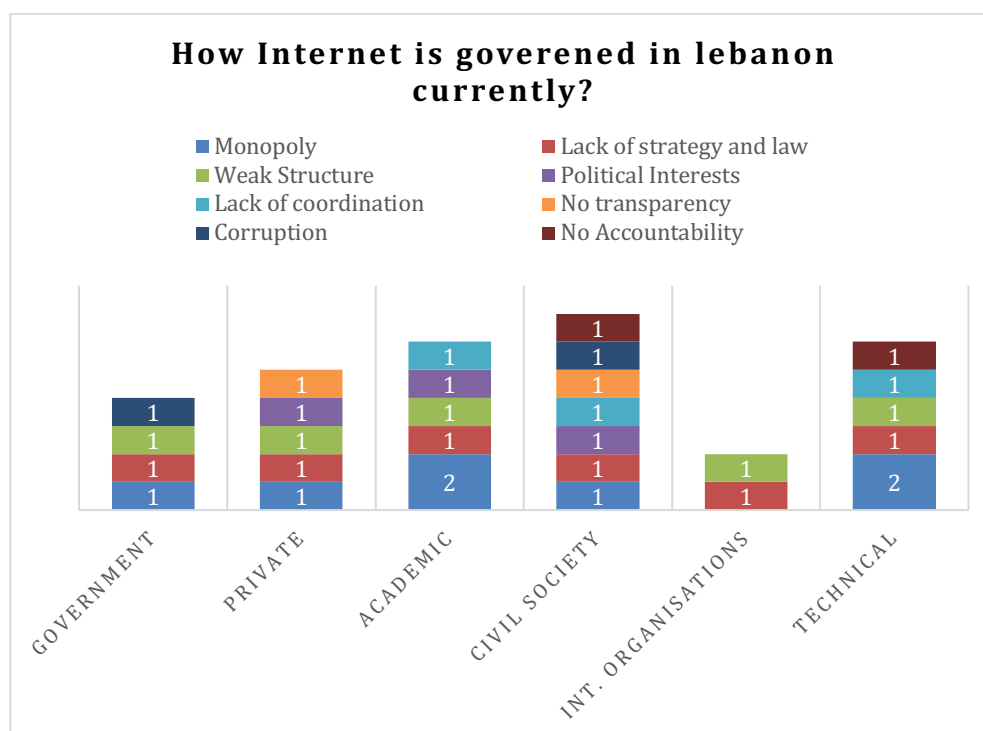
Figure 6.3: How Internet is governed in Lebanon?

The in-depth findings disclosed relevant information on how the Internet is governed in Lebanon currently and how decisions are made. The findings revealed that the government stakeholders involved in the Internet are those that are associated directly with the telecommunications ministry and OGERO, the public operator. In this regard, Gov2 openly summarised the situation:

Historically, the Ministry of Economy played a role in managing the digital economy and implicitly accepted the role of the ccTLD registrar. Currently the role of the Ministry of Economy is diminishing with respect to the role of the Ministry of Telecommunications and OGERO. The decision-making process is top down with no transparency and accountability. The government does not apply consultations with anybody.

And what makes things more challenging in Lebanon is the vast number of Internet stakeholders. Gov2 designated these stakeholders as follows:

The principal stakeholders in Lebanon at the national Lebanese level include but are not limited to: the council of ministers, the ministry of Telecommunications (MOT), the Telecommunications Regulatory Authority (TRA), the 2 Mobile operators, the different economic (and governmental) sectors, the private operators (Data Service Providers, and Internet Service Providers(ISPs) the private

> *sector, the academicians, civil society, ISOC, the Personal Computer Organizations, The different companies in the different economic sectors, the users and the consumer affairs organisations, and the military and security organizations.*

No doubt Gov2 succeeded in listing all the Internet stakeholders, including the Lebanese army, which is involved in allocating and monitoring usage of Internet frequency spectrums. However, it was found that no framework specifies the role of each and coordinates their work, and that each stakeholder understands governance in a way that suits his or her interests. AC2 shed more lights on this:

> *Different governance aspects are being dealt with by different stakeholders. The (.lb) country code Top Level Domain has been managed by one person since the mid-nineties of the last century. The international gateway, IP acquisition and distribution, and backbone and infrastructures are handled by the telecom incumbent OGERO (a subsidiary of the ministry of Telecom). Internet Exchanges, Caching, and other services are handled by private ISPs and academic institutions…. this is a vague and loose model.*

Furthermore, PS2 elaborated:

> *The Private sector (ISPs) with hap-hazard, non-planned efforts, inconsistent follow-up and interest, mostly driven by economic self-interest, with no clear oversight of the overall economic benefits of Internet adoption.*

More specifically, the in-depth findings shed more light on the actual Internet governance process. While the Internet is governed by the Ministry of Telecommunications, the council of ministers is the venue where decisions are parachuted and approved. Gov1 shed more light on the council of minister's role:

> *The council of ministers has the final say especially in setting local and international tariffs.*

Since the government's role was maligned, the follow-up question is this: how easy is it for other, different stakeholder groups to participate in and contribute to Internet governance in Lebanon? The informants' majority answer was "not easy," with 56% of the total responses, followed by "government doesn't allow" with 19%. Table 6.5 shows that one of the civil society interviewees revealed the need for a transparent legal framework to facilitate their involvement, while one of the government interviewees mentioned that there is no dialogue with civil society, which confirms the civil society

concern. Moreover, the technical and government informants indicated that the "government is not interested" in including other stakeholders. The academic also mentioned "political interests" as an obstacle to involvement in Internet governance in Lebanon.

How easy is it for different stakeholder groups to participate and contribute in Internet policy and governance in Lebanon?	Academic	Civil Society	Government	International Organisations	Private Sector	Technical Community	Percentage
Not easy	2	1	2	1	2	1	56%
Government doesn't allow		1	1			1	19%
Political interests	1						6%
No dialogue counterpart for Civil society			1				6%
No framework		1					6%
Grand Total	3	3	4	2	3	3	100%

Table 6.5: How easy to be involved in Internet governance?

The civil society informants specified that their good values and intentions sometimes contrast with the plans and intentions of the government. Even some of civil society views and opinions on certain topics are taboo to the government. CS1 explicitly stated that:

> *Our contribution is not easy at all nor is it welcomed.*

Gov1 commented on civil society's lack of a voice, stating:

> *Civil society is well organized and active; however, it does not have a counterpart for dialogue.*

Almost all the interviewees described Internet governance in Lebanon as a disordered domain that is difficult to contribute to. The technical and government informants revealed that the "government is not interested" in including other stakeholders. This was confirmed by Gov2:

> *It is not easy for the different stakeholders since the ministry have made it clear that they do not consider the different stakeholders important in the Internet governance.*

The findings and the evidence openly reflected in the above statements show and confirm the tight control of the government on telecommunications and the Internet. However, it was found that, for some private elites, the government is playing fair and giving space due to certain common interests. Private sector views on this were very open. PS2 stated:

> *Ministry of Telecommunications/OGERO and some private companies (owned by elites/politicians) interact with each other depending on their interests.*

Further, CS1 elaborated that:

> *In Lebanon, many factors contribute to the lack of good governance, some of which are monopoly within the government and certain private sector companies that do not allow room for growth. Internet in Lebanon is governed by lack of transparency from both public and private sector. There is no clear frame or structure to how it will be developed more, deployed or maintained.*

The in-depth qualitative findings revealed that an initiative involving the different stakeholder groups was initiated but failed due to government antagonism. On this point, TC1 clearly stated that this multistakeholder attempt was hindered by the government, elaborating that:

> *I am also one of the founders of the Lebanese Internet Center (LINC), a bottom-up public-private multistakeholder NGO founded in 2014. LINC is a multistakeholder entity where membership includes associations of companies, syndicates, chambers of commerce, civil societies, universities and government. LINC main responsibility is to manage and operate the لبنان.& lb. country domain name registry.*
>
> *LINC will be invested in capacity and community building activities and projects that promote the positive development of the internet in Lebanon. LINC association was blocked by the Ministry of Telecommunication.*

Describing the actual situation, findings indicated interference by government for political and personal interests.

6.2.3 Multistakeholder Internet governance

One of the major objectives of the qualitative interviews was to solicit interviewees' opinions and understandings about Internet governance; this was achieved through question 6 in the interview. Considering the diversity of the interviewees' backgrounds and the variety of stakeholder perspectives, however, responses to this varied only

narrowly. As revealed and illustrated in table 6.6, four themes emerged from the informants' answers related to their understanding of Internet governance, namely: collaborative governing, infrastructure, decentralization and resource management.

What is your understanding for Internet governance?	Sub themes	Academic	Civil Society	Government	International organisations	Private Sector	Technical	percentages
Collaborative Governance	management and control					1		6%
	administration and development to shape evolution and use of internet						1	6%
	frameworks, rules, procedures to set how internet should work		1					6%
	Policy mgmt., processes, systems, people, technologies, monitoring, interactions, communications, access, privacy for Internet management			1				6%
	global and local standards					1		6%
	set of rules, regulations and process	1						6%
	sets of rules	1						6%
	set of processes for best management				1		1	12%
Collaborative Governance Total		2	1	1	1	2	2	53%
Infrastructure development	access, infrastructure, maintenance, technology deployment			1		1		6%
	sharing decision making to create better infrastructure		1	1				6%
Infrastructure total			1	2		1		24%
Decentralisation	distributed and collaborative	1						6%
	decentralized	1						6%
Decentralized total		2						12%
Resources Management	managing Internet Resources			1				6%
Resources management total				1				6%
collective benefit	maximizing interests		1		1			6%
Collective benefits total					1			6%
Grand Total		4	2	5	2	3	2	100%

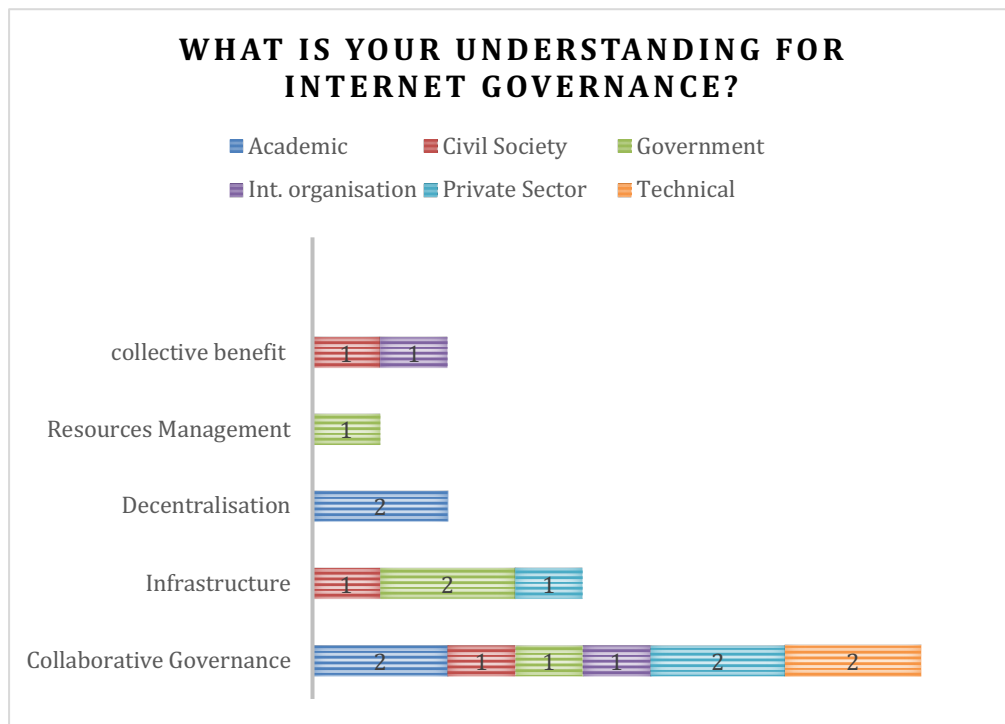Table 6.6: Internet governance as perceived by the interviewees

Figure 6.4: Internet governance understanding

Figure 6.4 illustrates the consensus of the stakeholders on the importance of collaboration, which is the primary component of Internet governance. This indicates that the informants are familiar with Internet governance and its principles. The in-depth Interview findings revealed that 53% of the interviewees described Internet governance as "collaborative governing", and 24% - namely, government and private - perceived it as infrastructure development. More specifically, the following sub themes and topics were derived from the data analysis of each multistakeholder group:

For the government, Internet governance is the management of people and infrastructure, of interaction between different processes, and of regulation and policies. Gov1 stated that:

> *Internet governance is the process of managing Internet resources.*
> *It is an ensemble of bodies, processes, and methodologies used to*
> *manage the Internet infrastructure.*

Also, Gov2 elaborated:

> *Internet governance is the total system of governing the Internet*
> *including policy, regulations, management, processes, systems,*
> *people, technologies, monitoring to guarantee usage, growth,*

> *benefits, interactions, communications, access to information and to others/all, security, privacy, rights, responsibilities/duties, etc.*

For the private sector, Internet governance is the management of the Internet developed by the Internet community, including regulations and appropriate laws. PS2 specified that:

> *Internet Governance is the collective activities, processes, mechanisms, regulations and laws that determine how the Internet is managed. These are incepted, instigated, developed, promoted, regulated by stakeholders in the Internet community.*

Supporting the neutrality and efficacy of the Internet governance process, PS1 defined Internet governance as:

> *A non-profit and non-aligned body that sets rules, regulations and creates awareness for the use, evolution and promotion of the Internet.*

The academic representative mentioned solely "decentralization" as a requirement of Internet governance in addition to the traditional definition: a set of rules, regulations and processes. AC1 illustrated that:

> *Internet governance to me are a set of rules that all operators abide by to ensure that the principles on which the internet was founded are preserved. Internet governance should be defined and managed in a "federated" and "decentralized" manner such that no one entity (or small group of entities) can dictate their rules and principles on the rest of the internet community.*

The views of the technical community and International organisations on Internet governance is the WSIS definition. TC2, for example, stated:

> *I define Internet Governance as how it was defined in the Tunis Agenda of 2005; "Internet governance is the development and application by all stakeholders in their respective roles, of shared principles, norms, rules, decision-making procedures, and programs that shape the evolution and use of the Internet".*

For CS1, Internet governance is:

> *The interaction of all internet stakeholders in decision making process in order to create a better working internet structure.*

These are important insights on Internet governance; one can observe that only the TC2 and IO cited the WSIS definition of Internet governance referenced in the literature review.

Question number 7 -on multistakeholderism- reveals that the interviewees had full awareness of the term; "engaging all stakeholders" was the highest common theme, with 43%, followed by "representation from several sectors," with 29% of the total responses. Note that the Private sector and government representatives tackled the theme of "inclusion in decision making," with 14% from the total responses. Additionally, the term "Transparency" was raised by the technical community, which is a key element and a necessary one for the multistakeholder process (see table 6.7).

What does the term "multistakeholder" means to you?	Academic	Civil Society	Government	International Organisations	Private Sector	Technical	Grand Total	percentages
Engaging all stakeholders	1		1	1	1	2	6	43%
Representation from all sectors	2	1	1				4	29%
Including all parties in decisions			1		1		2	14%
Involving people interested in Internet	1						1	7%
Transparency						1	1	7%
Grand Total	4	1	3	1	2	3	14	100%

Table 6.7: What "multistakeholderism" means for the informants

Generally, the interviewees had the same views on multistakeholderism. However, there was a divergence in positions on how to implement it. A statement from PS2, defining multistakeholderism, can be highlighted here:

> *Stakeholders from different sectors should equally contributing to the same objective*

The definition given was similar and straightforward; "engaging all stakeholders" was the most prominent common theme, followed by "representation from several sectors". Gov1 expressed his views:

> *Multistakeholderism is the set of efforts of actively engaging the different players and stakeholders of the society (government, private sector, civil society, academia, technologists, users, and others) in policy making and in governance.*

TC1 similarly stated that:

> *Multistakeholder is bringing all stakeholders (Governments, Private Sector, Civil Society, and Academia and Technical Community) together to the table to work together in an open and transparent environment*

Therefore, a model of multistakeholder Internet governance could be an opportunity and an alternative to change this status quo that entails the overall development of the Internet. TC2 highlighted that:

> *A national Internet governance environment is a good venue for people from different needs and backgrounds to come together and discuss how to better the Internet ecosystem. Key challenges would be the buy-in; mainly in the initial steps leading to such a framework. However, many opportunities can arise if the forum is in the hands of the right people, and is conducted in a bottom-up, multistakeholder, and transparent manner.*

Focusing on the importance of such a multistakeholder framework, CS1 elaborated that:

> *It will be very important; a change trying to make a better governance and create advanced infrastructure that can provide better services for users and other citizens.*

Further, AC2 explained that:

> *Lebanon environment is very well suited to have a multi-stakeholder governance model due to the strong civil society and the private sector.*

The interviewees entirely agreed that a suitable Internet governance framework is important to put Lebanon back among the developed and advanced countries. The informants highlighted the opportunities and identified number of challenges facing multistakeholder processes in Internet governance. Specifically, the opportunities identified by interviewees are as follows: inclusiveness and transparency, sustainable development, attracting international funds and encouraging investors, and bottom-up decision-making. Challenges to a multistakeholder process that were identified include:

government influence and power gaps, political interference, building a culture of trust in a society with stakeholders of diverse political and cultural backgrounds, equal representation among stakeholders and securing adequate and sustainable funding to keep the multistakeholder process evolving (see table 6.8 & figure 6.5).

How importance and effective will be the national Internet governance environment for you as a stakeholder? Challenges and opportunities?	Academic	Civil Society	Government	Int. Organisations	Private sector	Technical community	Total
Extremely important	2	1	1		1	2	7
Important		1		1		1	3
Challenges							
Implementing ICT policy	1		1		1	1	4
Government and political Interference		1			1	1	3
Build a culture of trust		1	1		1		3
Power gap		1					1
Equal Representation				1			1
Funding the process			1				1
Many other issues such as security			1				1
Opportunities							
Sustainable Development	1	1	1	1	1	1	6
Inclusiveness and Transparency		1	1		1	1	4
Bottom-up process	1					1	2
Encourage investors						1	1
Grand Total	5	7	7	3	6	9	37

Table 6.8: Importance, challenges and opportunities of national Internet governance
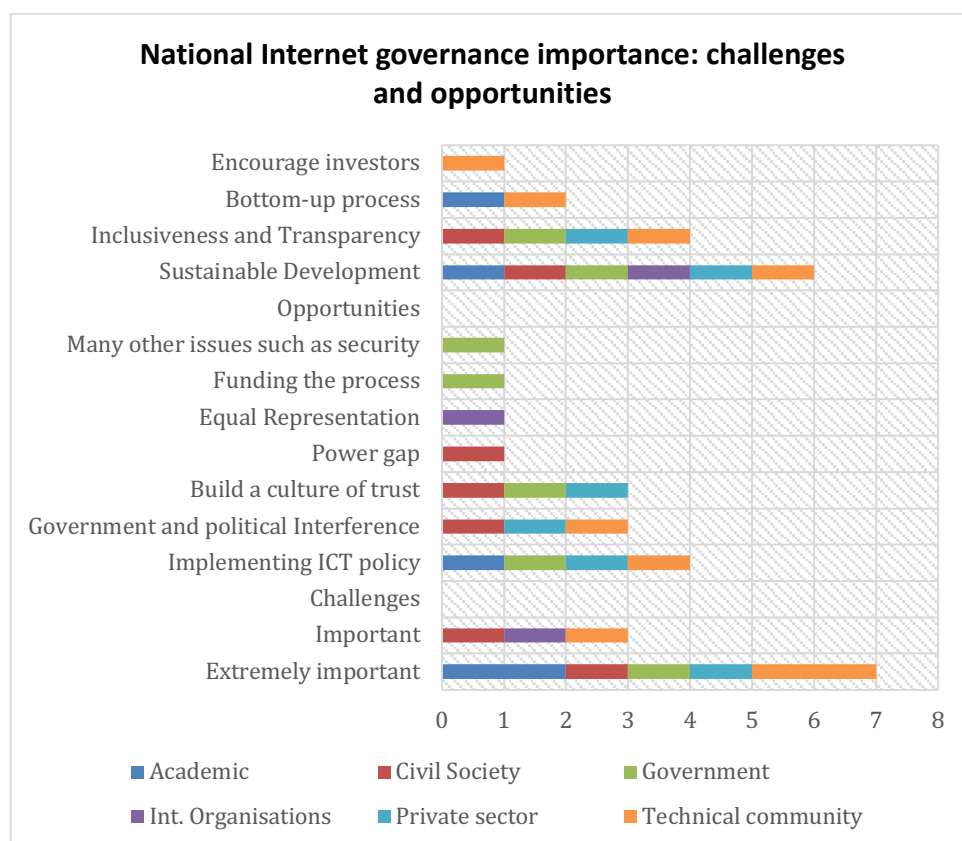
Figure 6.5: Opportunities and Challenges of Internet governance

Emphasizing these challenges, Gov2 thought that:

The principal challenges for the Internet governance in Lebanon are: Corruption, Political Instability, Politicizing ICT, Absence of a futuristic, open and stable ICT policy, Lack of willingness to put the law in effect, Control by one person/entity, Absence (pushing out) of the private sector, Inefficiency of the governance system and engagement of the different stakeholders.

Further, reflecting on the challenges of Internet governance, PS2 categorised these challenges on two levels: the legal level and that of the stakeholder:

On stakeholder level, the challenges are the Individual non-coordinated activities, with clashes of interest, and lack of real driving force. Additionally, the legal system is under development, and long overdue, stuck within the realm of political clashes, again by the time it catches-up, new issues will emerge.

More specifically, focusing on the challenges of political conflict, AC2 elaborated:

It should be fairly easy to have different stakeholders contribute to Internet policy and governance, provided that these policies do not

interfere with political interests, but it is not the case.

To the follow-up question whether there is any source of amelioration or a mechanism in place at the national level to address Internet-related challenges, the majority, including Gov1 and Gov2, simply answered "no". However, some informants indicated that the mechanism is "getting slightly better" as TC2 stated:

> *At the moment, no. However, with the changes that took place in Lebanon within the Ministry of Telecom and its main Internet arm OGERO, I can see changes on the horizon.*

Other stakeholders considered it to be "getting worse". TC1 contended that:

> *No, I believe that the gap between the Internet society in Lebanon and the political establishment is very wide and that the situation deteriorated after the Snowden incident and subsequent Internet governance activities spearheaded by ESCWA. I foresee that the Lebanese government is heading more and more toward imposing restrictive controls over the Internet.*

For their part, academic and technical representatives stressed once again the need to activate Telecom law 431 and give the Telecommunication Regulatory Authority (TRA) independence and power. For example, AC2 commented that:

> *All telecom related challenges, including the Internet, would be faced and managed properly by the telecom liberalization law (law 431/2002) or an updated version of this law. It just requires a political decision to implement it.*

The informants agreed that these challenges will have direct and indirect implications for implementing a national strategy and developing Internet infrastructure and services. Confirming this, CS2 explained that:

> *Not working on the Internet governance challenges will imply a lack of clear strategy to define the country needs and requirements for safe productive internet, and delay of infrastructure and services development.*

6.2.4 The impact of Internet governance on economic growth

Is the Internet important for Lebanon's development and economic growth? All the interviewees stressed that the Internet can contribute positively to economic growth and social development. This question seeks the informants' views on the economic benefits that can be gained by developing the Internet and its associated information and communication technologies. The informants' input on the implications of the Internet in Lebanon are summarised in table 6.9.

Is the Internet important for Lebanon's development and growth economy?	Sub Themes	Academic	Civil Society	Government	International Organisations	Private sector	Technical	Grand Total	Percentage
Economic development	Support other industries	1	2	1	1	1	2	8	25%
	Increase GDP	2	1	1	1	2	1	8	25%
	Encourages Entrepreneurships		1	1		1	1	4	13%
	Job Creation		1	1		1		3	9%
	Enhanced management and productivity	1				1	1	3	9%
	Innovation	1				1	1	3	9%
	Decrease transaction costs	1		1		1		3	9%
Total		6	5	5	2	8	6	32	100%
Social Implications	Inclusiveness			1		1	1	3	38%
	Diversity	1	1		1			3	38%
	Communications with Lebanese Diaspora			1		1		2	25%
Total		1	1	2	1	2	1	8	100%

Table 6.9: The importance of the Internet for Lebanon's economic growth

The results showed that 50% of the respondents indicated that the Internet affected economic growth positively by supporting other industries and increasing the country's GDP. Furthermore, it was found that 13% of the respondents believed that the Internet encourages entrepreneurship, job creation, innovation and transaction cost-reduction. All of these components received an equal share (9%) of the overall responses. Furthermore, and addition to the economic implications, another theme -social implications- emerged: the findings indicated inclusiveness and diversity as top benefits of Internet governance, with 70% of the responses. Towards exploring the impact of multistakeholderism on the economy, for example, AC1 stated that:

> *Yes, establishing neutral and independent multistakeholder internet governance in Lebanon that upholds the principles on which the internet was built will be the single most important step in supporting Lebanon's economic development.*

More obviously, answering the question on how multistakeholder Internet governance can best support Lebanon's economic development, TC2 focused on the impact on the GDP stated:

> *For sure. Today, the digital economy (Internet Economy) contributes to 4-5% of the global economy. And with the turbulent economic situation worldwide, the Internet economy is a bright ray of light.*

Additionally, PS1 expressed that:

> *By having a proper Internet governance, we will create a positive climate for entrepreneurs and consumers by providing guarantees and a managed sector. Hence, develop the ability to attract more investments and skills workforce while increasing the GDP and strengthen the economy in Lebanon.*

Further, CS2 recalled some studies on the positive impacts of Internet development on the economy, expressing that:

> *Very important as clearly showed by various studies correlating broadband and mobile penetration with national GDP growth, employment, entrepreneurship and other important metrics.*

Supporting the above statements, CS1 stated that:

> *I definitely believe that internet and its governance is important not only for Lebanon but for every country's development and growth for the economy. It is directly proportional to the GDP of a country as proven by a study conducted in the world bank.*

The contribution of multistakeholder Internet governance to the Lebanese economy was found to be substantial. The views of the informants on the positive effect of multistakeholder Internet governance are noted in table 6.10. It was found that the positive impact of multistakeholder Internet governance was multifaceted: interviewees said that such governance supported other economic sectors (45%), increased transparency and accountability (27%), and improved competitiveness (18% each). Furthermore, better coordination and more efficiency, transparency and accountability

were also cited as benefits of multistakeholder Internet governance. CS1 considered that:

> *Multistakeholder Internet governance can support Lebanese growth by taking into consideration the roles of all stakeholders and integrating them into creating one entity. We need to make the current entity accountable to the people and the people as a watch dog to the government and private organisations.*

Gov2 elaborated that:

> *The different stakeholders need to organise into a non-allied group that lobbies with the public and the government to push for an open Internet agenda that drives social and economic growth and improved competitiveness for Lebanon and its products and services.*

How can multistakeholder Internet governance best support Lebanon's economic development?	Academic	Civil Society	Government	International Organisation	Private sector	Technical	Percentage
support other economic sectors	1	1	1		1	1	45%
Transparency and Accountability	1	1			1	1	27%
Enabling environment	1	1					18%
Improves competitiveness			1		1		18%
Better coordination						1	9%
Inclusiveness		1		1			9%
Efficiency					1		9%
Social development			1				9%
Grand Total	3	4	3	1	3	2	100%

Table 6.10: How multistakeholder governance supports economic growth?

6.3 Conclusion

This chapter presented the findings of the qualitative data revealed from the interviews, in which two samples from each stakeholder group were selected for a semi-structured, in-depth interview to provide insight on Internet governance and its importance in achieving the country's development and economic growth. The qualitative data was categorised into meaningful patterns helping to answer the research questions, enriched by key informants' quotations.

For data comparison purposes, the qualitative data was structured and analysed under the same four thematic sub-areas as was the quantitative data: the actual Internet infrastructure status and who is in charge, the degree of involvement of different stakeholders in Internet policy, multistakeholder Internet governance, and the impact of Internet governance on economic growth.

One of the major objectives of the qualitative interviews was to solicit interviewees' opinions and understandings about multistakeholder Internet governance. Four themes emerged from the informants' answers: collaborative governing, infrastructure, decentralization and resource management. Also, there was full awareness of multistakeholderism and strong support for its principles and values.

The in-depth findings showed that the respondents specified that the Internet affects economic growth positively by supporting other industries and increasing the country's GDP.

Chapter 7: Findings, Discussion and Conclusion

7.1 Introduction

This thesis has investigated the interactions and relationships between the Lebanese stakeholders involved in the Internet and its policy, and the impact of Internet governance on Internet development and Economic growth. To achieve the research aim and objectives, this mixed methods research used as a research paradigm a pragmatic epistemological approach employing a concurrent parallel data collection design. In doing so, a theoretical model was developed and validated empirically and theoretically. This was particularly helpful in developing a clear and more complete explanation of the impact of Internet governance on the Internet and economic performance.

This chapter discusses the overall findings, bringing chapters 5 and 6 together into a coherent discussion on the perception and views of the Lebanese stakeholders on multistakeholder Internet governance and on its impact on Internet development and the country's economic growth. It discusses the in-depth findings from the qualitative interviews, validating the quantitative survey results. This combination is not only to examine the data convergence or validate/contradict theoretical arguments but also to achieve triangulation through integrating the quantitative results with in-depth interview findings enriched by the key informants' quotations. This mixed-methods research incorporates triangulation by integrating qualitative and quantitative data (Amaratunga and Baldry, 2001), validating convergence of data and suggesting conclusions. Hence, this chapter presents, compares, triangulates, interprets, discusses and validates the findings and the conceptual model in relation to the research aim and objectives.

The findings are summarised in this present chapter in an endeavour to address the theoretical and practical implications as well as the impact of the study. The chapter concludes with a discussion of the limitations of the study, future research directions and conclusion.

7.2 Findings and Discussion

The discussion begins by examining the findings on the actual status of Internet infrastructure and who is in charge and proceeds with an examination of the degree of involvement of different stakeholders in Internet policy. Then it will examine multistakeholder Internet governance as it is defined in the literature in relation to the views expressed by the participants and their views on the impact of Internet governance on economic growth.

To ensure understanding of the significance of Internet governance in a Lebanese context, it was essential to examine the actual status of Internet infrastructure and Internet governance. Internet infrastructure constitutes the main pillar for Internet connectivity: deployment of new technologies such as Internet Protocol version 6 (IPv6) gives an indication of the networks' advancement, since Internet Protocol version 4 (IPv4) is globally depleted and networks need to be upgraded to satisfy the increasing demand for Internet connection. In this context, the quantitative descriptive analysis on the actual status of Internet infrastructure showed that the mean of Internet connection and Internet Protocol version 6 (IPv6) is far below average. This undesirable situation was confirmed qualitatively by the in-depth interviews, the results of which showed little divide between the different stakeholders, especially the government. The informants qualitatively assessed the current infrastructure as a hoary national network that is not able to provide sufficient Internet capacity, which creates a bottleneck for connectivity and service affordability. It was revealed that this undesirable situation is due to the current long-standing infrastructure with limited bandwidth that is owned by the government. It was found that OGERO, the telecom/Internet public service provider, has exclusivity in getting International internet bandwidths to Lebanon and owns and operates the whole landline network. Consequently, the private Internet Service Providers (ISPs) depend on OGERO's infrastructure to provide their Internet services. This was confirmed by TC, stating that:

> *Ministry of Post & Telecommunications (MPT)/OGERO provides the international connectivity and backbone infrastructure for all telecom networks including mobile operators, data service providers, internet service providers (ISP).*
> *MPT/OGERO allocates the waveband frequencies, authorises or blocks services and sets the prices.*

Moreover, the findings revealed that outdated regulations and policies have a significant negative impact on infrastructure improvement and the development of the Internet overall. In this context, the non-implementation of the new Telecom law 431 was identified as being a significant obstacle to enhance and develop the Internet and telecommunications in Lebanon. It was found that the ministry of telecom is the body that has major influence over the status quo evolution and operation of the Internet in the absence of the Telecom liberalisation law and of an active role for the Telecommunication Regulatory Authority (TRA).

This clearly hints that the Internet governance landscape in Lebanon is plagued by the government's monopolistic policies imposed by the ministry of telecommunication and the incumbent operator OGERO, which are based on an outdated and obsolete telecommunication regulatory framework. These findings impose a complex situation confirming the theoretical assertion on the regulatory state and contradicting the public interest theory that liberal economists criticised. These economists criticised the notion of public interest in regulation and argued that government regulation is the result of the selfish actions of politicians and bureaucrats, in alliance with self-interest groups. According to Edelman (1964), attempts by governments to regulate industries tended to be symbolic politics, which appease consumers by providing them with symbolic regulation, rather than actually regulating industry to provide concrete benefits.

This thesis strongly agrees with the views of liberal economists and the Chicago School of regulatory policy, who argue that markets operate effectively and can be perfectly self-sustaining, while politics is seen to be imperfect, serving narrow particularistic interests and being compulsive in nature (Stigler, 1971; Posner, 1971 & Peltzman, 1976). The thesis endorses this view in the context of Lebanon, where not only the Internet sector, but also other essential and critical sectors such electricity and water, suffer from the politicians' selfish actions. Gov2 explicitly admits and validates this theoretical argument where he openly expressed:

> *The Internet in Lebanon is currently governed by the seat of the pants and by following personal well, and desires, and by doing what has personal and party returns and benefits.*

The findings converge on the involvement of different stake holders in current Internet policy, citing the heavy involvement of the Lebanese government in Internet governance

and the voicelessness of civil society and other stakeholders. The quantitative result converges with the qualitative findings, revealing the difficulty non-governmental stakeholders face in increasing their participation. Moreover, it was also revealed and noted that there is no dialogue with civil society regarding Internet governance. Gov1 confirmed civil society's lack of voice, stating:

> *Civil society is well organized and active; however, it does not have*
> *a counterpart for dialogue.*

Overall, almost all the interviewees described Internet governance in Lebanon as a disordered domain where it is difficult to contribute. The findings revealed that the government is not interested in including other stakeholders. This was explicitly confirmed by Gov2:

> *It is not easy for the different stakeholders since the ministry have*
> *made it clear that they do not consider the different stakeholders*
> *important in the Internet governance.*

The findings and the explicit statements clearly indicate the tight control of the government and contradict both the economic and State theory. The theoretical argument in economy suggests that regulation was a government response to public demand for intervention due to ineffective or unfair business practices (Breyer, 1982; Noll; 1989; Ogus,1994). Moreover, the main purpose of the Regulatory State is to improve the efficiency of the economy, promote competition, and protect consumers and citizens (Sunstein, 1990; Majone, 1996; Braithwaite, 2000). Here, the government is protecting its monopoly and the demand for good regulation is coming from outside the government to contest its control over the Internet.

In this context, it is important to note the divergence between informants' views towards the government role and involvement in Internet. This is can be explained by the idiosyncratic relationships and the level of interaction and cooperation between some private elites and government; it is a subjective evaluation. For example, some government projects go to privileged private elites, so government is seen by these private stakeholders as a fair player affording space to other stakeholders. However, this was not the case for the Lebanese Internet Centre (LINC), the creation of which the government opposed, as was revealed by TC1, who clearly stated that this private-public attempt was hindered by the government for political reasons:

The Lebanese Internet Centre (LINC) was blocked by the Ministry of Telecommunication for political reasons.

These findings explicitly contradict the theory of Retreat of State that fall under the State theory that believes that non-government stakeholders and markets are stronger than states and argued that states are becoming weaker due to more power being shifted towards other actors, which is not the case for Lebanon. In describing the actual situation, findings indicated a government regime composed of political and personal interests and a lack of coordination and accountability.

Almost all participants agreed that a suitable framework for multistakeholder Internet governance is important to putting Lebanon back among the advanced countries. This process faces a number of challenges. These include government influence and power gaps, political interference, lack of coordination and trust, the need for equal representation among stakeholders, clashes of interests and corruption. These challenges in fact recognise the complicated situation and the importance of putting in place a mechanism or process to address it. Asked whether there is a mechanism in place at national level to address these Internet-related challenges, and whether the situation is changing, the responses varied from "no" (from the government) to "getting slightly better" to "getting worse".

Admittedly, the concept of multistakeholder Internet governance is still very vague, and the roles and responsibilities of different actors are yet to be defined. This thesis recognises that multistakeholderism is too often employed uniformly and even uncritically. Just as it is a misnomer to speak of Internet governance as a single practice, it is also a misnomer to speak of a singular multistakeholder model. One of the most problematic aspects of the multistakeholder approach is the very meaning of "participation" in political processes and the underlying vision of governance (Padovani, 2005). It is clear that power-sharing and working relations between governments and non-governmental stakeholders are in constant flux and vary according to the authority relations between stakeholders. Drake (2011) argues that the scope of stakeholder participation remains too narrow; while there has been much debate in recent years about the "democratic deficit" in multilateral institutions, multistakeholderism unquestionably faces its own challenges with respect to participation and accountability.

Finally, on the topic of multistakeholder Internet governance as a driver of Internet development and economic growth, the qualitative findings confirm the quantitative results, i.e. that 89% of the respondents believed that Internet governance can contribute positively to economic growth. Clearly, the results obtained from the responses of the open-ended survey question and the findings from the interview on how Internet governance can impact the economic growth, included: economic and financial performance, increased GDP, improvement in productivity and quality of services, fair competition and management efficiency.

This indicates that multistakeholder Internet governance is a substantial contributor to Lebanon's economy. According to Putnam (2000), one way to understand how institutions and regimes may influence economic behaviour and innovation in a cluster is to examine how connections or social networks among individuals in a community influence economic development. This is in line with Granovetter (1973, 1985) and later Uzzi (1996, 1999), who argue that strong bonds formed by people of differing identities, business interests, professional associations and networks contribute to economic development. Accordingly, it is in the interests of the government to seek a healthy and strong multistakeholder environment and to meet the enthusiasm of the other stakeholders. Supporting this argument, a statement from Gov1 may be highlighted:

> *It would be nice for the country to have a position on multistakeholder Internet governance. It would also be very useful to have a high-level ICT policy for the country (if not a strategy). This would help bring clarity into the understanding of the ICT sector and encourage domestic and foreign investors.*

Gov2 elaborated that:

> *The different stakeholders need to organise into a non-allied group that lobbies with the public and the government to push for an open Internet agenda that drives social and economic growth and improved competitiveness for Lebanon and its products and services.*

These comments portray willingness by the government to take into consideration multistakeholderism as a governance model. However, the different stakeholder groups (Private sector, Technical community, Academic and Civil society), had concerns on how the government and its institutions would deal and cooperate with other stakeholders related to this critical and important issue. While disputes over the

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government's dealings with other stakeholders occur, this study revealed that these disputes also occur between different stakeholders in regard to their views on the government's role, though not in a uniform manner. In the context of the projected government involvement in Internet governance, a statistically significant difference was detected between the stakeholder groups, with p= 0.025 < 0.05. This indicates divergence in stakeholders' views on the ideal level of government involvement in future Internet governance. We can argue that the more a stakeholder is involved with the government, for whatever reasons, the more he/she would like to see the government stay in control. Therefore, these stakeholders fear losing government lobbying, which would impact their businesses or personal interests. Other stockholder groups, like civil society, on the other hand, encourage less government control. Emphasising and supporting this reasoning, CS1 considered that:

> *Multistakeholder Internet governance can support Lebanese growth by taking into consideration the roles of all stakeholders and integrating them into creating one entity. We need to make the current entity accountable to the people and the people as a watch dog to the government and private organisations.*

This confirms and supports the literature in the ongoing debate over the government's role in Internet governance, which has been and still is a controversial issue among scholars.

It can be concluded that the above discussion, supported by key informants' comments, reveal that a suitable framework of multistakeholder Internet governance is important to putting Lebanon back among the advanced countries in the area of digital economy. These findings support the majority of the empirical evidence in the literature as well as the World Bank study, the International Telecommunication Union Index, and the Boston consulting group report, which were referenced in this research. These studies show that multistakeholder Internet governance significantly influences a country's economic development and growth. Reflecting on the government's position regarding the importance and impact of the Internet, all stakeholders agreed that the Internet happens to be the most important element for Lebanon's development and economic growth. Gov1 stressed that the economy is linked to industrial performance, which today relies on the Internet as a main enabler, stating:

The media and advertising sector, banking and finance sector, which are ones of the strengths of Lebanon, are very much dependent on the Internet. Also, health and education sectors, which historically had a regional competitive advantage are being "punished" by the lack of good connectivity.

7.3 Model Validation

Through review of the literature, a conceptual framework can be developed to promote a 'progressive problem shift' that yields a new perspective, with more explanatory and predictive power than is offered by existing perspectives, on the literature itself (Strike & Posner, 1983). Thus, extensive review of relevant academic literature and pertinent theoretical literature suggested the need to develop a conceptual model to illustrate the dynamics and factual relationships between different Lebanese stakeholders and to empirically verify the influence of Internet governance on the economy.

The proposed model "MIG-L" has been developed (presented in chapter 3), mapping the five independent variables (government, private organisations, civil society, technical & International organisations and the academic community) and the two dependent variables (multistakeholder Internet governance and economic growth). The proposed model is characterised by regular, multidirectional and sustainable relations wherein the stakeholders are able to discuss and collaborate in an open, transparent environment to reach common agreements. These micro-negotiations lead either to robust structure that enable and promote or fragmented and weak structure that discourage and prevent the development of substantive governance processes. The proposed model predicts that the more robust the structure of Internet governance, the faster the rate of development of the Internet and of economic growth.

One of the validation processes of conceptual models consists of two basic validating approaches: empirical and theoretical. Flood and Carson (1993) present a number of approaches that can be used for the validation of models. They mention empirical validity, which checks whether the models correspond with the available data, and theoretical validity, which involves comparing the models with accepted theories. Similarly, Mohring (2002) claims that qualitative validation is at least as important as understanding the outcomes of models when combined with theoretical and qualitative

knowledge. Accordingly, the researcher uses empirical/theoretical validity to validate the conceptual model 'MIG-L' in this study.

Having examined multistakeholder Internet governance as a driver for Internet development and economic growth, the findings of this research show that the different stakeholders support and desire an approach to multistakeholder Internet governance that will have a significant impact on Internet development and economic growth in Lebanon. The statistical findings lend support to the qualitative result: no statistical significance was found among the different stakeholders regarding their consensus around multistakeholder Internet governance. These findings support the majority of the empirical evidence in the literature as well as the World Bank study, the International Telecommunication Union Index, and the Boston consulting group report, which were referenced in this research.

The outcome of this research and comparison of the 2 case studies (Brazil and Kenya) with the situation of Lebanon have also contributed to the validation of the conceptual model. These 2 case studies illustrate how multistakeholder participation in internet governance is shaped by social negotiations, and they show how governance impacts the Internet and economic performance.

While the Brazilian and Kenyan models are taken as examples of successful multistakeholder approaches, Lebanese efforts to make adopt a similar approach have failed. In the absence of stable government in post-conflict Lebanon, multistakeholder partnerships have been critical to the build-up of the country's core Internet infrastructure (Almeida, 2017). Various attempts have been made to coordinate different initiatives through a multistakeholder approach, but no comprehensive result exists to date. Different strategies were put in coordination with the ICT Coordination Office at the Prime Minister's office, but the Lebanese government did not adopt a strategy; bits and pieces of different strategies and action plans were executed in silos (WEF, 2017). As multistakeholderism in Internet governance failed to take place, the micro-negotiations between the different stakeholders led to relationships that discourage and prevent the development of any new regime of governance. The slow growth in Lebanon and many developing countries in the Middle East and North African countries has been disappointing over the last decade (Emara & Chiu, 2016). This supports the foundation

of the conceptual model suggesting that a weak governance structure will result in slower Internet development in which additional features of performance will suffer.

From the more optimistic perspective, Brazil provides a best-case-scenario study of multistakeholderism in the field of Internet governance at a national level that fits the Lebanese, since Brazil was experiencing a contentious political conflict at the same time that Internet issues were being fought over. Created by national law to coordinate and integrate all Internet service initiatives, the CGI is a corporatist body with a fixed number of representational slots allocated to specific sectors: the government, business, civil society (known as 'the third sector' in Brazil), and academia (Mueller & Wagner, 2014).

The Brazilian story was about a powerful coalition of pro-monopolist parties opposed by a party promoting an Internet governance coalition. A group of stakeholders saw the need for a new governance model and began to think about alternatives to Embratel, the incumbent monopoly. Soon afterward, the Minister of communications invited several people to discuss possible reforms. The outcome of these interactions was not a one-off transaction but a long-lasting strategic restructuring of the basic rules of Internet governance. These micro-level interactions across the stakeholders had major consequences for later Internet governance. Not only did the minister declare Internet a value-added service, he decreed that state companies would be forbidden to compete in Internet markets, leaving the arena open to private firms. Most ISP business people in Brazil confessed that, without the decree, they probably wouldn't be in business. It is almost certainly the case that, as a result of the governance reforms, Internet services are far cheaper and delivered more quickly to more people than would have been the case under the state monopolies. Restructuring governance had real consequences for service delivery, and it contributed to real differences in performance (Wilson, 2005).

Here, we can argue that the battle over governance in Brazil was conducted very much in line with what a MIG-L model predicts: strong social interaction among stakeholders, built on trust and cooperation, in which the outcome was a long lasting and robust structure of governance that shaped subsequent behaviours and performance in the national Internet market in Brazil.

The second case study is Kenya, which is widely regarded as one of the most vibrant Internet governance communities in Africa. Participants from the media, business, civil

society, academia, and development sectors were invited by the government to create the KICTANet. According to Adam et al. (2007), KICTANet was specifically designed to welcome multistakeholder participation due to the 'perceived strength and effectiveness in joint collaborative policy advocacy activities, which would be based on pooling skills and resources' (p. 26) as opposed to wasting resources in 'competing, overlapping advocacy' (Munyua, 2016; p. 213). This resulted in a strong ICT sector that contributed substantially to the growth of Kenya's economy, reportedly having been responsible for up to one quarter of the country's gross domestic product (GDP) over the past ten years (Munyua, 2016). Suitably, this validates the conceptual model "MIG-L," which predicts a causal relationship between the architecture of MIG-L on the one hand, and the subsequent performance of the Internet and the economy on the other. One can be more pointed: the more robust the structure of the Internet governance, the faster the rate of development of the Internet and of economic growth.

These case studies show that Internet governance practices vary from one country to another, notably with respect to the role of governments. However, it shows (and "MIG-L" posits) that governments are both necessary and inevitable to initiating and leading the process of multistakeholder Internet governance, even if the level and nature of their involvement differ from one country to another. Yet, the more robust the architecture of the governance, the better the performance of the Internet.

Moreover, the extant empirical literature on stakeholder theory is supportive of a positive relationship between stakeholder-oriented management and performance, which is almost always measured in terms of financial returns. Most of this empirical literature took stakeholder performance as the independent variable, with economic performance as the dependent variable (Berman et al., 1999; Choi & Wang, 2009; Hillman & Keim, 2001). This thesis underpins this perspective and asserts the argument, found in stakeholder literature, that when stakeholder interests are overlapped or joined, performance is proportionally better (Dyer & Singh, 1998; Freeman, 1984; Freeman, Harrison & Wicks, 2007). Hence, the consensus around multistakeholder Internet governance as a suitable framework for economic growth, conceptualised in 'MIG-L', is also theoretically validated. The findings revealed unanimous support and endorsement from different stakeholders regardless of the density and complexity of the process, especially the relation between the government and other stakeholders and their respective roles.

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As argued earlier, government regimes in developing countries oppose multistakeholder governance and make the case for their control on the Internet by citing their duty to protect their citizens from cybercrimes or even from terrorist acts. The debate on the role of governments in providing governance has had its share of controversy, especially concerning the extent and role that government and other stakeholders can effectively play. Globalisation theorists seem to argue that governance is a process dominated increasingly by governments. Conversely, what many globalisation theorists fail to reflect on is the state centric model of governing, which is illustrated by the work of Wiarda (2000) on corporatism. Accordingly, this model conceptualises non-governmental involvement, but still gives government the capacity to 'steer at a distance' especially when it comes to national and security issues.

7.4 Research Summary

The literature on Internet governance presented in this thesis exists due to the significance and importance of Internet on all aspects of life, socially and economically.

An extensive review of the literature was conducted on the contemporary topic of multistakeholder Internet governance and its implications for Internet development and economic growth. While scholars agree that the Internet plays a significant role in and has a significant positive impact on economic growth (Heeks, 1999), Internet governance is still a highly contested term with various definitions (Hoffman, 2005). Additionally, even though the positive aspects of multistakeholder governance have been clearly identified, it faces the challenges posed by the role of government authority and politics in the governance process. However, in multistakeholder governance, the roles and responsibilities of different stakeholders are yet to be defined. Multistakeholderism has never been fully developed and is only beginning to be critically studied or evaluated (Raymond & DeNardis, 2005).

Theoretically, chapter 2 investigated the cost transaction theory and economic theory to better understand the important role of the Internet in economic activities (Canback, 1998), to study the impact of regulation on the economy (Majone, 1997) and to examine government involvement in regulatory policy (Stigler, 1971; Posner, 1971; Peltzman, 1976). It also examined the changing roles of the government and other stakeholders by exploring stakeholder theory, Public Interest theory, Regime theory, and investigating

how organisational, societal and local actors build consensus around "Internet governance", thus leading to these practices being accepted (Marshall et al., 2005).

Chapter 2 also gave an overview of the political and economic environment of Lebanon directly affecting Internet governance. It provides a brief overview of the current monopoly in governance and of the status of the regulatory frame work and infrastructure. It also examines the assessments done by the World bank and the International Telecommunications Union (ITU) on the impact of the Internet on Lebanon's economic growth.

By studying and discussing the literature and existing studies, this research concluded that while researchers concentrate their investigations on global Internet governance, relatively few detailed studies of Internet governance at the national level have been carried out. Therefore, this research aims at making a secondary contribution to this growing literature by investigating the lacunae of research on national Internet governance, examining the social interaction of the stakeholders and its implications for Internet development and the country's economic growth.

Chapter 3 presented a conceptual model of multistakeholder governance, gleaned from the findings, that recognises better the Lebanese context. The proposed competing model "MIG-L" (figure 4.1), endorsed by the quantitative results, illustrates the dynamics and relationships between different stakeholders, especially the indisputable reality of the leading role of the government. Furthermore, the proposed model aims at helping explain the origins of 'Internet governance' and to make the term more explicit, contrasting with some of the arguments presented in literature. Encapsulating the literature and studies discussed in this thesis, the proposed conceptual model links the structure of governance to the development of the Internet and economic growth.

To achieve the research objectives, chapter 4 offered a pragmatic epistemological approach for this mixed-methods research (qualitative and quantitative); this research paradigm employs a concurrent parallel data collection design. Goodson and Walker (1991) explain that the task of research is to make sense of what we know, and that is determined by the selection of our approach. According to Libarkin and Kurdziel (2002), both quantitative and qualitative methods are concerned with studying phenomena.

This study deployed an online survey to generate quantitative data and semi-structured interviews to generate qualitative data. Purposive sampling leads to greater depth of information from a smaller number of carefully-selected cases, whereas probability sampling leads to greater breadth of information from a larger number of units selected to be representative of the population (Patton, 2002). For data comparison purposes, the quantitative and qualitative data were analysed and structured under four thematic sub-areas: the current status of Internet infrastructure and who is in charge of it, the degree of involvement of different stakeholders in Internet policy, the stakeholders' perceptions on multistakeholder Internet governance, and the stakeholders' assessments on the impact of Internet governance on economic growth.

Quantitatively, the online survey gathered 316 respondents from the five stakeholder groups: 39 respondents from the government, 102 from private sector, 78 from Academia, 40 from Technical community and International organisations and 34 from civil society. Quantitative data was analysed using the Statistical Package for Social Sciences (SPSS). For comparative analysis and detection of statistical significance, cross-tabulation with Pearson's Chi-Square and ANOVA tests were used to determine if correlation exits between the five independent variables (government, private organisations, civil society, technical & International organisations and the academic community) and the two dependent variables (multistakeholder Internet governance and economic growth). Accordingly, statistical significance was used as a tool to examine the relations between the variables to investigate any difference in stakeholders' views regarding the subject-matter. No statistical differences were found related to the perception of the different stakeholder groups on multistakeholderism as a suitable Internet governance framework and its positive impact on the country's economy. However, a statistically significant difference was detected between the stakeholder groups on how they perceive the level of involvement of the government. The more a stakeholder was involved in and had common interests with the government, more the stakeholder resisted government withdrawal from the scene.

To acquire qualitative data, this study deployed purposive semi-structured interviews to obtain the views and hear the voices of business decision-makers regarding Internet governance, thus backing the initial quantitative results. Thus, ten interviews were taken from the five identified stakeholders' groups in addition to an interviewee representing the United Nations. The qualitative data were grouped into meaningful patterns/themes

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that emerged from the research questions and from the data. The findings were categorised and organised in textual tables and charts to facilitate conclusion drawing. Through this process, the researcher was able to identify patterns and relationships observed within and across the stakeholder groups.

Chapter 7 presents, compares, triangulates, interprets and discusses the quantitative and qualitative findings. The qualitative in-depth findings revealed important hidden information supporting the quantitative statistical results, underpinning some of the theoretical reasoning and contradicting others. It also validates and the conceptual model and presents a summary and conclusion of the study as well its outcome. It concludes by positing the strengths and limitations of the study and suggestions for future research.

7.5 Research Outcome

The findings of this research permit us to conclude - as do Qiang et al. (2009), Koutroumpis (2009), Scot (2012), Zaballos and Lopez (2012) and Koutroumpis (2018) - that broad Internet and economic growth have a significant positive relationship. It also confirms the positive correlation between improved quality of governance and economic growth (Keefer, 1997; Campos and Nugent, 1999; Kaufmann et al. 1999a and 1999b; Mehanna et al., 2010; Han et al., 2014).

The research concludes that Internet spurs countries' economic development and growth. However, good governance for the Internet is indispensable for such development. As such, the study of Han and el. (2014) analyses the governance gap and its effect on economic growth and shows that governance matters to economic growth. This is in line with the work of Chauvet and Collier (2004), which shows that developing countries with poor quality of governance will lead to lower economic growth.

The implication of these findings for Lebanon is significant. In order to achieve Internet development and an important level of economic impact, Internet governance requires the introduction of new regime with different approach. As such, the multistakeholder model could credibly be considered an innovative governance concept, part of a wider global debate about rethinking governance in a globalised world. The multistakeholder approach remains the dominant paradigm of Internet politics even if the categories employed differ from one author to another (Mathiason, 2009).

The research has identified the positions of the government and of non-governmental actors, their roles and interactions and their relative influence and ability to structure the regime. The findings revealed two patterns of relations with the government: partnership and confrontation. It is clear that whilst some elite non-governmental stakeholders have been inclined to develop alliances with the government in an attempt to gain influence and personal benefits, others have failed

The question remains as to what extent the multistakeholder approach can be practiced or applicable in the current environment? With the advancement of multistakeholderism as a model in Internet governance, determining which governance model is appropriate will be a challenge. In Lebanon, in order to make a better environment for the Internet and to enhance economic development, government should involve stakeholders more effectively in a multistakeholder setting to improve collective responsibility, effective decision making, transparency and accountability.

7.6 Research Impacts

This study reveals that suitable multistakeholder Internet governance, aimed at removing the obstacles hindering Internet development, significantly influences a country's economic development and growth. While this causal relationship is confirmed empirically by the literature and by different studies examined by this study, the political and practical impacts of this research are significant.

The political structure in Lebanon and across the region is patriarchal and semi-democratic - not to say authoritarian – in enforcing laws and policies. These laws and policies are developed with little to no public input. This is reflected in the Arab Internet Governance Forum (Arab IGF) structure initiated in Kuwait in November 2012, planned to be held annually. However, the commitment to multistakeholderism and its principles seemed to recede at the October 2013 forum in Algiers, where tension between the idea of multistakeholderism and its implementation began to metastasise. A line began to emerge between governments and other stakeholders, creating a kind of binary-stakeholderism (SMEX, 2017a)

With no surprises, the outcome of the Global InformatIon Society Watch report, published in 2017, converges with the findings of this research. Quantitatively, the statistically significant difference detected within the stakeholders' perception towards

government participation in Internet governance confirm this trend of binary-stakeholderism. The qualitative findings endorsed the quantitative results, revealing that government is in charge and can be a facilitator or barrier depending how it assesses its interests. Moreover, the findings of the research revealed that even though stakeholders call for less government involvement in the governance process, they are practically convinced that government will remain the one-man-show in the areas of to national interests and sovereignty. Therefore, this research posits that stakeholders may need to concentrate more on the overall benefit of the multistakeholder process, accepting the government's upper hand in this process.

More specifically, the research supports the stakeholders' position accepting the government as the central pillar of the multistakeholder process to keep the process alive and evolving. The first impact on the national political and practical scene was the adoption of this thesis outcome and its conceptual model by the Lebanese government in the creation of the Lebanon Internet Governance Forum (LIGF) on December 8, 2017. In line with the findings of this thesis, the director general of operations and maintenance at the Ministry of Telecommunications in Lebanon was appointed the chair of the LIGF (SMEX, 2017b)

On the regional level, the researcher was called to reflect on his research argument and findings at the Global InformatIon Society Watch report 2017. The researcher quoted: "We should try to compromise. No-one said that the umbrella organisations or the governments should be left out of the equation, but other sectors need to be involved in the executive process, and I personally don't mind the upper hand being for the government representatives, because the Arab world has its nature. We just want true inclusion of all stakeholders" (Global InformatIon Society Watch, 2017; p.50).

7.7 Strengths and Limitations of the Research

The research has several key strengths. The conceptual research model for this study is based upon extensive review of prior empirical research on the Internet and the impact of its governance on economic performance. Primary quantitative and qualitative data were gathered specifically for the study, and statistical techniques were used to analyse the data. However, this research has a number of limitations which must be taken into consideration in evaluating the above results and their implications.

The World Summit on Information Society (WSIS) held in 2005 in Tunisia published a working definition for Internet governance (IG) in paragraph 34: "the development and application by governments, the private sector and civil society, in their respective roles, of shared principles, norms, rules, decision-making procedures, and programmes that shape the evolution of the Internet" (WSIS, 2005b, p. 6). However, there is still no academic agreement on the definition of Internet governance; the concept, and especially the relationship between different stakeholders including the government, is still unclear among academics (Hofmann, 2004). Moreover, De La Chapelle (2011), argues that the wording "in their respective roles" in the definition was a perfect example of what diplomats usually describe as constructive ambiguity, i.e. agreement on terms that conceals a disagreement of substance. Accordingly, this constructive ambiguity has become one of the great impediments to the success of the multistakeholder model. This thesis acknowledges that multistakeholderism is subject to power struggles in which stakeholders do not have equal power, and the viability of multistakeholderism is not determined by its inclusiveness alone but arguably by the balance of authority. That said, the focus of this research remained strictly upon the interaction of governmental and non-governmental stakeholders and did not discuss or investigate the relative power, roles and responsibilities of different stakeholders.

Additionally, the Tunis debates revealed the complexity and multifaceted nature of Internet governance, which implicates issues ranging from human rights to economic aspects of the Internet. Human rights and freedom of expression have been central to the WSIS process since its inception, since the Internet has helped develop values of democracy and freedom in many parts of the world (WSIS, 2005b). For the purpose of this research, these terms were not addressed by this thesis.

From the perspective of generalisability, this research is conducted from the perspective of a single developing country, Lebanon. Therefore, any attempt to generalize the findings to other developing countries needs to be verified.

While acknowledging the above limitations, this research unveils the different stakeholder groups' views and understanding of multistakeholder Internet governance, proposing a conceptual framework that strives to reshape the relationship among the different stakeholders to ensure the most appropriate and efficient use of the Internet to achieve the country's economic development.

7.8 Further Researches

As this thesis studied Internet governance from the perspective of a developing country at the national level in the extant global academic literature and researches, the study sought to provide new directions for academics for future research as well. This research strove to take new challenge using new construct measures with the triangulation of quantitative and qualitative data. This provides a new approach and a solid foundation for further research. Hence, two suggestions are made for further research.

First, this thesis recognises that the actual literature on multistakeholderism and Internet governance raise definitional complications and lead to misconception by scholars. One of the most problematic aspects of the multistakeholder approach is the very meaning of "participation" in political processes and the underlying vision of governance (Padovani, 2005). Thus, additional empirical studies on stakeholders' roles and responsibilities in Internet governance would benefit the research community as well as help governments and other stakeholders understand their mandates and objectives.

Second, in this context, Raymond and DeNardis (2015) argue that multistakeholder governance is produced by variation on at least two dimensions: the types of actors involved and the nature of authority relations between actors. While multilateralism admittedly combines a wide variety of actors, multistakeholderism differs from it in the authority relations between actors. Hence, there exist several possible scenarios of multistakeholderism depending on the relationship between the actors. Adopting this stance, further research is needed to maximise the applicability of these different multistakeholderism scenarios to empirical cases.

7.9 Conclusion

The research has examined how an environment of multistakeholder governance drives and fosters both Internet development and economic growth. While there are different schools of thought on Internet governance, this thesis strives to incorporate an additional direction aiming at giving more in-depth insight on Internet governance at a national level, underpinned by the literature and theoretical framework, which results in developing a new conceptual model in an empirical setting.

Contrary to many reviews, critiques and popular assumptions, governance of the Internet remains firmly under the control of the government. Any insinuation that

political power has been diffused in to other sectors, and that government is no longer the principal actor, is simply unfounded. The thesis explored these arguments and found them to be no more than myths.

However, non-governmental stakeholders can play a varied and important role in the Internet's governance, particularly in areas requiring technical expertise, which the government lacks. The thesis argues that the distribution of power to these non-governmental stakeholders is a sign of government strength and not weakness, since government will stay the prime actor and take the credit for any success.

Nevertheless, the concept of multistakeholder Internet governance is still very vague, and the roles and responsibilities of different actors are yet to be defined. This thesis recognises that multistakeholderism is too often employed uniformly and even uncritically. Just as it is a misnomer to speak of Internet governance as a single practice, it is also a misnomer to speak of the multistakeholder model as a single exercise.

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Appendix A

The Online Survey

Dear online survey participant,

I would like to thank you in advance for your participation in this questionnaire, which is part of my doctoral research (DBA). Your responses are very important to my dissertation thesis.

Your involvement in this research is voluntary. You have the right to withdraw from the research project, at any time without prejudice, up to the point that the data has been aggregated and or analysed. Data will be treated with full confidentiality and if published, every effort will be made to ensure it will not be identified as your data or responses to the questionnaire. For more information, please don't hesitate to email me on: c030310c@student.staffs.ac.uk.

My supervisor Dr. Anastasis Petrou can be reached at: Anastasis.Petrou@staffs.ac.uk.

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The survey should only take 10 minutes to complete. Please click 'Next' button below to begin.

Best Regards,
Chafic Chaya

Mapping Multistakeholderism in Internet Governance: Implications for the Administration of Internet for Economic Development in Lebanon

1. Gender

○ Male

○ Female

2. Area of residence?

○ Beirut

○ Mount Lebanon

○ South

○ North

○ Bekaa

3. What is your age?

○ 18 to 25

○ 25 to 50

○ 50 to 64

○ 64 or older

4. Which of the following best describes the principal industry of your organisation?

○ Government

○ Private Sector

○ Academic

○ Civil Society

○ Technical Community

○ None of the above

Other (please specify)

[   ]

5. How would you assess domain name management in Lebanon?

	Very Poor	Poor	Satisfactory	Good	Very Good
Rating	○	○	○	○	○

6. How would you assess the deployment of Internet Protocol version 6 (IPv6) in Lebanon?

	Very Poor	Poor	Satisfactorty	Good	Very Good
Rating	○	○	○	○	○

7. How would you assess the Internet connection in Lebanon?

	Very Poor	Poor	Satisfactorty	Good	Very Good
Rating	○	○	○	○	○

8. Who do you think is in charge of the Internet infrastructure including country code Top Level Domain (ccTLD) in Lebanon?

☐ Individuals

☐ Private organisations

☐ Government

☐ Academic Institutions

☐ I don't know

☐ Others

Other (please specify)

[   ]

9. How easy is for the mentioned different stakeholders to contribute and participate in the Internet policy and regulation in Lebanon?

	Very difficult	Dificult	Easy	Very easy
Government	○	○	○	○
Private Sector	○	○	○	○
Technical Community	○	○	○	○
Academic	○	○	○	○
Civil Society	○	○	○	○

10. Who do you think is in charge of the Internet worldwide?

☐ Individuals

☐ Private organisations

☐ Governments

☐ International Telecommunications Union (ITU)

☐ I don't know

☐ Others

Other (please specify)

[   ]

11. Are you familiar with the term "Internet Governance"?

○ Yes

○ No

If you have selected No above, what other term are you familiar with?

[   ]

12. Do you think that Multistakeholderism (bringing Internet stakeholders together) will be a suitable model for Internet Governance in Lebanon?

○ Yes

○ No

13. At what level Internet governance matters?

○ National

○ Regional

○ Global

○ All of the above

14. For each of the below levels, to what extent do you believe Internet governance matters? 1 matters the most and 5 matters the least.

	1	2	3	4	5
Individual	○	○	○	○	○
Business	○	○	○	○	○
Governmental	○	○	○	○	○
Economic	○	○	○	○	○
Other level	○	○	○	○	○

Please specify other level

[   ]

15. What do you think are the main factors that have caused changes in the Internet governance model?

○ More users online

○ Concerns about safety and security

○ Increasing involvment and control of government over the Internet

○ Role of the Internet in doing business

○ Role of the Internet in the global economy

Other (please specify)

[   ]

16. Do you strongly agree, agree, disagree, or strongly disagree with the following statements:

	Strongly agree	Agree	Disagree	Strongly disagree	N/A
Non-governmental actors should be more influential	◯	◯	◯	◯	◯
Government should be less involved	◯	◯	◯	◯	◯
Multistakeholder processes are inclusive and representative	◯	◯	◯	◯	◯
Multistakeholder institutions or frameworks should be created to govern the Internet	◯	◯	◯	◯	◯
Multistakeholder Internet governance is one of the economic development drivers	◯	◯	◯	◯	◯

17. What do you consider to be the strengths and weaknesses of the Internet's multistakeholder process?

18. In your view, how can multistakeholder Internet governance best support Lebanon's economic development?

Appendix B

Semi-Structured Interview

1. What is your understanding for Internet governance?

2. What does the term "multistakeholder" means to you?

3. What are the principal issues of Internet governance in Lebanon? Please list them in order of importance.

4. How is the Internet governed in Lebanon currently?

5. Who are the decision makers and what are the decision-making processes that influence the evolution and use of the Internet in Lebanon?

6. How easy is it for different stakeholder groups to participate and contribute in Internet policy and governance in Lebanon? How do they interact with one another?

7. How importance and effective will be the national Internet governance environment for you as a stakeholder? Challenges and opportunities?

8. Is the Internet important for Lebanon's development and growth economy?

9. In your opinion, how can multistakeholder Internet governance best support Lebanon's economic development?

10. How you describe the current infrastructure status and why? How would you assess the following Internet related issues in Lebanon (very poor - poor – modest - good – very good):

    a. Access to the Internet
    b. Affordability of the Internet
    c. Availability of local Internet content
    d. Cyber security, data protection and privacy
    e. Regulation and policymaking by government
    f. Broadband policy and connectivity
    g. Domain name management

11. Do you think there are efficient and effective mechanisms in place at national level to address the Internet-related challenges you have identified above?