Managing Complexity in Governance Networks: The Case of Energy Sector in Pakistan

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Declaration

This is to certify that the study contained in this dissertation is my own effort. No part of this dissertation has been submitted for any other degree or professional qualification.

Signed:

Shabana Sultana

Preliminary findings of this research were incorporated in following research papers:


Abstract

Governance networks are emerging as a prominent feature of contemporary public administration where different actors are in a position to exert power on public organizations exposing them to conflicting demands. Moreover, public organizations are exposed to contradictory institutional pressures as they try to attend to numerous and sometimes-conflicting prescriptions from different reform models. Whilst, the presence of contradictory institutional logics is well recognized, how organizations cope with the challenge of contradictory institutional logics remains under researched. A largely prevailing argument is that organizations indecisively conform to institutional pressures where new logic replaces the prior one. This argument provides an over simplified explanation of this complex phenomenon because organizations may use diverse strategies (and at-times hybrid responses) to incorporate multiple logics at the same time.

Responding to this literature gap, this study addresses how public organizations experience and manage institutional complexity in the contemporary network arrangements in the public sector. This study uses a multi-level framework for analyzing institutional complexity incorporating macro-level sectoral reforms that present contradictory logics to organizations; the meso-level network characteristics that shape the complexity for the embedded organizations; and micro-level organizational attributes that enable them to handle complexity by choosing appropriate strategies. The study adopts an abductive research approach using case study research design taking Pakistan’s energy sector as the case; power network as the embedded unit (within the energy sector) for network analysis; and two public sector utilities (LESCO and IESCO) as embedded units within power network for organizational analysis.
The study finds that diverse reform trajectories have exposed the energy sector to three competing institutional logics including traditional public administration (TPA) logic, new public management (NPM) logic and new public governance (NPG) logic, exposing the public organizations to institutional complexity. Additionally, under NPM-based fragmentation and NPG-based integration reforms, there is drastic shift in energy sector from vertically integrated bureaucracies to a web of autonomous organizations working in governance networks. Three notable characteristics of the power network are fragmentation, centralization and trust, which play a critical role in shaping the complexity for embedded organizations. The study finds that the embedded organizations (LESCO and IESCO) have incorporated multiple and conflicting institutional prescriptions through the strategies of differentiated hybridity (where diverse logics are addressed separately) and blended hybridity (where logics are blended for new solutions). In this regard, the critical attributes of organizations, that can enable them to better handle institutional complexity, include their task, leadership and governance structure. The study supports the argument of institutional logics perspective that the organizations actively incorporate multiple institutional pressures by developing hybrid solutions.

This study contributes to existing literature by providing an explanation of how organizations respond varyingly to institutional pressures while choosing appropriate strategies. Moreover, it captures the emergence, structure and characteristics of governance networks in contemporary public administration in developing countries. It also delineates policy implications for the energy sector crises in Pakistan from a governance point of view.

**Key words**: Complexity; governance; networks; energy sector; institutional logics
Dedicated to

…my parents, Ghulam Haider and Sardar Begum, for their unconditional love and utmost efforts to make me what I am today.
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Shabana Sultana
### Abbreviations

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<td>ACR</td>
<td>Annual Confidential Report</td>
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<td>AEDB</td>
<td>Alternate Energy Development Board</td>
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<tr>
<td>BOD</td>
<td>Board of Directors</td>
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<tr>
<td>CAQDAS</td>
<td>Computer Assisted Qualitative Data Analysis Software</td>
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<tr>
<td>CEO</td>
<td>Chief Executive Officer</td>
</tr>
<tr>
<td>CCOR</td>
<td>Cabinet Committee on Restructuring</td>
</tr>
<tr>
<td>CPEC</td>
<td>China Pakistan Economic Corridor</td>
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<td>CPPA</td>
<td>Central Power Purchase Agency</td>
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<tr>
<td>DISCO</td>
<td>Distribution Company</td>
</tr>
<tr>
<td>GENCO</td>
<td>Generation Company</td>
</tr>
<tr>
<td>GOP</td>
<td>Government of Pakistan</td>
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<tr>
<td>IESCO</td>
<td>Islamabad Electric Supply Company</td>
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<tr>
<td>IPP</td>
<td>Independent Power Producer</td>
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<td>KESC</td>
<td>Karachi Electric Supply Company</td>
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<td>Acronym</td>
<td>Description</td>
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<tr>
<td>LESCO</td>
<td>Lahore Electric Supply Company</td>
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<td>MOWP</td>
<td>Ministry of Water and Power</td>
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<td>NAO</td>
<td>Network Administrative Organization</td>
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<tr>
<td>NEPRA</td>
<td>National Electric Power Regulatory Authority</td>
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<tr>
<td>NPG</td>
<td>New Public Governance</td>
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<td>NPM</td>
<td>New Public Management</td>
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<td>NTDC</td>
<td>National Transmission and Despatch Company</td>
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<td>PAEC</td>
<td>Pakistan Atomic Energy Commission</td>
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<tr>
<td>PEPCO</td>
<td>Pakistan Electric Power Company</td>
</tr>
<tr>
<td>PPIB</td>
<td>Private Power Infrastructure Board</td>
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<tr>
<td>SECP</td>
<td>Security and Exchange Commission of Pakistan</td>
</tr>
<tr>
<td>TPA</td>
<td>Traditional Public Administration</td>
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<tr>
<td>WAPDA</td>
<td>Water and Power Development Authority</td>
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Chapter 1  Introduction

1.1- Introduction to research study

Contemporary challenges, particularly globalization, use of information technology and complex social issues have accentuated the need to operate in networks (Kapucu, Arslan, & Collins, 2010; Wise, 2006). This trend is emerging in public administration also with a shift from government to governance (Teisman & Gerrits, 2014). There is growing realization that no government has the capacity to solve complex societal problems alone (Kooiman, 1993; Bueren, Klijn, & Koppenjan, 2003; 2014). Rather, actors from private sector, nonprofit sector and civil society have important assets to share and can greatly influence public policy issues. Moreover, with the increasingly “wicked” and complex societal issues, network certainly offers critical structural arrangement to generate collaborative action for sustainable policy and solutions (Klijn, 2008: 504). On the other hand, different generations of public sector reforms have also participated towards complex structural arrangements accentuating the need to operate in networks (Koliba, Meek, & Zia, 2011). With these developments, governance networks are appearing as a prominent feature of public administration (Hwang & Moon, 2009; Klijn & Koppenjan, 2016).

Governance networks refer to “public policy making and implementation through a web of relationships between government, business and civil society” (Klijn, 2008: 507). After the shortcomings and negative impacts of new public management (NPM) reforms, governance networks are emerging both consciously (as a tool for governance) and unconsciously (responding to fragmentation). Considerable evidence has been produced on the use of network governance as
policy tool (Klijn & Koppenjan, 2012; 2016). However, most of these studies have been conducted in the context of advanced countries. There is dearth of literature that provides evidence of use of governance networks in the developing countries. Particularly, how governance networks are emerging in developing countries after the advent of NPM reforms. The questions arises whether networks are unconsciously formed as a result of fragmentation in public sector or being consciously used as a tool for governance; and whether developing countries have political and administrative capacity to work in network arrangements. Operating in networks offers new challenges that hierarchy or market based theories have not addressed (Zia et al., 2014; Koliba et al., 2011). The central control of public authorities is quite possible in public management networks due to long history of hierarchical and control based designs (McGuire and Fyall, 2014). Such centralizing tendency can hinder the effective use of networks for inter-organizational collaboration.

Public organizations also need to learn new practices for working in network arrangements, which differ greatly from the vertical controls (Klijn & Koppenjan, 2016). With the increased fragmentation in the public sector, different actors may be in position to exert power on public organizations exposing them to conflicting demands (Koliba et al., 2011). Moreover, due to several generations of reforms, public organizations are exposed to contradictory institutional logics due to interplay of conflicting prescriptions from different reform models (Christensen & Laegreid, 2010). This phenomenon of contradictory institutional pressures, faced by organizations, is well recorded in the literature of institutional complexity (Greenwood et al., 2011). Still, the exploration of institutional complexity in the context of public sector reforms is rarely addressed with a few exceptions (such as Reay & Hinings, 2009; Meyer, Egger-Peitler, Hollerer, & Hammerschmid, 2014; ). In this regard, three most prominent
and competing institutional logics include traditional public administration (TPA) logic; new public management (NPM) logic and new public governance (NPG) logic (Christensen & Lægreid, 2011). Competing logics create countervailing determinants of power and impose contested situations (Thornton, 2002) which are important to examine in order to understand how public organizations are operating in contemporary fragmented public sector.

Greenwood et al. (2011) argue that the nature and extent of institutional complexity, faced by organization, is shaped by the structure of organizational field particularly with respect to fragmentation or centralization of actors in the field. In the fields of public organizations, a critical development is the dominance of governance networks (Teisman & Gerrits, 2014) whereby inter-organizational relations are shifting from vertical controls towards horizontal interdependencies. Being embedded in the governance networks, public organizations are now working with variety of actors (from public/private/non-profit sector) which can present diverse demands to organizations. Hence, diverse actors in the field can fundamentally shape and reinforce their preferred institutional logic for organization (Greve, Palmer, & Pozner, 2010). In this respect, the role of networks characteristics, in shaping institutional pressures, is calling for researcher’s attention particularly in the context of growing complexity due to multiple reforms in the public sector.

Another critical domain is how organizations respond to institutional complexity. On this point, there is debate, between scholars of institutional theory. New-institutional theorist argue for organizational conformity and diffusion of incoming new logics (DiMaggio & Powell, 1983; Meyer & Rowan, 1977; Scott, 2008). Whereas, institutional logics perspective argue that organizations blend diverse logics and create new solutions for survival. In this regard, though scholars have theoretically elaborated and categorized various organizational responses
1991; Murray, 2010; Pache & Santos, 2013), nevertheless a more comprehensive empirical exploration is much warranted with respect to how organizations experience and navigate through complex institutional environments and how they internally manage contradictory pressures by choosing appropriate response (Raynard, 2014; 2016). Pache & Santos, (2010) highlighted:

“While institutional scholars acknowledge that organizations are often exposed to multiple and sometimes conflicting institutional demands…existing research makes no systematic predictions about the way organizations respond to such conflict.” (P.450)

Addressing above-mentioned gaps in literature, this study aims to do a comprehensive analysis of how public organizations experience multiple and contradictory institutional logics, (particularly under TPA, NPM and NPG reform models) and how they internally manage these pressures by choosing appropriate strategies. In this attempt, this study has also incorporated how the contemporary fragmented public sector (which have shifted from vertical hierarchies to networked arrangements) mitigate or amplify the institutional pressures for public organizations. For this purpose, the study has taken the case of energy sector in Pakistan to explore the emergence of networks under the public sector reform trajectories; to describe the mode of interaction and other characteristics of governance networks; and to explain how public organizations manage institutional complexity being embedded in governance networks in the energy sector in Pakistan. The study adapts the framework of Greenwood et al. (2011) for multi-level analysis of institutional complexity capturing the macro level sectoral reforms that presents contradictory logics to public organizations; the meso level network characteristics that shape the complexity for embedded organizations; and the organizational attributes that enable them to navigate through institutional complexity.


1.2- **Contextualizing the study**

In 1992, the Government of Pakistan took the strategic decision of restructuring of Water and Power Development Authority (WAPDA). Under this reform initiative, the large vertically integrated bureaucracy of WAPDA was unbundled into fourteen autonomous public companies with the division of power generation, transmission and distribution (GOP, 1994). In the later decade, the energy sector witnessed the incorporation of various autonomous bodies for the purpose of coordination, integration and regulation of the sector. Moreover, private sector was also increasingly involved for power generation projects (Bhatti, Bhatti, Chaudhary, & Javed, 2012). These reforms shifted the energy sector of Pakistan from vertically integrated hierarchy to a network of horizontally spread autonomous public companies.

Hence, the energy sector of Pakistan is a typical case where fragmented autonomous bodies need to be coordinated in governance networks in order to solve the complex problem of shortage of electricity supply in Pakistan. Since Pakistan is a developing economy, a case from Pakistan can provide important implications for the use of network arrangements and its effectiveness in weak institutional and political conditions prevailing in Pakistan and in other developing countries. Furthermore, the growing energy crises in Pakistan are also demanding researchers' attention in this sector. Hence, the case of energy sector is important for both, the theoretical implications (in terms of the use of networks in the public sector of developing countries) and the policy implications for energy crises in Pakistan.

1.3- **Questions, objectives and design of the study**
1.3.1- Research Questions

The overarching research question of the study is:

*How organizations manage institutional complexity in governance networks?*

The following sub-questions help us in answering the above overarching research question:

1. What is the structure of governance networks in the energy sector of Pakistan?
2. Why do organizations face institutional complexity in the governance networks in the energy sector in Pakistan?
3. How do network characteristics and organizational attributes influence institutional complexity faced by embedded organizations in governance networks?
4. How do organizations embrace (internally manage) institutional complexity?

1.3.2- Objectives

Following are the objectives of the study:

- To examine the structure of governance networks in energy sector in Pakistan.
- To explore the emergence of governance networks in the energy sector in Pakistan.
- To identify the institutional logics faced by organizations in energy sector in Pakistan.
- To determine the level of institutional complexity experienced by organizations in energy sector in Pakistan.
- To explain the role of governance network in shaping institutional complexity for the organizations in energy sector in Pakistan.
- To explain the organizational attributes that can enable organizations to handle institutional complexity.
- To explore how organizations internally manage contradictory institutional logics.
To explain the organizational responses to institutional complexity in light of institutional logics perspective.

The study requires in-depth contextual analysis of public organizations working in governance networks. Therefore, case study research design is employed taking the energy sector of Pakistan as the case for analysis. It is the “critical” and “extreme” case in the public sector of Pakistan. It is the “extreme case” where fragmented autonomous bodies need to be coordinated in governance networks in order to solve the complex problem of shortage of electricity supply in Pakistan. It is also a “critical” case because such fragmentation is present in other policy domains of public sector of Pakistan as well and the findings from this case can be generalized to other governance networks in the public sector of Pakistan. Within the case of energy sector of Pakistan, the study has taken power network as embedded unit for network level of analysis because it is the largest and most fragmented network in the energy sector. Within power network, two power-supplying public companies (LESCO and IESCO) are taken as embedded units of analysis to examine institutional complexity at organizational level. Power suppliers are selected because they are most vulnerable to diverse demands due to their exposure to general public service. Data collection sources included in-depth interviews, semi-structured interviews and documents. Data was collected and analyzed in three phases of data collection using abductive approach.

1.4- Contribution

This study argues that the literature on public management reforms has seriously overlooked that the public organizations (in the contemporary fragmented public sector) are experiencing and managing the rivalries of multiple and conflicting institutional pressures as they try to attend to numerous and sometimes conflicting demands at the same time from
different reform models. Much of the research in public management reforms portrays the public sector as ordered by an overarching reform model and examines the process by which public sector has moved from one dominant reform model to another. In this attempt, the literature presents the image of the public organizations progressing through the transitional times until the prescriptions of the new reform models are either accepted or rejected (Reay & Hinings, 2009). The underlying assumption is that either the new reform model replaces the prior model or the prior model continues. With this simplified explanation, the extant literature has overlooked the possibility of presence of multiple institutional logics over an extended period; and under-estimated the consequences of the rivalries between conflicting pressures faced by the contemporary public organizations. In this regard, the institutional conformity arguments provide only a nuance understanding of organizational response to institutional pressures (Naveed, Salman, Jadoon, Jabeen, & Rana, 2017).

This study argue that in attempt to implement different generations of modern public sector reforms (particularly TPA, NPM and NPG) at an accelerating pace, the public organizations are faced with the phenomenon of institutional complexity whereby organizations have to incorporate multiple institutional pressures at the same time. In this attempt, there is no single response of organizations to multiple institutional pressures, rather, the public organizations can deploy varying strategies to cope with multiple institutional pressures and in this attempt, they participate in institutional change and transformation through building hybrid mechanisms which enable them to satisfy multiple institutional demands. In this regard, the exposure of public organizations to institutional complexity, although recognized (Christensen & Laegreid, 2010) and received attention as well which is encouraging (Reay & Hinings, 2009; Meyer, Egger-Peitler, Hollerer, & Hammerschmid, 2014), however it has remained modest and much remains
to be learned. It is because the literature in public management has captured only the existence and contradiction of multiple institutional pressures while accepting the dominant assumption that the new reform models are readily accepted by the organizations. In this respect, a more comprehensive empirical exploration is much warranted with respect to how organizations experience and navigate complex institutional environments and how they internally manage contradictory pressures by choosing appropriate response (Raynard, 2014; 2016). Organizational response are critical to examine not only to gain legitimacy and aid from important referent audience, but also to devise appropriate hybrid designs and practices that can successfully satisfy multiple institutional pressures.

Addressing this critical domain, the study advances the theory in multiple ways. Firstly, it goes beyond the over parsimonious explanation of adherence to (adoption of) incoming new logics by exploring the hybrid responses of the organizations whereby some elements of logics are ignored while others are amalgamated with previous logics to manage the contradictory pressures. Hence, this study attempts to provide the much-needed explanation for discretion of agency for employing appropriate strategic response in face of institutional pressures, which is a counter argument to institutional isomorphism and organization’s unconditional conformity to institutional pressures.

Secondly, this study reorients theorizing towards a more comprehensive account of external and internal challenges confronting public organizations by incorporating multi-level analysis, which includes the influence of macro level reforms, network level characteristics and internal organizational capacities to embrace contradictory logics. Specifically, this study extends the previous work by illuminating how tension between logics, can be amplified or mitigated at the network level, before, public organizations struggle with them. Moreover, it sheds light on the
organizational capacities through which they can better handle the pressures from contented institutional logics.

Thirdly, this study has addressed a challenging area in the literature of public sector reforms by capturing the emergence, structure and characteristics of governance networks in the public sector. In this regard, the case of energy sector of Pakistan is important for two reasons. Firstly, it provides the context of developing economies, which needs researcher’s attention to evaluate the idea of governance through networks in the politically and administratively weak economies. Secondly, Pakistan is facing serious energy crises for last three decades. Whilst, this sector has gone through numerous reforms interventions, the researchers have paid little attention to evaluate the impacts of these reforms. For this reason, this case provides important policy implications for energy crises in Pakistan from a governance and management standpoint.

1.5- Structure of the thesis

This thesis consists of 10 chapters. Chapter 2 reviews the literature from three streams of literature including public management reforms, institutional theories and governance networks. Chapter 3 presents conceptual framework to analyze the responses of organizations, to institutional complexity, being embedded in the governance networks in the public sector. The framework incorporates multi-level analysis of institutional complexity including macro level institutional logics (under famous reform models) in the public sector in Pakistan; meso level network characteristics that mitigate institutional complexity for embedded organizations; micro level organizational attributes that enable organizations to handle complexity and intra-organizational processes to absorb complexity.
Chapter 4 presents the philosophical and methodological choices of this study. Followed by Chapter 5, which provides the context of the study covering energy sector reforms and crises in Pakistan and the institutional structure of this sector. Chapter 6, Chapter 7 and Chapter 8 present data analysis covering governance network structure and characteristics; institutional complexity confronted by embedded organizations; and organizational responses to institutional in face of network and organizational characteristics.

Chapter 9 discusses the findings of this research in light of existing literature followed by Chapter 10, which provides conclusion and reflection on the thesis.

A list of references is included after chapter 10 followed by appendices.

Table 1-1 provides a snapshot of all chapters.
Table 1.1 Overview of Thesis Structure and Contents

| Chapter 1: Introduction | • Brief overview of the thesis  
| • Research Questions  
| • Contribution to knowledge |
| --- | --- |
| Chapter 2: Literature review | • Approaches to public management reforms  
| • Governance networks and public sector  
| • Organizations in the institutional context  
| • Institutional complexity and organizational responses |
| Chapter 3: Conceptual framework | • Emergence of governance networks  
| • Multi-level analysis of institutional complexity  
| • Operational definitions of concepts |
| Chapter 4: Methods | • Philosophical stance  
| • Case study as a strategy  
| • Data collection methods, phases and analysis  
| • Ethical considerations |
| Chapter 5: Energy sector in Pakistan | • Institutional and policy context of Pakistan  
| • Energy sector reform trajectories  
| • Energy crises  
| • Energy departments and companies |
| Chapter 6: Governance networks: Emergence and structure | • Emergence of governance networks in energy sector in Pakistan  
| • Network structure: Actors and relational ties |
| Chapter 7: Institutional complexity in embedded organizations | • Contradictory logics in goals  
| • Contradictory logics in means (performance monitoring mechanism, decision making process and professional legitimacy) |
| Chapter 8: Multi-level analysis of institutional complexity | • Network characteristics and institutional complexity  
| • Organizational attributes and institutional complexity  
| • Hybrid solutions to absorb multiple pressures |
| Chapter 9: Discussion | • Triangulation of findings with the literature  
| • Answering the research questions |
| Chapter 10: Conclusions | • Key findings against research objectives  
| • Contribution in knowledge  
| • Policy implications |
Chapter 2  Literature Review

2.1- Introduction to the chapter

The study aims to address organizational responses to institutional complexity in governance networks in the context of public sector. For this purpose, literature is reviewed covering public sector reforms, governance networks, institutional logics, institutional complexity, and organizational responses to institutional complexity. The chapter contains four sections. First two sections, review the studies from public management literature. Last two sections are based on literature from organizational theories and management. Section 2.2 reviews critical features of public sector reforms, various approaches to public management and prescriptions under each model. It provides essential base to explain different institutional logics prescribed under various reform models. Section 2.3 reviews development of governance networks in public sector, features of governance networks and challenges to manage networks in the context of public sector. Section 2.4 and 2.5 capture literature on institutional theories and institutional complexity respectively. Moreover, network and organizational characteristics are reviewed that can mitigate the level of complexity for the organizations.

2.2- Approaches to Public Management

2.2.1- Reforms and public sector

Reform refers to bringing intended or designed change into established ways of governance, management or administrative practices. (Christensen, Largreid, Rones, & Rovik, 2007) differentiates reforms from change. Reform means “active and deliberate attempts by political and administrative leaders to change structural or cultural features of organizations”
whereas “change is often a gradual process in organizations” and more incremental (p.122). In contrast to general change processes, reform always entails deliberate change (Christensen & Lægreid, 2011). Reforms may range from surgical (minimal) changes to radical transformation incorporating fundamental alterations. Reforms may address structure, process and culture or values. Mostly, structural reforms are more radical and revolutionary in nature whereas process and cultural reforms are more gradual and incremental in nature (Farazmand, 2006).

Public sector reform process is distinct from other type of reform process mainly due to its specific structural features and administrative machine (Christensen & Lægreid, 2011). Christensen (2007) points out two critical contextual factors that make public organizations fundamentally different from private organizational. First, they fall under a parliamentary chain of governance due to their subordination to politically elected leadership. Second, due to their multifunctional feature, “one consideration alone cannot normally be singled out as a superior value from which all other values can be derived” (p.179). Therefore, reformers have to deal with multi-functional public organizations and conflicting goals and values while designing and implementing reform agenda. Complexity of public sector further enhances due to multiplicity of public organizations in-terms of their historical legacy, culture, tasks significance, task standardization and financial dependency.

Another critical feature of public sector reforms is policy transfer phenomenon whereby popular reform models are adopted by most of the countries in different time periods (Dolowitz & Marsh, 2000). Among the globally accepted and widespread public sector models, the most famous models include Traditional Public Administration (TPA), New Public Management (NPM) and New Public Governance (NPG). Each model has prescribed different jargons, targets and contents, of reform efforts, during different periods (Jadoon & Jabeen, 2012). It is significant
to review these famous reform models to understand the current complex situations faced by public sector. The following section reviews reform models that gained global acceptance (and hence adopted by both developed and developing countries), their characteristics, prescriptions and contradictions from each other.

2.2.2-Traditional Public Administration

Traditional Public Administration (TPA) owes much to the administrative tradition of Germany and the articulation of the principles of bureaucracy (Weber, 1946). The concept of politics-administration dichotomy (Wilson, 1887) is another classic contribution in the development of TPA model. It was marked by sovereign, rationality-bounded state whereby centralized state had control over public sector with centralized decision-making, standardization and equality as key features (Olsen, 1988). The distinctive features of this model included standardization of public personnel system, political neutrality and hierarchical loyalty and centralizing tendency. It was based on classical principles of Weber’s bureaucracy (1946) with the key characteristics of job specialization, hierarchy of authority, formal selection of officers, formal rules and regulations, impersonality, career orientation and job security. Weber emphasized policy to be formulated on the top and executed in a series of offices acting in a clear chain of command. Peters (2001) summarized the key features of traditional model of public administration including apolitical civil service, hierarchy of authority, regulations, permanence, equality and stability. This model had strong vertical integration mechanisms to ensure control and command systems through public bureaucracies. Initially, presence of autonomous public agencies was rare in this model due to centralizing feature. The size of state was also small being market as the major player in economy. State intervened only in those areas where market failed to meet public demands or exploits the situation. After World War II, enhanced role of state was rationalized,
especially with Euro-American experiences to handle great depression and post-World War reconstruction issues. Due to the massive destruction, market deficit and capital shortfalls the enhanced role of the state was crucial in order to accelerate economic growth and to stabilize markets (M. A. Khan, 2008). With the increased role of state, public agencies were created both in developed and developing countries to promote economic development, reduce mass unemployment and to produce essential goods at lower prices (Rondinelli, 2008). State-led social-economic development was the main slogan in this era which was spread globally as famous recipe for economic growth (Farazmand, 2006).

In the context of South Asia, Haque, (2007) labels it as “post-colonial development model” (p.1303). The recipes to pursue development goals were not indigenously emerged in developing countries rather were majorly dictated by international actors such as international donor agencies and were filtered by policy preferences of national ruling elites (Haque, 2007). Challenge faced by almost every newly independent country included nation building, economic expansion, poverty reduction, and social cohesion and strengthening of political institutions. To handle these complicated goals, state-led development was propagated. Consequently, role of state was enhanced with centralized decision-making and vertical/hierarchical control (Farazmand, 2006).

2.2.3- New Public Management

In late 1980s, enhanced role of state and wide public sector came under sharp criticism by reformers due to inefficient, rigid, non-responsive and high resource consuming public organizations (Dunsire & Hood, 1989). Consequently, smaller government and reduced public expenditures emerged as major slogans of reformers in the early phase of criticism on development administration. Privatization, deregulation and neo-liberal models of economic development were propagated extensively (Dunleavy & Hood, 1994). In this phase, massive
downsizing of human resources and privatization of public bureaucracies was practiced all over the world. However, despite massive privatization and other cost-cutting reforms, reformers could not address the inefficiencies of public bureaucracies (Nunberg, 1990). Therefore, a second phase of reforms emphasized business-like institutions, structures and functions of public sector (Hood, 1991; Osborne & Gaebler, 1992; Pollitt, 1993). These market and business oriented initiatives were first initiated in western countries in 1980s and were encapsulated as new paradigm shift in public sector reforms under the rubric of new public management (NPM).

The New Public Management is an umbrella term containing several different concepts and strategies for public sector reforms. Literature suggests that NPM is not a homogenous whole, rather has several and at times conflicting and overlapping elements (Christensen et al., 2007). It is defines as an ideology or bundle of private sector management approaches ((Pollitt, 1993); a body of managerial thoughts (Ferlie, Pettigrew, Ashburner, & Fitzgerald, 1996); and ‘a shorthand name for the set of broadly similar administrative doctrines’ (Hood, 1991, p. 03). These writers have identified major components and features of NPM reforms and highlighted its overlapping components and features, which can be merged into two major trends: market-mechanism and managerialism. Table 2-1 provides major constituents and recipes of NPM under these trends.

The first trend is marked by market based competitive environment and business like practices in the public sector (Hood, 1991; Osborne & Gaebler, 1992; Christensen & Laegreid, 1999). Famous recipes included corporatization and agencification; contracting out public services; and use of best business practices in public sector. Ferlie et al., (1996) noted that the purpose of contracting out is to create internal markets and competitive environment in public
sector. According to Pollitt et al., (2001), market based mechanism is useful for providing managerial autonomy and result oriented culture.


**Table 2.1 Components and Features of NPM**

<table>
<thead>
<tr>
<th>Trend</th>
<th>Recipes and constituents</th>
<th>Gist/ Idea</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Market based mechanisms</strong></td>
<td>Corporatization</td>
<td>Unbundling of large bureaucracies into corporatized units of specialized areas</td>
</tr>
<tr>
<td>Hood, 1991; Osborne &amp; Gaebler, 1992; Pollitt, 1993; Christensen &amp; Laegreid, 1999;</td>
<td>Contractualization</td>
<td>Outsourcing and contracting out public services to create internal markets and competition</td>
</tr>
<tr>
<td></td>
<td>Private sector style of management</td>
<td>Applying proven private sector management tools in public sector such as it based solutions and best practices</td>
</tr>
<tr>
<td><strong>Managerialism</strong></td>
<td>Decentralization/ managerial autonomy</td>
<td>Less centralized arrangements. Providing autonomy to public managers to take decisions.</td>
</tr>
<tr>
<td>Aucoin, 1990; Hood, 1991; Ferlie et al., 1996; Pollitt &amp; Bouckaert, 2004</td>
<td>Downsizing</td>
<td>More emphasis on cost cutting and frugality in resources</td>
</tr>
<tr>
<td></td>
<td>Performance management</td>
<td>Explicit formal measurable standards and measures of performance success</td>
</tr>
<tr>
<td></td>
<td>Outcome orientation</td>
<td>Greater emphasis on output control and result orientation</td>
</tr>
</tbody>
</table>

*Source: Compiled by the author using major components and features of Hood (1991)*

Denhardt & Denhardt, (2000) define NPM as “a cluster of contemporary ideas and practices that seek, at their core, to use private sector and business approaches in the public sector” (p. 550). Basic idea behind NPM doctrine is that the efficiency and effectiveness of public sector can be increased through exposing it to performance-based and result-oriented
corporate management culture and that the entrepreneurial spirit can transform public sector. Meyer & Hammerschmid (2004) noted that NPM’s agency-based managerial logic and market-based commercial logic is in direct conflict with the traditional bureaucratic logic.

Although NPM reformers aimed to address the shortcoming TPA model, however, NPM reforms also resulted in several shortcomings. Christensen & Lægreid (2011) analyzed that NPM reformers emphasized small size of government and institutional autonomy, stressing structural devolution (vertical specialization) and single-purpose organizations (horizontal specialization). It resulted in creation of many autonomous agencies tied in competitive relationship, which created fragmentation in public sector. The negative effects of unbundling, contracting, and performance measurement resulted in loss of trust, rise of strategic behavior and the increased need for coordination and collaboration (Christensen et al., 2007; Pollitt & Bouckaert, 2004; (Bouckaert, Peters, & Verhoest, 2010). To address the shortcomings of NPM, reformers moved towards new ways of public governance.

2.2.4- New Public Governance

In order to address the shortcomings and negative impacts of NPM reforms, post NPM governance reforms started penetrating in public sector in the late 1990s. These include, good governance (Grindle, 2004), good enough governance (Grindle, 2010) the-whole-of-governance (Christensen & Laegreid, 2007), collaborative governance (Morse & Stephens, 2012; Ansell & Torfing, 2018) and network governance (Koliba et al., 2011). Table 2.2 provides major contributors and their calls for post-NPM reforms that have contributed to the development of new public governance (NPG) paradigm in public management literature.
Table 2.2 Ideas for New Public Governance

<table>
<thead>
<tr>
<th>Scholars</th>
<th>Ideas</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Joined-up-government</strong> (Hood, 2005)</td>
<td><em>It is a new label to old doctrine of coordination in the study of public administration. The idea is to join up the public organizations, administrative levels and policy areas to handle wicked issues that straddle the traditional boundaries.</em></td>
</tr>
<tr>
<td><strong>Whole-of-government</strong> (Christensen &amp; Laegreid, 2007)</td>
<td><em>“Whole-of-government denotes public services agencies working across portfolio boundaries to achieve a shared goal and an integrated government response to particular issues.” (p.1060)</em></td>
</tr>
<tr>
<td><strong>Good governance</strong> (United Nations, 2009)</td>
<td><em>“Good governance has 8 major characteristics. It is participatory, consensus oriented, accountable, transparent, responsive, effective and efficient, equitable and inclusive and follows the rule of law”. (p.01)</em></td>
</tr>
<tr>
<td><strong>Good enough governance</strong> (Grindle, 2004)</td>
<td><em>“Good enough governance agenda should be based on a more nuanced understanding of the evolution of institutions and government capabilities; being explicit about trade-offs and priorities in a world in which all good things cannot be pursued at once; learning about what’s working rather than focusing solely on governance gaps; taking the role of government in poverty alleviation seriously, and grounding action in the contextual realities of each country” (p.525)</em></td>
</tr>
<tr>
<td><strong>Collaborative governance</strong> (Morse &amp; Stephens, 2012)</td>
<td><em>“Collaborative governance is an umbrella term that encompasses various interweaving strands of public administration scholarship including intergovernmental and interagency collaboration, regionalism, cross-sector partnerships, public service networks (or simply network studies), consensus building, and public engagement. As such, it is more of a broad frame or motif for public administration rather than a singular model or framework.” (p.566)</em></td>
</tr>
<tr>
<td><strong>Governance network administration</strong> (Koliba et al., 2011)</td>
<td><em>Use of collaborative and coordinating strategies to effectively manage the inter-organizational relationships of actors across different sectors, levels and policy streams and having divers goals and preferences with regard to certain problem or policy measure.</em></td>
</tr>
<tr>
<td><strong>Governance network perspective</strong> (E. H. Klijn &amp; Koppenjan, 2016)</td>
<td><em>Use of strategies such as network management, joint solutions to the problems and generating cross sectoral and cross boundaries collaborations by using networks as policy tools.</em></td>
</tr>
<tr>
<td><strong>Democratic governance</strong> (Bowornwathana, 2006)</td>
<td><em>Democratic governance advocates a multidimensional approach towards administrative reforms with four key principles including government as facilitator, global vision and flexibility, accountability and fair government.</em></td>
</tr>
</tbody>
</table>

With this shift, New Public Governance (NPG) got popularized as a new perspective in public management debate (Osborne, 2006; Osborne, 2010). According to Pierre (2000),
“Governance refers to sustaining coordination and coherence among a wide variety of actors with different purposes and objectives such as political actors and institutions, corporate interests, civil society and transactional organizations” (p. 3). NPM has created many specialized agencies, which increases the need of collaboration and coordination in public sector. Moreover, it is also increasingly realized that societal issues are complex and wicked in nature and need cross sectoral and cross geographical collaborations (Klijn & Koppenjan, 2016). In this regard, the early calls include joined-up-government (Hood, 2005) and the whole-of-government (Christensen & Laegreid, 2007) based on the idea of shared solutions and collaborative arrangements of public organizations, administrative levels and policy areas. Grindle's (2010) idea of good governance got immense popularity to increase the responsiveness of government towards societal issues. However, the idea was caught by over enthusiasm with the large list of expectations from government. Grindle (2010) revised the idea into good enough governance emphasizing the need of indigenous and more practical country specific solutions. More recent ideas under NPG paradigm include collaborative governance (Sorensen & Torfing, 2007; Morse & Stephens, 2012; Ansell & Torfing, 2018) governance network administration (Koliba et al., 2011) and governance network perspective (E. H. Klijn & Koppenjan, 2016). The term governance has been used in a variety of ways, but is most often presented as an attempt to improve coordination between relatively dependent actors for the purpose of solving societal problems (Klijn, 2008).

2.2.5- Comparing TPA, NPM and NPG

Each model of public administration is dominated by set of principles, which differentiate it from other models. TPA model is dominated by use of bureaucracy as tool to provide uniform product and services to the public. The major tool of administration is control and command with
centralized decision-making structure. Whereas, NPM model provides contrasting prescriptions based on market-based mechanism and managerial approach. It emphasizes to create specialized autonomous agencies that work at arms-length from government and utilize the resources efficiently. The major tool of administration is autonomy, private sector management techniques and decentralization of decision-making. NPG model provides its distinctive principles to the government to meet the public expectations. Table 2.3 provides contrast between TPA, NPM and NPG models for public sector reforms.

Table 2.3 Comparison of public sector reform models

<table>
<thead>
<tr>
<th></th>
<th>Traditional Public Administration (TPA)</th>
<th>New Public Management (NPM)</th>
<th>New Public Governance (NPG)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major contributors</td>
<td>(Wilson, 1887); (Weber, 1946);(Taylor, 1911)</td>
<td>(Hood, 1991); (Osborne &amp; Gaebler, 1992); (Pollitt, 1993)</td>
<td>(Grindle, 2004); (Stephen Osborne, 2006); (Christensen &amp; Laegreid, 2007); (Klijn, 2008)</td>
</tr>
<tr>
<td>Dominant Institution</td>
<td>State</td>
<td>Market</td>
<td>network</td>
</tr>
<tr>
<td>Responsibility</td>
<td>State is responsible to serve general public</td>
<td>Autonomous organizations are responsible to meet targets</td>
<td>Joint responsibility of multiple actors to solve complex problems</td>
</tr>
<tr>
<td>Focus</td>
<td>Differentiation and coordination within bureaucracy</td>
<td>Internal function of government agencies and contractual relations</td>
<td>Cross sectoral relations and inter-organizational relations</td>
</tr>
<tr>
<td>Goals</td>
<td>Equality, legitimacy, legality</td>
<td>Efficiency, effectiveness</td>
<td>Joint-solutions to wicked problems</td>
</tr>
<tr>
<td>Dominant administrative structure</td>
<td>Public bureaucracy</td>
<td>Autonomous agency</td>
<td>Inter-organizational Network</td>
</tr>
<tr>
<td>Administrative tools</td>
<td>Command and control</td>
<td>Autonomy and competition</td>
<td>Collaboration</td>
</tr>
</tbody>
</table>

Source: Compiled by the author using the framework of (Koliba et al., 2011:191) and (Klijn & Koppenjan, 2016: 9)
2.3- Governance networks in the public sector

New public governance reforms are based on the argument that governments are becoming increasingly dependent on societal actors to solve challenging issues. Many of these challenges involve conflicting values, and addressing those demand involvement of various actors in policy making and implementation process (Koliba et al., 2011). Private sector, social alliances, and civil society each has important resources to share, as well as the power to obstruct policy interventions. It is only through collaborative action that complex problems can be solved (Klijn & Koppenjan, 2016). Governance networks offer better solutions for managing relations among actors who are tied in horizontal interdependencies. Hence, reformers are emphasizing the need to use inter-organizational networks as a tool for handling complex issues (Teisman & Gerrits, 2014).

Governance networks are “inter-organizational networks comprised of multiple actors, often spanning sectors and scale, working together to influence the creation, implementation, and monitoring of public policies (Koliba et al., 2011: xxv). Literature on governance networks has gradually developed over the decades (Rhodes, 1997; Kooiman, 1999; Klijn & Edelenbos, 2007). However, recently it is becoming famous trend in public administration (Keast, Mandell, Brown, & Woolcock, 2004; Koliba et al., 2011; Teisman & Gerrits, 2014; Klijn & Koppenjan, 2012; 2016). Especially after the shortcomings and negative impacts of NPM reforms, it may replace NPM as a new perspective under the heading of New Public Governance (Osborne, 2012 as cited in Klijn & Koppenjan, 2012). Koliba et al., (2011) argue that the trend towards networks of actors is penetrating both consciously as well as unconsciously in public sector. Consciously, governance networks are being used as policy tools in public reforms to handle
complex societal issues. Unconsciously, governance networks are emerging in public sector as a response to NPM based fragmentation and Post-NPM based integration reforms.

2.3.1- Governance networks as policy tools

There is good reasons for conscious efforts towards using governance network as a tool and strategy to handle public policy issues (Klijn, 2008; Keast, Mandell, Brown, & Woolcock, 2004). Societal problems are becoming increasingly wicked (Bueren et al., 2003). Wicked problems (Rittel & Webber, 1973) or messy problems (Acoff, 1975) are those which involve great deal of uncertainty regarding the nature of problem and kind of risk involved and hence need involvement of diverse actors for the solutions. These problems are ‘essentially unique’ and ambiguous (Koliba et al., 2011:14) and cannot be handled by traditional style of management and vertical hierarchies. They call for the interdependencies and interaction of public sector, private sector, non-for-profit organizations and civil society. Hence, governments are becoming increasingly dependent on societal actors to solve challenging issues. Many of these challenges involve conflicting values, and addressing those demands involvement of various actors in policymaking and implementation process. Private sector, social alliances, and civil society each has important resources, as well as the power to obstruct policy interventions. It is only through collaborative action that wicked problems can be solved. On the other hand, considerable collaborative advantage can be achieved while working in networks (Huxham & Vangen, 2005; 2009). Hence, reformers are emphasizing the need to use governance networks as a tool for handling wicked issues.

2.3.2- Governance networks as response to fragmentation

On the other hand, governance networks are also penetrating unconsciously. Koliba and colleagues (2011) argue that three moves have played an important role in developing inter-
organizational networks in public sector: move to devolve, move to privatize and move to partner. The move to devolve and privatize, created many independent agencies in public sector. To cater this fragmentation, various coordinating and collaborating agencies were created under move to partner. Consequently, networks of actors are formed in public sector who are now tied in more horizontal relations and interdependencies as compared to traditional vertical relations and hierarchical dependencies (Klijn & Koppenjan, 2016). Several scholars have worked on presence, relevance and importance of public policy making and implementation in governance networks. Table 2.4 summarizes literature produced on use of networks for public administration.

Table 2.4 Contributions towards use of networks for public administration

<table>
<thead>
<tr>
<th>Literature</th>
<th>Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agranoff &amp; McGuire, (2003)</td>
<td>Introduced micro-level tools for public managers to be used for horizontal and vertical collaborative relations.</td>
</tr>
<tr>
<td>Provan &amp; Kenis (2007)</td>
<td>Identified three network typologies based on network governance including shared network, lead organization network and administrative organization network.</td>
</tr>
</tbody>
</table>
2.3.3- Network governance and eminent typologies

Various typologies of inter-organizational relations/networks are developed in literature based on the mechanisms of regulation or modes of governance (Benson, 1975; Considine & Lewis, 2003; Provan & Kenis, 2007; Rodriguez, Langley, Beland, & Denis, 2007). Benson (1975) differentiated hierarchical and market-based mechanism of governance in inter-organizational relationships. A third form is presented by Ouchi (1980) as clan governance which is a hybrid mode of governance between hierarchy and the market to regulate inter-organizational relations. It is further conceptualized as collaborative governance or inter-organizational collaboration as a process of negotiation patterns and shared meanings between interdependent actors (Gray, 1989). Lawrence, Hardy, & Phillips, (2002) define collaboration as “a cooperative, inter-organizational relationship that relies on neither market nor hierarchical mechanisms of control” (p.481). Other scholars have also pointed out collaboration based inter-organizational relations (Phillips, Thomas, Lawrence, & Hardy, 2000; Hardy, Phillips, & Lawrence, 2003; Agranoff & McGuire, 2003). Rodriguez et al., (2007: 152) noted two main features of inter-organizational collaboration including “voluntary process” and “mode of regulation of exchanges between actors is the clan…which calls for the development of shared meanings between actors”.

Provan & Kenis (2007) have identified three modes of network governance including self-governed, lead-organization governed, and network administrative organization governed networks. The typology is based on set of actors involved and presence or absence of relational ties between different actors. Self-governed networks depend exclusively on the involvement and commitment of network participants who are themselves responsible for managing internal and
external network relationships. This is basically the clan mechanism of governance resented by Ouchi (1980). Lead organization governed networks occurs when there is a single powerful buyer/supplier/funder and several weaker organizations in the network. In such case, most of the decisions are taken by lead organization. In such case, negotiation patterns are based on market mechanism. In case of network administrative organization, a separate administrative entity is set up specifically to manage the network and its activities. Unlike the lead organization model, network administrative organization (NAO) is not another firm or agency in the supply chain, providing its own services. Instead, the NAO is established with the exclusive purpose of network governance. In such case, mandated collaboration is most likely to exist in network (Rodríguez et al., 2007). After reviewing literature on various forms of inter-organizational relations, Koliba et al., (2011) differentiate three macro-level forms of networks including market, hierarchy and collaborative. However, they suggest that a mixed form governance network is required, with some combination of market, hierarchical and collaborative arrangements, to solve complex problems of public sector. Provan & Kenis (2007) also argue that self-governed/ lead/ NAO are all pure forms of network. However, in practice, some hybrid network form may exit particularly hybrids of the self-governed and NAO models.

Working in governance network is quite challenging for public organizations because it is altogether different from hierarchical control and command relationship. Huxham & Vangen (2009) highlighted the dilemma that although networks are formed for collaborative advantage however they often suffer from collaborative inertia, which can significantly reduce their effectiveness. On the other hand, better coordination mechanisms may contribute to the success of governance networks. Recently, the effective use of digital and smart technology is also recognized as a critical factor to enhance the capacity for innovative solutions in public
administration (López-Quiles & Bolívar, 2018). The implementation of sophisticated information technologies (ICTs) in public administrations can cause a revolutionary transformation in the interaction, decision making patterns and service delivery mechanisms. Still, effective use of digital and smart technologies for network management is a challenge. Another critical domain is to handle complex relations in the network. Organizations need to incorporate various demands/pressures coming from its environment and shaped by diverse actors in governance networks. In this regard, new institutional theories provide rich explanation for why organizations pay attention to institutional logics and how multiple logics create institutional complexity for organization. Following section will review literature on multiple institutional logics faced by organizations in light of institutional theories particularly new institutionalism.

2.4- Organizations in the institutional context

The basis of institutional complexity goes back to the early realization of organizational adherence to socio-cultural (institutional) pressures. Therefore, in order to understand the concept of institutional complexity, it should be placed within the context of institutional theory and institutional analysis. This section starts with historical contributions in institutional analysis, neo-institutionalism and institutional logics perspective that have paved ways toward institutional complexity literature. Then it reviews institutional complexity, role of field in institutional complexity and organizational responses.

2.4.1- Old institutionalism: socio-cultural influences of institutions

The study of institutions has a long history with Selznick’s (1948) and Parson’s (1956) early realization of external and internal socio-cultural influences on organization. Selznick (1948;
1949 and 1957) established that organization is responsive towards diverse pressures coming from external environment. Parsons (1956) theorized multidimensional view of social action separating institutional aspects from technical and economic aspects of society. Cyert & March (1963) highlighted varied reactions of informal groups to conflicting demands and supremacy of informal structure of organization on the rational structure. These early contributions highlighted informal organizational structure, which deviates from the rational structure. However, instead of questioning the rationality of formal structure, the attention remained on the influence of cultural and institutional aspects on rational action of organization.

2.4.2- New Institutionalism: Institutional conformity and continuity

In late 1970s, a new perspective of institutional analysis emerged with the work of Meyer & Rowan (1977) and Zucker (1977) who located irrationality in the formal structure itself due to adherence of organizations to institutional context. Other important early contributions include DiMaggio & Powell (1983), Meyer & Scott (1983) and Tolbert & Zucker (1983). They established conceptual foundations of modern/new institutionalism raising the question of why organizations look similar. Their central proposition was organization’s similarity in structures, processes and practices due to their conformity to institutional rules in the environment (Thornton, Ocasio, & Lounsbury, 2012). New institutionalism emphasized the symbolic role of formal structure, loose coupling of inter-organizational system and structural conformity to institutional pressures.

Meyer & Rowan (1977) explained rationalization and diffusion of formal bureaucracy in modern society due to taken-for-granted myth that bureaucracy was rational structure. Such wide spread taken-for-granted social understandings constitute the institutional context. Organizations have to respond to institutional context to gain legitimacy in the eyes of important referents.
They explained three sources of legitimacy that promoted rationalized myths: 1) elaboration of relational networks; 2) collective societal rules and 3) leadership efforts. Zucker (1977) explored taken-for-granted nature of institutions and rationalized myths from micro perspective. He asserted that institutionalized acts require no reinforcements but still they are transmitted to next generation. Tolbert (1985) realized the influence of institutional context as “widespread social conceptions of appropriate organizational form and behavior constitute the institutional environment of organization” (p.2). In two-stage isomorphism model, Tolbert & Zucker (1983) presented organizations as captives of their institutional environment and that organizations have to respond to environmental pressures which make them similar to each other.

DiMaggio & Powell (1983;1991) shifted focus of institutional theory from societal level to organizational fields and presented structuration of field as the basis of isomorphism. They presented three basis of isomorphism including coercive, normative and mimetic sources. Professional bodies exert normative pressures. Coercive pressures are caused by both “formal and informal pressures exerted on organizations by other organizations upon which they are dependent” (DiMaggio & Powell, 1991:67). Whereas, mimetic processes result from imitation due to uncertainty. DiMaggio a Powell’s mimetic isomorphism got great popularity with the realization of mindless organizational behavior in response to cultural rationalization. They argued that organizations get similar in form because structural change in organization is due to structuration of field rather than need for competition or efficiency. Scott (2007) conceptualized the enduring features of institutions in the framework of three pillars including regulative, normative and cultural-cognitive (p.51). He argued that these pillars provide stability and meaning to the social life.
These thoughts were popularized as “new institutionalism” which rejected ‘rationality’ as the explanation for organizational behavior and emphasized ‘legitimacy’ rather than ‘efficiency’ as a source of organization’s success (Greenwood et al., 2011: 100). As DiMaggio & Powell (1991:8) state that “new institutionalism in organization theory and sociology comprises a rejection of rational-actor model”. An important observation of new-institutional theory was decoupling and loose coupling of inter-organizational system. Theorizing loose coupling in organization, Meyer & Rowan (1977) explained ceremonial adoption of rationalized myth i.e. a practice was announced symbolically and not implemented in technical core. March & Olsen (1976) observed that organizations are loosely coupled as they take decisions that are never implemented. Such attempt is important to satisfy external referents while protecting the technical efficiency of organization. The arguments of new-institutionalism attracted a wide community of scholars for explaining isomorphic influences on organizations (Weick, 1976; Meyer & Rowan, 1977; Haveman & Rao, 1997; Scott, 2007; Thornton, 2002; Lounsbury, 2002; Broek, Boselie, & Paauwe, 2014; see Boxenbaum & Jonsson, 2008 for review).

Scholars of new institutional perspective did a remarkable job by bringing cognition to the forefront of institutional analysis; however, they altogether ignored the role of agency in creating institutions. DiMaggio (1988:12) early recognized that the scope of new institutional perspective is limited to providing explanation of diffusion process and reproduction of institutionalized myths. Thornton et al. (2012: 31) argued that the greatest critique on institutional theory is “emphasizing mindless cognition and ignoring mindful action and agency”. It ignored the ability of individual actors in changing and transforming institutions. This limited scope paved way towards institutional logics perspective, which catered the freedom of agency against institutional pressures. Scott (2004:94) defines agency as “actor’s ability to have some
effect on the social world—altering the rules, relational ties, or distribution of resources”. Instead of organizational indecisive conformity to institutional pressures (isomorphism proposed by new institutionalism), institutional logics perspective proposed the multiplicity of institutions and heterogeneity in organizational responses to institutional demands (Thornton & Ocasio, 1999; 2008).

2.4.3- Institutional logics: Institutional change and innovation

Institutional logics perspective has its roots in early calls for institutional change and action (Alford & Friedland, 1985); institutional entrepreneurship (DiMaggio, 1988) and consideration of power in institutional analysis (Thornton & Ocasio, 1999). Friedland & Alford (1991) argued that organizations are faced with multiple institutional contexts and that they present separate rationalized myths which organization has to incorporate. DiMaggio (1988) highlighted actor’s innovation arguing, “New institutions arise when organized actors with sufficient resources see in them an opportunity to realize interests that they value highly” (p.14). Brunsson (1989) recognized that organizations are confronted with multiple and conflicting expectations from variety of institutions. These thoughts developed the literature of ‘institutional logics’ which addressed question of how organizations experience and respond to logics coming from variety of contexts rather than their isomorphic impacts of institutionalized myths. Hence, not only, logics shape organizational behavior but organizations also have some control over shaping the logics coming from diverse contexts (Thornton, 2004).

The term ‘institutional logics’ was first introduced by Alford & Friedland (1985) pointing to contradictory practices and beliefs inherent in the institutions (state bureaucracy, political democracy, nuclear family, Christian religion and capitalism) of modern western societies. Each institution is characterized by an inherent logic which constitute “a set of material
practices and symbolic constructions” (Friedland & Alford, 1987:248). Growing interest in logics is reached the point where the term “has become something of a buzz word” (Thornton & Ocasio, 2008 :99). It is emerging as the most exiting area of research in the institutional theory. Table 2.5 presents definitions of institutional logics by various scholars.

**Table 2.5 Definitions of institutional logics in literature**

<table>
<thead>
<tr>
<th>Scholars</th>
<th>Definition of Institutional logic</th>
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</thead>
<tbody>
<tr>
<td>Friedland &amp; Alford (1991, p.243)</td>
<td>“Symbolic systems, ways of ordering reality, and thereby rendering experience of time and space meaningful”</td>
</tr>
<tr>
<td>Thornton &amp; Ocasio (1999, p.804)</td>
<td>“Socially constructed, historical pattern of material practices, assumptions, values, beliefs and rules by which individuals produce and reproduce their material subsistence . . . and provide meaning to their social reality”</td>
</tr>
<tr>
<td>Scott (2001, p.139)</td>
<td>“Belief systems and related practices that predominate in an organizational field”</td>
</tr>
<tr>
<td>Thornton (2004, p.2)</td>
<td>“The axial principles of organization and action based on cultural discourses and material practices prevalent in different institutional or societal sectors.”</td>
</tr>
<tr>
<td>(Greenwood et al., 2009, p. 2)</td>
<td>“Logics underpin the appropriateness of organizational practices in given settings and at particular historical moments. Failure to use practices legitimated by an extant logic can have adverse consequences”</td>
</tr>
<tr>
<td>(Greenwood et al., 2011, p.318)</td>
<td>“Logics...provide guidelines on how to interpret and function in social situations”</td>
</tr>
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</table>

Logics provide rationalization for activities of individuals and organizations, which reproduce institutions by their activities (Suddaby & Greenwood, 2005). Hence, logics provide guiding principles on how to understand and operate in social situations. Organizations conform with logics in order to gain legitimacy from important referent audience (Greenwood et al., 2011). Friedland & Alford (1991) theorized that various institutions operate at different levels
and presented the idea of institutional order. Individuals, family, religion, state, market and democracy are all decomposable components that operate at different levels in inter-institutional social system. Each institution has a central logic that put constraints on the means and ends of human behavior. At the same time, institutions also provide opportunities for change. Thornton et al. (2012) further theorize that different institutions can present conflicting demands. This confliction creates opportunity for actors to manipulate this conflict for change and innovation.

Old institutionalism also recognized the power of actors in institutional pressures. However, later, it was overlooked in the structural arguments of new institutionalism who presented actors as passive recipients of institutional demands. Institutional logics perspective bridged the gap between old and new institutionalism and expands the scope of institutional analysis to cater the sources of institutional transformation and change. It therefore, reintroduced agency interests and power into institutional analyses of organizations. It thus offers promise to researchers seeking to bridge what have come to be called the “old” and “new” institutionalisms in organizational analysis (DiMaggio & Powell, 1991; Greenwood & Hinings, 1996). To sum up, there has been debate between scholars on structure verses agency arguments. On the one hand, scholars have emphasized institutional constraints on actors promoting the idea of institutional resilience, conformity and institutional continuity. On the other hand, scholars have argued for actor’s freedom to choose action promoting the idea of institutional change and transformation. For synthesis, Thornton et al. (2012) argues that “to understand individual and organizational behavior, it must be located in a social and institutional context, and this institutional context both regularizes behavior and provides opportunity for agency and change”. Hence, there is a debate in literature between institutional continuity (structural constraints) and institutional
change (agency behavior). Table 2.6 presents the contrasting arguments of old institutionalism, new institutionalism and institutional logics perspective on this debate.

### Table 2.6 Contrasting arguments in institutional theory literature

<table>
<thead>
<tr>
<th>Developments in institutional theory</th>
<th>Arguments/ Directions</th>
<th>Major contributions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Old institutionalism</td>
<td>Socio-cultural influences on organization; power of informal group ties, values, norms, culture; organization as institution, path-dependency, unique culture and heterogeneity of organizations</td>
<td>Selznick, 1948, 1949, 1957; Parsons, 1956; Cyert &amp; March, 1963</td>
</tr>
<tr>
<td>New institutionalism</td>
<td>Institutional constraints on formal organization; institutional conformity and continuity; indecisive adherence to rationalized myths; isomorphism; homogeneity of organizations</td>
<td>Meyer &amp; Rowan, 1977; Zucker, 1977; DiMaggio &amp; Powell, 1983; Meyer &amp; Scott, 1983</td>
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#### 2.4.4 Research in institutional logics: Coverage and directions

Institutional logics have attracted a vibrant and ongoing research community. Lot of empirical and theoretical studied have been conducted in this area covering variety of fields such as healthcare (Reay & Hinings, 2009; Scott et al., 2000; Dunn and Jones, 2010; Koç & Vurgun, 2012; Broek, Boselie and paauwe, 2014), social enterprises (Dacin, Dacin, & Tracey, 2011; Pache and Santos, 2010), publishing (Thornton, 2002; Thompson, 2011; Raviola & Dubini, 2016). Further, logics are examined in life sciences (Murray, 2010a), Finance and banking sector (Battilana & Dorado, 2010; Lounsbury, 2002; Marquis & Lounsbury, 2007; Palermo, Power, &
Ashby, 2016), neonatal intensive care (Heimer, 1999), sports industry (Baumann-Pauly et al. 2015), public bureaucracies (Meyer & Hammerschmid, 2004; Fan and Zietsma 2017) and cultural industries (Glynn & Lounsbury, 2005).

Medicine and healthcare industry is the most popular field among researchers to study presence and contradiction of multiple logics. Here, researchers have identified various logics including professional care, science, regulatory, servant and administration logic. However, most of the studies have captured contradiction between two logics. Reay and Hinnings (2005, 2009) analyzed Alberta healthcare field where competing logics (medical professionalism and business-like healthcare) co-existed for a lengthy period of time due to separate identities of key actors that support separate logics. They found that competing Logics can co-exist and their rivalry can be managed through collaborative efforts of actors. Taking the similar stance, Dunn and Jones (2010) captured co-existence of care logic and science logic in healthcare field. They found that distinct groups and identities (that serve as carriers of logics) support different logics. Koç & Vurgun, (2012:159) found development of ‘commercial institutional logic’ in Turkish healthcare field where ‘servant institutional logic’ was traditionally dominant in state hospitals. Scott et al., (2000) explored shift in healthcare logic from professional dominance to managed care.

Publishing is another popular field among researchers to study shift in logic (Thornton, 2002), contestation in logics(Thompson, 2011), innovation and change in logics (Murray, 2010a) and inter-organizational processes to practice logics (Raviola & Dubini, 2016). Thornton, (2002) examined spread of multi-divisional structure in craft and profession based firms under market logic which replaced editorial logic in the U.S. higher education publishing industry. Thompson, (2011) found contestation between editorial and market logic in public sector higher education
publishing. Raviola & Dubini, (2016) compared professional logic and commercial logic in journalism to explore inter-organizational process to practice logic. Murray, (2010) found emergence of distinctive logics (hybrids) due to contestation of logics in overlapping institutions.


Christensen & Laegreid, (2001) conceptualized that various reform agendas got global popularity in public sector, and were practiced in most of the countries in the world, irrespective of developed and developing countries. Each reform model had a unique institutional logic. Researchers have identified and conceptualized various logics in the context of public sector including state/bureaucratic logic, corporate/managerial logic, market logic, coordination logic, new public management logic and post-NPM logic. State logic and bureaucratic logic has many overlapping aspects and thus can be merged. State logic prescribe supremacy of the state and policy implementation through bureaucracy. Bureaucracy is the mean to achieve goals in state
logic. Bureaucratic logic prescribe rules, regulation and processes as the rationality to act. Rational structure is ‘public departments’ and ‘authorities’ to implement policies. Human resource management practices include permanent hiring, seniority based promotion and seniority based pay increment. State logic got popularity in public sector with the concept of Max weber’s bureaucracy. State was assumed the major player in economy. Bureaucracy was the tool to deliver services and products. Scholars have named it traditional public administration era in public sector.

Market logic got popularity in public sector in 1970s with neoliberal views towards privatization, decentralization, competitive environment, outcome based rewards and cost-benefit analysis (Scott, 2014). Under the umbrella of new public management reformer argued that government should run like business (Osborne & Gaebler, 1992). Famous recipes of market logic included privatization, use of state-owned companies (legally autonomous agencies), public-private partnership and use of business practices (such as e-government, private sector HR practices etc.) Zelner, Henisz and Holburn (2009) examined the decision by more than 80 countries to privatize electric power utilities involving more than 970 projects during the period 1989 to 2001. The countries, all over the world, privatized state-owned facilities and encouraged private power development under ideological influences towards neo-liberalization and lending policies of World Bank and IMF. These reforms were adopted under market logic. Market logic is based on market competition and profit generation.

As institutional logics got popularity, extensive literature is produced in diverse directions. Researchers have identified logics in particular field and analyzed how logics contradict (Cooper, Hinings, Greenwood, & Brown, 1996; Thornton, 2002; Thornton & Ocasio, 1999; Reay & Hinings, 2009). Role of logics is studied in organizational change process
(Greenwood & Hinings, 1996; Reay & Hinings, 2005). Another direction is studying the political behavior of stakeholders in the process of shifting from one logic to logic (Bacharch & Mundell, 1993; Haveman & Rao, 1997; Seo and Creed, 2002). An area where researchers have paid relatively less attention is how organizations respond to these apparently incompatible expectations (Greenwood et al., 2011). In other words, how organizations experience institutional complexity and what strategies they may adopt to cope with institutional complexity. Although some efforts are present in literature (Murray, 2010; Pache & Santos, 2013; Greenwood et al., 2011; Fossestøl et al., 2015), however, further investigation will be a significant contribution in literature.

2.5- Institutional complexity

Old institutionalism, new institutionalism and institutional logics literature are the major contributors towards development of institutional complexity literature. Institutional complexity is created when organizations face multiple and conflicting institutional logics in its institutional context (Greenwood et al., 2011). Meyer & Rowan, (1977) noted that organizations confront sociocultural as well as commercial expectations and that these may be incompatible. Scott (1991) emphasized that “there is not one but many institutional environments and... Some would be sources of rationalized myths may be in competition if not in conflict” (p.167). Friedland & Alford, (1991) highlighted that society is constituted of multiple institutions, which may present interdependent yet contradictory logics. D’Aunno, Sutton, & Price, (1991) argued:

“conforming to strong environmental beliefs and rules is difficult for many organizations because they face fragmented environments in which multiple independent groups and organizations make demands that are, at best, uncoordinated.” (p.636)

Greenwood and colleagues (2011:318) define institutional complexity as a state in which organization “confront incompatible prescriptions from multiple institutional logics”.

[564x709] Greenwood & Hinings, 1996; Reay & Hinings, 2005). Another direction is studying the political behavior of stakeholders in the process of shifting from one logic to logic (Bacharch & Mundell, 1993; Haveman & Rao, 1997; Seo and Creed, 2002). An area where researchers have paid relatively less attention is how organizations respond to these apparently incompatible expectations (Greenwood et al., 2011). In other words, how organizations experience institutional complexity and what strategies they may adopt to cope with institutional complexity. Although some efforts are present in literature (Murray, 2010; Pache & Santos, 2013; Greenwood et al., 2011; Fossestøl et al., 2015), however, further investigation will be a significant contribution in literature.

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Greenwood and colleagues (2011:318) define institutional complexity as a state in which organization “confront incompatible prescriptions from multiple institutional logics”.

...
Incompatible institutional logics generate tensions and challenges for the organizations (Greenwood et al., 2011). Literature has endorsed two dimensions/aspects of institutional complexity: multiplicity of logics and logics incompatibility.

Multiplicity of logics refers to sheer number of logics (Greenwood et al., 2011) and their coexistence over an extended period of time. The more the number of logics, the greater the complexity experienced by organization. Dunn and Jones, (2010) examined coexistence of care and science logic in medical education. Reay & Hinings (2009) explored presence of medical profession logic and market logic in health care of Canada over an extended period. Palermo et al. (2017) observes two logics in financial sector to take risk: logic of precaution and logic of opportunity. Meyer et al. (2014) found bureaucratic logic and managerial logic in public sector organizations. Laurel, Arjalies, & Marco Giorgino (2014) explored emergence of new logic of responsible investment (RI) in place of already prevailing financial logic in asset management industry in Europe. Most of the scholars have catered coexistence of two logics that depicts over simplicity in the phenomenon of institutional complexity. An exception to Law, medicine and family institutions o this is the study of Greenwood et al., (2009) in which state, market and family logics are compared. Alford & Friedland (1985) also incorporate multiple logics in their theory. Heimer, (1999) elaborated theory of institutional pluralism and competition examining three institutional logics (law, medicine and family) in infant intensive care units.

Greenwood et al. (2011) calls for incorporating multiplicity (more than two) logics in a context and providing explicit justification for including particular logics in analysis. Such an analysis will provide better understanding of intensity of institutional complexity faced by organization. Logic incompatibility refers to the extent to which logics present divergent prescriptions to organization. Greenwood and colleagues (2011) argue, “Complexity is amplified
by the divergence between prescribed goals and means, and by their relative specificity”. Pache & Santos (2010) argue that institutional logics present conflicting demands either in terms of goals of the organization or the means to achieve those goals. Institutional logics can present conflicting goals to achieve legitimacy. For example, Purdy & Gray (2009) found conflicting expectations over the mission of dispute resolution offices in US. Different referent groups had conflict over the mission of these offices as ‘democratic’ or ‘bureaucratic’. Public policy officers had democratic orientation and wanted to involve large number of disputants in decision-making. On the other hand, judicial advocates wanted to handle a large volume of routine cases to increase efficiency. Pache & Santos (2013) found that social enterprises had conflicting goals under social welfare logic and commercial logic. Social enterprises had to make products and/or services available to address local social needs. On the other hand, they had to sell good and generate appropriate economic surplus for the owners. The explicit differences, between the prescribed goals of two logics, created institutional complexity for social enterprise.

Incompatibility can be in terms of means to achieve the goals. Pache & Santos (2010) noted difference in means prescribed by welfare logic and commercial logic in terms of organizational forms, sources of control and professional legitimacy. Welfare logic prescribed non-profit status, democratic control and mobilization of volunteers to achieve social welfare goals. Whereas, commercial logic prescribed for-profit/business status, hierarchical control and hiring of professional human resource to efficiently manage resources. In their study on stock market repurchase programs in US corporations. Westphal and Zajac (2001) found convergent views of different referent groups over the means of achieving same profit generation goal. The stock market analysts favored stock repurchase plan to increase earnings per share. On the other hand, management professionals preferred using cash reservations for investment or acquisitions
to increase future earnings. Thus, the incompatibility was found in means to achieve the same goals. Pache & Santos (2010: 460) define goals as “expressions of the core system of values and references of organizational constituencies and are, as such, not easily challenged or negotiable”. Goals are manifested in the identity of the members. Therefore, many researchers have worked on identity to investigate the associated institutional logic (Meyer & Hammerschmid, 2006; Meyer et al., 2014; Skelcher & Smith, 2015; Kodeih & Greenwood, 2014).

Pache & Santos (2013) argue that logics may present incompatible pressures over the goals or means alone or both at the same time. Means can be prescribed in practices, structures or/and symbols. Studies have linked logics with a wide range of practices, including workforce composition (Pache & Santos, 2013); distribution of retained earnings (Zajac & Westphal, 2004), executive succession and compensation (Thornton and Ocasio, 1999) social responsibility (Lounsbury, 2007), teaching methodology (Lounsbury and Pollack, 2001), health care (Broek, Boselie and Paauwe 2014), professionalization (Lounsbury 2002) and dispute resolution (Purdy & Gray, 2009). Structural prescriptions can have incompatibility as noted in career structures (Stovel and savage 2006), business forms (Haveman & Rao, 1997; Thornton & Ocasio, 1999; Thornton, 2004; Greenwood and Suddaby, 2006), technological entrepreneurship (Sine and David 2003), governance structure (Pache and Santos, 2013). Greenwood and Suddaby (2006) examined shift in the business from of corporate accounting firms due to change in professional logic to commercial logic. Professional logic prescribed single ownership or partnership model whereas commercial logic prescribed business model with multi-service, centralized and managerial control. They examined incompatibility in different logics regarding the structural requirements.
The construction of organizational identity is increasingly recognized by institutional researchers as an important mechanism to understand institutional complexity. Several researchers have explored complexity through organizational identity or individual’s identity. Literature on institutional complexity has taken diverse directions summarized in Table 2.7

### Table 2.7 Diverse research directions in institutional complexity

<table>
<thead>
<tr>
<th>Developments in institutional complexity literature</th>
<th>Major contributions</th>
</tr>
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<tbody>
<tr>
<td>Dominance of one institutional logic in organizational field</td>
<td>Prahalad &amp; Bettis, (1986); Reay and Hinings (2005)</td>
</tr>
<tr>
<td>Rivalry/competition of logics due to multiplicity of logics in field with no dominant logic</td>
<td>Boxenbaum &amp; Battilana (2005); Greenwood et al. (2010); Thornton &amp; Ocasio, (1999)</td>
</tr>
<tr>
<td>Field level mechanisms in framing logics for organizations</td>
<td>Purdy and Gray (2009); Reay and Hinings (2005)</td>
</tr>
<tr>
<td>Organizational change process</td>
<td>Greenwood and Hinings, 1996; Reay and Hinings (2005)</td>
</tr>
<tr>
<td>Political behavior of stakeholders in the process of logic shift</td>
<td>Bacharch and Mundell, 1993; Haveman and Rao, 1997; Seo and Creed, 2002</td>
</tr>
<tr>
<td>Inter-organizational processes in organizations to navigate through institutional complexity</td>
<td>Murray, 2010; Pache and Santos, 2013; Greenwood et al., 2011; Fossestøl et al., 2015</td>
</tr>
<tr>
<td>Reconfiguration of logics into hybrid forms, hybrid practices or hybrid identities.</td>
<td>Schneiberg &amp; Clemens (2006); Murray (2010); Tracey et al., (2011); Pache and Santos (2013);</td>
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</table>

### 2.5.1- Responses to institutional complexity

Earlier studies provided arguments for adoption or diffusion of new logics in the field which resulted in isomorphism (Meyer and Rowan, 1977; Zucker, 1977; Scott, 1983). Isomorphism got a popular meaning that all organizations respond to institutional context in the same way. Hence, only two responses were conceptualized: adoption and diffusion. Later it was realized that institutional context contained multiple and inconsistent myths. Therefore,
organizations had multiple strategic choices available to respond to external pressures. Scholars argued that organizations are not passive recipients of institutional pressures rather they interpret, decode and actively transform logics.

Oliver (1991) argued for active responsiveness of organization instead of passive conformity to institutional pressures. Her typology of strategic responses of organization got immense admiration in institutional logics literature. She theorized a broad range of strategic responses available to organization to respond to institutional pressures: Acquiescence, compromise, avoidance, defiance and manipulation. Purdy and Gray (2009) developed four types of responses to logics: transformation, grafting, bridging, and exit. Kraatz and Block (2008) also presented four types of responses to institutional pluralism but with different terminology: resistance, balancing, detachment and compartmentalization. Murray (2010) has identified three dominant responses of organizations in literature: collapse, blending and easy coexistence of logics. In their review of organizational responses to institutional complexity, Greenwood et al., (2011) have summarized literature in two major categories: Strategic responses and structural responses. Strategic responses majorly include resistance of upcoming logic, balance of two logics, detachment from one logic and decoupling behavior. Structural responses refer to incorporating institutional logics in structure and practices of organization, which can be in form of blended hybridity or differentiated hybridity. Pache and Santos (2013) identified “decoupling”, “compromising”, and “combination”, as strategies deployed by organizations to respond to multiple institutional pressures. To sum up, organizational responses to institutional complexity can be explained in following five categories.
**Replacement/acceptance**

This response got popularity in the early studies on institutional pressures. Most of the researchers argued that organizations had to confirm to institutional pressures and hence new logic replaced the old logic. Organizations may adopt the prescriptions of new logic either to gain useful resource, to avoid negative sanctions or to increase legitimacy. Westphal and Zajac (1994) explored substitution of an agency logic for a steward-ship logic of CEO behavior, the former prevalent until 1980 and the latter thereafter. In finance, a regulatory logic replaced a thrift logic, and both were later replaced by a market logic (Haveman and Rao, 1997; Lounsbury 2002). Thornton, (2002) found replacement of craft logic by market logic in academic publishing industry. Rao, Monin, and Durand (2003) explored that in culinary field, nouvelle cuisine replaced haute cuisine. Thornton (2004) found replacement of simple structure to multidivisional structures in higher education publishing firms due to change in logic from editorial logic to market logic.

**Resistance/Rejection**

Kraatz and Block (2008) argued that organization might become an institution in itself through building a strong identity that immunizes it form external pressures for compliance. Thus, organization might be in position to reject or at least resist new institutional logic. Oliver (1991) conceptualized it as defiance whereby organization resist the upcoming institutional pressures very explicitly involving other actors from the field. Covaleski and Dirsmith (1988) explored one organization’s (the University of Wisconsin) attempt to resist state’s requirement of new budgetary system. The university obtained public support to resist change in the budgetary system. However, later the state power enforced the university to accept state’s requirements for new logic. Similarly, Scott et al. (2000) found resistance to new care logic in healthcare field.
Although, the new logic was resisted but some organizational features were more open to change than others. In both studies, although organizations have attempted resistance but ultimately new logic prevailed which strengthen institutional argument of organizational conformity to institutional pressures.

**Decoupling / Compromising**

Organizational response to decouple, or partly compromise with incoming logics, got enormous popularity in institutional theory literature. Meyer and Rowan (1977) argued that although organizations confirm to institutional forces by adopting the famous prescriptions, however, the actual behavior of employees substantially deviate for formal adoption. Westphal and Zajac (1994) examined large US corporations who adopted long-term CEO compensation plans to align CEO’s incentives with stockholder’s interest. They found that although many organizations adopted this plan but a large number did not restructure executive compensation. They concluded that adoption of long-term CEO compensation plan increased their legitimacy, which increased stock market prices. On the other hand, this plan could negatively affect CEO’s packages. Due to CEO’s influence on the board, the plan was not implemented in many companies and was adopted only ceremonially. Zajac and Westphal (2004) compared corporate logic and agency logic. They found that under agency logic, more and more companies adopted the policy of stock repurchase plan however; they did not implement that policy. Hence, decoupling strategy was adopted by most of the companies. Palermo et al. (2017) found that organization de-intensified institutional complexity pressures through mean-end decoupling. Luo et al. (2015) found decoupling response for compliance to CSR requirements against conflicting demands from state and local governments.
Co-existence of logics

Researchers have argued for co-existence of institutional logics in organizational fields and organization’s structure and practices. Co-existence entails that none of the logic is dominant rather all exert equally important for the organization. Co-existence can result in compartmentalization or contestation of logics. Reay and Hinings (2009) found that competing logics can co-exist and their rivalry can be managed through collaborative effort of actors. They found presence of competing logics in healthcare sector over an extended period. They argued that competing logics could co-exist and their rivalry could be managed by separating identities of key actors under each logic. This mechanism provided a way for competing logics to co-exist and separately guide the behavior of different actors. Dunn and Jones (2010) found co-existence of both care and science logic in health care organizations and were supported by different groups. This mechanism is also conceptualized as compartmentalization of logics where separate subunits deal with particular logics with compartmentalization of different mindsets, identities, practices and processes (Kraatz and Block, 2008; Pratt and Foreman, 2000). Greenwood et al. (2011) put is under the category of differentiated hybrids.

Co-existence of logics can also result in contestation and rivalry among diverse prescriptions of logics. Szücs (2013) found development of two different governance logics in the local government offices: NPM based competition logic and post-NPM based cooperation logic. They argued that both logics were based on contested principles. Similarly, Thompson (2011) found presence and contestation between editorial and market logic in public sector higher education publishing. This contestation can be very problematic for the organization and may result in organizational collapse. On the other hand, organization may take it as opportunity to create innovative practices. Misangyi (2016) found very different systematic connections
between the coupling and decoupling of expected environmental management system program practices and the multiple institutional intentions given for the environmental management system adoptions. They explained this response/mechanism as loose coupling.

**Hybridization/innovation**

This response is most popular in contemporary researchers in institutional theory particularly those who challenge the thesis of isomorphism and organizational conformity to institutional pressures. Researchers have argued for agency autonomy and creativity to play its role in institutional change process. With this argument, many researchers have explored innovative ways through which organizations blended practices and structures taken from different logics and created new hybrid versions. Greenwood et al. (2011:352) termed it ‘blended hybrids’.

Most popular, to this category of response, is creation of hybrid business form. For example, creation of social enterprise that is a hybrid form of commercial and nonprofit organizations. Pache and Santos (2013) found that social enterprises selectively coupled intact elements prescribed by commercial and welfare logics. They identified specific hybridization pattern that they refer to as “Trojan horse,” whereby social enterprises, that had commercial status, strategically incorporated elements from the social welfare logic to gain legitimacy. Likewise, Murray (2010) found creation of hybrid business form that can maintain a distinctive boundary in overlapping institutions. Instead of co-existence, collapse or blending of logics, they found new version of logic. Other researchers have also explored emergence of new type of organization combining two conflicting logic (Tracey et al. 2011; Battilana and Dorado, 2010). Ocasio and Radoynovska (2016) argue that institutional pluralism leads to heterogeneity rather than homogeneity in business models. They explained organizational transformation process due
to differentiated organizational commitments to distinct combinations and prioritizations of institutional logics.

In the context of public sector, Fan and Zietsma (2017) presented a model of creation of new shared governance logic in public sector. Berg and Pinheiro (2016) found emergence of new hybrid logic in public sector. Market logic was introduced in place of bureaucratic logic. However, neither market logic was not adopted fully nor previous professional logic was left behind. Rather, bureaucratic logic was expanded and supplied by a neo-bureaucratic logic. Broek, Boselie and Paauwe (2014) also found hybrid innovative practices in the context of public sector.

Greenwood and Suddaby (2006) studied organizational hybridity as an opportunity for institutional entrepreneurship. They argued that actors take innovative solutions by manipulation of the given logics. In the similar vein, Skelcher and Smith (2015) argued that contradictions between institutional logics offered space to organizations to creatively reconstruct the logics. They proposed five types of organizational hybridity in response to institutional pluralism: segmented, segregated, assimilated, blended, and blocked. Similarly, Venkataraman et al. (2016) argued that different institutional logics can be used by agency instrumentally to change institutional logic. They explained how market logic and a community logic are combined by an organization to develop new social structures in the rural communities.

2.5.2- Multi-level analysis of institutional complexity

The contradictions of logics is captured on various levels including societal level (Alford and Friedland, 1985; Friedland and Alford, 1991; Heimer, 1999; Bhappu, 2000; Zhao & Wry, 2011) filed level (Reay and Hinings, 2005; Purdy and Gray, 2009), organizational level (Broek,
Boselie and Paawe, 2014; Baumann-Pauly et al., 2015) and even on individual level (Fan and Zietsma, 2017). However, multi-level analysis of institutional complexity is the most neglected area with the few exceptions such as Colyvas and Jonsson (2011).

Colyvas and Jonsson (2011), while analyzing diffusion of equal employment opportunity (EEQ) trend among organizations, pointed to multi-level diffusion as

“ A notable feature in the institutionalization of EEQ is how much governance occurred at multiple level: in the field, through the assimilation of principles and practices in the law; at the organizational level as a rationalized response to legal mandates; and among individuals by its integration into everyday procedures and employee expectations. Such complexity is obscured in traditional models that map these macro-dynamics onto levels of analysis.” (p.41)

With this recognition, scholars are calling for macro-meso-micro analysis of institutional complexity (Greenwood et al., 2011). Pache and Santos (2010) emphasized that researchers need to make more systematic predictions about the ways organizations respond to conflicting institutional demands. Addressing this need, Greenwood et al., (2011) presented a framework for multi-level analysis of institutional complexity. It is quite a comprehensive framework to analyze ‘how the interaction of plural institutional logics, refracted through field level structures and processes are experienced within organizations and how organizations respond’ to this complexity (p.319). Hence, the framework of Greenwood et al., (2011) covers the vertical complexity (embracing the nestedness of field level logics) and horizontal complexity (incorporating multiplicity of logics). The empirical examination of this framework can be a significant contribution in the literature of institutional complexity.

Scott (2013) also argued that multi-level analysis, is the most desirable approach in institutional analysis but least used. Hence, Scott (2013:210) calls for multi-level analysis for “much of the value in an institutional approach resides in its recognition of the interplay of
structures and procedures across levels”. Hence, multi-level analysis is a desirable direction in the literature of institutional complexity and institutional analysis.

In this regard, the promising areas include macro level institutional pressures, field level mitigating characteristics and micro level organizational capacities to handle institutional complexity. The macro level multiple institutional pressures create institutional pluralism in the field of organizations that are refracted through field level characteristics. Therefore, the level of institutional complexity can differ according to the field characteristics.

Researchers initially argued for dominance of one institutional logic in the field (Reay and Hinings, 2005). These scholars argue for organizational conformity to dominant institutional logic and thus fall in the literature of institutional isomorphism and homogeneity of organizations to incorporate dominant templates. Later, researchers explored that multiple logics may compete with each other which make the fields more heterogeneous over time where logic compete to take dominance (Greenwood et al. 2010; Boxenbaum & Battilana, 2005). D’Aunno et al., (1991) conceptualized that organizations experienced fragmented environments in which “multiple independent actors put forth their demands which are uncoordinated” (p.636).

Logics are fundamentally shaped in field and therefore field level characteristics are very important to shape logics. It is argued that only one institutional logic has a tendency to dominate the organizational fields (Prahalad & Bettis, 1986). Reay and Hinings (2005) proposed that there would be dominance of one institutional logic in field level along with the possible development of homogeneity. However, many researchers have realized that organizational fields may attain a heterogeneous structure over time and that may contain multiple institutional logics that are inconsistent from each other. Therefore, one logic may not get dominance in the field
(Boxenbaum & Battilana, 2005; Greenwood et al. 2010; Thornton & Ocasio, 1999) and this may result in competition, rivalry or easy coexistence of logics in the field (Lounsbury, 2007; Pache and Santos, 2010; Reay & Hinings, 2009; Seo & Creed, 2002). In this regard, critical field-level characteristics include fragmentation (D’Aunno et al., 1991; Pache and Santos, 2010); level of centralization (Meyer et al., 1987) and trust (Klijn et al., 2013).

In addition to field characteristics, organizational capabilities also play important role in shaping institutional complexity for the organizations. In this regard, literature has pointed to various organizational attributes including governance structure of the organization (Goodrick & Salancik, 1996; Pache and Santos, 2010); field position of organization (Battilana & Dorado, 2010); and task (Verhoest et al., 2010). These attributes serve as filters through which institutional complexity pass through and is absorbed in the organizational processes.

2.6- Conclusion

There has been debate between scholars, in institutional theory, on structure versus agency arguments. On the one hand, scholars have emphasized institutional constraints on actors promoting the idea of institutional resilience, conformity and institutional continuity. On the other hand, scholars have argued for actor’s freedom to choose action promoting the idea of institutional change and transformation. For synthesis, Thornton et al., (2012) argue that institutional context both regularizes behavior and provides opportunity for agency and change.

Old institutionalism, new institutionalism and institutional logics literature are the major contributors towards development of institutional logics and institutional complexity literature. Here scholars have argued for multiplicity and in-compatibility of institutional logics, which can create stagnation/collapse or change/innovation for the actors placed in the institutional context.
Public sector organizations are exposed to multiple and conflicting institutional logics due to its adherence to various reforms models on an accelerated pace. The three dominant public reform models include TPA, NPM and NPG models that have exposed public sector to three diverse institutional logics. Each logic has its own goals, values, prescriptions and means that are contradictory from each other. These diverse logics are compared and contrasted, in the conceptual framework of the study (Section 3.4), for examining the level of institutional complexity faced by public organizations.

The context of public sector has also changed from vertically controlled systems to web of autonomous agencies that are placed in horizontal relations, conceptualized as governance networks. Consequently, governance networks are emerging as the most prominent feature of public administration. Scholars are increasingly emphasizing on the use of networks as policy tool to handle complex public policy and service delivery domains. Moreover, networks are also emerging as response to various generations of structural reforms in public sector. The characteristics of governance networks (in particular, the governance and regulatory mechanisms) are important for the organizations to incorporate institutional complexity. In this regards the popular typologies of networks are further discussed in the conceptual framework and the role of network characteristics in shaping institutional complexity is conceptualized.

Furthermore, organizational attributes are also important to absorb institutional complexity. Hence, the organizations respond to institutional complexity may vary according to its contextual characteristics. Literature has identified various organizational responses to institutional complexity such as replacement of old logic with the new logic, resistance or rejection of new logic; decoupling, co-existence of two or more logics and hybridization of logics into to new and innovative solutions.
Given the complexity of the phenomenon of institutional analysis, the scholars are calling for comprehensive analysis of the phenomenon of institutional complexity. In this respect, the macro-level institutional factors play pivotal role in exposing complexity in the fields of public organization. Moreover, the meso level field characteristics are significant in mitigating institutional complexity faced by organizations. Additionally, micro level organizational characteristics enable organizations to handle institutional complexity. Addressing this promising area, the framework of this study incorporates multi-level analysis of institutional complexity in Chapter 3.
Chapter 3 Conceptual Framework

3.1- Introduction to the chapter

This chapter presents conceptual framework to analyze the responses of organizations, to institutional complexity, being embedded in the governance networks in the public sector. The framework incorporates multi-level analysis of institutional complexity including macro level institutional logics (under famous reform models) in the public sector in Pakistan; meso level network characteristics that mitigate institutional complexity for embedded organizations; micro level organizational attributes that enable organizations to handle complexity and intra-organizational processes to absorb complexity.

Section 3.2 reviews literature on network typologies and presents conceptual definition and structural features of governance networks in the public sector. Section 3.3 analyze the emergence of governance networks in public sector in the context of NPM and NPG reforms models. Section 3.4 conceptualizes the construct of institutional complexity with reference to multiplicity of logic and contradictions of logics faced by public organizations embedded in governance networks. Next two sections discuss the network level factors and organizational factors that can modify the level of institutional complexity for embedded organizations. Last section provides arguments for the possible organizational response to manage institutional complexity.

3.2- Structure of governance networks

According to Klijn and Koppenjan (2016) governance networks refer to web of autonomous yet interdependent actors across government, business and civil society who are tied with each other
for public policy making and implementation. Koliba, Meek nd Zia (2011) define governance networks as

“relatively stable patterns of coordinated action and resource exchanges; involving policy actors crossing different social scales, drawn from the public, private or non-profit sectors and across geographical levels; who interact through a variety of competitive, command and control, cooperative, and negotiated arrangements; for purposes anchored in one or more facets of policy stream.” (p.60)

In light of above definitions, this study defines governance networks as web of autonomous yet mutually dependent organizations from public, private and non-profit sector who work together for public policy formation, implementation and evaluation. According to this definition, a key feature is ‘the context of public sector’ that differentiates governance network from other networks of organizations that may not work primarily for public policy issues. Hence, in this thesis, the term ‘governance networks’ means the networks in the context of public sector (that may involve cross-sector actors), however, work primarily for public policy matters.

As established in literature review (Section 2.3.3), various network typologies are popularized in literature, including hierarchical versus market networks (Benson, 1975) clan network (Ouchi, 1980); and self-governed, lead and NAO networks (Provan and Kenis, 2007). In market networks, market forces govern the networks. Actors compete with each other for critical resource and the inter-organizational relations are based on negotiations. On the other hand, in hierarchical (or lead organization) networks, powerful actors are in position to control major decisions and exert control over weak actors in the network. A very different organizational interaction pattern is present in clan network (Ouchi, 1980) and self-governed networks (Provan and Kenis, 2007). These networks depend primarily on the involvement and collaboration of actors who also develop shared meaning s and values to manage their relations. Still another form in NAO network, in
which an administrative organization is authorized to manage the relations in the network (Provan and Kenis, 2007). In this case, the inter-organizational relations are essentially based on mandated collaboration. Collaboration is mandated where a third party organization attempts to impose collaboration on other actors in network (Rodríguez et al., 2007).

These typologies, in extant literature, provide important points to examine the structure of governance networks in the context of public sector. Governance networks are quite complex and deal with complex societal issues with involvement of multiple actors and sectors (Klijn and Koppenjan, 2016). With the involvement of variety of actors and sectors, the most likely features of governance networks include different sources of power, divergent values and conflicting interests. Clan like mechanism of regulation is limited in its capacity to work in such complex networks (Koliba et al., 2011). However, collaborative relations cannot be altogether ignored because of changing horizontal arrangements of actors. Hence, some collaborative and cooperative relational ties are expected to exist in governance networks.

On the other hand, under NPM based reforms, market mechanism is definitely present in governance networks. However, market-based negotiation cannot be the only mechanism of interaction here due to presence of administrative authorities in governance networks. It is quite possible that government authorities are provide with mandate of policy implementation through other actors in network. In this regard, government agencies are expected to manage mandated collaboration among actors (Rodríguez et al., 2007). In the presence of such mandated collaboration, some command and control relations are still very relevant and public authorities are expected to have a
very central role here. On the other hand, due to cross-sector involvement (autonomous actors from public/private/non-profit) government is now put as one of the partner organizations in governance networks (Klijn, 2008). Therefore, only control and command relations can no longer exist in governance networks with the changing horizontal arrangements. Hence, this thesis argues that variety of inter-organizational relations are most likely to be present in governance networks. Therefore, this study argues that instead of a pure form of self-governed, market or hierarchical networks, there are more chances of presence of hybrid form of network with variety of relational ties including control, negotiation and collaborative relations. Henceforth, structure of governance network is examined through following dimensions:

- **Actors (Nodes):** Identification of key actors, in the network, and their characteristics with respect to role, goal, sector and geographical scale.
- **Relational ties:** type of interaction among network actors with respect to control and command relations; negotiation based relations; and collaborative relations.

### 3.3- Emergence of governance networks in public sector

Governance networks are penetrating in public sector both consciously and unconsciously (Koliba et al., 2011). Consciously, it is being used as a tool of governance to address complex societal issues. There is growing realization that government alone cannot solve the complex problems of contemporary society. Hence, governments are becoming increasingly dependent on societal actors to solve challenging issues. Many of these challenges involve conflicting values and variety of actors in policy making and implementation process. Private sector, social alliances, and civil society each has important resources, as well as the power to obstruct policy interventions. It is only through collaborative action that complex problems can
be solved. Hence, Klijn (2004) argues that governance is a process that takes place in governance networks. Hence, use of networks is being emphasized by various reformers as a policy tool to address coordination and integration issues in public sector (Teisman and Gerrits, 2014; Koliba et al., 2011).

Unconsciously, a major contributor to this trend is the phenomenon of policy transfer. Under policy transfer phenomenon, democratic governments have adopted and implemented different generations of modern reform agendas at an accelerating pace (light 1997 as cited in Christensen and Laegreid, 2010). New Public Management (NPM) is the reaction to traditional public administration model of bureaucratic hierarchies and controls of the state. Christensen and Laegreid (2010) analyzed that NPM reforms proliferated vertical specialization (through structural devolution and single-purpose organizations) and horizontal specialization (through role purity and multiple organizations at same level). Koliba, Meek and Zia (2011) analyze that NPM reforms have influenced development of governance network in public sector through three major trends: move to devolve, move to privatize and move to partner. These trends are resulted in fragmentation in public sector. To cater this fragmentation, Post-NPM reformers emphasized a combination of vertical integration and horizontal collaboration catering both inter-sector and inter-governmental integration mechanisms in form of teams and projects (Halligan, 2006). Analyzing these trends, Klijn and Koppenjan (2016) argue that public sector is shifting towards web of autonomous agencies tied in horizontal dependencies to solve public issues. Koliba et al., (2011) also argue that proliferation of such NPM and post NPM based policy tools, have positioned governmental actors as members of inter-organizational governance networks. Hence, it is argued that
Governance networks are penetrating in the public sector under NPM based fragmentation and post-NPM based integration reforms.

Figure 3-1 shows the penetration of governance networks in the public sector under NPM and post NPM reforms. The moves such as devolve, privatize and public-private partnerships have created fragmentation in public sector. Whereas, Post NPM based reforms have created mechanisms for integration and collaboration among the fragmented actors.

Figure 3.1 Emergence of governance networks in the public sector

3.4- Institutional complexity: Multiple and conflicting logics

Institutional logics are “belief systems and related practices” (Scott, 2001:139). Greenwood and colleagues (2011:318) define institutional complexity as a state in which organization “confront incompatible prescriptions from multiple institutional logics”. Thornton et al., (2005) conceptualize institutional complexity as juxtaposition of conflicting institutional logics with one another. Pache and Santos (2013) argue that various institutional logics contradict with each other in-terms of appropriateness of goals and means. Individually, each logic may present a coherent set of prescriptions, norms and values to be followed. However, contradictions may found between prescriptions of different logics. The contradiction among different logic is conceptualized as institutional complexity which arises due to plurality of institutions each providing its own set of logic for appropriate behavior (Greenwood et al.,
2010). From the above definitions, two dimensions of institutional complexity are highlighted: multiplicity of logics and incompatibility of logics.

**Multiplicity of logics** refers to sheer number of logics and their coexistence over an extended period of time (Greenwood et al., 2011). Literature of institutional complexity indicates that most of the researchers have analyzed presence of two logics which is an over simplification of the phenomenon. Criticizing this restricted scope of institutional complexity, Greenwood et al. (2010) calls for incorporation of multiple logics in a given context. They argue that two logics may not provide generalizable results because “the extent of complexity experienced may be underestimated or misinterpreted” (2010, p.332). The more the number of logics, the greater the complexity experienced by organization.

However, the sheer number of logics is only one aspect of institutional complexity. A second dimension of institutional complexity is relative incompatibility of institutional logics. **Incompatibility of logics** refers to the extent to which logics provide contradictory prescriptions for goals and means (Greenwood et al., 2011). Goals are “expressions of the core system of values and references of organizational constituencies and are, as such, not easily challenged or negotiable” (Pache and Santos, 2010:460). The study argues that stated goals can be differentiated from real goals of organization and both need to be explore how logic are internally incorporated by organization. Stated goals are present in organization’s mission and vision statement, strategic objectives and stated values. Real goal are manifested through identities of organization’s employees. Prescribed means can be in terms of prescribed roles, structures, practices, symbols, competencies and performance criteria etc. (Reay and Hinings, 2005; Thornton, 2004; D’Aunno et al., 1991; Pache and Santos, 2013). This study takes goals, means to explore contradiction among various instructional logics in public organizations. The
more the contradiction between goals and means, the greater the complexity experienced by the organization.

As established earlier (chapter 2; literature review), various public sector reform models are popularized globally and are practiced in major countries (irrespective of developed and developing countries). Building on public management reforms literature (section 2.2) and institutional logics literature (Section 2.4.3 and 2.4.4), this study argues that various reforms have exposed public sector with diverse institutional logics including traditional public administration (TPA) logic, new-public management (NPM) logic and new public governance (NPG) logic. Although, this argument is not new in the literature, as many researchers have captured presence of more than one logic in various policy domains of public sector (Meyer and Hammerschmid, 2004, 2006; Reay & Hinings, 2005; Berg and Pinheiro, 2016). However, most of the researchers have catered contradiction of two logics in public sector. Greenwood et al. (2010) proposed that future researchers should recognize multiplicity of institutional logics in a particular context and should be more explicit in providing justification for why particular logics are included in the analysis. Therefore, this study argues that public sector is exposed to multiple institutional logics including following

- bureaucratic logic based on rules, regulations, processes and hierarchical authority system;
- professional logic based on the technical expertise of a given field such as medical care, education;
- Managerial logic based on private sector management practices
- Market logic based on competition and commercial orientation
• Political logic based on involvement of democratic government in policy implementation

• Collaboration logic based in collaboration of inter-organizational and inter-sector networks.

• Civil society logic based on involvement of civil society in public organization’s decisions.

• Finally, media logic based on transparency of public organizations.

However, not all these logics are incorporated in this study for two major reasons. First, it would make the phenomenon too complex to grasp the impact of all logics through empirical investigation. Secondly, some logics have more direct impact in changing public organizations’ structure and practices because they are introduced in explicit reform process (such as bureaucratic, market, managerial, collaboration) whereas others can be incorporated without major organizational changes (such as pressures form political actors, professional bodies, civil society and media). Therefore, this study incorporates those logics that are explicitly introduced under public management reforms. Moreover, some logics have less contradiction in ultimate goals and only contradict in the means to achieve those goals. On this point the study agrees to Meyer et al. (2014:6) that some logics share ‘signature elements’. Therefore, they can be simply merged to in one logic. It can be understood from the fact that each public management reform model had more than one institutional logics, which presented different prescriptions remaining in the values of that model. Based on this argument, this study takes three dominant logics in public sector: Traditional Public Administration (TPA) logic, New Public Management (NPM) logic and New Public Governance (NPG) logic.
This study argues that traditional public administration was marked by two logics: bureaucratic logic and political logic. Their contradiction was evident in classical politics/administration dichotomy (Wilson, 1887). Political logic was based on supremacy of democratic government over bureaucracy. The very rational was that democratic government could better represent public choices. Under this logic political governments practices excessive involvement in policymaking and implementation process, so much so, that political governments hired excessive human resources public bureaucracies. Bureaucratic logic, in contrast to political logic, was based on professional supremacy for public policy choices and implementation (Weber, 1946). The rational was that bureaucrats could find better solutions to the problems due to their professional expertise. Although, it recognized political neutrality and impartial implementation of political will. However, it had less room for involvement of political government in day-to-day affairs of public bureaucracies. Under this logic, bureaucracies became very influential and bureaucrats played central role in policymaking. Alford and Friedland (1991) differentiate logics under state bureaucracy and political bureaucracy. However, scholars have attempted to resolve the contradiction between politics and administration. According to Wilson (1887), political government is responsible for policy making and bureaucracy is responsible for impartial implementation of policies. Although, both logics had some differences, however, both logics were based on the ultimate goal of public service. Moreover, both logics shared configuration of mutually supporting elements. For example, bureaucracy recognized to implement political will. On the other hand, political government used bureaucracy as the administrative apparatus for implementation of public policies. Hence, this study has merged political and bureaucratic logics to conceptualize traditional public administration logic in public sector. The study argues that this logic has
prevailed in public organizations over a long period in history. Therefore, it has attained an institutionalized character in public organizations.

In the same way, new public management model is heavily criticized due to its contradictory prescriptions for the ultimate goal of increasing efficiency and performance of public sector. Under the umbrella of NPM reforms, two distinct logics can be identified: managerial logic and market logic. Market logic got popularity in public sector in 1980s with neoliberal views towards privatization, decentralization, competitive environment, outcome based rewards and cost-benefit analysis (Scott, 2014). This logic prescribed small size of government as a mean to increase its efficiency through privatization, use of state-owned companies, competitive environment in public sector and commercialization (Hood, 1991; Osborne and Gaebler, 1992; Pollitt, 1993). On the other hand, managerial logic prescribed private sector management solutions to increase the efficiency of government such as performance orientation, organizational autonomy, IT based solutions and outcome based evaluations, modern personnel practices, expertise, openness and transparency (Aucoin, 1990; Holmes and Shand, 1995; Ferlie et al., 1996; Pollitt and Bouckaert, 2000). Although both logics provide different prescriptions but they share the same goal of increasing efficiency and performance of public sector. Therefore, both market and managerial prescriptions can be combined as means to achieve the same goal (of increasing efficiency of public organizations) under NPM reforms. Hence, this study has merged both (managerial and market) logics to conceptualize NPM logic which is the most dominant contemporary logic in public organizations.

Due to shortcoming and negative impacts of NPM reforms, various post-NPM reforms are introduced in public sector (Christensen and Laegreid, 2001). Post-NPM reforms share a
common goal of achieving inter-organizations and inter-sector collaboration for public policy making and implementation. Various prescriptions include use of integration mechanisms (such as creation of coordination bodies), providing holistic services (multi-purpose offices/organizations), and use of network management strategies (negotiation, facilitation, provision of resources, consensus building). This study combines these prescriptions to conceptualize new public governance (NPG) logic in public organizations.

Figure 3-2 depicts the contradictory institutional logics in public sector reforms.

Figure 3.2 Contradictory Institutional logics in Public Sector Reforms

Table 2.3 (in literature review) provides contrast between TPA, NPM and NPG reforms in public sector. The table indicates that the three reforms are based on contrasting institutional logics. Using the framework of Pache and Santos (2013), this study compares the three logics in
terms of contradictions in goals and means. The study argues that TPA, NPM and NPG logics have contradictions in terms of what goals are appropriate for public organizations and what means are legitimate to achieve those goals. **Table 3.1** presents the contradiction among these logics.

TPA logic is based on the principle of supremacy of the state and democratic government with public service as major goal. The prescribed means to achieve this goal are hierarchical controls, bureaucratic processes, political neutrality, equity, seniority and secrecy. New public management is based on market and managerial logic based on organizational autonomy, performance orientation, outcome based evaluations, market competition, commercial orientation, expertise, openness and transparency. Post- NPM presents entirely different logic from traditional administration and NPM. It is based on coordination, horizontal collaboration, inter-organizational relations, information and resource sharing mechanisms and joint solutions to the problems. Therefore, public organizations are faced with at least three different logics including TPA logic, NPM logic and NPG logic, which present contradictory prescriptions exposing organizations to institutional complexity.

Contestation among various generation of reforms in public sector is highlighted by Christensen and Laegreid (2010). They argue that market-based NPM reforms are in sharp contrast to traditional public administration based on hierarchy, authority and centrality. Moreover, post NPM reforms have contradiction with NPM reforms. NPM emphasizes on role purity, specialized agencies and segregation of tasks. Whereas, post NPM reforms propagate horizontal collaboration, vertical integration, network and project type mechanisms and cross-sector involvement. In the context of Australian public sector, Meyer and Hammerschmid (2006:1003) found contradiction between old administration orientation based on “terminology
of duties, procedures and obligations” and new managerial logic reflected in terminology such as “performance and result, efficiency and effectiveness, and managerial competence and prudence”. Incompatibility among logics enhances the level of complexity for organizations.

Table 3.1: Contradictory institutional logics in the public sector organizations

<table>
<thead>
<tr>
<th>Goals</th>
<th>TPA logic</th>
<th>NPM logic</th>
<th>NPG logic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vision</td>
<td>Public organizations are responsible to serve the general public</td>
<td>Public organizations have to provide goods/services to customers</td>
<td>Public organizations are contributors in common public purposes</td>
</tr>
<tr>
<td></td>
<td>Legality, correctness, political neutrality, loyalty</td>
<td>Performance, efficiency, Prudence, discussion, interaction, participation, consensus</td>
<td></td>
</tr>
<tr>
<td>Values</td>
<td>Adherence to rules procedure</td>
<td>Results, output/outcome</td>
<td>Organizational expertise in network</td>
</tr>
<tr>
<td>Means</td>
<td>Control, Coordination, Secrecy</td>
<td>Autonomy, Competition; Transparency</td>
<td>Cooperation, collaboration, sharing</td>
</tr>
<tr>
<td>Professional legitimacy</td>
<td>Accountability to political government</td>
<td>Accountability to BOD/shareholders</td>
<td>Shared accountability</td>
</tr>
</tbody>
</table>

In light of above arguments, two dimensions of institutional complexity can be identified: logic multiplicity and logic contradiction. The number of logics faced by public organizations is used to examine first dimension. Second dimension is examined by relative divergence between goals and means of logics. Exploring these dimensions can enable to determine the extent to which public organizations are faced with institutional complexity. Hence, it is proposed:
Multiple generations of public sector reforms (in particular TPA, NPM and NPG reforms) have exposed public sector organizations to institutional complexity

The more the number of institutional logics; and the higher the contradiction among logics; the higher the level of institutional complexity faced by public organization.

3.5- Governance networks and institutional complexity

Researchers have argued that organizational fields play fundamental role in shaping institutional complexity faced by organization (Thornton et al., 2005; Scott, 2008; Pache and Santos, 2010; Greenwood et al., 2011). Greenwood et al. (2011) argue that the nature and extent of institutional complexity is shaped by the structure of organizational field particularly with respect to fragmentation or centralization of actors in the field. Fields are the arenas where external actors are most active for building pressures on organizations. Fields are important for various reasons such as role of professional associations (Lounsbury, 2002); demands from influential actors such as national or local governments (Greve, Palmer, & Pozner, 2010); rivalry among fields actors for preferred logic (Reay and Hinings, 2009); degree of fragmentation among actors (Meyer and Scott, 1983; Pache and Santos, 2012); degree of formularization in field (Meyer et al., 1987) and degree of centralization of authority figures (Greenwood et al., 2011).

As argued earlier, an important development, in the field of public sector organizations, is presence of web of cross-sector organizations (public/private/non-profit) tied in horizontal dependencies with each other for policy development and implementation. Public organizations are now working in governance networks. This development has increased variety of actors in the fields of public organizations, which can present variety of demands to organizations. The present study argues that diverse actors in the governance networks fundamentally shape and
reinforce their preferred institutional logic for organization. For example, ministry and administrative seniors are in authoritative position to present state logic to the organizations in network. Regulatory bodies ensure accountability of organizations for utilization of resources presenting managerial logic under NPM reforms. Other organizations in network, who are in same role and in competitive position with organization, present market logic under NPM reforms. Such organizations present coordination logic to the organization. Therefore, this study argues that public organizations experience institutional complexity due to multiple generations of contradictory reforms. These reforms are reinforced and shaped by diverse actors in the governance networks in which public organization are operating. The more the dependency of organization on other actors, the more it can be vulnerable to influence of other actors in network. Particularly, those actors who are in authority position can exert more power on organization.

It is further argued, that network characteristics such as centralization, fragmentation and trust can be important for shaping institutional complexity for organizations in public sector. As argued earlier, governance networks comprise of quite complex structures due to vide variety of interdependent actors with frequent interactions and mixed-form regulatory mechanism. Mixed-form regulatory mechanism points to presence of both hierarchical as well as negotiation based relations among actors in network. The extent to which organizational relations are based on negotiation or centrally controlled can greatly shape institutional complexity for organization (Greenwood et al., 2011). It is understood that government agencies have central role in governance networks. The degree of centralization and control of government authorities is important. Meyer et al., (1987) explored that as independent schools were brought under districts and further under higher authority of state government, the field of education became more
centralized. Due to centralized role of state government, the organizational rules become “more clear, better specified, more uniform and integrated” (p.190). They argue that it reduced organizational pressures. Absence of centralized actor can expose organizations to more competing institutional demands, which require negotiation at the part of organization. On the other hand, if major decisions are controlled in center, it can leave less discretion at the part of organization to handle diverse demands, which may hinder organizational ability to handle complexity. Therefore, it is argued that structure of governance network, particularly the degree of centralization has important role in shaping institutional complexity for organizations embedded in that network. Hence, this thesis argues:

*The higher the centralization in the governance network, the lower the institutional complexity faced by the embedded public organizations.*

Fragmentation refers to “the number of uncoordinated constituents upon which an organization is dependent for legitimacy and material resources” (Greenwood et al., 2011:337). Fragmentation is high when uncoordinated actors or external referents separately present multiple logics to organization. Meyer et al., (1987) captured multiple and competing pressures on schools from parents, churches, teachers and local communities. High level of fragmentation among external actors exposes organization to higher level of institutional complexity due to lack of consistent and predictable demands. On the other hand, institutional complexity is reduced if network actors have high coordination with each other. (Greenwood et al., 2011) argue that tension between different logics may be worked out at network level, among actors due to their coordinated efforts, and thus organization may face more demands that are predictable. Whereas, organizations face higher level of institutional complexity, if various field actors present separate and uncoordinated demands to the organization. Hence, this thesis it is proposed:
The higher the fragmentation in the governance network; the higher the institutional complexity faced by the embedded public organizations.

Another important characteristic is trust, which has been recognized an important factor in inter-organizational relations. Klijn and Koppenjan (2016) define trust as “perception of the good intentions of other actors” (p.115). Rousseau et al., (1998) describe trust a psychological state of openness to others based on positive expectations about other’s behavior. Trust can be play important role for exchange of information and knowledge (Nooteboom, 2002), for facilitating cooperation among actors and reducing transaction cost (Sako, 1998; Lane and Bachman, 1998), for stability in relations and facilitating innovation (Parker & Vaidya, 2001) and for network performance and network management strategies (Klijn et al., 2013). Trust can also enhance legitimacy of decisions in network (Klijn and Edelenbos, 2007). Therefore, having trust based relations with other actors can enable organization to better cope with multiple pressures coming from diverse actors in governance networks. Trust based relations are less formal and provide more flexibility and discretion to organization to deal with multiple institutional demands.

The higher the trust among actors in governance networks; the lower the level of institutional complexity faced the embedded public organizations.

Figure 3-3 depicts role of network characteristics in shaping institutional complexity for organizations in public sector. Public organizations are faced with institutional complexity due to multiple and contradictory institutional logics under traditional public administration, new public management and new public governance reforms. These multiple reforms have also created governance networks in the public sector. The characteristics of governance networks (such as centralization, fragmentation and trust) can mitigate the level of institutional complexity faced by public organizations embedded in the network.
3.6- Organizational attribute to handle institutional complexity

Pressures arising from institutional environment do not affect all organizations equally. Institutional logics pass through organizational network and are then filtered by various characteristics of organization (Greenwood et al., 2011). This study argues that attributes of public organization such as its position in network, size, task, structure and leadership can frame the way organizations experience and handle institutional complexity.

*Network position of organization* is determined by its location as ‘periphery’ or ‘center’ organization. Salancik, Copay, and King (1991) noted that organizations located at the “periphery” are more motivated to deviate from established practices because they are less caught by institutionalized relationships and expectations. Hence, the Peripheral organizations may experience lower levels of complexity because they are less connected to other organizations from which appropriate behaviors are learned and conveyed. From this argument, it appears that central
organizations face higher level of institutional complexity. On the other hand, since centrally positioned organizations tend to be deeply embedded in the existing institutional arrangements they may be insensitive to newly emerging complexity and may be in a better position to resist it (Greenwood et al., 2011).

Greenwood et al., (2011) describe two characteristics that are implied in the definition of central organization- its size (which is often associated with age but not necessary) and its status. Size can be determined by the number of employees and spread of offices of the organization. Status may be defined by the strategic/authority position of the organization in the network or the critical resources it shares in network. Large high status organizations are able to deviate from prevailing cultural expectations because they are beyond the control of regulatory agents (Greenwood & Suddaby 2006) or other government authorities in governance network. Size and status, in this sense, can provide an organization with a “…measure of immunity from institutional pressures” (Greenwood et al., 2011) providing it with greater discretion over how to manage complexity. Hence, following proposition is argued:

*Large high status organization, in governance network, will be in a better position to cope with institutional complexity as compared to small low status organization.*

*Structure of Governing Board* of public organization may also be an important factor. Independent legal status give more autonomy to the public sector organizations (Painter et al., 2010). It is argued that agencies having their own governing boards can be insulated from ministerial interventions and controls from the center (Verhoest et al., 2010; Zahra and Jadoon, 2016) and can enjoy more autonomy Christensen et al., 2007). Hence, according to the literature, the mechanism of independent BOD can decrease ministerial intervention in company’s affairs. However, the board composition and nomination of chairperson of the board is determined by the
pattern of shareholding in the organization. If government is a major shareholder, then there is more possibility of higher government representation in the board, which can enhance ministerial control on organization. Managerial autonomy can greatly affect according to governance mode of the organization. Managerial autonomy is an important factor to handle diverse institutional demands. On the other hand, ministerial controls can make public organization more vulnerable to institutional pressures. Hence, the study proposes:

*Governance structure of organization is associated with organization’s capacity to handle institutional complexity; Higher the ministerial control the more vulnerable the organization to handle diverse institutional logics, whereas the higher the autonomy of organization the better it can handle institutional complexity.*

Another influential attribute is the task of public organization. Lioukas, Bourantas and Papadakis (1993) argue that high political visibility of the task of the public organization attracts government attention, which results in more ministerial intervention. Political visibility refers to the contribution of the organization to social welfare and service to the wider public. (Pollitt et al., 2004) assert that political salience of the task of the organization is particularly important to understand the pressures on organization. They contend that in the area of welfare and social policy, public organizations have face-to-face interaction with relatively larger proportion of citizens that make their task more politically salient. Verhoest et al., (2010:215) assert that such political salience invite more controls from government. If the organization’s task directly effects the general public and influential groups; then government has to be more concerned for the performance of the organization. The performance of public organizations in such sensitive service delivery tasks is attached with the repute of political government. Hence, higher political visibility of the task of the organization, can invite more pressures on the organization from
different powerful referent groups. On the other hand, ministerial interventions are also more likely to be there. Therefore, it is proposed:

*The more the political salience of the task of the organization, the higher the level of institutional complexity faced by the organization.*

### 3.7- Organizational responses to institutional complexity

With reference to review of literature on institutional theories (Section 2.4.1; 2.4.2 and 2.4.3) and organizational responses (Section 2.5.1), this study summarizes three broad categories of organizational responses to manage institutional complexity: Rejection, passive acceptance and active acceptance. These three responses are explained by path-dependency perspective, new institutionalism and institutional logics perspective respectively.

First categories is rejection of new institutional logic or de-complexifing institutional complexity by rejecting or resisting it. This response can be explained in light of path-dependency perspective based in old institutionalism. Old institutionalism argues that organization takes an institutional character due to development of informal norms and values embedded in organizational history, which makes it unique and different (Selznick, 1949; Parsons, 1956; Cyert and March, 1963). Christensen et al. (2007) explained, “When a formal organization develops informal norms and values in addition to the formal variety, it acquires institutional features and one speaks of institutionalized organizations” (p. 38). An organization has path-dependency feature whereby organizational structure, practices and processes, developed in the history, become institutionalized routines, which are difficult to change. Therefore, organizations reject incoming institutional logics if they offer contradictory prescriptions to already prevailing practices. The perspective takes organization as an active agency that can resist institutional pressures. This study argues that rejection or resistance of new logics is only possible for short time period. In the longer run, organization cannot survive with
such rejection and has to incorporate upcoming institutional changes as argued by Reay and Hinings (2005).

Second category, of organizational responses, is passive acceptance of institutional complexity. Acceptance can be either through replacement of old logic with the new one or through accepting new logic only symbolically. This response can be explained in light of new institutional perspective (Meyer and Rowan, 1977; Zucker, 1977; DiMaggio and Powell, 1983; Meyer and Scott, 1983). This perspective takes organization as passive recipient of institutional pressures that make them isomorphic with each other.

Third category is the active acceptance of intuitional demands through developing new mechanisms or innovation in current practices. It results in new or hybrid mechanism and practices. This response is explained by institutional logics perspective (Alford and Friedland, 1985; Thornton and Ocasio, 2012).

This study argues that institutional logics perspective has provided more convincing arguments for explanation of organizational responses to institutional pressures. The arguments of passive acceptance or decoupling can only be relevant as immediate response to answer external demands. However, in the end organization cannot survive or maintain legitimacy using this mechanism. Moreover, it is also less possible that organizations protect its system against incoming pressures in the end. Therefore, the study argues that organizations need to incorporate pressures from new logics in its system and practice. On the other hand, influence of path dependency features cannot be ignored. Structural inertia and cultural resistance are very forceful characteristics through which practices under old logics are difficult to replace. The contestation between old and new logics generates hybrid structures and practices in the organization.
Through this mechanism, organization is able to satisfy both external and internal referents. The study further argues that some organizations are more creative to generate blended hybrid mechanisms whereas other might be able to incorporate logic in differentiated hybrid mechanisms. In blended hybrids, organizations blend different logics in a creative style, which results in new/innovative practices. On the other hand, differentiated hybrids create separate paths for separate logics. Through hybrid mechanisms, organizations are in better position to absorb (manage) multiple institutional pressures in their structure and processes.

As established in literature (Section 2.5.2), that most of the researchers have over simplified the phenomenon of institutional complexity by addressing only two logics and restricting on single level of analysis. Whereas, actually, the phenomenon is quite complicated. In this regard, the promising areas include macro level institutional pressures, field level mitigating characteristics and micro level organizational capacities to handle institutional complexity. Greenwood et al., (2011) has incorporated these challenging areas in their framework for multi-level analysis of institutional complexity. This study has adapted the framework of Greenwood et al., (2011) in the context of public sector organizations being embedded in the governance networks. Figure 3.4 presents the framework of how organizations respond to institutional complexity in governance networks in the public sector.

Macro level public sector reforms (in particular traditional public administration, new public management and new public governance) has exposed public sector with institutional pluralism. In addition, an indirect result of these reforms is development of governance networks in the public sector. Hence, public organizations are faced with multiple and contradictory institutional logics. The more the number of logics and the higher the contradiction, the higher the level of institutional complexity faced by organizations. However, meso-level network
characteristics can mitigate the level of institutional complexity faced by public organizations. Moreover, micro-level, organizational attributes play important role in enabling organization to manage complexity and accordingly organization responds to institutional complexity.

*Figure 3.4 Multi-level analysis of institutional complexity in public sector organizations*

### 3.8- Operationalization of concepts

This section seeks to operationalize the constructs used in this study including governance networks, institutional complexity, network characteristics (fragmentation, centralization, trust) and organizational attributes (task, position in network, governance structure and leadership). Table 3.2 presents the operationalization.
### Table 3.2: Operationalization of concepts

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Operational definition</th>
<th>Key studies</th>
<th>Operationalization</th>
</tr>
</thead>
</table>
| Structure of governance network | Governance networks refer to web of autonomous yet interdependent actors across government, business and civil society who are tied with each other for public policy making and implementation. Governance networks are hybrid form of network with variety of inter-organizational relations. | Koliba, Meek and Zia, 2011; Klijn and Koppenjan, 2016; Provan and Kenis, 2007 | Structure of governance networks, includes two dimensions  
  - **Actors (Nodes):** key actors in the network, and their characteristics (role, goal, sector and geographical scale).  
  - **Relational ties:** Type of interaction among network actors (control and command relations; negotiation based relations; and collaborative relations). |

| Institutional complexity | Institutional complexity is a phenomenon whereby organization is confronted with incompatible prescriptions from multiple institutional logics | Greenwood et al., 2011; Pache and Santos, 2013 | Level of institutional complexity is measured through two dimensions  
  1. **Multiplicity of institutional logics:** The number (more than one) of institutional logics and their co-existence.  
  2. **Contradiction of logics:** The extent to which logics provide contradictory prescriptions for goals of the organizations and means to achieve those goals. |

#### Network characteristics

<table>
<thead>
<tr>
<th>Centralization</th>
<th>Centralization refers to the hierarchical power structure among network actors</th>
<th>Pache and Santos, 2010</th>
<th>The extent to which organizational relations are centrally controlled in the network.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fragmentation</td>
<td>Fragmentation refers to the extent to “the number of uncoordinated constituents, upon which an organization is dependent for legitimacy and material resources”.</td>
<td>Greenwood et al., 2011:337</td>
<td>The extent to which power actors in network are uncoordinated and present separate pressures to network actors.</td>
</tr>
<tr>
<td>Trust</td>
<td>Trust refers to” perception of good intentions of other actors”.</td>
<td>Klijn and Koppenjan, 2016:115</td>
<td>The extent to which network actors have good intentions that other actor will abstain from opportunistic behavior at the cost of other actors in network.</td>
</tr>
</tbody>
</table>
### Organizational characteristics

<table>
<thead>
<tr>
<th>Network position of organization</th>
<th>Network position of organization is determined by its location as ‘periphery’ or ‘center’ organization.</th>
<th>Whether the organization is located as the center (or periphery) in the network based on - Large size (small size) - High status (low status)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task</td>
<td>Task refers to the political visibility of the organization</td>
<td>The extent to which organization’ task has direct effect on public at large.</td>
</tr>
<tr>
<td>Structure of Governing Board</td>
<td>The structure of governing board is determined by the board composition and pattern of shareholding in organization.</td>
<td>Governance structure is determined by following dimensions - Presence of independent board - Board composition - Government representation - Nomination of chairman</td>
</tr>
<tr>
<td>Leadership</td>
<td>Leadership refers to the autonomy of the company’s head to take independent decisions without interference of other network actors.</td>
<td>The extent to which the leader has the autonomy with respect to - HR autonomy - Operational autonomy - Financial autonomy</td>
</tr>
</tbody>
</table>

### 3.9- Conclusion

This chapter presents conceptual framework to analyze the responses of organizations to institutional complexity, being embedded in the governance networks in the public sector. Despite the extensive literature produced in the field of institutional complexity, the need to analyze institutional complexity at multiple levels is rarely addressed. Greenwood et al., (2011) has presented a framework for multi-level analysis of institutional complexity, inviting the researchers for the empirical investigation. This study has adapted the framework of Greenwood et al., (2011) in the context of public sector. The framework incorporates multi-level analysis of institutional complexity including macro level institutional logics (under famous reform models) in the public sector in Pakistan; meso level network characteristics that mitigate institutional complexity for embedded organizations; micro level organizational attributes that enable organizations to handle complexity and intra-organizational processes to absorb complexity.
Chapter 4  Research Methodology

4.1-  Introduction

This chapter presents the research design of the study. Section 4.2 presents the philosophical stance of the study and informed choices made by the researcher for determining the epistemology and ontology of the research. Section 4.3 discusses the research approach followed by research design presented in section 4.4, which also addresses the methodological issues and criteria to ensure the quality of the research. Section 4.6 elaborates methods used for data collection, data collection phases and multiple sources of evidences used. Next section provides data analysis techniques followed by the last section, which discusses ethical considerations of the study.

4.2-  Philosophical stance of the thesis

This research study has been carried out with the philosophical assumptions of the paradigm of critical realism (Sayer, 2000), the philosophical stance that takes a middle position between the two extreme assumptions of reality under positivism and interpretivism. Saunders et al., (2016) have notably explained that “there are two steps to experiencing the world: Firstly, there is the thing itself and the sensations it conveys. Second, there is the mental processing that goes on sometime after that sensation meets our senses” (p.115). Ontologically, although reality is objective and exists independently of human thoughts and beliefs. However, it is interpreted through social conditioning involving both physical and mental aspects of it (Sayer, 2000). Hence, it cannot be understood independently of the social actors involved. Epistemologically, phenomenon create sensations, which are open to misinterpretation. Multiple sources of evidence and triangulation of data can increase the credibility of interpretations. Critical realism also
recognizes the importance of a multi-level research study (Saunders et al., 2016). Multi-level analysis provides the opportunity to understand reality from different lenses. Each level has the capacity to change and enrich researcher’s interpretation of the phenomenon (for example at the level of individuals, Organizations and the fields).

Taking the stance of critical realism, this thesis rejects positivist’s assumption that researcher can have direct access to such phenomena and agrees to what Bhaskar (1989) argues that management and business research is concerned with the social world. Hence, researcher is only able to understand (what is going) through social structures that have developed the phenomenon. Moreover, researcher can act as a mirror on the social world to reproduce reality for others (Hammersley, 1992). This study has an objective view of reality, which has been interpreted by the researcher. Reality is considered as socially constructed and multiple. Therefore, the explanations (presented in this study) can be treated as one of the possible representations of the social reality, instead of an absolute version of that social reality. Efforts are made to strengthen the accounts by using multiple sources of evidence and data triangulation.

This study aims to examine how public organizations experience institutional complexity in governance networks. The basic assumption is that organizations are placed in the context of governance networks. In order to understand dynamics of complexity in organization, the characteristics of governance networks and dynamic interaction between organization and network actors needs to be examined. The phenomenon is studied on multiple levels including energy sector, network and organization. Each level has the potential to change researcher’s understanding about the phenomenon. Reality is explored from different lenses, which are triangulated to increase the credibility of interpretations.
4.3- **Research approach**

The study has adopted abductive approach with elements of induction and deduction throughout the research study. The study is based on an explicit conceptual framework (chapter 3) before data collection. That framework has provided, the researcher, a pre-understanding about the issue and has served as starting point of investigation. Several researchers have recommended this approach for qualitative data and in-depth explorations. Gadamer (1979:273) termed it “hermeneutic circle” in fusion of horizon. Blaikie (2010) called it an abductive inquiry that blends the induction and deduction process. In this study, a conceptual framework was developed for the study after comprehensive review of literature from public management reforms, governance networks and institutional complexity. The constructs of study were conceptualized and operationalized. Relationship among variables were proposed based on the existing research (figure 3.3). It served as template for investigation (Crabtree & Miller, 1999).

Data was collected in three phases. Each phase further developed the framework and understanding of the issue. Data analysis resulted in a transformed framework. Throughout the research, the researcher employed two distinct processes at work.

- A theory-driven process: In this process, conceptual framework served as template to analyze data based on deductive inquiry.
- A data-driven process: In this process, data served for reformation and adjustment of various aspects in initial framework based on inductive inquiry.

4.4- **Research design**

Given the philosophical assumptions and the research questions, this study has used case study research design. The energy sector in Pakistan is taken as a case for multi-level analysis of
institutional complexity. Case study can serve as the most appropriate design for this research for multiple reasons.

First, case study provides an opportunity for contextual analysis as Yin (2003) claim that case study is the most appropriate strategy when “the focus is on a contemporary phenomenon within some real life context” (p.1). The phenomenon of institutional complexity and organizational responses (under examination) is not isolated from its context (governance network), rather it is interesting particularly due to its embeddedness in the context. Therefore, exploration of organizational responses to institutional complexity is only possible by plotting the organization within its network and exploring organization’s interaction with network actors. Case study design is appropriate to explore contextual factors involved in presenting complexity to organizations. This feature distinguishes case study design from other research strategies such as conducting survey or experiments, which extract data from their context with limited ability to incorporate the context. Moreover, other qualitative strategies such interviews and focus-group discussions also suffer from limited ability to investigate the context of the study. Hence, case study most appropriately serves this purpose as compared to any other research strategy.

Second, case study provides a rich understanding of the phenomenon. Hartley (2004) proposes that case study research is “particularly suited to research questions which require detailed understanding of social or organizational processes because of the rich data collected in context” (p.323). It allows collecting data from multiple sources including observation, documents, interviews and archival data. Through multiple sources of data collection, it provides us with a holistic picture and rich descriptions to examine responses to institutional complexity.
Also, through holistic treatment of real life events, researcher can contribute uniquely to the knowledge of phenomena (Yin, 2003).

Third, case study supports development of theoretical framework before empirical investigation and at the same time allows the flexibility to incorporate changes in the framework as the study explores new dimensions in empirical inquiry. Development of theory or conceptual framework is recommended as an integral part of case study research process (Yin, 2003; Stake, 1995) and qualitative data analysis (Miles and Huberman, 1994). The conceptual framework provides a link between established literature and empirical investigation of the issue and keeps the researcher on track throughout the investigation. Such link is not offered in other qualitative inquiries such as grounded theory or ethnography. On the other hand, experiments and surveys focus on the control and influence of few variables in the theoretical framework and are more focused on the number of informants. Conversely, case study can accommodate more complex framework meeting the requirement of this study which incorporates a complex multi-level analysis of institutional complexity involving diverse factors at different level of analysis.

Fourth, case study strategy is flexible to incorporate various types of data. Yin (2003, p.8) puts it as “the case study’s unique strength is its ability to deal with full variety of evidence-documents, artifacts, interviews, and observations”. Moreover, it is flexible to incorporate both quantitative and qualitative methods of inquiry. With this flexibility case study, strategy can handle variety of research purposes including exploratory, descriptive and explanatory depending on the nature of research questions. With this flexibility and variety, case study can appropriately handle research questions of this thesis. This thesis used qualitative methods for data collection from the selected case.
Finally, case study is highly recommended strategy in qualitative inquiry (Allison, 1971) and widely used method to explore institutional complexity (Cooper et al., 1996; Lounsbury, 2002; Battilana and Dorado, 2010). Moreover, case study strategy can better explore complexity in network structure and network management (Koliba et al., 2011). In the field of public management, Mcguire and Agranoff (2007:37) used case study strategy to investigate network management with the confidence that “qualitative research through comparative case studies can provide insight that quantitative research cannot offer”. Irfan (2015) used case study method to explore contextual factors in inter-organization relations in public private partnerships. In a review of literature on institutional complexity, Greenwood et al., (2011) found that case study is a widely used method to study institutional complexity. Hence, case study is the most suitable strategy for this thesis, being a recommended method for network analysis, institutional complexity and qualitative inquiry.

For the aforementioned points, this thesis has used case study design with multiple sources of qualitative inquiry including interviews, documents and observations. Following section addresses various issues to ensure quality of case study and qualitative enquiry.

4.4.1- Addressing methodological issues

Although case study is well established and widely accepted as a credible method for empirical inquiry, it has long been (and continue to be) “stereotyped as a weak sibling among social science methods” (Yin, 2003; P. Viii ). It has been criticized for insufficient rigor, subjectivity and lack of generalizability of results. However, scholars (Yin, 2003; Flyvbjerg, 2006) argue that conventional wisdom about case study is based on misconceptions. On the other hand, qualitative data has also suffered from less acceptability among researchers as
compared to quantitative data. Hence, case study employing qualitative inquiry have received much suspicion about its credibility and reliability of result.

However, a great community of scholars has used case study method for rich qualitative inquiry addressing diverse purposes including exploration (Eisenhardt, 1989); description (Whyte, 1955; Kidder, 1985; Brinton, 1938); explanation (Allison, 1971) and generalization to theory (Jacob, 1961; Cooksey, 1981). Eminent scholars have struggled to establish the legitimacy of case study methodology (Yin, 2003; Stake, 1995; Flyvbjerg, 2006; Eisenhardt, 1989; Eisenhardt & Graebner, 2007) and credibility of qualitative data (Miles and Huberman, 1994; Bazeley, 2013; Saldaña, 2009; Patton, 2002; Glaser & Strauss, 1967). Efforts of these scholars are source of motivation to use qualitative case study research in this thesis. As established earlier, the researcher is confident that case study is the most suitable method to meet the objectives of this study. To ensure the quality of this study, four most recommended tests (for social inquiry) were applied including construct validity, internal validity, external validity and reliability. Moreover, the framework of Maxwell (2013) was applied to keep various aspects of design inter-twinned. Using the criteria of Yin (2003) various tactics were used under each test to increase the quality of study summarized in Table 4.1.

**Table 4.1 Case study quality checks**

<table>
<thead>
<tr>
<th>Quality tests</th>
<th>Tactics used by the researcher</th>
<th>Stages of research</th>
</tr>
</thead>
</table>
| Construct Validity| ✓ A Conceptual framework was developed based on comprehensive existing literature (Chapter 3).  
✓ Operationalization of the constructs (Section 3.8)  
✓ Chain of evidence used through triangulation of multiple sources of data (interviews, policy documents, observation)  
✓ Interview guides got reviewed by key informants in the field for validation purpose                                                                                           | ✓ Pre-data collection (Literature review and conceptual framework)  
✓ Data collection (collection of data from multiple sources)  
✓ Preliminary collection stage (initial key interviews in field)                                                                                                           |
<table>
<thead>
<tr>
<th>Internal Validity</th>
<th>✓ Pattern matching</th>
<th>✓ Use of field notes and memos</th>
<th>✓ Cross verification of emerging patterns from diverse respondents</th>
<th>✓ Explanation building</th>
<th>✓ Use of NVivo 11 for matrix models for relationships</th>
<th>✓ Data collection</th>
<th>✓ Data analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>External Validity</td>
<td>✓ Care in selection of case</td>
<td>✓ Use of theory for analytic generalization</td>
<td></td>
<td></td>
<td></td>
<td>✓ Research design</td>
<td>✓ Data analysis</td>
</tr>
<tr>
<td>Reliability</td>
<td>✓ Development of Case study protocol (including interview guides; informed consents; systematic in-depth field work; detailed documentation of data collection rules and procedures)</td>
<td>✓ Careful storage of case study database.</td>
<td>✓ Detailed memos and field notes</td>
<td></td>
<td></td>
<td>✓ Pre-data collection</td>
<td>✓ Data collection</td>
</tr>
</tbody>
</table>

Construct validity

Construct validity refers to use of appropriate operationalization of concepts being studied. Several tactics were used to deal with this test. First, a conceptual framework was developed in light of comprehensive review of established literature on public management reforms, governance networks and institutional theories (Chapter 3). In this chapter, each theoretical construct was conceptualized from different aspects from literature to ensure construct validity. Then constructs were operationalized (section 3.8). Conceptual framework is recommended as a mean to increase construct validity (Maxwell, 2013; Yin, 2003).

Second, data was collected from multiple sources including interviews, reports, field notes and observations. Moreover, interviews conducted with diverse respondents. Multiple sources of data was triangulated to develop chain of evidence. For example, multiple institutional pressures were explored from organizations, network actor, regulatory bodies and coordination authorities to validate the information sought from different sources.
Third, draft of interview guide was got reviewed from key informants. Draft was reviewed and updated in iterative process in three phases of data collection (three phases are discussed in detail later). In each phase of data collection, draft was reviewed and revised for next phase of data collection.

Internal validity

Internal validity is mainly important for establishing explanatory or causal relationships to ensure that the relationship actually exists and is not spurious relationship (Yin, 2003). To increase internal validity, pattern matching and explanation building was used. The detailed elaboration is presented in data analyses section. Study used NVivo 11 for transcription, analysis of patterns and systematic relation building.

External validity

External validity increases generalizability of results. This is the most criticized and problematic aspect of case study. Some scholars have actively rejected generalizability as a goal of qualitative research (Lincon and Guba, 1985). They suggest incorporating rich description of accounts to increase external validity. Generalizability of case study can be improved through the systematic selection of the case and by carefully establishing the “domain to which study findings can be generalized” (Yin, 2003; p.34). Yin (2003) proposed that instead of statistical generalizability, analytic generalizability is suitable for case study research. Mason (2002) called it theoretical generalizability, which is a distinct and valuable way to generalize in qualitative inquiry. In agreement to these suggestions, this study has tried to generalize a set of results to broader theory using the logic of analytic generalization. (Mason, 2002; Yin, 2003). The purpose is to advance /test the theoretical concepts developed in conceptual framework of the study.
Instead of generalization to a set of population, the results are generalized on conceptual level which is above the specific case.

Reliability

This test demonstrates that the study, if repeated, will produce same results. Although reliability is hard to achieve in qualitative data collection mainly because initial social setting is subject to change in later research (Bryman and Bell, 2011). However, scholars have proposed valuable tactics to increase reliability of qualitative inquiry (Yin, 2003; Mason, 2002). Mason (2002) proposed systematic and detailed documentation of procedures. Yin (2003) presented case study protocol as a tool to increase reliability. Earlier, Lincoln and Guba (1985) suggested that an overall research plan needed to be carefully developed beforehand including theory, variables of interest, relationships, methods for data collection and data analysis. Yin (2003) called it case study protocol. A case study protocol was developed which contained interview guides, systematic in-depth field work, detailed documentation of data collection rules and procedures.

4.4.2- Case selection

This study has taken the case study of energy sector of Pakistan. Energy sector of Pakistan is the “critical” and “extreme” case in the public sector of Pakistan which has gone through NPM based devolution reforms and resulting fragmentation. Energy sector is the “extreme case” where fragmented autonomous bodies need to be coordinated in governance networks in order to solve the complex problem of shortage of electricity supply in Pakistan. Moreover, the organizations in energy sector are exposed to institutional complexity being placed in the networks of organizations in need of coordination with each other. It is also a “critical” case because such fragmentation is present in other policy domains of public sector of Pakistan as well and the
findings of managing institutional complexity by electricity supplying companies can be
generalized to other governance networks in the public sector of Pakistan.

Within the case of energy sector of Pakistan, the study has taken ‘Power network’ as
embedded unit for network level of analysis. There are two networks in the energy sector of
Pakistan: Power network and gas network. As compare to gas network, power network has more
fragmented and autonomous organizations due to high fragmentation created under unbundling
reforms of WAPDA. Furthermore, it is the largest governance network with variety of actors.
This variety and fragmentation is much desired to study complexity in governance network.
Therefore, power network is taken as embedded unit for network analysis.

Within power network, two electricity-supplying companies (LESCO and IESCO) are
taken as embedded units of analysis to examine institutional complexity at organizational level.
Power suppliers are selected because they are most vulnerable to diverse demands due to their
exposure to general public service. Among power suppliers, IESCO and LESCO are selected
because they have large customer base and cover huge area for power supply. Moreover,
researcher could access them more conveniently. IESCO supply electricity in Islamabad, which
is the capital city of Pakistan. LESCO supply electricity to Lahore, which is the capital city of
the province of Punjab. Punjab is the most powerful province in term of power supply in the
country. Earlier, at times of integrated WAPDA, all major orders were released from WAPDA
headquarter, Lahore.

The study adopted purposive sampling technique because the study required information
rich units for detailed analysis. Respondents were selected based on researcher’s judgement and
recommendations from already interviewed respondents, that they have rich information of the
subject under study. They were selected from various organizations in the power network for the structure and characteristics of network. At organizational level, respondents were selected from top-level managers; middle level managers and employees.

4.5- Data collection methods and procedures

4.5.1- Case study protocol

Based on the recommendation of Yin (2003), the researcher developed a case study protocol before starting the fieldwork. The case study protocol is attached in Appendix-I. The protocol included research objectives and a comprehensive plan to record research procedures including following sections:

- Authority letters, which were sent to organizations to seek permission for data collection.
- Consent form, to take the informed consent of the respondent before data collection.
- Interview guides; take contained the questions to ask from the respondents.
- Interview contact record sheet; which was filled after conducting each interview.

4.5.2- Data collection phases

Data was collected in three phases. First phase comprised of interviews with key network actors to explore energy sector reforms and the structure of governance network. In second phase, interviews were conducted, in two embedded organizations and interacting network actors, to analyze institutional complexity experienced by embedded organizations. Third phase comprised of interviews in various departments and across the hierarchy of the embedded organizations. Documents were also collected in each phase. Data was analyzed after each phase and interview guide was revised. Three phases of data collection is summarized in Table 4.2.
Table 4.2 Phases of data collection

<table>
<thead>
<tr>
<th>Phases</th>
<th>Objectives</th>
<th>Data sources</th>
<th>Research Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 1</td>
<td>Initial study on reforms in energy sector, key organizations in energy sector and their interaction with LESCO, network structure of energy sector</td>
<td>2 unstructured and 7 semi-structured interviews with key network actors; Collection of policy documents, reports</td>
<td>What are the key reforms introduced in energy sector in Pakistan? How governance networks are structured in energy sector of Pakistan?</td>
</tr>
<tr>
<td>Phase 2</td>
<td>Interviews with managers; identification of institutional logics in LESCO; key actors that present particular logic; logics contestation</td>
<td>10 semi-structured interviews in embedded organizations; 7 semi-structured interviews with network actors; collection of company reports, policy documents</td>
<td>How various network actors present diverse logics to embedded organizations; and how public organizations experience how institutional complexity?</td>
</tr>
<tr>
<td>Phase 3:</td>
<td>Interviews with managers and employees to explore absorption of institutional complexity and organizational responses to multiple logics</td>
<td>3 unstructured and 27 semi-structured interviews in embedded organizations; HR policy manuals, WAPDA Service Rules</td>
<td>How organizations respond to institutional complexity?</td>
</tr>
</tbody>
</table>

First phase of data collection

Initial visits in the field

Although the energy sector is central to Pakistan is economy and most crucial for analyzing reform impacts. Unfortunately, it is highly under researched sector in academic circles in Pakistan. The sector has gone through various changes (particularly in last decade) that are not well recorded in literature. Therefore, two initial interviews were conducted with key informants in the field. Both were unstructured interviews because at that time researcher needed to explore energy sector reforms in detail. First interview was conducted with the Director General (Administration) of LESCO. Second interview was conducted with the staff officer in PEPCO (Coordination body).
An interview guide was developed, before these preliminary visits in field, based on several constructs in light of conceptual framework. The guide was reviewed by respondents and was further refined with preliminary interviews. Interview guide is attached in case study protocol (Appendix-I). It was prepared with funnel technique (Saunders et al., 2010), starting from general question and then moving towards more specific and probing questions.

These interviews helped in identifying key actors in power network, motivations behind unbundling reforms of WAPDA and the current arrangement after unbundling. Reports and documents related to energy sector reforms were collected. Information from these interviews validated researcher’s understanding of current developments in this sector and application of study’s conceptual framework for empirical investigation. These interviews also validated the right choice of power network to examine institutional complexity and various dynamics to be explored. Moreover, these interviews enabled to establish initial contacts in the field.

Establishing access to data

From initial interviews, researcher identified key actors in the power network (Ministry, PEPCO, NEPRA, WAPDA, LESCO, IESCO, CPPA, NTDC and GENCO) for network analysis and two embedded organizations (LESCO and IESCO) for analysis of institutional complexity. An authority letter was posted to all the identified organizations in the power network, from the institute of researcher, to seek formal permission from the management of the organization. This authority letter ensured research’s access to company reports, policy documents, respondents receptivity and facilitation to collect data collection. It also increased researcher’s receptivity to the respondents. In the selected embedded organizations (LESCO and IESCO), researcher needed detailed coverage of interviews in different departments and across hierarchy. Therefore, a focal person was assigned to researcher in each organization, which helped in identifying
respondents who were more knowledgeable and informed and taking appointments. The focal person remained the point of reference, throughout the data collection process. The case study protocol (Appendix-I) contains the authority letter.

Interviews with network actors

On receiving permission from organizations, researcher conducted semi-structured interviews in various organizations in the power network. One interview was conducted in each organization, with an informant from the top-level management. In this phase, the focus was on structure of governance network, scope of network, role of each actor, motivations behind unbundling of WAPDA, current mechanisms of interaction among network actors and network characteristics. Table 4.3 presents detail of interviews in first phase of data collection.

**Table 4.3 Interviews in first phase of data collection**

<table>
<thead>
<tr>
<th>Organizations</th>
<th>No of interviews</th>
<th>Type of interview</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial visits</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PEPCO</td>
<td>1</td>
<td>Unstructured</td>
</tr>
<tr>
<td>LESCO</td>
<td>1</td>
<td>Unstructured</td>
</tr>
<tr>
<td>Interviews with network actors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MOWP</td>
<td>1</td>
<td>Semi-Structured</td>
</tr>
<tr>
<td>IESCO</td>
<td>1</td>
<td>Semi-Structured</td>
</tr>
<tr>
<td>WAPDA</td>
<td>1</td>
<td>Semi-Structured</td>
</tr>
<tr>
<td>NTDC</td>
<td>1</td>
<td>Semi-Structured</td>
</tr>
<tr>
<td>CPPA-G</td>
<td>1</td>
<td>Semi-Structured</td>
</tr>
<tr>
<td>NEPRA</td>
<td>1</td>
<td>Semi-Structured</td>
</tr>
<tr>
<td>GENCO-1</td>
<td>1</td>
<td>Semi-Structured</td>
</tr>
<tr>
<td><strong>Total interviews</strong></td>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>

Data analysis from this stage, enabled to review and further develop the interview guide for the next phase of data collection.

Some learning points, from this phase, are worth to mention.
Proceeding through proper channel was important. Before making visits, the researcher processed applications (through post) to seek permission from competent authorities in each organization. Phone calls and reminders were made to speed up the process. In response to those applications and calls, the researcher got approval letters/approval email/verbal consent, which was an important starting point. Each organization assigned a focal person to the researcher to facilitate data collection process. It resulted in easy access to the respondents, particularly those who were skeptical of research and/or had tight schedules.

The energy and motivation of the researcher was very important to get the respondents involved in the study. With such involvement, respondents took the responsibility to honestly participate in the study. Researcher had less advantage of friend and family references to gain access. Still, there was no major issue of access. Most of the respondents cooperated with the researcher and showed great interest in the research. Many respondent took it as their responsibility to participate in a study worthy for the country. Researcher got much appreciation from respondent for taking up much-desired topic in the context of Pakistan. Such appreciations increased research’s motivation for further exploration of the issues. Researcher also ensured to reach the offices on/before the provided time. This attitude also, helped in making good impression to respondent.

Document collection was highly important to triangulate the evidence from multiple sources.

Respondent’s subjective perspective needed to be cross-verified by multiple actors in network. Researcher also needed to be very reflexive during data collection and analysis to reach actual picture.
Keeping dairy was very important to note down field observations. Especially, work environment, accessibility issues, attitude of the respondent, use of IT, various demands/pressures on respondent etc.

Second phase of data collection

Second phase of data collection targeted to explore institutional complexity experienced by organizations embedded in governance networks. In this phase, unit of analysis were embedded power supplying organizations (LESCO and IESCO). However, view of respondents in interacting organizations, were also incorporated to triangulate the perspectives. Interviews were conducted in embedded organizations and with interacting network organizations including Ministry, NEPRA, NTDC, WAPDA and the coordinating bodies (PEPCO & CPPA-G). All were semi-structured interviews and conducted with top management. Policy documents, reports and other documents were collected. Table 4.4 presents detail of interviews in second phase of data collection.

Table 4.4 Interviews in second phase of data collection

<table>
<thead>
<tr>
<th>Organizations</th>
<th>No of interviews</th>
<th>Type of interview</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interviews in embedded</td>
<td></td>
<td></td>
</tr>
<tr>
<td>organizations</td>
<td>LESCO</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>IESCO</td>
<td>5</td>
</tr>
<tr>
<td>Interviews in other</td>
<td></td>
<td></td>
</tr>
<tr>
<td>organizations in power network</td>
<td>MOWP</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>PEPCO</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>NEPRA</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>NTDC</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>WAPDA</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>CPPA-G</td>
<td>1</td>
</tr>
<tr>
<td>Total interviews</td>
<td></td>
<td>17</td>
</tr>
</tbody>
</table>

As mentioned earlier, first phase of data collection refined interview guide for this stage. During this stage, data was collected through interviews, documents and reports. During data
collection, interview guide was further developed and revised for third phase of data collection. Data collected in three phases enabled the researcher to gradually build themes and enrich data. The purpose was not to compare data in three phases. Rather, three phases supported each other for enrichment of data and exploration of issues with further depth. Due to researcher’s continuous interaction with respondents, it was possible to fill in gaps (if any) in the initial phase of data collection.

**Third phase of data collection**

Third phase of data collection aimed at explanation of organizational responses to institutional complexity. Three unstructured (in-depth) and twenty-eight semi-structured interviews were conducted. Unstructured interviews were conducted with the HR managers in LESCO and IESCO and administration officer in PEPCO to explore the HR process in detail. The purpose was to record various changes introduced in HR system and process over the period after WAPDA’s unbundling. Researcher wanted to explore how organizations have incorporated various institutional logics in its structure and practices and what hybrid/innovative arrangements are made in the system. It was only possible through providing ample room to respondents to share various changes in detail. Unstructured and in-depth interviews could serve this purpose better than semi-structured interviews. HR policy manuals and WAPDA Service Rules were collected.

Next, semi-structured interviews were conducted covering various departments of the organizations. Here researcher aimed at horizontal coverage of absorption of institutional complexity in HR process. The purpose was to capture perceptions of organization’s informants about the degree of success reached by the organization in dealing with multiple logics. Perspective gained in earlier interviews with top management and policy documents was
triangulated with the perspective of organization’s informants in different departments. Through triangulation of perspective and triangulation of sources, absorption of various institutional logics were explored and organization’s responses to institutional complexity were interpreted. Table 4.5 presents detail of interviews in third phase of data collection.

### Table 4.5 Interviews in third phase of data collection

<table>
<thead>
<tr>
<th>Organizations</th>
<th>No of interviews</th>
<th>Type of interview</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interviews in HR departments in embedded organizations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LESCO</td>
<td>2</td>
<td>Unstructured</td>
</tr>
<tr>
<td>IESCO</td>
<td>1</td>
<td>Unstructured</td>
</tr>
<tr>
<td>Interviews in different departments in embedded organizations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LESCO</td>
<td>14</td>
<td>Semi-Structured</td>
</tr>
<tr>
<td>IESCO</td>
<td>13</td>
<td>Semi-Structured</td>
</tr>
<tr>
<td><strong>Total interviews</strong></td>
<td><strong>30</strong></td>
<td></td>
</tr>
</tbody>
</table>

4.5.3- Data collection sources

Data was collected from multiple sources and in three phases. Sources included semi-structure interviews and documents (reports, company’s websites, and policy documents).

**Interviews**

The study required detailed and rich information to capture how organizations experience complexity while interacting with various actors in governance networks and how they navigate through the complexity. For this purpose, interview technique was most suitable. Semi-structured interviews were conducted because this technique was most suitable with the abductive inquiry. It enables to include deduction from theory and flexibility for change in light of induction from data. Interview guides (Appendix-I) were developed before interviews in light of conceptual framework and operationalization of constructs. It kept the researcher focused and allowed comprehensive exploration of phenomenon from various aspects. At the same time, researcher had the flexibility to ask further questions (or eliminate decided questions) according to flow of
discussion (Bryman and Bell, 2011). Interviewees were provided flexibility to share experiences and views. Researcher picked up additional points to be explored that were relevant to the research. After each phase of data collection, interview guide was revised to adjust emerging questions from data. Semi-structured interviews were most suitable technique for this purpose. Pre-defined questions and structure of interview prevents from data overload and lack of comparable data that mostly results in unstructured data (Miles and Huberman, 1994). On the other hand, structured interview lacks flexibility to record novel findings from social settings. Semi-structured interview eliminates both of these weaknesses unstructured and structured interviews. It becomes especially important for abductive approach. Most of the interviews were conducted with semi-structured technique. Separate interview guides were prepared for different phases summarized in Table 4.3.

Interview guides were prepared in light of operationalization of constructs that linked data to theoretical propositions following Yin (2003) recommendations. Interview questions were based on concepts and themes identified in the literature review/conceptual framework that provided foundations for thematic analysis. Major themes included reforms interventions in energy sector, governance network structure, contradictory institutional logics, network and organizational characteristics that shape complexity and organizational responses to complexity. Each theme was explored through 7-9 questions.

Taking advice of Patton (2002) the researcher remained opened to emerging issues and provided opportunity to respondents to express additional views about the issue. Some questions for open investigation were also included to remain reflexive and open for emerging themes. For example: please explain your experience with the change over last two decades. With agreement to Greener and Martelli’s (2015) suggestion, researcher ensured that respondents understood the
question. Flexibility of semi-structured interviews allowed researcher to make elaborations, where needed which further increased construct validity.

A major challenge was the different kinds of actors involved in governance network. From power suppliers to power transmission, central power purchaser, regulatory authority, coordination bodies and the ministry. All these actors were involved in creating institutional complexity for the mainstream organizations. Complexity needed to be examined from multitude of views. It had to be interpreted from different lenses that various actors subjectively experience capturing all the complexity involved. Researcher has struggled to capture and triangulate the multitude of perspectives in data analysis to present a picture closer to reality.

Most of the interviews were recorded to increase reliability of data. Interviews lasted between 40 and 80 minutes. Interviews were conducted on the stipulated time after taking prior appointment to avoid any inconvenience for respondent. In cases where respondents were reluctant, recording was substituted by detailed note taking during discussion. Furthermore, non-recorded interviews were transcribed on the same day to ensure data reliability.

**Documents**

Documents are important source of evidence in case study research (Yin, 2003; Stake, 1995). This study included various documentary sources as part of data and collected documents in all the three data collection phases and even before and after that. Documentary evidences were triangulated with respondent’s perspectives in data analysis. Documents were collected at various levels and can be classified as follows:
• **Energy sector level:** Reports and policy documents related to energy sector reforms, energy crises, energy sources and demand and supply of energy in Pakistan. Examples include “Pakistan Economic Survey” and “Energy Crises in Pakistan”.

• **Governance network level:** Reports and policy documents related to unbundling reforms of WAPDA, companies websites, NEPRA’s annual reports on industrial performance etc.

• **Organizational level:** Reports and policy documents related to embedded organizations such as brochures, information booklets, companies’ web sites, Companies Ordinance, 1984, SECP Rules for Public Companies, World Bank’s reports on companies’ performance, companies’ audit reports.

List of documents collected is attached in Appendix- II

**Data Triangulation**

Data was triangulated through two approaches

• Triangulation of data from multiple sources

• Triangulation of perspectives from diverse participants

Field studies mostly use more than a single source of data collection (Patton, 2002). Multiple sources of evidence is highly recommended in qualitative inquiry because none of the source is without weakness and together they can help to strengthen the reliability of data (Yin, 2003). Moreover, using a combination of different methods fosters the validity of findings through triangulation technique.

This study collected evidences from multiple sources including interviews, reports, policy documents and companies’ information from websites and observations. Researcher kept a diary
in the field to take notes, record important observations, and hidden meanings from conversations and contexts. Out of all these sources, the main source of data was semi-structured interviews. Multiple sources of data were triangulated to validate the findings. Multiple sources and multiple perspective allowed the researcher to build chain of evidence.

For triangulation of perspective, interviews were conducted with diverse respondents in the network (for network analysis) and with diverse respondents from different departments in embedded organizations (For organizational analysis).

4.6- Data analysis

In this study, three processes were working concurrently: data collection, data preparation and data analysis. In order to improve the reliability and transparency of data analysis process, the study used Computer Assisted/Aided Qualitative Data Analysis Software package (CAQDAS). NVivo (Version-11) was used as a suitable CAQDAS due to its recommended features by the supervisor and other colleagues. First, the data was prepared in NVivo and then it was analyzed in first cycle coding and second cycle of coding following the techniques recommended of Saldana (2016).

4.6.1- Data preparation

The recorded interviews were transcribed, in NVivo 11, in the same week of conducting the interview. The unrecorded interviews were transcribed on the same day in order to increase its accuracy. The transcription of interviews provided the opportunity to get familiar with the depth and breadth of the content (Clarke and Braun 2006). With each transcription, researcher recorded additional field notes, which were taken during data collection. While transcribing the interviews, the researcher made analytic memos in NVivo. Memos provided the opportunity to
reflect and write the emerging relations in the content and compare/relate them with the emergent or existing theory. Moreover, the limitations of the study, future directions and some recommendations were also noted in the memos. Saldana (2016) states that “memo writing also serves as a code-and-category-generating method” (p.157). The memos written during data preparation stage, later served useful linkages (in theory and data) in the data interpretation stage. Various documents, collected during field visits, were also imported in NVivo 11.

4.6.2- First Cycle coding

The purpose of first cycle coding was to split the data into individually coded items/categories. It is helpful for initial data exploration through fracturing and splitting it in parts (Saldana 2016). For this purpose, the researcher developed an initial list of codes that was based on etic (outside) issues fetched in by the researcher based on theoretical constructs used in the study and reflected in the interview guide. Etic coding served as starting point for initial coding. Additionally, emic (inside) issues also emerged from the analysis of transcriptions. These issues emerging from data were added as emic coding in the already developed list of etic codes. The list was enlarged as the exploration of data progressed from one transcription to another.

Furthermore, attribute coding (Bazelay, 2013) was used to code basic descriptive information at the beginning of the transcription such as field work setting, demographical characteristics of the respondents and the organization. It provided essential information of informant and the context for analysis and interpretation. Attribute coding is especially recommended for large data sets and variety of data resources (Mason, 1994; Saldana, 2016). Additionally, versus coding (Saldana, 2016) was used for coding the conflicts and clashes found in the data. It was particularly important for mapping contradictions among different institutional logics. Using these four techniques (etic, emic, attribute and versus), first cycle coding was
mainly used to breakdown data into discrete parts to examine the possible similarities or contrasts for further directions. It provided a base for second cycle coding.

4.6.3- Second cycle coding

The purpose of second cycle coding was to reorganize data into meaningful categories and themes (Saldana 2016). Three coding techniques were used in second cycle coding: pattern coding, axial coding and theoretical coding. Pattern coding provide explanatory or inferential codes (Miles and Huberman, 1994). The study used pattern coding to develop smaller number of setts, themes and constructs. It was useful for finding explanations such as the network characteristics and organizational attributes that can mitigate the level of institutional complexity for the organizations in the power network.

Axial coding is a recommended technique to strategically reassemble the data that was fractured in the first cycle coding (Charmaz, 2006). The study used axial coding for developing comparisons and contrasts such as how different institutional logics present contrasting pressures to the embedded organization in governance networks. Through axial coding, various displays were made in data analysis and interpretation including tables, figures, flow diagrams and causal loop diagrams. Through pattern and axial coding, the researcher reduced the spitted codes by weaving them in similar categories.

Theoretical coding was used to extend the analytical work from pattern coding and axial coding. It acted like an umbrella that covered and accounted for other codes and categories and merged them to have sense of theory and explanations. Theoretical coding is the process of integration and synthesis of categories derived from codes (Charmaz, 2006). Figure 4.1 depicts an example of coding process of data analysis. In this figure, the contradiction of institutional logics emerged
from various codes (in first cycle coding) which were merged into categories (in second cycle coding).

**Figure 4.1: Coding Process**

Through theoretical coding process, the researcher merged the categories in themes and related them with theoretical constructs used in conceptual framework. At this stage, the researcher also
used the analytic memos, notes and theoretical concepts for iterative process between theory and data.

4.6.4- Multilevel analysis

This study has incorporated multi-level analysis of data. Data was analyzed on three level including macro level energy sector reforms, meso level network characteristics and micro level organizational attributes and responses to institutional complexity. This is most desirable approach in institutional analysis but least used. Scott (2013) stressed on the need for multi-level institutional analysis and argued, “Much of the value in an institutional approach resides in its recognition of the interplay of structures and procedures across levels” (p.210).

Colyvas and Jonsson (2011), while analyzing diffusion of equal employment opportunity (EEQ) trend among organizations, pointed to multi-level diffusion as

“A notable feature in the institutionalization of EEQ is how much governance occurred at multiple level: in the field, through the assimilation of principles and practices in the law; at the organizational level as a rationalized response to legal mandates; and among individuals by its integration into everyday procedures and employee expectations. Such complexity is obscured in traditional models that map these macro-dynamics onto levels of analysis.” (p.41)

With this recognition, scholars are calling for macro-meso-micro analysis of institutional logics. This study has responded to these calls by incorporating multi-level analysis of institutional complexity.

4.7- Ethical considerations

The study responded appropriately to make sure that no ethical principles is violated. An authority letter was processed to seek permission from the concerned authority (CEO/MD) in organization for data collection. Furthermore, a consent form was developed. The consent form
was developed to formally inform the respondents about the purpose and benefits of current study and to get respondent’s voluntary agreement for participating in the study. The organization was also assured that all the information gathered would be kept strictly confidential and would be used for academic research purpose only. Respondent was provided with the right to withdraw from participation in study at any time without prejudice and penalty. Interviews were conducted with prior appointment taken from the respondents. Before conducting interview, a consent form was got signed by the respondent and researcher. This consent form was an ethical commitment (at the part of researcher) to maintain anonymity of respondent and to use data only for academic purpose. The consent form is attached in case study protocol (Appendix-I).

The confidentiality of the respondents was ensured by assigning codes to the transcripts of the interviewees. The code contained abbreviation of the organization and the generic number assigned to the respondent rather than specific name. For example, R-01-LESCO indicates that this interview belongs to LESCO and the respondent is given the identity of 01 to distinguish it from other respondents in LESCO. These codes serve multiple purposes. First, this technique protects the confidentiality of the respondents. Second, it provided useful information to the reader about the organizations of the interview. Such information is particularly important to understand the mechanism of interaction among various actors in network. Further, these codes can serve as cross reference to trace the codes in transcriptions.

The organizations were also informed about their identity in the thesis. An authority letter was processed to take formal permission before data collection. Additionally, a verbal permission was taken for the use of their identity. Scholars are also challenging the presumption of the name of case study organizations and even the respondents (Patton 2002) and becoming
more open to refer the name of the case under study. It is especially recommended when the cases like to have ownership of their own stories. The organizations of this thesis had no reservation to disclose their identity. Therefore, the codes contained the names of the organizations. Whereas, the privacy of the respondents was kept confidential by assigning number to the transcripts.

4.8- Conclusion

Following table summarizes the methodology of this study.

*Table 4.6 Summary of research Methodology*

<table>
<thead>
<tr>
<th>Research paradigm</th>
<th>Critical Realism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Approach</td>
<td>Abductive approach with elements of induction and deduction throughout the research study; three phases of data collection</td>
</tr>
<tr>
<td>Research Design</td>
<td>Case study of energy sector in Pakistan, with embedded power network (for network analysis) and two embedded public organizations, LESCO and IESCO (for organizational analysis)</td>
</tr>
<tr>
<td>Data Collection</td>
<td>Triangulation of data by collecting evidences from different sources; Interviews with various network actors including ministry, regulatory authority, coordination bodies and power suppliers; policy documents; Public sources of information like newspapers, public documents, web</td>
</tr>
<tr>
<td>Data Analysis</td>
<td>Thematic analysis using first cycle coding (with etic, emic, attribute and verses coding techniques) and second cycle coding (with pattern, axial and theoretical coding techniques)</td>
</tr>
</tbody>
</table>

The philosophical stance (research paradigm) of this study is critical realism with the assumption that reality is objective but interpreted through social conditioning involving both physical and mental aspects of it. Hence, phenomenon need to be understood through contextual
analysis and social meanings. Given the philosophical assumptions and the research questions, this thesis has used case study research design. The energy sector in Pakistan is taken as the case for multi-level analysis of institutional complexity. Within energy sector, power network as embedded unit of analysis on the network level and two public organizations (LESCO and IESCO) are taken as embedded unit of analysis at organizational level.

The study has adopted abductive approach with elements of induction and deduction throughout the research study. Data is collected in three phases with an iterative process. An interview guide was prepared before data collection. Data was analyzed after each phase and interview guide was revised. The study has used multiple sources of evidence including unstructured and semi-structured interviews, documents and observation. The major source of data collection was semi-structured interviews that were conducted from multiple organizations (in the network) and multiple departments (in the embedded organizations) to collect diverse perspective of the respondents. Data was triangulated with two approaches including triangulation of data sources and triangulation of respondents’ perspective. Data was analyzed through thematic analysis using first cycle coding and second cycle coding techniques. Using the criteria of Yin (2003), the study applied various tactics to enhance construct validity, internal validity, external validity and reliability of the case study. Moreover, the study took appropriate measures to make sure that ethical principles are duly addressed including seeking organizational permission through authority letters, seeking respondent’s informed consent, providing right to withdraw, protecting the anonymity of respondents and confidentiality if the data.
Chapter 5   Energy Sector in Pakistan

5.1- Introduction

The chapter is divided into four sections. The first section, briefly discusses the institutional and policy context of Pakistan and its public sector. Next section describes major reform interventions introduced in energy sector in Pakistan followed by an overview of energy sector base and development in Pakistan and the energy crises. The final section, describes the institutional structure of key players in energy sector of Pakistan.

5.2- About Pakistan: Institutional framework and policy context

Pakistan got independence in 1947 from the British colonial rule, under the sub-continent’s struggle for independence. With a rich agricultural sector, a semi-industrialized economy and a growing service sector, it is the 26th largest country in the world in terms of purchasing power and 45th largest in terms of nominal GDP (IMF, 2018) and is considered as the emerging and growing economy in the world (Lagarde, 2016).

The colonial legacy of Pakistan include weak political institutions, strong military and entrenched civil bureaucracy (Rizwan & Jadoon, 2010). The post-independence history of Pakistan has been dominated by military rule and political instability. Due to weak political institutions, democratic values could not flourish in the system (Cohen, 2002). Rather, military got the opportunity to rule over the country for more than three decades. Even at the times of elected governments, military and civil bureaucracy remained dominant in public policy making and implementation (Aziz, 2007). The dominance of military and civil bureaucracy; the weak democratic institutions and the feudal system in the society gave rise to “bureaucratic-
authoritarian state” (Rizwan and Jadoon, 2010:8). Hierarchical relations, centralized decision-making and authoritarian style of government remained the key features of public sector in Pakistan (Farooq et al., 2018). Both military and democratic governments acted in authoritarian manner due to which democratic values and even bureaucratic norms of behaviors were compromised. The times of elected governments are marked by poor policy making, corruption and political interference in public bureaucracies (Cohen, 2002). Civil society remained largely fragmented and media got voice only in recent decade. The country continued to faced challenging problems, including overpopulation, terrorism, poverty, illiteracy, energy crises and corruption etc.

Regarding policy context, state-led economic development was the most prominent feature of government policies after independence. Since, private sector was very weak, state started its role as the major player to boost the economy. Initially, the state played its role in the free market economy and the private sector was encouraged and supported for investment in various industries to boost the economy (López-Cálix, Srinivasan, & Waheed, 2012). State intervened in the market where private sector failed. In 1971, democratic government of Zulfiqar Ali Bhutto adopted nationalization policy, which further enhanced the role of state in the economy. It resulted in dramatic increase in number of state-owned enterprises which increased the size of public sector during Bhutto’s “experience of socialism” (Bokhari, 1998:187). However, public sector could not play its true role in economic development due to corruption, inefficiencies and political interferences. Instead of contributing in economic growth, the inefficient public enterprises contributed in fiscal deficit (Bokhari, 1998).

In 1977, the military government of General Zia-Ul-Haq came with major policy shift towards liberalization, disinvestment and denationalization (Raja, 2015). In 1980s, Pakistan
adopted various public reforms under structural adjustment programs backed by international
donor institutions. Particularly, IMF, World Bank and Asian Development Bank has majorly
influenced the reform initiatives and process in Pakistan under structural adjustment loans
(Anwar & Iqbal, 1996). Since, 1980s, liberalization, privatization and deregulation continued as
the three main principles of public sector reforms in Pakistan (Rizwan & Jadoon, 2010). Despite
great political instability and frequent changes in government, these three principles remained
intact irrespective of military and democratic governments. Moreover, the narrow objective of
economic growth was replaced with wider slogans of poverty reduction and sustainable
development under good governance reforms (Israr & Islam, 2006).

5.3- Reforms in energy sector in Pakistan

Following sub-sections provide a detailed account of various reform trends in energy
sector in the 70 years history of Pakistan’s independence.

5.3.1- Towards state-led development: State monopolies in energy sector

Pakistan’s public sector inherited colonial bureaucratic structure of administration after
its independence. The state played major role for economic development and public enterprises
were created in every sphere of life. State-led development was carried through vertically
integrated state agencies with monopolistic approach. The energy sector comprises of two major
networks of public utilities: Gas network and power network. The gas network was mainly
managed by two vertically integrated public utilities for gas transmission and distribution: Sui
Southern Gas Company (SSGC) Sui Northern Gas Pipelines Limited (SNGPL). SSGC was
established in 1955 for provision of gas in Southern Pakistan including Karachi, Sindh and
Baluchistan. SNGPL was established in 1964 for gas supply in Northern areas of Pakistan.
The power network was also managed by two vertically integrated systems of Water and Power Development Authority (WAPDA) and Karachi Electric Supply Company (KESC) for generation, transmission and distribution of electricity (Kessides, 2013). WAPDA was established in 1958 to take charge of control and management of water and power resources throughout the country except Karachi. For Karachi, KESC was already established before the independence of Pakistan as a private company. In 1952, the government of Pakistan took control of the company by acquiring major shareholding of KESC (Chaudhry, 2004). In 1956, Pakistan Atomic Energy Commission (PAEC) was established for research and development of nuclear power.

Until 1980s, private sector had less involvement in energy sector and public authorities were majorly responsible for provision of gas and electricity to public (Khalid & Ifthhar-ul-Husnain, 2016). Gas network is still working with the same vertically integrated system of two state monopolies. Whereas, power network has gone through various restructuring reforms resulting in creation of many new public agencies as well as involvement of private and non-profit sector in power network of the country (ICCI, 2013).

5.3.2- Towards liberalization: Private sector involvement in power generation

The performance of WAPDA and KESC remained satisfactory until mid-1980s. However, after 1980s they could not meet the growing demand of electricity due to lack of capital and deterioration of transmission and distribution system (ADB, 2014). WAPDA was responsible for power generation through two major resources: hydropower and thermal power. Hydropower was the most reliable and cost efficient energy resource of Pakistan. However, hydro projects needed huge investment. Parallel to hydropower resources, WAPDA also developed thermal power base in 1960s, which was continuously enhanced in next two decades.
(Kessides, 2013). In early 1980s, government put bar on WAPDA’s further investment in thermal projects and adopted the policy of power generation through private producers. On the other hand, new hydropower projects could not initiated due to politicization of water resources. Consequently, existing power generation capacity could not meet rising demand of electricity.

To address the energy crises, government started the process to reform this sector under the pressure of international donor agencies (Dawood, Saeed, Ata, & Nawaz, 2013). Government introduced policy to provide incentives for private sector power generation (GOP, 1994). Moreover, Private Power Infrastructure Board (PPIB) was created to facilitate private sector’s participation in power generation. PPIB provided the platform for one window facility for private investment in energy sector. Through this policy, Independent Power Producers (IPPs) were provided contracts for power generation. This was the first step towards liberalization reforms, which opened the energy sector of Pakistan to private sector. Moreover, privatization of public utilities was also adopted as major agenda. In 1996, partial privatization of Kot Addu Power Plant was achieved. Later, in 2005, KESC was privatized.

5.3.3- Towards restructuring public bureaucracies: Unbundling of WAPDA

In 1992, government approved the strategic plan for restructuring WAPDA. This plan sought to meet three critical goals: enhance capital formation; improve efficiency and greater role of private sector through privatization (Siddiqui, 2011). This major decision was taken to improve the viability of Pakistan’s electric power sector which was characterized by extensive government involvement in management, political interference, and a tariff plagued by cross-subsidies (Parish, 2006). However, the plan remained shelved till 1998. In 1998, Cabinet Committee on Privatization approved strategic plan for restructuring of WAPDA’s thermal power wing (PEPCO, 2010). WAPDA had two wings: Water Wing and Power Wing. Water
wing remained with WAPDA, whereas, Power wing was unbundled into fifteen independent public limited companies as follows:

- National Transmission & Dispatch Company (NTDC)
- Four Thermal Power Generation Companies (GENCOs)
- Ten Distribution Companies (DISCOs)

To ensure autonomous commercial operations, various agreements were executed between WAPDA and corporate entities including Business Transfer agreements (BTA), Operations and Development Agreement (ODA), Electricity Supply Agreement (ESA), Bulk Supply Agreement (BSA) and Fuel Supply Agreement (FSA). On the basis of these agreements WAPDA’s resources were distributed among the unbundled autonomous companies (PEPCO, 2010).

5.3.4- Towards regulated state monopolies: Creation of regulatory agencies

Creation of autonomous regulatory bodies was among the critical reforms in the energy sector. It had to serve multiple purposes including transparent and judicious economic regulation, fair competition and protection of various stakeholders (Malik, 2007). In the power sector, National Electric Power Regulatory Authority (NEPRA) was created to regulate power generation, transmission and distribution. Whereas, Oil and Gas Regulatory Authority (OGRA) was created to regulate oil, gas and fuel development and distribution network. Regulatory bodies ensured quality, price and entry in the market. In this regard, regulatory instruments like Grid Code, Distribution Codes, Performance Standard for Distribution Companies and Transmission Companies were drafted and got approved from regulatory bodies.
5.3.5- Towards governance reforms: One window facilities and coordinating bodies

Restructuring reforms and involvement of private sector, resulted in fragmentation in the energy sector. To handle this fragmentation, energy sector has gone through gradual increase in the number of coordination and integration bodies to facilitate the involvement and coordination of various organizations in the sector. In 1992, PPIB was created to provide one window facility to private sector for investment in power generation projects. PPIB is facilitating investors in establishing private power projects and related infrastructure. In December 1998, Pakistan Electric Power Company (PEPCO) was established to oversee the process of unbundling of WAPDA and smooth transition from vertically integrated system to horizontal system of autonomous public enterprises. PEPCO developed Man Power Transition Plan in 1998 for distribution of manpower among unbundled companies. PEPCO’s progress for implementation of restructuring of WAPDA remained unsatisfactory. Therefore, in 2000, Cabinet Committee on Restructuring (CCOR) was formulated. CCOR expedited the process of restructuring reforms. It appointed Board of Directors in all newly established state enterprises unbundled from WAPDA for the better governance of the companies. In 2005, Central Power Purchasing Agency (CPPA) was created to integrate all financial transactions among power companies. For integration of technical transactions, National Power Control Centre (NPCC) is responsible.

5.3.6- Towards capacity building: Alternate energy development and conservation

Main resources of power generation in Pakistan are hydro power and thermal power. Since, the demand is continuously increasing whereas supply has not been sufficiently enhanced
to meet rising demand. Therefore, government took steps towards alternate energy resources for power degeneration including bio-mass, solar and wind energy. In 2002, Alternate Energy Development Board (AEDB) was set up. AEDB was assigned the target to contribute 5 percent of the total national power generation capacity. Moreover, it had to accomplish village electrification programs through renewable energy.

Another initiative was establishment of National Energy Conservation Centre (ENERCON) in 1996. This department was responsible for energy conservation and management. ENERCON is serving as national focal point for energy conservation and energy efficiency activities in various sectors including agriculture, industry, development and transportation. Likewise, Pakistan Council of Renewable Energy Technologies (PCRET) was established in 2001 with the aim to coordinate research and development activities for the promotion and enhancement of renewable energy resources.

5.3.7- Towards energy exchange market: CPPA-G in action

Another key feature, of energy sector reforms, is creation of energy market in the sector. For this purpose, there is movement from the single buyer model towards buyer plus and ultimately an energy exchange market. Earlier, NTDC (a sole public authority) was performing as the major mediator between power producers and power suppliers. As first step of the transition, an agent for the power sector entities and a clearing house was established by operationalization of Central Power Purchase Agency (CPPA-G). Thus under the executive direction from the ECC (April 30, 2015), NEPRA mandated CPPA-G to propose the characteristics of a competitive trading bilateral contracts market (the CTBCM). As part of this assignment, the CPPA-G is working on development of self-sustainable power market with least intervention and subsidy support from the government of Pakistan. To increase transparency in
the system, more dissemination of information is carried out through public disclosure of major
daily financial transactions in the power sector.

5.3.8- Towards international collaborative arrangements: CPEC

Under the China-Pakistan Economic Corridor (CPEC), Pakistan has initiated various
energy projects under collaborative arrangements with China. CPEC envisions projects in energy
and infrastructure, with a total financial outlay of around US$ 46 billion (Economic Survey,
2016-17). Energy sector projects are estimated to be US $ 34.74 billion while Infrastructure
projects are estimated to be US $ 13.217 billion. Energy sector projects includes power
generation and transmission projects. Infrastructure projects includes projects for construction of
roads, highways, railways, ports and telecommunications infrastructure. Till March 2017, twelve
projects have been signed in energy sectors with eight projects in PPB and four projects in
AEDB. Table 5.1 presents major reform trajectories in energy sector in Pakistan.

Table 5.1 Major trajectories in the energy sector reforms in Pakistan

<table>
<thead>
<tr>
<th>Reform trajectories</th>
<th>Year</th>
<th>Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>Towards State-led development through public sector monopolies</td>
<td>1952</td>
<td>Nationalization of Karachi electricity Supply Company (KESC)</td>
</tr>
<tr>
<td></td>
<td>1955</td>
<td>Sui Sothern Gas Company (SSGC)</td>
</tr>
<tr>
<td></td>
<td>1956</td>
<td>Creation of Pakistan Atomic Energy Commission (PAEC)</td>
</tr>
<tr>
<td></td>
<td>1958</td>
<td>Creation of Water and Power Development Authority (WAPDA)</td>
</tr>
<tr>
<td></td>
<td>1961</td>
<td>Creation of Oil and Gas Development Company Limited (OGDCL)</td>
</tr>
<tr>
<td></td>
<td>1964</td>
<td>Incorporation of Sui Northern Gas Pipelines Limited (SNGPL)</td>
</tr>
<tr>
<td>Towards liberalization and privatization</td>
<td>1992</td>
<td>Strategic Plan of Restructuring of WAPDA</td>
</tr>
<tr>
<td></td>
<td>1994</td>
<td>Contractual agreements with 17 private Individual Power Producers (IPPs) under Power Policy 1994</td>
</tr>
<tr>
<td></td>
<td>1996</td>
<td>Partial privatization of Kot Addu Power Plan</td>
</tr>
<tr>
<td></td>
<td>2002</td>
<td>Contractual agreements with 13 IPPs under Power policy 2002</td>
</tr>
<tr>
<td></td>
<td>2005</td>
<td>Privatization of KESC</td>
</tr>
<tr>
<td>Towards restructuring reforms</td>
<td>1998</td>
<td>Unbundling of WAPDA into hydro and thermal power units.</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>------</td>
<td>-----------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>1998</td>
<td>Creation of National Transmission and Despatch Company (NTDC)</td>
</tr>
<tr>
<td></td>
<td>1998</td>
<td>Creation of 10 power distribution companies (DISCOs)</td>
</tr>
<tr>
<td></td>
<td>1998</td>
<td>Creation of 4 power generation companies (GENCOs)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Towards regulation and integration reforms</th>
<th>1997</th>
<th>Creation of National Power regulatory Authority (NEPRA)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1998</td>
<td>Creation of Pakistan Electric Power Company (Private) Limited (PEPCO)</td>
</tr>
<tr>
<td></td>
<td>2002</td>
<td>Creation of Oil and Gas Regulatory Authority (OGRA)</td>
</tr>
<tr>
<td></td>
<td>2002</td>
<td>Cabinet Committee on Restructuring (CCOR)</td>
</tr>
<tr>
<td></td>
<td>2005</td>
<td>Central Power Purchasing Authority (CPPA)</td>
</tr>
<tr>
<td></td>
<td>2007</td>
<td>Legal agreements between WAPDA and public utilities (BTAs, ODAs, ESAs, BSAs and FSAs)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Towards capacity building</th>
<th>1996</th>
<th>National Energy Conservation Centre (ENERCON)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2001</td>
<td>Pakistan Council of Renewable Energy Technology (PCRET)</td>
</tr>
<tr>
<td></td>
<td>2002</td>
<td>Alternative Energy Development Board (AEDB)</td>
</tr>
</tbody>
</table>

| Towards international collaboration | 2015 | Contractual agreements under China-Pakistan Economic Corridor (CPEC) |

Source: Compiled by the researcher of this thesis

5.4. Energy crises in Pakistan

At the time of independence, the energy base of Pakistani was very small with the installed capacity of 50 MW (Asif, 2011) which was gradually developed through exploration of various sources of energy. Pakistan’s energy sector history has been characterized by consistent supply deficits, massive load shedding, resource constraints and heavy dependence on weather conditions for hydel power (HDIP, 2017). Serious energy crises of Pakistan were started in 1990s and it is almost three decades that no sustainable solution could be devised to handle the crises (Javaid, Hussain, Arshad, Arshad, & Idrees, 2011). The situation is becoming more critical with increased load shedding hours and increased per unit cost of electricity (Khalid & Ifthhar-ul-Husnain, 2016). Dawn (2016) reported that more than 140 million Pakistanis either have no access to electricity or suffer long hours of load shedding. The nation is facing more than 6000
MW power supply shortage (Khan, 2016). The extended and frequent load shedding has negative impact on industry as well as the living of citizens.

This section will provide detail of various issues and challenges in energy sector.

5.4.1- Circular debt

Energy sector of Pakistan is critically facing the issue of circular debt, which is created by inter-corporate debt. Such debt is created when the power generation companies fail to clear their dues to fuel supplier. The fuel suppliers in turn default on their payment commitments towards refineries and international fuel suppliers. The failure in clearing dues towards fuel suppliers is due to inefficiency of electricity distribution companies (DISCOs) in the collection of revenues, transmission and distribution losses and below cost power tariffs.

The issue of circular debt was initiated in the year 2006 and till 2010 the situation became quite critical for the economy of Pakistan. As a consequence, most of the thermal power plants were forced to operate at a very low ‘capacity factor’ thus massive increase in power load-shedding. The country lost between 2000 MW to 2500 MW of potential thermal power generated by private power companies as they remained off grid due to non-availability of fuel supply coupled with lack of funds due to swelling dues (ADB, 2010). Pakistan’s oil refineries were operating at only 45 percent of their capacity at the end of 2010.

The amount of circular debt has kept on fluctuating from Rs.100 billion to more than Rs. 400 billion owing to reduction in recovery and failing to receive fines from power thieves. Till April-2011 the net circular debt was Rs 258.5 billion with receivables amounted to Rs. 775.2 billion and payables stood at Rs. 516.7 billion (NEPRA, 2011). The Ministry of Water and Power and NEPRA took various steps to overcome this issue including timely tariff
determination, provision of subsidies to reduce debt, reduction in transmission and distribution losses and increase in bill recoveries by DISCOs. Although, the amount of circular debt is reduced, however, it is still a pressing issue of power sector. NEPRA (2015) reported the gap of Rs.41 billion for which government need to come up with sustainable policies instead of injecting money in the system through partial payment from commercial banks.

5.4.2- Tariff determination

Tariff determination has also remained controversial in Pakistan. Various factors are involved in this phenomenon. Over the period of time, Pakistan’s energy mix moved towards thermal power as the major source which was costly way to produce electricity as compared to hydel power. But, the increase in cost of power generation was not realized timely in tariff. This was main factors which aggravated the circular debt problem due to the inability of the DISCOs to pass on the cost of electricity to consumers. The cost of providing electricity to consumers could not fully recovered as no real increase in tariff was notified by the Government from 2003-2007. Given the fact that 68 percent of electricity generation was thermal based (where 99.8 percent relied on imported oil and gas), the impact of almost frozen tariffs was so huge that increase in tariffs in the coming years could not make up for the cost price deficit.

Even after 2007, Government notified tariffs always remained below the NEPRA determined (on the basis of cost) tariffs, inadequate to cover the average costs of the power companies Malik, (2012). As a result, the companies started to incur losses which continued to build up to unmanageable limits. Thus, tariff determination is a major issue of energy sector. The current mechanism of determining tariff is on the basis of minimum cost of generation. Since, the government determined tariff is always lower than the tariff determined by the National Electric Power Regulatory Authority (NEPRA). The difference between the actual cost
of energy and the domestic charge ends up as a direct subsidy to the DISCOs. This practice serves as disincentive to DISCOs and they continue with their inefficient practices. To avoid political reaction in the smaller provinces, the government is following the uniform tariff principle (despite the fact that some DISCOs have line losses above 30 percent). If the different tariff is charged in different DISCOs, the profitable DISCOs will be in a position to buy more power for its consumers.

5.4.3- Transmission and distribution losses

Another critical issue is safe, reliable and less costly transmission and distribution of electricity. The situation of huge power losses (from transmission and distribution networks and auxiliaries consumption) over the years has hardly improved rather it is deteriorated. Table 5.2 shows the trend of transmission and distribution losses. The steady losses are creating alarming situation for the country.

Table 5.2 Transmission and Distribution Losses

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Transmission losses</td>
<td>3.11</td>
<td>2.95</td>
<td>2.70</td>
<td>2.70</td>
<td>2.70</td>
</tr>
<tr>
<td>Distribution losses</td>
<td>18.37</td>
<td>18.17</td>
<td>17.60</td>
<td>19.80</td>
<td>19.90</td>
</tr>
</tbody>
</table>


5.4.4- High cost of production

According to the location and geographical conditions of Pakistan, hydro-power is most cheaper source to produce electricity. However, hydro power can be effected by seasonal changes in natural sources of water and require proper management of water reserves in the country. With the creation of WAPDA (in 1958) this source was best utilized through creation of Mangla and Terbella dams and it met the demands of the country in efficient way. However, this
economical source was not utilized properly and its contribution gradually decreased in the energy mix of the country.

In 1960s, hydro power was the major source to produce electricity. In 1970s, WAPDA started thermal power projects also. Thermal power was expensive then hydro, however, it was important to manage fluctuations in hydro-power base of country. Still, hydro power remained the main source of energy in the country keeping the unit price of electricity at an economical rate. In 1994, the Government of Pakistan involved private sector to produce thermal power. At that time, the ratio of hydro to thermal was 60:40 which got reversed in 1998 with 60% thermal and 40% hydro power. This decrease in the generation of hydro power continued due to decrease in water reserves. Moreover, the governments paid less attention to build dams and water reserves. More attention was paid towards attracting private sector in energy production. For this purpose, the Government also signed costly projects with IPPs which involved high import of oil at the part of government. Thus, the Government impeded the development of cheap and abundant domestic energy sources over the cost of very inefficient fuel-mix choices. Such imprudent and reckless government policies resulted in decrease in hydro power and increase in costly thermal power generation. It moved the country towards imbalanced energy mix. Currently hydroelectricity contributes 20% in the energy mix of Pakistan.

Now, the Government is promoting and incentivizing alternative and renewable sources of energy to reduce its reliance on thermal electricity and import of oil. With the creation of AEDB, various steps are taken to explore alternative sources including solar energy, wind energy, biogas and bagasse. However, currently power is being generated at high unit cost due to reliance on import of oil. At present, NEPRA determines the base electricity tariff on a
quarterly basis for DISCOs which the federal government notifies after taking into account the subsidy.

Thus, the basic problem, in Pakistan, is the imbalances in terms of power pricing and some implicit subsidies to those who might be able to afford those subsidies. Determination of appropriate tariff appears to be a simple matter of demand and supply, which could be easily resolved. However, given the nature of this particular product, determination of tariff has become a complex issue. Appropriate policy decisions by the government in these areas would help improve the tariff imbalances and resolve the implicit subsidy issue, for benefit of most of the stakeholders including the consumers.

5.5. Energy departments and companies

Pakistan started with quite a few energy departments and entities after independence. For a long time (almost three decades) the sector was largely hierarchical and vertically integrated with few state monopolies. The growth in energy demands, new styles of governance and changing consumption and generation trends resulted in development of new entities in energy sector. Particularly after 1990s, there is rapid growth in energy entities in both size and number. Energy sector entities can be classified into two broad networks: Power network and Oil and gas network. The power network comprises of the supply chain of power generation, transmission and distribution. Oil and gas network includes departments and companies that deal with explosion, production, transportation and distribution of various types of fuels and gases. Both networks are governed by separate ministries and regulated by separate regulatory bodies.
5.5.1- Oil and gas network

This network is managed by the Ministry of Petroleum and Natural Resources. The ministry is responsible for development, availability and sustainable supply of oil and gas for the economic development of the country. It is also responsible for the development of natural resources of energy and minerals. Oil and Gas regulatory Authority (OGRA) regulates the network. OGRA was established in 2000 to regulate transmission, distribution and sale of oil and gas. This network is still working with large vertically integrated state enterprises. The key public entities and their roles are summarized in Table 5.3.

Table 5.3 Key Players in Oil and Gas Network

<table>
<thead>
<tr>
<th>Organization</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oil and Gas Development Company Limited (OGDCL)</td>
<td>Oil and gas development</td>
</tr>
<tr>
<td>Ministry of Petroleum and Natural Resources (MPNR)</td>
<td>Policy making and implementation</td>
</tr>
<tr>
<td>Oil and Gas regulatory Authority (OGRA)</td>
<td>Regulation</td>
</tr>
<tr>
<td>Pakistan Petroleum Limited (PPL)</td>
<td>Petroleum exploration and production</td>
</tr>
<tr>
<td>Pakistan State Oil (PSO)</td>
<td>Oil distribution</td>
</tr>
<tr>
<td>Sui Northern Gas Pipelines Limited (SNGPL)</td>
<td>Gas distribution</td>
</tr>
<tr>
<td>Sui Southern Gas Company (SSGC)</td>
<td>Gas distribution</td>
</tr>
<tr>
<td>Pakistan Oilfields Limited</td>
<td>Exploration and production of oil and gas</td>
</tr>
<tr>
<td>Oil Companies Advisory Committee</td>
<td>Coordination</td>
</tr>
<tr>
<td>Pak-Arab Refinery Limited (PARCO)</td>
<td>Storage and transportation of oil</td>
</tr>
</tbody>
</table>

Source: Compiled by the author from the website of MNR, [www.mpnr.gov.pk](http://www.mpnr.gov.pk)
5.5.2- Power network

The Ministry of water and Power manages the power network. Key players in power network and their roles are summarized in Table 5.4.

Table 5.4 Key Players in Power Network

<table>
<thead>
<tr>
<th>Organization</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ministry of Water and Power (MOW&amp;P)</td>
<td>Policy making and implementation</td>
</tr>
<tr>
<td>National Electricity Regulatory Authority (NEPRA)</td>
<td>Regulation</td>
</tr>
<tr>
<td>Water and Power Development Authority (WAPDA)</td>
<td>Water and hydropower development</td>
</tr>
<tr>
<td>Pakistan Electric Power Company (PEPCO)</td>
<td>Coordination</td>
</tr>
<tr>
<td>Power Generation Companies (GENCOs)</td>
<td>Thermal power generation</td>
</tr>
<tr>
<td>Individual Power Producers (IPPs)</td>
<td>Thermal power generation</td>
</tr>
<tr>
<td>Power Distribution Companies (DISCOs)</td>
<td>Power distribution to consumers</td>
</tr>
<tr>
<td>Karachi Electricity Company (K-Electric)</td>
<td>Power distribution to consumers</td>
</tr>
<tr>
<td>National Transmission and Despatch Company (NTDC)</td>
<td>Power transmission</td>
</tr>
<tr>
<td>Central Power Purchasing Agency Guarantee Limited (CPPA-G)</td>
<td>Integration of financial transactions</td>
</tr>
</tbody>
</table>

Source: Compiled by the author from the website of MOWP (www.mowp.gov.pk)

Power network has gone through major reform interventions in 1980s and 1990s. Initially there were two vertically integrated state monopolies: WAPDA and KESC. In 1998, WAPDA was restructured into fourteen independent public companies. Later, further authorities and bodies were created for different purposes. Various reform trajectories in power network are discussed in detail in data analysis chapter. The roles of key players in power network are discussed in detail in structure of power network in Chapter 6.
5.6- Conclusion

Energy sector of Pakistan is the backbone of the economy of the country. Unfortunately, the sector is facing verse energy crises for more than two decades including circular debt, complicated process of tariff determination, high cost of production, transmission and distribution losses and massive load shedding. Various reform interventions are witnessed in this sector to improve the energy base and reduce the massive load shedding including involvement of private sector power producers for power generation; restructuring of public monopolies into autonomous public companies; creations independent regulatory agencies; creation of integrating and coordinating agencies; capacity building authorities and international collaborations. However, despite the progressive public sector reforms, the energy crises could not resolved in Pakistan. The extensive government involvement in the finance and management of the sector and high political interference in the management of the public companies further exacerbated the situation. Whereas, inter-organizational relations are drastically changed with various reform interventions (most importantly unbundling of WAPDA) which is rarely captured and reported by the researchers in Pakistan. Hence, it is a critical sector, in Pakistan, that needs researchers’ attention to produce evidence-based policy implications and recommendations for policy makers and implementation agencies.
Chapter 6  Governance Networks: Emergence and Structure

6.1- Introduction

This chapter addresses the first research question: *What is the structure of governance networks in the energy sector in Pakistan?* Firstly, the emergence of governance networks is captured from analysis of reform trajectories in the energy sector of Pakistan (discussed in detail in Chapter 5). Then, the structure, of governance networks in energy sector, is described through identification of actors and relational ties in network. Power network is taken as embedded unit of analysis in the energy sector in Pakistan. Interviews are conducted with nine key actors in the supply chain of power network to get holistic picture of the role of each actor and the inter-organizational relational ties.

As described, in section 4.7-, each transcription (of the interviewees) has been assigned a code for the purposes of confidentiality and cross reference. For example ‘R-01-LESCO’ indicates that the interview belongs to ‘LESCO’ (the organization) and the respondent is assigned the identity of ‘01’ to distinguish it from other respondents from LESCO. Likewise, the documents collected from organizations (in form of minutes of meetings, memos, reports etc.) are also assigned a code for the purpose of cross reference. For example, ‘DOC-02-MOWP’ indicates that this document was collected from MOWP (the organization) and ‘02’ is the number assigned to this document to be referred during analysis. The code of each document starts with ‘DOC’ whereas the code of each transcription starts from ‘R’ to differentiate the excerpts from documents and interviews.
6.2- Emergence of governance networks in the energy sector in Pakistan

The reform trajectories in the energy sector in Pakistan are discussed in Chapter 5. An analysis of energy sector reforms in Pakistan highlights three major reform trends: Traditional Public Administration (TPA) reforms; New Public Management (NPM) Reforms and New Public Governance (NPG) reforms as depicted in Table 6.1.
Table 6.1 Energy sector reforms and emergence of governance networks

<table>
<thead>
<tr>
<th>Year</th>
<th>Events</th>
<th>Reform Trajectories</th>
</tr>
</thead>
<tbody>
<tr>
<td>1952</td>
<td>Nationalization of Karachi electricity Supply Company (KESC)</td>
<td>State-led development through public sector monopolies</td>
</tr>
<tr>
<td>1958</td>
<td>Creation of Water and Power Development Authority (WAPDA)</td>
<td></td>
</tr>
<tr>
<td>1992</td>
<td>Strategic Plan of Restructuring of WAPDA</td>
<td>Liberalization and privatization</td>
</tr>
<tr>
<td>1994</td>
<td>Contractual agreements with 17 private Individual Power Producers (IPPs) under Power Policy 1994</td>
<td></td>
</tr>
<tr>
<td>1996</td>
<td>Partial privatization of Kot Addu Power Plan</td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>Contractual agreements with 13 IPPs under Power policy 2002</td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>Privatization of KESC</td>
<td></td>
</tr>
<tr>
<td>1998</td>
<td>Unbundling of WAPDA into hydro and thermal power units.</td>
<td>Restructuring and unbundling</td>
</tr>
<tr>
<td>1998</td>
<td>Creation of National Transmission and Despatch Company (NTDC)</td>
<td></td>
</tr>
<tr>
<td>1998</td>
<td>Creation of 10 power distribution companies (DISCOs)</td>
<td></td>
</tr>
<tr>
<td>1998</td>
<td>Creation of 4 power generation companies (GENCOs)</td>
<td></td>
</tr>
<tr>
<td>1997</td>
<td>Creation of National Power regulatory Authority (NEPRA)</td>
<td></td>
</tr>
<tr>
<td>1998</td>
<td>Creation of Pakistan Electric Power Company (Private) Limited (PEPCO)</td>
<td>Coordinating and integrating bodies</td>
</tr>
<tr>
<td>2002</td>
<td>Cabinet Committee on Restructuring (CCOR)</td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>Central Power Purchasing Authority (CPPA)</td>
<td></td>
</tr>
<tr>
<td>1996</td>
<td>National Energy Conservation Centre (ENERCON)</td>
<td>Collaborations and Capacity building</td>
</tr>
<tr>
<td>2001</td>
<td>Pakistan Council of Renewable Energy Technology (PCRET)</td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>Alternative Energy Development Board (AEDB)</td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>Contractual agreements under China-Pakistan Economic Corridor (CPEC)</td>
<td></td>
</tr>
</tbody>
</table>
6.2.1- Traditional public administration reforms: Vertically integrated system

State- led development through public monopolies (popularized as traditional public administration), remained the dominant model in the energy sector until 1980s. Under this model, power sector was managed through two highly centralized and integrated state monopolies (WAPDA and KESC) who were controlling and performing various tasks in the supply chain. WAPDA was responsible for generation, transmission, distribution of thermal, and hydel power all over Pakistan except Karachi. KESC was responsible for the area of Karachi for all the three tasks including generation, transmission and distribution. Figure 6.2 depicts this centralized arrangement before restructuring of WAPDA.

Figure 6.1: Power network before restructuring of WAPDA

6.2.2- New public management reforms: Fragmented supply chain

The second major phase, of energy sector reforms in Pakistan, started in 1990s with multiple directions such as liberalization, restructuring of WAPDA, creation of independent
authority and use of business practices. This phase of reforms is marked by the popular NPM trend. In 1992, government approved the Strategic Plan of restructuring of WAPDA, whereby it was restructured/unbundled into fifteen independent public limited companies including National Transmission & Dispatch Company (NTDC), four Thermal Power Generation Companies (GENCOs), eight Distribution Companies (DISCOs). Figure 6.2 depicts unbundling of integrated system of WAPDA in 1992 into several independent entities.

**Figure 6.2 Restructuring of WAPDA**

Government also involved individual power producers (IPPs) from private sector to increase the generation capacity. Through contractual agreements, government involved more than 30 private sector power producers. An autonomous regulatory body (NEPRA) was also incorporated. Moreover, under the policy of privatization, KESC was privatized. These NPM based reforms, have resulted in excessive fragmentation in the energy sector with the creation of multiple independent companies as well as involvement of private sector.
6.2.3- New public governance reforms: Integration and collaboration

The third phase of reforms was dominated by integration, collaboration and capacity building reforms. NPM based reforms created much fragmentation in the sector. A reaction to this fragmentation was witnessed in form of coordination and integrating bodies, most of which are created after 2001. PEPCO was created for coordination among DISCOs. CPPA-G was created for managing and integrating all financial transactions in the power network. NEPRA was created for regulation of the sector. These coordinating bodies further enhanced the number of organizations in the power sector. Therefore, it is inferred that NPM base fragmentation and NPG based integration reforms have shifted the vertically integrated system of two large bureaucracies (WAPDA and KESC) to a web of horizontally spread autonomous organizations resulting in the emergence of governance networks in the energy sector in Pakistan. Following section provides a detail account of actors and their relational ties in power network. It will set the ground to analyze the structure of power network.

6.3- Networks analysis: Actors and relational ties

As established in operationalization Section 3.8 (Table 3.2), structure of governance network has been analyzed across two dimensions: Actors (Nodes) and relational ties. The position of actors is determined through various characteristics including actor’s goals, roles, social sector, geographical scale and central/ peripheral place in network. Relational ties are determined through the interaction of actors in networks. Each actor’s profile and its relational ties in the network are discussed in the following sub-sections.
6.3.1- Ministry of Water and Power

Power network is managed and governed by Ministry of Water and Power (MOWP), which is the executive arm of the government dealing with two crucial resources: hydropower and thermal power. The Ministry is also responsible for exploiting and developing renewable energy sources. It devises power policy and develops strategies and annual development plans for its implementation. Currently, it is working on government’s power reform plan that is based on the National Power Policy (GOP, 2013). MOWP (2017) has declared its vision and aims:

“The vision of the Ministry is to develop the most efficient and consumer centric power generation, transmission, and distribution system that meets the needs of its population and boosts its economy in a sustainable and affordable manner. It also aims to ensure adequate, equitable and economical availability of water for irrigation, domestic, industrial and environmental needs of the country”. (DOC-02-MOWP)

To achieve the above-mentioned goals, the Ministry initiated “Pakistan Sustainable Energy Sector Reform Program” in 2014 with the financial assistance of international donor agencies (MPNR, 2017). The donor agencies included Asian Development Bank (ADB), World Bank (WB) and Japan International Cooperation Agency (JICA). It exercises its function through various line agencies as well as relevant autonomous bodies and coordinates with other ministries for policy implementation.

The ministry is playing diverse roles in the power network including policy formulation, policy implementation, monitoring of the sector, coordination, facilitation (in form of subsidy), reporting, making public disclosures and liaison with international donor agencies and provincial governments for power generation and capacity enhancement issues. Due to its

diverse and multiple roles, it is placed in the center of power network. It is also serving as “common body” among unbundled distribution companies in power network. A respondent said, “Financially and administratively, ministry is controlling power sector” (R-28-NEPRA). It also enjoys authority position over majority of actors in network. MOWP is excessively involved policy implementation and the operational matters of the companies as evident in following excerpt:

“Now ministry is fully involved in policy implementation. Rather I must say that the focus of ministry is more on policy implementation and day to day operations rather than policy formulation and evaluation.” (R-22-PEPCO)

However, with more and more inter-sectoral involvement and autonomous public agencies, its authority is being challenged as evident in following excerpt.

“Tariff is determined by NEPRA by involvement of all stakeholders. I must add that government (ministry) can only act as a major stakeholder not the decision maker in the whole process. The final decision is in hand of authority (NEPRA).” (R-29-NEPRA)

Table 6.2 provides an analysis of MOWP with respect to its role and relational ties in network.

### Table 6.2: Profile Summary and Relational ties of MOWP in Power Network

<table>
<thead>
<tr>
<th>Vision</th>
<th>To develop the most efficient and consumer centric power generation, transmission, and distribution system that meets the needs of its population and boosts its economy in a sustainable and affordable manner</th>
</tr>
</thead>
</table>
| Goals                                                                  | - promote world class efficiency in power generation  
- Create a cutting edge transmission network  
- Minimize inefficiencies in the distribution system  
- Minimize financial losses across the system |
| Roles                                                                  | Policy formulation, policy implementation, monitoring of the sector, coordination, facilitation, reporting, making public disclosures and liaison |
| Sector                                                                 | Public |
| Position in network                                                    | Central actor |

**Network ties of MOWP with other actors in network**

<table>
<thead>
<tr>
<th>Actors</th>
<th>Excerpts (from interviews/ documents)</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agency</td>
<td>Quote</td>
<td></td>
</tr>
<tr>
<td>--------</td>
<td>-------</td>
<td></td>
</tr>
</tbody>
</table>
| PEPCO | "There are many functions that are managed by the Ministry on central level through PEPCO including load management, quota for load shedding, monitoring of companies, maintain records etc."
| NEPRA | "Ministry is involved in tariff determination. It can give us guidelines also. They can even ask for increase or decrease of certain category of tariff but it cannot influence the decision about tariff. Government is a stakeholder not the decision maker. However, it has certain channels to manipulate the tariff rate to some extent."
| DISCOs | "Ministry is involved in almost every decision. Board has authority but government appoints directors. So they don’t go against government."
| GENCOs | “GOP appointed Secretary Ministry as chairman PEPCO…it lured the Ministry in the day to day operational management of companies at the cost of its own role, despite its organizational incapacity to monitor the operations of Companies”.
| NTDC | “Government nominates the Directors and hence government can directly influence major decisions of the company. Ministry gives us instructions; it takes regular performance record form us. It can call our senior management any time.”
| CPPA(G) | “All financial transactions are done through the central system of CPPA-G. Ministry is definitely involved in these transactions or any delays. Ultimately, ministry takes steps to clear payments and handle issue of circular debt.”
| PPIB, AEDB | “Other bodies come under ministry such as PPIB and AEDB. PPIB is boasting private sector investment for power generation whereas AEDB is working on power generation from alternate and indigenous sources of energy. They update us regarding upcoming new projects.”
| WAPDA | “Ministry cannot influence Chairman WAPDA because his appointment or removal is not in hands of ministry. Ministry can request WAPDA to provide information, but it is not involved in decision-making. Nevertheless, there is frequent interaction of our senior management with ministry.”
| KESC | “Ministry can request KESC to provide certain information. But KESC is privatized and it is autonomous in its operations. Ministry can be involved as common body whenever there is a matter of electricity transmission or financial transactions in KESC and CPPA-G.”
| IPPs | “GOP has contractual agreements with IPPs to generate thermal power. Ministry is responsible for implementation of policies regarding thermal power generation.”

Source: Compiled by the researcher from interviews and the website of MOWP (Retrieved from http://mowp.gov.pk/)
6.3.2- National Electric Power Regulatory Authority (NEPRA)

NEPRA is another key actor in the power network who regulates the power network. It was created under NEPRA Act, 1997 to promote fair competition in the electricity industry and to protect the rights of consumers, producers and sellers of electricity. The mission of NEPRA as stated on its website is:

“We shall strive to develop and pursue a Regulatory Framework, which ensures the provision of safe, reliable, efficient and affordable electric power to the electricity consumers of Pakistan” (NEPRA, 2018)

A respondent from NEPRA elaborated the goals as follows:

“NEPRA aims to develop and pursue a Regulatory Framework to encourage market driven and competitive environment in power sector because an independent and objective regulatory entity abridges the perception of risk to investors in market and increases long-term stability in the market.” (R-27-NEPRA)

NEPRA’s major responsibilities include issuance of licenses, enforcement of standards of operations, and determination of tariff. It is a central actor in the network due to its diverse roles and interaction with various actors in the network. While discussing the critical role of NEPRA in the power network, a respondent said:

“We are doing two different roles. Licensing and tariff determination. Both are entirely different tasks. One is primarily economical, commercial and financial work and the other is adjudication.” (R-28-NEPRA)

From these excerpts, three major roles of NEPRA are evident in the network: Tariff determination, licensing and performance monitoring. Therefore, it can be inferred that NEPRA is a central actor in network. Moreover, NEPRA is autonomous body performing these roles without interference of the Ministry or any other political influence. A respondent commented on NEPRA’s autonomous role in network as follows:

---

“NEPRA is an autonomous body which does not come under ministry and is created under its Act. NEPRA is empowered by that NEPRA Act, which is passed by the parliament. It has to pursue the objectives specified in the Act. The Chair and members of NEPRA appointed by the Cabinet Division. So, NEPRA does not come under ministry or any other organization.” (R-26-NEPRA)

The following excerpts further elaborates the influencing and crucial position of NEPRA in power network:

“NEPRA is acting as unbiased authority which looks into the interest of customers. It’s a state authority. NEPRA does not to report to ministry rather it can object on the act of ministry as well. Ministry can also tell NEPRA to revise certain documents.” (R-10-LESCO)

Following tables summarize key information of NEPRA and its relational ties in power network.

**Table 6.3: Profile Summary and Relational Ties of NEPRA in Power Network**

<table>
<thead>
<tr>
<th>Vision/ Mission</th>
<th>We shall strive to develop and pursue a Regulatory Framework, which ensures the provision of safe, reliable, efficient and affordable electric power to the electricity consumers of Pakistan</th>
</tr>
</thead>
</table>
| Goal            | - To develop and pursue a Regulatory Framework to encourage market driven and competitive environment in power sector  
                   - To break the monopoly and introduce competition in power sector |
| Roles           | Licensing, tariff determination, performance monitoring and evaluation |
| Geographical scale | Federal authority |
| Sector          | Public |
| Position in network | Central |

**Network ties of NEPRA with other actors in network**

<table>
<thead>
<tr>
<th>Actors</th>
<th>Excerpts (from interviews/ documents)</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOWP</td>
<td>“Ministry is involved in tariff determination. It can give us guidelines also. They can even ask for increase or decrease of certain category of tariff but it cannot influence the decision about tariff. Government is a stakeholder not the decision maker. However, it has certain channels to manipulate the tariff rate to some extent.”</td>
<td>R-29-NEPRA</td>
</tr>
<tr>
<td>GENCOs</td>
<td>“We determine tariff for GENCOs. We fine GENCOs as well if they do not perform according to the standard. For the mechanism of all the three parts…generation, transmission and distribution…. We are ultimately responsible for overseeing the operations.”</td>
<td>R-26-NEPRA</td>
</tr>
<tr>
<td>DISCOs</td>
<td>“We have dependency on NEPRA because NEPRA is the regulatory body. NEPRA determines the tariff. Even if LESCO has to buy cars…say 100 cars… it has to get approved from NEPRA. NEPRA has its detailed policy requirements against which it can approve. We have to wait till we get ok sign from NEPRA.”</td>
<td>R-01-LESCO</td>
</tr>
</tbody>
</table>
NTDC  “NEPRA issued NTDC’s license for transmission of electricity to all distribution companies. Now NEPRA has approved amendment in NTDC’s license to restrict its operations for direct financial transactions with DISCOs.”  R-18-NTDC

CPPAG  “Ministry is drafting Commercial Code by CPPA-G for submittal to NEPRA and approval by NEPRA.”  DOC-02-MOWP

PPIB  “For, licensing of new projects definitely they have to coordinate with us.”  R-26-NEPRA

AEDB  “NEPRA has also issued upfront tariff for Mitiari-Lahore transmission line, solar, wind and other alternative energy projects. In addition to that NEPRA has also issued the various rules, regulations, codes and procedures, such as NEPRA (Alternate & Renewable Energy)”  DOC-02-MOWP

WAPDA  “WAPDA’s tariff is determined by NEPRA...We take resources from WAPDA. When NEPRA was created, employees from WAPDA were appointed in NEPRA.”  R-26-NEPRA

KESC  “There is continuous interaction for tariff determination, performance monitoring, and implementation of power regulations.”  R-28-NEPRA

IPPs  “Same as GENCOs in public sector, IPPs are power generation projects in private sector. NEPRA issues licenses, monitors performance, determines tariff etc.”  R-26-NEPRA

Source: Compiled by the researcher from the website of NEPRA Retrieved from http://www.nepra.org.pk; and interviews

6.3.3- Pakistan Electric Power Company (PEPCO)

Pakistan Electric Power Company (PEPCO) was established in 1998 as a lean body of professionals proficient in technical, commercial and corporate management skills to implement restructuring of the power sector. It was given the mandate to manage the process of restructuring of WAPDA Power Wing. It was created under an Executive Order as a public company. Initially, it was given the mandate to complete restructuring, corporatization and facilitate ultimate privatization of corporatized entities as given in the policy documents:

“Pakistan Electric Power Company (PEPCO) was setup in 1998 for the implementation of the Reforms Program….The Program envisioned developing the outlines of a competitive, modern and dynamic Power Sector through process of corporatization, commercialization and ultimately privatization of the corporatized entities. PEPCO was also entrusted the creation of commercial and financial skills and structures within the companies which were lacking in WAPDA’s Power Wing.” (DOC-01-PEPCO)

PEPCO had to be liquidated within two years with the completion of its mandate. However, it was not dissolved because it could not achieve its mandate. The transformation process, of
fourteen companies, as commercially viable and autonomous entities, didn’t move smoothly. PEPCO went through various transitions, which greatly affected the reform process. Initially, it was over-shadowed by WAPDA resulting in deadlock of reform’s implementation. It actually started its original mandate in 2007 with the separate leadership. In 2010, the Cabinet Committee of Restructuring decided to windup PEPCO. With erosion of the central control of PEPCO over the Companies, their operational performance deteriorated resulting in low recoveries and, increased line losses. Therefore, government took stay order on dissolution of PEPCO and currently it is serving as an arm of ministry for the management and governance of power sector. Moreover, there are many inter-company coordination matters, which are handled by PEPCO. Table 6.4 shows the transition of PEPCO’s role in power network.

**Table 6.4: Structural Changes in PEPCO**

<table>
<thead>
<tr>
<th>Year</th>
<th>Structural changes in PEPCO</th>
<th>Role in Power Network</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td>Executive Order for creation of PEPO as lean body of professionals</td>
<td>Implementation of Restructuring and Corporatization reforms</td>
</tr>
<tr>
<td>1999</td>
<td>Chairman WAPDA took additional charge as MD PEPCO; PEPCO placed under WAPDA as its Power Wing</td>
<td>Stalemate of restructuring reforms (reforms overshadowed by WAPDA)</td>
</tr>
<tr>
<td>2007</td>
<td>Executive Order for Bifurcation of WAPDA’s Power Wing; Appointment of independent Chairman PEPCO and MD PEPCO</td>
<td>Reaffirmation of the original mandate of PEPCO (restructuring reforms)</td>
</tr>
<tr>
<td>2010</td>
<td>CCOR decided to disband PEPCO; Reform implementation taken up by CCOR; appointments of BODs of all companies by CCOR</td>
<td>Erosion of the central control of PEPCO over the Companies</td>
</tr>
<tr>
<td>2013</td>
<td>Secretary, Ministry of Water and Power took the additional charge as MD PEPCO; PEPCO as arm of Ministry</td>
<td>PEPCO as central body to assist the ministry to monitor the performance of Corporatized Entities</td>
</tr>
</tbody>
</table>

Sources: Compiled by the researcher from policy documents
PEPCO has played major role in WAPDA’s restructuring reforms and has handled various network level issues including incorporation of corporatized entities under Companies Ordinance and constituting the respective BODs; implementation of Manpower Transition Program between companies and WAPDA; development of Grid Codes, Commercial Codes, Performance Standards, Distribution Codes and transfer of assets & liabilities from WAPDA to Companies.

Table 6.5 provide profile summary of PEPCO in Power network.

**Table 6.5: PEPCO Profile Summary and Relational Ties in Power Network**

<table>
<thead>
<tr>
<th>Vision/Mission</th>
<th>A lean body of professional for the transition of integrated system of WAPDA towards competitive, modern and dynamic Power Sector.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal</td>
<td>To implement corporatization, commercialization and privatization reforms (through providing corporate guidance to the companies and capacity building of existing employees of the companies for the new corporate culture)</td>
</tr>
<tr>
<td>Roles</td>
<td>Liaison, facilitator and arm of MOWP for coordination with DISCOs.</td>
</tr>
<tr>
<td>Geographical scale</td>
<td>Federal Public Company</td>
</tr>
<tr>
<td>Sector</td>
<td>Public</td>
</tr>
<tr>
<td>Position in network</td>
<td>Central</td>
</tr>
</tbody>
</table>

**Relational ties of PEPCO with other actors in Power Network**

<table>
<thead>
<tr>
<th>Actors</th>
<th>Excerpts (from interviews/ documents)</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOWP</td>
<td>“Serving as intervening body between the Government and the Power Sector Companies and interface for all stakeholders including loan giving agencies”</td>
<td>DOC-05-PEPCO</td>
</tr>
<tr>
<td>GENCOs</td>
<td>“PEPCO is like a middle man...between all companies and ministry” (R-10-LESCO)</td>
<td>R-22-PEPCO</td>
</tr>
<tr>
<td>DISCOs</td>
<td>“Pepco is also monitoring us about our progress in mobile meter reading... PEPCO and ministry coordinate with each other a lot regarding questioning from LESCO. If there is any query from ministry it is forwarded to PEPCO, PEPCO forwards it to us and reports to ministry.” “Inter-company transfer matters are also managed by PEPCO.” “PEPCO announces ingrate vacancies against which employees from all companies can qualify.”</td>
<td>R-22-PEPCO R-29-IESCO</td>
</tr>
<tr>
<td>CPPA-G</td>
<td>“Since, Ministry has to look for tariff determination and subsidies for distribution companies. Ministry can ask PEPCO to have record of these matters as well. In this way PEPCO has to coordinate with CPPA-G also.”</td>
<td>R-22-PEPCO</td>
</tr>
<tr>
<td>WAPDA</td>
<td>“PEPCO nominates employees in grade 18 and above for training according to seniority list and it is conducted by WAPDA Staff College.”</td>
<td>R-22-PEPCO</td>
</tr>
</tbody>
</table>

Source: Compiled by the researcher from the interviews and documents
**6.3.4- Power Distribution Companies (DISCOs)**

DISCOs were created as independent state-owned companies under Companies Ordinance 1984. Initially, WAPDA was restructured into eight Area Electricity Boards (AEBs). Later, the AEBs were converted into autonomous companies for electricity distribution called DISCOs with all the shares held by the Government. Further, two more distribution companies were established. Currently following ten, DISCOs are distributing electricity in all over Pakistan (except Karachi) in their respective jurisdiction:

- Faisalabad Electric Supply Company (FESCO)
- Gujranwala Electric Power Company (GEPCO)
- Hyderabad Electric Supply Company (HESCO)
- Islamabad Electric Supply Company (IESCO)
- Lahore Electric Supply Company (LESCO)
- Multan Electric Power Company (MEPCO)
- Peshawar Electric Supply Company (PESCO)
- Quetta Electric Supply Company (QESCO)
- Sukkur Electric Power Company (SEPCO)
- Tribal Areas Electricity Supply Company (TESCO)

This research study has combined DISCOs to discuss their role in network because they have similar connections and roles in the network. DISCOs supply electricity from transmission system to distribution lines (below 220-kilo volt) and grid stations (132-kilo volt and lower capacity). With this role, DISCOs are connected with NEPRA, Ministry, PEPCO, CPPA-G and
WAPDA. They are also connected with each other for various shared mechanisms including integrated seniority, integrated training and integrated promotion. However, DISCOs contact with each other through PEPCO and Ministry as indicated in following excerpts:

“We have integrated seniority system for Grade 19 and above which is maintained by PEPCO. PEPCO decides how to adjust employees on these grades in all over Pakistan” (R-01-LESCO)

“We also share manpower with each other… inter-company transfer is quite frequent and routine activity which is coordinated by PEPCO.” (R-25-IESCO)

Each distribution company has monopoly in its own jurisdiction. However, companies have to compete in performance standards and KPIs set by NEPRA. The performances of companies are monitored by both MOWP and NEPRA. NEPRA has the statutory authority to approve tariff for each DISCO. USAID’s report on distribution companies describes relationship of DISCOs and NEPRA:

“DISCOs retail tariff petitions are presented to NEPRA for review, evaluation and final approval. NEPRA is a federal regulatory authority tasked with licensing electric power generation, transmission and distribution companies, as well as regulating quality of service and approval of generation, distribution and transmission tariff” (USAID, 2011).

Being regulatory authority, DISCOs have dependency on NEPRA for three main reasons. First, NEPRA issues license to each DISCO to operate in the respective territory. Second, NEPRA determines tariff of each DISCO. Third, NEPRA monitors quality of distribution services.

NEPRA has developed performance indicators to monitor companies’ performance. However, NEPRA is not the only authority to monitor DISCO’s performance. Other actors in network can equally build pressure on DISCOs on various issues as indicated in following excerpt:

“On the one hand power is decentralized and on the other hand, lot of authorities are there to which we are answerable including Ministry, NEPRA, PEPCO and BOD.” (R-10-LESCO)

Table 6.6 contains excerpts as evidence of DISCO’s connections with other network actors.
Table 6.6: Relational Ties of DISCOs in Power Network

<table>
<thead>
<tr>
<th>Actors</th>
<th>Excerpts (from interviews/ documents)</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOWP</td>
<td>“Ministry is involved in almost every decision. Board has authority but government appoints directors. So they don’t go against government.”</td>
<td>R-11-LESCO</td>
</tr>
<tr>
<td>PEPCO</td>
<td>“Our top management has frequent formal meetings with PEPCO... on monthly basis. Moreover, there are informal interaction on almost daily basis.”</td>
<td>R-01-LESCO</td>
</tr>
<tr>
<td>NEPRA</td>
<td>“We have dependency on NEPRA because NEPRA is the regulatory body. NEPRA determines our tariff. Even if LESCO has to buy cars...say 100 cars... it has to get approval from NEPRA. NEPRA has its detailed policy requirements against which it can approve... We have to wait until we get ok sign from NEPRA.”</td>
<td>R-01-LESCO</td>
</tr>
<tr>
<td>NTDC</td>
<td>“NTDC is the one with which LESCO has much dependency because NTDC is dealing with all the transmission of electricity. There are power generation organizations. NTDC takes electricity from them and then transmit to electricity supplying companies.”</td>
<td>R-01-LESCO</td>
</tr>
<tr>
<td>CPPAG</td>
<td>“All financial transactions are done through CPPA. It is like middleman between generation, transmission and distribution of electricity. All transactions have to take place through CPPA. So it is centralized.”</td>
<td>R-10-LESCO</td>
</tr>
<tr>
<td>WAPDA</td>
<td>“There is no direct dependency on WAPDA. Instead of chairman WAPDA, there is MD PEPCO parallel to DISCOs. It reports to ministry... WAPDA conducts training of grade 18 and above employees for which we interact with WAPDA but that again through PEPCO.”</td>
<td>R-01-LESCO</td>
</tr>
</tbody>
</table>

6.3.5- National Transmission and Despatch Company (NTDC)

Under WAPDA’s restructuring program, power transmission cell of WAPDA was restructured into NTDC to be operated as independent public company. NTDC took the charge of all the property rights, asset, obligations and liabilities of 220KV and 500KV grid stations and transmission lines / network owned by WAPDA. NEPRA provided license to NTDC in 2002 to engage in exclusive transmission business for the term of thirty years. Power transmission is mainly provided by NTDC in all over Pakistan except Karachi. The key functions of NTDC
include system operation, transmission network operations and power exchange administration. (NTDC, 2018)\(^4\).

The key role of NTDC is indicated in following excerpt:

“NTDC is like the back bone of energy sector. It has the role of intermediary. It buys power from producers and the transmit it to distributing companies. It has to collaborate with all different companies in energy sector.” (R-18-NTDC)

Power, from all the generators, is combined in a single pool and provided to NTDC. Then NTDC distribute it among DISCOs according to the pre-decided quota allocated to each company. The quota is fixed according to the conditions and no of consumers of the company. Every company forecast its power demand for the coming year and submit it to NTDC. Then NTDC makes forecasting on national level as indicated in following excerpt:

“NTDC forecasts electricity demand and supply and possible sources for meeting power demands on the national level. Looking into the overall demand and supply, quotas are allocated to the companies. The planning department of NTDC determine the quota based on conditions and power demands in the areas of each company. (R-28-NEPRA)

NTDC has frequent interactions all power generation companies and power distribution companies because all power generated is transferred to the system of NTDC and then NTDC transfers electricity to DISCOs. Since, all financial transactions are settled through CPPAG, therefore, NTDC has frequent interaction with CPPAG. In addition to these actors, NTDC has to interact with MOWP. However, unless in case of DISCOs, NTDC coordinates with ministry directly. Table 6.7 provides NTDC’s profile information and its relational ties in power network.

Table 6.7: Profile Summary and Relational Ties of NTDC in Power Network

<table>
<thead>
<tr>
<th>Vision/ Mission</th>
<th>To contribute in the development of prosperous Pakistan by managing smooth and economical transmission and despatch system through excellence of professional work.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal</td>
<td>-To provide safe and secure transmission of electricity. -To plan and design expansion in transmission network. -To record and monitor contracts relating to bilateral trading system</td>
</tr>
<tr>
<td>Roles</td>
<td>System operator, transmission network operator, power exchange administrator.</td>
</tr>
<tr>
<td>Geographical scale</td>
<td>Federal Public Company</td>
</tr>
<tr>
<td>Sector</td>
<td>Public</td>
</tr>
<tr>
<td>Position in network</td>
<td>Central</td>
</tr>
</tbody>
</table>

Relational ties of NTDC with other actors in network

<table>
<thead>
<tr>
<th>Actors</th>
<th>Excerpts (from interviews/ documents)</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOWP</td>
<td>Government nominates the Directors and hence government can directly influence major decisions of the company. Ministry gives us instructions; it takes regular performance record form us. It can call our senior management any time.</td>
<td>R-18-NTDC</td>
</tr>
<tr>
<td>DISCOs</td>
<td>‘NTDC is responsible to take electricity from producers &amp; transmit it to distributing companies’; ‘We have frequent interaction with NTDC because we take electricity from NTDC’</td>
<td>R-19-NTDC</td>
</tr>
<tr>
<td>GENCOs</td>
<td>NTDC updates information in website on a daily basis for payment to generation and operational data, and every 15 days for merit order</td>
<td>DOC-02-MOWP</td>
</tr>
<tr>
<td>NEPRA</td>
<td>NEPRA issued NTDC’s license for transmission of electricity to all distribution companies. Now NEPRA has approved amendment in NTDC’s license to restrict its operations for direct financial transactions with DISCOs. NEPRA also provides standards for our operations and evaluate our performance periodically.</td>
<td>R-18-NTDC</td>
</tr>
<tr>
<td>CPPAG</td>
<td>For all financial transactions we have to coordinate with CPPAG</td>
<td>R-19-NTDC</td>
</tr>
<tr>
<td>KESC</td>
<td>KESC imports electricity from NTDC. There is a contractual agreement that NTDC has to supply electricity to KESC at the rate of 8 rupee per unit.</td>
<td>R-18-NTDC</td>
</tr>
</tbody>
</table>

Source: Compiled by the researcher from interviews and NTDC’s website retrieved from www.ntdc.com.pk

6.3.7- Karachi Electricity Supply Company (KESC)

Karachi Electricity Supply Company (KESC) is distributing electricity in the city of Karachi, which is the largest city and economic hub of Pakistan. KESC is the oldest power company of the country being established in 1913. In 1952, the Government of Pakistan acquired the company by taking majority shareholding. It served as public utility and was principally engaged
in generation, transmission and distribution of electricity for Karachi. KESC was privatized in 2005 as K-Electic (KE). Currently, the licensed area of K-Electric is spread over the entire city of Karachi and nearby cities and towns of Sindh and Baluchistan. It is the only private sector electricity supply company in the power network. It is still working as vertically integrated utility and is engaged in various supply chain activities including power generation, transmission and distribution. Table 6.8 provides the profile information of KESC and its relational ties in power network respectively.

Table 6.8: Profile Summary and Relational Ties of KESC in Power Network

<table>
<thead>
<tr>
<th>Vision/Mission</th>
<th>Brightening lives by building the capacity to deliver uninterrupted, safe and affordable power to Karachiites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal</td>
<td>KE works towards maintaining and developing a culture of trust, accountability, respect and collaboration.</td>
</tr>
<tr>
<td>Roles</td>
<td>Electricity distribution</td>
</tr>
<tr>
<td>Geographical scale</td>
<td>Joint stock public limited company</td>
</tr>
<tr>
<td>Sector</td>
<td>Private</td>
</tr>
<tr>
<td>Position in network</td>
<td>Periphery</td>
</tr>
</tbody>
</table>

Relational ties of KESC with other actors in network

<table>
<thead>
<tr>
<th>Actors</th>
<th>Excerpts (from interviews/ documents)</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOWP</td>
<td>Ministry can request KESC to provide certain information. But KESC is privatized and it is autonomous in its operations. Ministry can be involved as common body whenever there is a matter of electricity transmission or financial transactions in KESC and CPPA-G.</td>
<td>R-37-MOWP</td>
</tr>
<tr>
<td>NEPRA</td>
<td>There is continuous interaction for tariff determination, performance monitoring, and implementation of power regulations.</td>
<td>R-28-NEPRA</td>
</tr>
<tr>
<td>NTDC</td>
<td>There is an agreement between NTDC and KESC, whereby NTDC supplies 650 MW electricity to KESC</td>
<td>R-19-NTDC</td>
</tr>
<tr>
<td>CPPAG</td>
<td>We settle our payments through the mechanism of central agency-CPPA</td>
<td>R-47-KESC</td>
</tr>
</tbody>
</table>

Source: Compiled by the researcher from the interviews and website of KESC retrieved from www.ke.com.pk
6.3.6- Central Power Purchasing Agency Guarantee Limited (CPPA-G)

Central Power Purchasing Agency Guarantee Limited (CPPA-G) was established to integrate all financial transactions in Power network. The company was incorporated in the year 2009 after its segregation from National Transmission and Dispatch Company (NTDC). However, it continued its operations under NTDC (as department of NTDC) until June 2015, when a separate entity was made operational. The CPPA-G being the Market Operator is facilitating power market transition from the current single buyer to competitive market. While changing the market model, the overall strategy is to bring efficiency through competition in generation and retail, while transmission and distribution will remain regulated, as they are natural monopolies.

Respondents as indicated in following excerpts highlighted the central role of CPPA-G in the power network:

“CPPA is central agency to purchase and sale power in energy sector. It comes between power generation and distribution companies. LESCO has to pay purchasing cost to CPPA. CPPA then transfer this amount to power generation companies. All invoices travel through CPPA that is why I am saying that it is a central organization. We cannot deal with GENCOs directly. All transactions have to take place through CPPA”. (R-10-LESCO)

“All financial transactions have to take place through CPPA. So it is centralized” (R-26-NEPRA)

These excerpts indicates the central role of CPPA in network for all financial transactions. Due to single-buyer market mechanism, power generation companies and power distribution companies need not to interact with each other. The interaction takes place at central level by the coordinating and integrating government agency (CPPA-G). Table 6.9 provides profile information of CPPA and its relational ties in power network respectively.
Table 6.9: Profile Summary and Relational Ties of CPPA-G in Power Network

<table>
<thead>
<tr>
<th>Vision/Mission</th>
<th>To develop a market which facilitates the competitive trading of electricity for the benefit of market participants and end consumers by 2020. During the transition period, procure the required energy on behalf of the consumers transparently and efficiently.</th>
</tr>
</thead>
</table>
| Goal           | -To search for efficiency for reducing costs and making prudent investments  
|                | -To facilitate the financing of the power sector, introducing dynamic and creditworthy players  
|                | -To increased efficiency and appropriate financing ultimately should lead to lower tariffs and better service quality for end users |
| Roles          | Power procurement; financial settlements |
| Geographical scale | Federal Public Company |
| Sector | Public |
| Position in network | Central |

Relational ties of CPPA with other actors in network

<table>
<thead>
<tr>
<th>Actors</th>
<th>Excerpts (from interviews/ documents)</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOWP</td>
<td>“All financial transactions are done through the central system of CPPA-G. Ministry is definitely involved in these transactions or any delays. Ultimately, ministry takes steps to clear payments and handle issue of circular debt.”</td>
<td>R-37_MOWP</td>
</tr>
<tr>
<td>DISCOs</td>
<td>“We cannot deal with GENCOs directly. All transactions have to take place through CPPA”</td>
<td>R-10-LESCO</td>
</tr>
<tr>
<td>GENCOs</td>
<td>“CPPA is the centralized agency for all financial transactions in power sector”</td>
<td>R-40-CPPA</td>
</tr>
<tr>
<td>NEPRA</td>
<td>“CPPA is an authority to see financial settlements. CPPA was created to monitor the billing process in power sector. I can’t comment why it is put into operational activities.”</td>
<td>R-26-NEPRA</td>
</tr>
<tr>
<td>NTDC</td>
<td>“For all financial transactions we have to coordinate with CPPA”</td>
<td>R-19-NTDC</td>
</tr>
<tr>
<td>KESC</td>
<td>“We settle our payments through the mechanism of central agency- CPPA”</td>
<td>R-47-KESC</td>
</tr>
</tbody>
</table>

6.3.8- Power Generation Companies

WAPDA is responsible for hydro power generation in the Pakistan. WAPDA’s thermal power generation wing was restructured into four power generation companies (GENCOs) which are following:

- Jamshoro Power Company Limited (JPCL) GENCO I
Central Power Generation Company Limited (CPGCL) GENCO II
Northern Power Generation Company Limited (NPGCL) GENCO III
Lakhra Power Generation Company Limited (LPGCL) GENCO IV

Later, Nandipur Power Generation Company Limited (NPGCL) was also created. Besides these power generation companies, private sector individual power producers (IPPs) are producing thermal power. Currently, there are 38 IPPs based projects. In this way, an environment of marketization and competition is fully introduced for power generation in the country. Besides, hydro power and thermal power, a third important source of power is nuclear energy in Pakistan. Pakistan Atomic Energy Commission (PAEC) is responsible for nuclear power generation in Pakistan. It was established in 1956 as Atomic Energy Research Council. PAEC is responsible for the peaceful uses of atomic energy in the fields of agriculture, medicine and industry as well as execution of development projects involving nuclear power stations and generation of electricity.

Power generation from alternate and renewable energy sources (including solar, wind and biomass) is also taking roots in Pakistan but it is on initial stage. The Alternate Energy Development Board (AEDB) is established in 2003 with the mandate to facilitate power generation through renewable energy resources in the country and contribute at least 5% of the total national power generation capacity.

6.3.9- Water and Power Development Authority (WAPDA)

The Water and Power Development Authority (WAPDA) of Pakistan was established through an act of parliament in February 1958 for integration and rapid development of water and power resources of Pakistan and was vested with the responsibility of following projects:
• Generation, transmission and distribution of power all over Pakistan except Karachi.

• Irrigation, water supply and drainage.

• Flood control

• Inland navigation

For a long time, it remained the largest power producer in Pakistan. In 1994, thermal generation projects were shifted to the private sector. Moreover, under restructuring of power wing of WAPDA, the utility part was shifted from convergence to divergence giving birth to 14 different companies to operate in different zones. Hence, currently WAPDA is responsible for water related project including generation of hydel power. The role of WAPDA is reduced to generation and supply of hydel power in the power network. In this regard, it has to interact with CPPA for financial settlements, with NTDC for supply of power in transmission lines and with ministry for policy implementation and NEPRA for regulatory requirement. In addition to this, WAPDA has to coordinate with PEPCO for integrated training system in DISCOs, GENCOs and NTDC, which is still handled by WAPDA. Table 6.10 provides profile information of WAPDA and its relational ties in power network respectively.

Table 6.10: Profile Summary and Relational Ties of WAPDA in Power Network

| Vision/ Mission | To put Pakistan on the track of development, |
| Goal | To harness water and hydropower resources in the country. |
| Roles | Hydro power generation |
| Geographical scale | Public Authority |
| Sector | Public |
| Position in network | Periphery |

Relational ties of WAPDA with other actors in network

| Actors | Excerpts (from interviews/ documents) | Source |
“Ministry can request WAPDA to provide information. There is frequent interaction of our senior management with ministry.”

“NEPRA, there is continuous interaction for tariff determination, performance monitoring, and implementation of power regulations.”

“PEPCO nominates employees in grade 18 and above for training according to seniority list and it is conducted by WAPDA Staff College.”

“WAPDA supplies electricity to NTDC and then NTDC transmit to distribution companies.”

For financial transactions WAPDA need to coordinate with CPPAG.

“WAPDA conducts training of grade 18 and above employees for which we interact with WAPDA but that again through PEPCO.”

Source: Compiled by the researcher from interviews and official website retrieved from www.wapda.gov.pk

Based on above analysis of actors and their interaction in network, Table 6.11 summarizes the presence of interaction among various actors in network.

**Table 6.11: Interaction among Actors in Power Network**

<table>
<thead>
<tr>
<th></th>
<th>MOWP</th>
<th>NEPRA</th>
<th>WAPDA</th>
<th>PEPCO</th>
<th>GENCOs</th>
<th>NTDC</th>
<th>DISCOs</th>
<th>CPPA</th>
<th>IPPs</th>
<th>KESC</th>
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<tbody>
<tr>
<td>MOWP</td>
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<td>NEPRA</td>
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<td>GENCOs</td>
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<td>DISCOs</td>
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<td>IPPs</td>
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<td>KESC</td>
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<td>V</td>
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</tbody>
</table>

*V indicates presence of interaction between actors; X indicates actors need not to directly interact with each other

Figure 6.3 presents the current structure of power network with reference to the interactions among network actors.
Figure 6.3 depicts the structure of power network with reference to current network actors and their relational ties in network. The comparison of Figure 6.1 (supply chain before WAPDA’s restructuring) and Figure 6.3 (supply chain after WAPDA’s restructuring and creation of other integration agencies) shows the drastic change in structural arrangement of power network under NPM and NPG reforms. MOWP and NEPRA are the most prominent actor of network actors who are connected with all other actors in the network. Another central actor is CPPA who is coordinating all financial transactions in the network. NTDC is also a central actor because it is the only organization, which is handling power transmission. GENCOs, DISCOs and IPPs have peripheral positions in network due to their limited tasks and less direct interactions in the network. WAPDA, which once used to be the most prominent actor, is now
placed in peripheral position in the network. Figure 3 is a simple depiction of power network because it has combined actors with similar roles and ties in the network. DISCOs include ten distribution companies, which are combined in the figure. It is due to the reason that all DISCOs have similar profile and relational ties in network. All share the legacy of WAPDA and are performing same role in their respective jurisdictions. Likewise, GENCOs (four separate generation companies) and IPPs (thirty-eight individual contractual projects) are combined.

6.4- Hybrid governance structure in the power network

The interaction pattern among actors indicates the type of network (established in literature review Section 2.3.3) including hierarchical networks (based on command and control relations); market network (based on negotiation) and collaborative networks (based on trust and collaboration). Following sub-sections analyze the type of interactions among actors in power network.

6.4.1- Control and command based relations

MOWP and NEPRA are found to be the key actors in the network who are connected to all other actors in the network. MOWP (the executive arm of the government) mainly governs and manages the power network. It is involved in both policymaking and policy implementation. Whereas, NEPRA is the regulator of the power network and playing the crucial roles including licensing, tariff determination, performance monitoring and performance evaluation of the actors in the supply chain. Therefore, it can be inferred that both MOWP and NEPRA are the central actors in the power network. Moreover, both enjoy authority positions in the network. Both oversee the performance of other organizations in the value chain (including power generation, transmission and distribution) and control major decisions. Other organizations have to comply
with their requirements. A respondent remarked on the formal control of MOWP on other organization’s in following excerpt:

“Reporting of distribution companies to MOWP is established in performance contracts” (R-22-PEPCO)

Following excerpt further, elaborate the informal control of MOWP on other organizations in power network:

“In our case, the parent ministry takes most of the decisions. Sometimes, our BOD and management is involved in decision-making process. At times, they get the order from Ministry and implement it”. (R-38-IEESCO)

These excerpts clearly indicate the presence of control and command based relations in the power network. Moreover, various centralized mechanisms in power network (discussed later in section 8.2.1) accentuate the centralized controls from the Ministry and NEPRA. These centralized mechanisms include financial transactions through CPPA-G; centralized training and promotion of senior executives and price control mechanism by NEPRA. Hence, it can be inferred that control and command based relations are a prominent feature of power network.

6.4.2- Negotiation based relations

Negotiation based relations are also found in power network. The policy documents indicate that a crucial purpose, of unbundling reforms, was to introduce competitive environment in power sector. With the creation of legally autonomous public companies, the horizontal interaction with each other is an obvious phenomenon. With the independent status of public companies and involvement of private sector, government authorities can no longer work with command and control relations alone. Rather they have to convince the actors to exercise their authority. Respondents have highlighted that companies, in the power network, are challenging the authority positions pf public authorities. With this development, the authoritative
organizations can attempt to exercise control only if they get the consent of being governed. Authorities need to be transparent and have rationale in their dealing, only then, actors accept their order. For example, in following excerpt the respondent challenged the authority of government and the centralized system of training:

“My question is why it is compulsory for me to send my employees to WAPDA to get training when I have other better institutes. WAPDA’s training is expensive. It is charging millions of rupees from IESCO. If I spend this amount to LUMS, it will provide us customized training according to the need of our employees”. (R-25-IESCO)

Moreover, the presence of more than one authoritative actors is another indication of competitive relations in the network. Ministry and NEPRA both have authoritative positions and overlapping authorities in the network that enable them to play strategic games against each other. For example, following excerpt indicates the bargaining relations between MOWP and NEPRA:

“NEPRA controls the process of tariff determination in which MOWP can only act as one of the actor with less influential position. However, the government notifies the tariff and that provides an opportunity to MOWP to manipulate the decision of NEPRA by delaying the process of tariff notification.” (R-28-NEPRA)

Hence, the presence of negotiations and bargaining, between MOWP and NEPRA, is quite evident. Such negotiation and bargaining relations are also found in case of other coordination bodies such as CPPA-G, and PEPCO who are coordinating and integrating various actors in network. Moreover, many inter-company dependencies were revealed that demand negotiations and bargaining among unbundled companies such as inter-company employee transfer and other centralized HR practices for senior executives. Therefore, it can be inferred that actors in power network have negotiation-based relations.

6.4.3- Collaborative relations

Presence of collaborative and cooperative relational ties is also prominently found in the power network. Particularly, the relations among unbundled companies (NTDC, GENCOs and
DICSOs) are majorly based on cooperation with each other because they all share the legacy of WPADA and have various interdependencies for the resources that are still shared among these companies. Respondents quoted various matters where inter-company consensus is required to reach any decision (discussed in detail in Section 8.4.7 and 8.4.8). For such matters, MOWP and PEPCO play the role of mediators among companies and maintain uniform policies among companies. A respondent said:

“In order to bring any change, we need consensus of all DISCOs on the change which is very difficult to achieve. That is why DISCOs are dependent on the Ministry because only Ministry can serve as common body among DISCOs”. (R-38-IESCO)

MOWP and PEPCO are also in position to influence the decisions of unbundled companies. There are some central actors (including CPPA-G, PEPCO and NTDC) who may not be in position to influence others, however, other organizations are bound to cooperate with them. Other actors have dependency on them due to their critical role in the network. CPPA-G is managing all financial transactions in the network. NTDC is the only organization that is playing the role of power transmission in the network. PEPCO is playing the role of mediator between MOWP and DISCOs. There is another critical reason for the collaborative relational ties in power network and that is lack of competition in the supply chain. Each actor has monopoly in its area and it need not to play strategic games against each other. On the other hand, they have lot of interdependencies for which they have to collaborate with each other. Most of the respondents reported that organizations trust each other and cooperate with each other for building consensus on combined decisions.

6.4.4- Hybrid governance network

In light of above findings, it is inferred that power network contains quite complex inter-organizational relations including diverse relations ties such as command and control relations;
negotiation and bargaining relations; and collaborative and cooperative relations. Due to these relational ties, the power network has similarities with different pure forms of network typologies discussed in literature review (Section 2.3.3) including hierarchical networks, market networks and clan networks.

Control and command based relations are prominently present in the network with the authoritative position of MOWP in power network. However, unlike the pure form of hierarchical or lead organization network, the power network (under study) has more than one powerful actor (such as MOWP, NEPRA and PEPCO) who enjoy authority positions and can assert control over other weaker actors in the network. Moreover, these power actors are not part of supply chain rather they are performing exclusive purpose of coordination or regulation. Hence, they are not in direct competition with other actors in the network. Therefore, it is inferred that power network is not a pure hierarchical type of network.

On the other hand, negotiation based relations are also found in power network which point to its similarity with market network. However, market mechanism and pure competition is not prominently present in power network. Most of the public organizations are still working as monopolies in their respective jurisdiction. In the similar vein, although collaborative relations are found in power network, but in the presence of hierarchical relations, voluntary process of interaction does not take place in power network. Rather, collaboration is managed and mandated by the centralized administrative authorities. Hence, due to presence of diverse inter-organizational relations, it is inferred that power network is a hybrid form of governance network with blended features of hierarchical, market and clan network typologies.
6.5- Conclusion

The energy sector of Pakistan has gone through multiple reform trajectories under three major reform models including TPA, NPM and NPG reforms. Under TPA reforms, the energy sector of Pakistan was operating with simple integrated structure of state monopolies. NPM reforms created fragmentation in the sector due to multiple public companies with autonomous status. On the other hand, NPG reforms created further agencies in the sector for integration and coordination purpose. NPM based fragmentation and NPG based integration reforms have resulted in complex governance networks in the energy sector in Pakistan.

The Ministry of Water and Power is found the most dominant actor in power network. It has control over major decisions in the network. Another dominant actor is NEPRA, which is the regulatory body. Additionally, PEPCO and CPPA-G are also operating as centralized and coordinating bodies. Hence, hierarchical relations are found to be the prominent feature of power network. On the other hand, negotiation and bargaining relations are also found which are quite expected under restructuring reforms. One of the purpose of NPM based restructuring was to introduce market competition in the power sector. At the same time, collaborative and cooperative relations are also present in the network. The structure of power network is found to be a hybrid form of hierarchical, market and clan networks with the presence of diverse relational ties among actors.
Chapter 7  Institutional Complexity in Embedded Organizations

7.1- Introduction

This chapter addresses second research question: Why do organizations face institutional complexity in governance networks in energy sector of Pakistan? For this purpose, Lahore Electric Supply Company (LESCO) and Islamabad Electric Supply Company (IESCO) are taken as embedded units of analyses in the power network. Data is analyzed with respect to how embedded organizations (LESCO and IESCO) face institutional complexity being placed in the Power network of energy sector.

Few points need to be noted regarding the analysis in this chapter:

- As established in operationalization (Section 3.8; Table 3.2), institutional complexity is determined through presence of multiplicity and contradiction of institutional logics in goals and means.
- Goals are analyzed in terms of vision, mission and values of the organizations.
- Mean are analyzed through prescriptions (of various logics) with respect to performance monitoring mechanisms, professional legitimacy and mode of interaction of embedded organizations with other organizations in network.
- ‘Embedded organizations’ means organizations (LESCO and IESCO) that are selected as embedded unit of analysis in this study.
- Both IESCO and LESCO are distribution companies (DISCOs). There are total ten DISCOs in power network. Where the words ‘DISCOs’ or “distribution companies’ are
used in analysis, they refers to all distribution companies in the power network in general and selected organizations (LESCO and IESCO) in particular.

7.2- Multiple logics in goals

Goals, of embedded organizations, were analyzed in terms of vision, mission and values formally stated on the websites. Moreover, it was also asked from employees in interviews and their responses were triangulated with the stated goals of the organizations. Table 7.1 presents the vision, mission and values of LESCO and IESCO as stated on their websites. Both electricity distribution companies have the ‘profitability’ element in their vision. LESCO looks itself as the top performer of the country by 2021, whereas IESCO wants to be the most admired and profitable public utility of Pakistan. Visions of both companies indicate that they want to compete for profitability. IESCO has also used the term “efficient” in its vision. It indicates the presence of NPM logic in the companies. Both companies share the focus of profitability, which is prescribed by NPM logic.

Table 7.1 Vision, mission and values reported on websites

<table>
<thead>
<tr>
<th></th>
<th>LESCO</th>
<th>IESCO</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Vision</strong></td>
<td>Lahore Electric Supply Company will be amongst the top performer nationwide electric utility companies by 2021</td>
<td>To be the most admired public utility in Pakistan, an undisputed leader in the power sector, efficient and profitable.</td>
</tr>
<tr>
<td><strong>Mission Statement</strong></td>
<td>To distribute electricity in a reliable, secure, safe, environmentally responsible &amp; cost-effective manner</td>
<td>To provide uninterrupted power supply to our customers with the lowest line losses in the distribution sector and to generate profits for our stakeholders.</td>
</tr>
<tr>
<td><strong>Values</strong></td>
<td>Commitment to customers; commitment to employees; teamwork and trust; excellence; ethical behavior and integrity</td>
<td>Merit; teamwork; efficiency; transparency; safety; innovation.</td>
</tr>
</tbody>
</table>

Source: Website of LESCO (www.lesco.com) ; Website of IESCO (www.iesco.com)
The mission statements (of LESCO and IESCO) are also heavily dominated by NPM logic with the terms such as “cost-effective manners”, “generate profits” and “supply to customers”.

Provision of uninterrupted supply to “customer” indicates customer orientation of the company. According to Table 7.1, the values of LESCO and IESCO indicate that all the three logics are present in the companies. TPA logic is present in the values such as “merit”, “ethical behavior” and “integrity”. NPM logic can be traced in values such as “efficiency”, “commitment to customers”, “transparency” and “innovation”. NPG logic is also present in values such as “teamwork” and “trust”.

Respondents have also reported presence of diverse values, which are categorized in three themes including public service orientation, customer orientation and collaborative orientation belonging to TPA, NPM and NPG logics respectively. Figure 7.1 depicts the first cycle and second cycle coding under the theme of contradiction of institutional logics in values of embedded organizations.
Figure 7.1 Coding of contradictory institutional logics in values
Table 7.2 contains excerpts from interviews (with respect to values of LESCO and IESCO) reported by the top-level managers of the organizations.

**Table 7.2 Values reported by respondents in LESCO and IESCO**

<table>
<thead>
<tr>
<th></th>
<th>LESCO</th>
<th>IESCO</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Public services</strong></td>
<td>“Continuation of supply” ;</td>
<td>“Public service round the clock (R-38-IESCO); “Best service provider” (R-40-IESCO)</td>
</tr>
<tr>
<td><strong>orientation (TPA</strong></td>
<td>“electricity for all” (R-11-LESCO)</td>
<td>“providing public service” (R-39-IESCO)</td>
</tr>
<tr>
<td><strong>logic)</strong></td>
<td>“LESCO is a public company dealing with public” (R-10-LESCO)</td>
<td></td>
</tr>
<tr>
<td><strong>Customer</strong></td>
<td>“Customer satisfaction” (R-11-LESCO); “efficiency” (R-01-LESCO)</td>
<td>“Generating revenues” (R-39-IESCO); “lowest cost”(R-40-IESCO); “customer satisfaction” (R-24-IESCO)</td>
</tr>
<tr>
<td><strong>orientation (NPM</strong></td>
<td>“we have customer service center” (R-14-LESCO)</td>
<td></td>
</tr>
<tr>
<td><strong>logic)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Collaborative</strong></td>
<td>“contribution is common goals set by ministry” (R-14-LESCO)</td>
<td>“Contribution in economic growth of our country.” (R-39-IESCO)</td>
</tr>
<tr>
<td><strong>orientation (NPG</strong></td>
<td>“ all the CEOs, join together whenever there is crises” (R-16-LESCO)</td>
<td>“Vital role in power sector growth” (R-38-IESCO)</td>
</tr>
<tr>
<td><strong>logic)</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**7.2.1- TPA logic: Public service orientation**

TPA logic is present in the values of both LESCO and IESCO. There is a strong perception that the companies are providing service to public. One of the respondent (from LESCO) explained that electricity provision is quite a sensitive matter particularly in cases where public is involved at large for example streetlights or public hospitals. It is not possible to stop electricity provision in case of non-clearance of bills. Hence, public service orientation is a dominant value of LESCO as clearly reported in following excerpt:

“I must say it is a public company. When you are dealing with public, it is more sensitive. With customers, you have contractual relations. When you are dealing with customers there are no emotions involved whereas dealing with public is a sensitive matter. If they will pay you, you will provide electricity otherwise not but in case of public, your
orientation is different... Can we stop electricity provision to public hospitals if bills are not paid? Sometimes we wait for long time for recoveries of bills from Punjab Government” (R-10-LESCO)

Respondents, from IESCO, also reported their priority and sensitivity for public service purposes as indicated in following excerpt:

“Increasing income or increasing revenue is not our priority because we are working for general public service and we have to provide electricity even if we bear losses.” (R-39-IESCO)

Respondents also reported that the companies (LESCO and IESCO) are providing service at the price determined by NEPRA. There is a price control mechanism to protect general public interest. Moreover, companies are also less sensitive for ‘profitability’ and more for ‘continuation of supply’ and ‘electricity for all’. Companies are provided with distribution margin to supply electricity. If they earn more than the distribution margin, the surplus amount is submitted to CPPA-G. CPPA-G is handling all financial transactions at the central level. Companies, who are bearing losses, are provided subsidy by the government to maintain equal price in the country. The excerpt “public service round the clock” (R-38-IESCO) is very influential to determine the presence of public service orientation in the companies. According to a respondent:

“I think as a public manager one has to be concerned for efficient use of resources but more important is the benefit of society at large. For example, while designing an electricity supply route an engineer would look for the shortest possible way because that will be cost effective but as social economist, I will look for the least damage to the environment and society. For that purpose, I may increase the route. So as public manger, I am concerned for public benefits.” (R-20-LESCO)

Respondents in IESCO and LESCO had more or less similar views that provision of electricity is a crucial and sensitive matter for the ruling party. High electricity prices or high load shedding hours can seriously damage the image of political government. Therefore, DISCOs have much
pressure to serve public with respect to provision of uninterrupted electricity at reasonable price. The price is controlled by NEPRA. Hence, TPA logic is prominent in both LESCO and IESCO.

7.2.2- NPM logic: Customer orientation

Although ‘public service’ is a noticeable value of IESCO and LESCO, however, ‘customer’ orientation is also present very prominently. NPM reformers have propagated the value of serving customers, which is associated with revenue generation. In other words, public has to pay for the service. A major proof of its presence is the customer service departments. A respondent from LESCO said,

“We have 10 customer facilitation centers and in addition to this we have four mobile vans for customer’s facilitation. These mobile vans perform the same function for our indoor customers.” (R-04-LESCO)

Customer orientation got popular in the year 2000 when customer service Centers were created as indicated in following excerpt:

“In 2000 such type of customer service departments were created in many public organizations. Before that, no idea of such department prevailed in LESCO. This is when army took the charge of LESCO.” (R-04-LESCO)

The respondent further explained that in 2000, management divided areas under divisions and sub divisions and in each sub-division; a customer service center was created. Customer orientation is associated with revenue generation. The companies are now more focused on generating income to meet their expenses. Although, earning profit is not very emphasized, however, generating enough revenue to meet expenses is a must requirement for the companies. Companies’ performance is compared on standards, which include customer satisfaction and meeting their expenses. Government has stringent criteria to provide subsidies. Both IESCO and LESCO are meeting their expenses through generating income themselves. With this orientation,
there is mixed response towards “providing public service” and “serving customers”.

Respondents frequently used both terminologies in interviews.

7.2.3- NPG logic: Collaborative orientation

Another theme that emerged from data is the value of ‘collaborative orientation’ in IESCO and LESCO. This value is important because respondents consider their company as part of the crucial problem of energy crises in Pakistan. Respondent had the view that their company is not solely responsible for provision of electricity to public because it cannot solve the crises alone. Moreover, the company has to collaborate and frequently interact with other actors in the network for common purposes. Therefore need for ‘teamwork’, ‘trust’ and ‘collaboration’ are reported as crucial values in both IESCO and LESCO as evident in following excerpts:

“Although WAPDA is unbundled, however companies are working together in various matters.” (R-20-LESCO)

“We are working to find joint solutions to the power crises of our country. (R-39-IESCO)

7.3- Multiple logics in means

As established in conceptual framework, means are the tools, prescriptions or recipes to achieve the goals. TPA logic prescribes bureaucracy (featured by hierarchical controls, rules, regulations, processes) and political accountability (controls from ministry and other administrative authorities) as tools to achieve the goal of general public service. NPM logic prescribes organizational autonomy, performance/outcome based evaluations, market competition, commercial orientation and business practices as tools to achieve the goals of customer satisfaction and efficiency. NPG logic is based on horizontal collaboration, inter-organizational relations, information and resource sharing mechanisms to achieve the goal of
joint solutions to complex problems of the society. Based on operationalization and interview guide, *etic* codes were initially prepared in NVivo. The additional codes (emerged from data) created *emic* codes in the file. The codes were merged in nine codes, which were merged in three categories. Figure 7.2 summarizes the codes and categories in this theme of contradictory institutional logics in means.

*Figure 7.2 Coding of contradictory institutional logics in means*
7.3.1- Performance monitoring mechanism

Data revealed the presence of various mechanisms in performance monitoring of the embedded organizations. At times, management is faced with conflicting situations because they are answerable to multiple authorities and have to meet their requirements separately. Moreover, it is found that some logics presents more pressure than others, which indicate the dominance of that logic. In other words, some pressures are easier to handle than others, which makes certain logic more prominent than other does. Table 7.3 presents some excerpts (for the evidence) of presence of multiple pressures in performance monitoring of the embedded organizations.

Table 7.3 Contradictory logics in performance monitoring mechanisms

<table>
<thead>
<tr>
<th>TPA logic</th>
<th>NPM logic</th>
<th>NPG logic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accountability to political government</td>
<td>Accountability to BOD</td>
<td>Joint accountability/ Monitoring by the regulator</td>
</tr>
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</table>

“Reporting of Distribution Companies to MOWP is established in performance contracts.” (R-22-PEPCO)

“MOWP has signed performance contract with distribution companies including operational and financial performance indicators and the monitoring framework”. (DOC-02-MOWP)

“IESCO provides progress report to MOWP on monthly basis” (R-38-IESCO)

“Ministry gives targets to LESCO for receiving of amount which is stuck in legal cases” (R-16-LESCO)

“We have to achieve our targets set by ministry” (R-40-IESCO)

“There is lot of questioning from BOD” (R-01-LESCO)

“Policies, decisions, development projects, procurements, purchases and all other matters are handled by BOD.” (L-17-LESCO)

“According to law, companies are to be governed by BOD and BOD is independent to take financial, HR and management decisions.” (R-22-PEPCO)

“I must say that I have to ensure the efficient use of resources” (R-38-IESCO)

“Within Power Sector Entities, government introduced professional boards and management to improve sector governance.” (DOC-02-MOWP)

“NEPRA fines DISCOs if they do not meet the performance standards… It fines GENCOs as well if they do not perform according to the standard. For the mechanism of all the three parts… generation, transmission and distribution…. We are ultimately responsible for overseeing the operations.” (R-26-NEPRA)

“NEPRA is our regulatory authority who sets our monthly and yearly targets.” (R-10-LESCO)

“We have to perform up to NEPRA’s standards of performance” (R-40-IESCO)
TPA logic: Accountability to political government

Both LESCO and IESCO are accountable to political government through various mechanisms including performance contracts with MOWP, reporting to MOWP through PEPCO and rewards and sanctions from MOWP. There is regular reporting of distribution companies to MOWP in form of submission of required data and formal meetings, which are held on monthly basis. PEPCO coordinates with MOWP and then it calls meetings with distribution companies on various matters including loss recoveries, load shedding plans, private interest, public interests, performers, non-performers, defaulters etc. These meetings are held on monthly basis usually in the mid of the month. PEPCO is also monitoring the distribution companies about their progress in operational matters such as progress in mobile meter reading. MOWP has made performance contracts with LESCO and IESCO including financial and operational performance indicators. MOWP monitors the companies’ performance against these indicators. In addition to this, MOWP can ask for any other information or give instructions to distribution companies. A respondent from LESCO elaborated:

“Both PEPCO and Ministry coordinate with each other regarding questioning from LESCO. If there is any query from Ministry, it is forwarded to PEPCO and PEPCO forwards it to us and reports to ministry. Ministry can directly call us too.” (R-10-LESCO)

The respondent provided further detail about the mechanism through which MOWP monitors LESCO. MOWP monitors the performance of LESCO on various parameters including billings, loses, recoveries, revenues, technical lose, distribution lose, administrative lose, surcharge, GST collection, income tax collection, remittance to FBR, damaged transformers, meter readings and new connections. PEPCO has to gather all the information from distribution companies and then reports/coordinates with ministry. PEPCO has also developed a dashboard (on the request of Secretary of MOWP) to monitor the performance of companies in power
network under efficiency monitoring system. The dashboard has running information of various charges of distribution companies including billing and collection information, CPPA receivables, transmission and commercial losses, costs, surcharges, remittances, subsidies, billing targets, and other charges. It is maintained down to sub-division level of LESCO including the daily status and graphical status of various financial charges. Based on this record, various (monthly, quarterly and yearly) reports are produced and presented to MOWP. The same is true in case of IESCO. The respondents explained that there is regular reporting and frequent meetings of management of IESCO with both PEPCO and MOWP. In addition to formal meetings, informal meetings and calls are also quite frequent. Some of the excerpts are provided below for the evidence:

“Senior management has regular meeting with ministry. We can say, at least ones a month. Phone calls and queries from ministry is very frequent …let’s say weekly.” (R-20-LESCO)

“Senior management has very frequent meetings… and phone calls from ministry on daily basis. Almost every month, senior management has formal meeting with ministry.” (R-40-IESCO)

The respondents from PEPCO and MOWP also verified that there is regular reporting system for performance monitoring of distribution companies by PEPCO and MOWP as indicated in following excerpt from a respondent from PEPCO:

“Reporting of Distribution Companies to MOWP is established in performance contracts.”(R-22-PEPCO)

Moreover, MOWP also practices the system of reward and sanctions based on achievement of the indictors. Such mechanisms further establish companies’ accountability to the political government. Another, mechanism is Audit from Auditor General of Pakistan, which is conducted annually. Thus, the data indicates that TPA logic is present in the mode of governance of LESCO and IESCO in form of their accountability to political government. Various mechanisms
include reporting of the companies to MOWP and PEPCO in form of formal meetings at least on monthly basis, submission of progress reports and frequent phone calls for queries, questioning in case of low performance, appreciation for good performance and sanctions in case of bad performance.

**NPM logic: Accountability to BOD**

NPM logic is present in form of management’s accountability to BOD. LESCO and IESCO are registered under Companies Ordinance (1984). According to Companies Ordinance (1984), the CEO (and senior management) of the company is accountable to the board of the company. BOD is autonomous to take/approve strategic, financial, HR and other management decisions including policies, development projects, procurements, purchases and all other internal matters. A respondent said:

“Their is lot of questioning from BOD” (R-01-LESCO)

Management face frequent questioning from BOD. BODs can question from management regarding any financial or operational decisions. BOD appoints commercial auditor for the audit of the company.

**NPG logic: Monitoring by the regulator**

NPG logic prescribes the mechanism of joint accountability or monitoring by independent regulator. Presence of independent regulator ensures that actors in network operate autonomously (without political influences) and an independent authority monitors their performance. Data shows that NPG logic is also present in the embedded organizations due to their accountability to the regulator (NEPRA). LESCO and IESCO are accountable to NEPRA through various mechanisms including price control in form of tariff determination, regular
performance monitoring and evaluation, fines etc. A respondent from NEPRA explained that NEPRA performs functions and exercises powers under NEPRA Act (1997) and the rules and regulations made thereunder for the determination of tariff, issuance of the licenses, formulation and implementation of standards and specification in the power sector. Following excerpt presents the substantial role of NEPRA in power network and the accountability of embedded organizations towards NEPRA

“In this country, there is only one regulatory body which is regulating electric power sector. We evaluate company’s performance. We ensure that standards are met. We are looking that no malpractices prevail in power sector. We determine tariff. We have monitoring and controlling unit to monitor company’s performance.” (R-26-NEPRA)

Respondents from IESCO also verified that the company is answerable to NEPRA for meeting performance standards and operational efficiency requirements regularly monitored by NEPRA. Following excerpt demonstrates this phenomenon:

“NEPRA is acting as unbiased authority, which looks into the interest of customers. It determines our tariff in a transparent process involving various stakeholders. It regulates other matters related to our performance and efficiency.” (R-38-IESCO)

Under section 46 of the Regulation of Generation, Transmission and Distribution of Electric Power Act (1997), NEPRA has devised Performance Standards (Distribution) Rules, 2005. NEPRA monitors and evaluates the performance of companies in power sector under the standards of performance. Respondent from NEPRA (R-28-NEPRA) explained the process that each company has to submit report to NEPRA quarterly and yearly. Then NEPRA analyzes whether the company is meeting the set standards. Compliance with the standards is needed. The team from NEPRA also cross verifies the good performance (reported by company) by doing field visits. NEPRA determine the level of compliance of the company with the set standards. The companies who are not meeting the set standards, NEPRA takes legal actions against them in form of show cause notice, fines etc. Following excerpts elaborates it:
“There was heavy fog in Punjab. Due to very low temperature, the systems were collapsed and there was high load shedding in Punjab. We investigated and fined LESCO and GEPCO for system losses.” (R-26-NEPRA)

Various operational and technical standards include consumer facilitation (the extent to which consumer complaints are increasing or decreasing); number of fatal incidents (the extent to which safety measures are taken to avoid fatal incidences); voltage issues; the restoration time of power issues etc. In addition to performance monitoring, NEPRA determines tariff and companies are answerable to NEPRA for any increase in expenses as indicated in following excerpt:

“NEPRA determines the tariff. Even if LESCO has to buy cars…say 100 cars… it has to get approval from NEPRA. NEPRA has its detailed policy requirements against which it can approve… We have to wait till we get ok sign from NEPRA.” (R-02-LESCO)

**7.3.2- Decision making process**

Data revealed that both logics (TPA and NPM) are present in decision-making process. NPM logic is inherently present due to the independent legal status of LESCO and IESCO. On the other hand ministry in also involved in strategic and operational decisions of the companies. Mostly, ministry takes decisions for DISCOs and get them implemented through PEPCO.

Following excerpt clearly shows this phenomenon:

“In our case, the parent ministry takes most of the decisions. Sometimes, our BOD and management is involved in decision-making process. At times, they get the order from Ministry and implement it”. (R-38-IESCO)

Furthermore, there are situations in which companies need collaborative decision-making. Such decisions require involvement of central authorities (MOWP and PEPCO) and all stakeholders. Moreover, MOWP also takes unified decisions for all distribution companies in the network. It indicates that NPG logic also presents pressures to the embedded organizations.
Table 7.4 presents some excerpts for the evidence of conflicting pressures from three logics faced by the embedded organizations in decision-making process.

Table 7.4 Contradictory logics in decision-making process

<table>
<thead>
<tr>
<th>TPA logic</th>
<th>NPM logic</th>
<th>NPG logic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>Autonomy</td>
<td>Collaboration</td>
</tr>
<tr>
<td>Centralized decision making</td>
<td>Decentralized decisions making</td>
<td>Collaborative decision making</td>
</tr>
</tbody>
</table>

“*In our case, the parent ministry takes most of the decisions. Sometimes, our BOD and management is involved in decision-making process. At times, they get the order from Ministry and implement it*”. (R-38-IESCO)

“*MOWP instructed PESCO, HESCO, SEPCO, and MEPCO to outsource to the private sector collection of their respective feeders with losses of 50% or above*” (DOC-02-MOWP)

“*MOWP instructed all DISCOs to implement revenue protection program.*” (DOC-02-MOWP)

“Companies are independent financially and technically to take strategic and managerial decisions.” (R-22-PEPCO)

“According to Company ordinance 1984, Being an independent public company, LESCO can take loans from others. LESCO can determine its tariffs with the approval of NEPRA. LESCO is independent in its financial and operational decisions” (R-02-LESCO)

“Administrative decision making is granted to the companies but financially companies are not independent.” (R-25-IESCO)

“*Our decision got pending because of the conditions of uniformity of policies in DISCOs*” (R-15-LESCO)

“All stakeholders were required to support the formation and functioning of DCRP, so that Implementation of Distribution Code is carried out in effective manner.” (R-29-NEPRA)

“A certain level of decision-making autonomy is given to companies. But for uniformity of decisions we need a body for which PEPCO was created (R-22-PEPCO)

Table 7.4 highlights that embedded organizations are experiencing multiple pressures in decision making process which are discussed in following sub-themes.

**TPA logic: Centralized controls on decisions**

TPA logic is very much evident in LESCO and IESCO due to many mechanisms of controls exerted by MOWP not only in the policy decisions but also in day-to-day operational and financial matters. Policy decisions are controlled through major government representation in the
boards of the companies. Evidences are found that MOWP takes major policy decisions and implement through PEPCO as indicated in following excerpts:

“IESCO purchases electricity from CPPA. CPPA keeps some margin for transferring it from NTDC to distribution companies. NTDC also keeps a margin to transfer it from generation to CPPA. Therefore, what happens…. My cost per unit has increased. Now if I have financial autonomy, my priority would be to invest in generation (may be limited but still to some extent I would plan to be self-sufficient to generation). This is not possible since IESCO has no generation license and it can never have it.” (R-25-IESCO)

Above excerpts clearly describe that IESCO cannot take the strategic decisions itself. It cannot take investment decisions.

“We can say that ministry is fully involved in BOD’s decisions. Policies are from government.” (R-17-LESCO)

A respondent from IESCO reported that when IESCO was unbundled from WAPDA, it adopted WAPDA Service Rules in the IESCO on the instructions of MOWP. Still the same rules are in practice. A respondent said:

“Companies were created in 2002 and now it is 2017. Almost 15 years have been passed and still no company could make its rules” (R-03-LESCO)

The same is true in case of LESCO as reported in following excerpts:

“PEPCO makes rules and LESCO adopts them with no change because rules and regulations are same for all DISCOs”(R-09-LESCO)

There is also considerable control of MOWP and PEPCO in HR related decisions of senior management. MOWR (through PEPCO) takes HR decisions in Grade 18 and above including training, promotions, transfer and increments. PEPCO maintains seniority list of all employees. It nominates the employees for training according to seniority list. Likewise, promotion is decided according to seniority list by PEPCO. The same is true in case of inter-company transfer of employees. After unbundling of WAPDA, PEPCO was assigned the task to implement manpower transition programs in unbundled companies through rendering policy guidelines.
Still, the employees up to BPS-17 were given corporate employment with devolution of necessary HR authorities to companies. Whereas, the matters for BPS-18 officers remained with PEPCO due to centralized decisions for integrated seniority system. Following excerpts provide evidence of the centralized controls in HR decisions:

“PEPCO is managing the decisions of employee’s promotion in Grade 18 and above (i.e. XEN, SE, and Chief Engineers).” (R-22-PEPCO).

PEPCO takes decisions in consultation with MOWP. It is working as an arm of MOWP. In this way, the controls are exerted from the Ministry. Financial decisions are also controlled at central level. The hold on financial decisions is twofold. First, through price control mechanism (tariff determination) NEPRA allows only a minimal distribution margin to distribution companies. Secondly, if the distribution company generates more income (than the distribution margin) it cannot invest it on company’s benefit. Rather, it is transferred to CPPA and MOWP decides where to utilize the amount. Following excerpts explains it:

“All revenue generated is transferred to CPPA and LESCO gets only the distribution margin, even if LESCO generate more amount than the distribution margin, it cannot utilize that for company’s benefit.” (R-16-LESCO)

The above excerpt indicates that MOWP has high level of control on the financial decisions of the company. MOWP is also involved in tariff determination process and scrutinizes companies’ expenses against distribution margin. The centralized controls is twofold: First, there are centralized controls from ministry and secondly there are centralized decision making with in the hierarchies of the organization.

“I am always busy is satisfying questions from the top. Decisions are in the hands of top hierarchy. They do not consider ground realities in taking decisions and just give order to implement which is sometimes not possible.” (R-11-LESCO)
**NPM logic: Autonomy in decision making**

LESCO and IESCO are incorporated as corporatized entities under Companies Ordinance, 1984 with the constitution of the BODs. The formation of the companies provide sufficient evidence for the policy, operational and financial autonomy of the companies. According to Companies Ordinance (1984) and Corporate Governance Rules (2013), companies are to be governed by BOD which is a formal mechanism to reduce ministerial interference in companies’ affairs. Box 7.1 provides the detail of administrative and financial powers of unbundled companies specified in a report provided by PEPCO.

**Box 7.1: Administrative and financial powers of companies (PEPCO, 2010)**

<table>
<thead>
<tr>
<th>Powers of Unbundled Companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Powers related to all kinds of Works Purchases and Repairs.</td>
</tr>
<tr>
<td>- Approvals for purchase of Vehicles (Standardized Cars, Utility Vehicles, Fabrication of body etc.)</td>
</tr>
<tr>
<td>- Works against Tender for Construction, Maintenance and report works.</td>
</tr>
<tr>
<td>- Award of Contract work orders and Variation / change in original contract/ work orders / purchase orders.</td>
</tr>
<tr>
<td>- Purchases for stores including civil Construction/ Maintenance items, T&amp;P and instruments.</td>
</tr>
<tr>
<td>- Engaging Consulting Engineers and Administration of consulting services.</td>
</tr>
<tr>
<td>- Re-appropriation of Funds within the approved Budget. viii. Creation and abolition of Post.</td>
</tr>
<tr>
<td>- Contingent expenditure relating to purchase of stationery articles, hiring of residential Buildings and other miscellaneous.</td>
</tr>
<tr>
<td>- Powers for disposable of Property including Land, Buildings Surplus Stores materials, Instruments, Tools &amp; Plants, equipment and vehicles.</td>
</tr>
<tr>
<td>- Payments under Court orders.</td>
</tr>
</tbody>
</table>

*Source: PEPCO (2010)*

Corporate Governance Rules (SECP, 2017) clearly state that the Chairman of the board should be from private sector. Moreover, 51% directors must be from private sector. Government cannot appoint CEO. There is a mechanism of selection of CEO. The BOD has to advertise shortlist,
interview and then recommend three persons for the seat of CEO to GOP. GOP selects one out of those three. According to a report from PEPCO:

“Perception of PEPCO of meddling in corporate affairs of companies is unfounded rather companies enjoy full administrative and financial powers, exercised by their own BOD and also supported on this account by PEPCO.” (PEPCO, 2010)

Hence, according to laws, the BOD of IESCO and LESCO is fully autonomous to take policy, financial and administrative decisions of the companies. However, other government reports verified only administrative and financial autonomy of the companies. The government controls policy decisions in order to maintain uniform policies in all the unbundled companies (including IESCO and LESCO). During the implementation stage of WAPDA’s unbundling reforms, PEPCO has provided consultancy services to the companies to enable them for independent operations and now companies are operating autonomously as indicated in following excerpt:

“PEPCO has steered the Companies for initial operations by providing them rules of business and other enabling mechanisms. The Companies on an appreciable scale have accordingly started autonomous operations”. (R-22-PEPCO)

Box 7.2 summarizes HR autonomy granted to distribution companies.

**Box 7.2: HR Autonomy of Distribution Companies**

<table>
<thead>
<tr>
<th>HR Autonomy of Distribution Companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Hiring of employees in BPS 1 to 19 in terms of Company’s Rules.</td>
</tr>
<tr>
<td>• Transfer/Posting of employees in BPS-1 to 17.</td>
</tr>
<tr>
<td>• All Establishment matters for employees in BPS 1 to 20 relating to disciplinary actions, leaves, availing of advances at Company’s end, except concern progression of officers in BPS-19 &amp; 20</td>
</tr>
<tr>
<td>• Inter Company transfer of employees in BPS 1 to 17 without any approval from Head Office.</td>
</tr>
<tr>
<td>• Promotions / transfer / up-gradation in time scales for employees up to BPS -17</td>
</tr>
<tr>
<td>• Appointments against Sr. Management positions like Administration &amp; HR Directors, Finance Director from open market</td>
</tr>
</tbody>
</table>

Source: (PEPCO, 2010)
Respondent from LESCO also verified that LESCO (being incorporated under Company Ordinance, 1984) has the autonomy to take strategic decisions and formulate its policies.

According to law, LESCO can make new policies and change the existing policies, rules and regulations as indicated in following excerpt:

“If we talk about by law, then LESCO is incorporated as public limited company under Company Ordinance 1984. Therefore, LESCO can take loans from others; LESCO can determine its tariffs with the approval of NEPRA. LESCO can make contract with other organizations with the approval of BOD. It can go for joint venture with other companies. For examples, we have power purchase agreement with IPPs. LESCO can take shares of any other companies. LESCO make its own budget but it has to be approved by NEPRA... However, government has representatives in BOD. Therefore, government is definitely involved in all matters.” (R-02-LESCO)

Above excerpt indicates that LESCO has strategic and operational autonomy. However, government has representatives in BOD and through this mechanism; government can be involved in company’s affairs as explained in following excerpt:

“I think IESCO is independent in its decisions. CEO has autonomy to take all operational and financial decisions. Board oversees the CEO’s decisions. However, the management has to consult the ministry and need formal approval before taking any decision. Our senior managers present their case to ministry through PEPCO.” (R-40-IESCO).

On the other hand, although the companies are fully autonomous in formal documents, they enjoy less real autonomy due to considerable involvement of MOWP in BOD’s decisions:

“We can say that ministry is fully involved in BOD’s decisions. Policies are from government.” (R-17-LESCO)

Moreover, the study found that BOD has less interest in company’s affairs and they seldom use their autonomy to take decisions. An important reason is the mechanism of BOD’s appointment. The government nominates the directors because WAPDA and President of Pakistan own companies’ shares. Since, the directors are not the investors in the company; therefore, they have less interest in company’s affairs. Even, the criteria of 50% representation from private sector
cannot work in case of IESCO and LESCO because directors from private sector come up with their self-interest. Therefore, they are not interested in company’s affairs as indicated in following excerpt:

“Board is created to fulfill a formality of Company's Ordinance, 1984 otherwise all decisions are in hands of government.” (R-12-LESCO)

A respondent admitted that LESCO is partially responsible for not using its autonomy. LESCO has not done any work to make its own policies. Some work has been done (HR policies of LESCO) in this regards but it is not implemented. Moreover, BOD never goes against government’s decisions because government has majority representation in BOD. Due to this reason, government can easily get approval from BOD. In this way, the mechanism of BOD serves as formality for company’s autonomy whereas; in reality, government has control in majority of decisions. In addition to this, evidences are also found where BOD approved certain decision, which was (later on) rejected by MOWP. Such a situation is a question mark on the company’s autonomy granted in Company Ordinance, 1984. Respondent from LESCO quoted following example to provide evidence:

“We needed cars for employees. We got approval of 200 cars from the Board of LESCO and placed order. 72 cars were received. Ministry took action against this decision because ministry was not informed about the decision. An inquiry committee was formed for investigation into the decision. Therefore, the decision was stopped from implementation. We had a stance that order of cars is placed after BOD approval but it was given no importance. Ideally, Board should take this decision but it is not the case.” (R-15-LESCO)

On the other hand, the CEO is also appointed by the government and remains in office until government order. Therefore, CEO also serves government’s orders. A respondent from IESCO exquisitely explained the situation, of presence of formal autonomy with less real autonomy, in following excerpt:
“Let me explain our autonomy…We are independent in a way that our hands and feet are tied up and we are allowed to swim.” (R-25-IESCO)

Respondents shared many experiences of direct ministerial involvement in their routine matters particularly HR related decisions in grade 19 and above. A respondent from IESCO explained that after unbundling of WAPDA, manpower was distributed among unbundled companies. Moreover, up to Grade 17, corporate employments were created. Therefore, IESCO takes decisions up to grade 18. However, for grades 19 and above, decisions are controlled by MOWP through PEPCO. For grade 19 and above there is integrated seniority system maintained by PEPCO. Following excerpts provide the evidence:

“Government has to approve contractual hiring’s first. Then it is approved from BOD and then we can hire them. If government restricts/ puts ban on hiring, then we cannot hire employees.” (R-01-LESCO)

“We cannot promote employee without PEPCOs permission.” (R-25-IESCO)

“Recently LESCO has hired 400 employees on different lower level positions like lineman, field officers. Most of which is political hiring. The ruling party has distributed these jobs in their area for taking votes in election” (R-04-LESCO)

Indirect political interference is also reported by respondents. Respondent explained that political interference has increased to a great extent. At time of integrated WAPDA, MNAs and MPAs were less influential. The seat of Chairman WAPDA was very powerful. Political hiring was quite rare. Now, who so ever has a minor reference in political government, can influence the CEO/ BOD. Government nominates BOD members. CEO is also appointed by government and remains in office till government order. Therefore, this position is quite vulnerable to political influences.

“It is not like that, I will be accommodating every demand from political actors. However, I cannot say ‘NO’ sometimes. Therefore, I have to handle the situations very diplomatically.” (R-13-LESCO)
While comparing the time of integrated WAPDA with autonomous LESCO, a respondent remarked that instead of increase in autonomy, there is considerable decrease in autonomy whereas, political influences are increased largely:

“WAPDA was the authority. It worked independent of political government's interests. Even minister could not influence the Chairman WAPDA. Now, political influences are too much to concentrate on operational efficiency.” (R-12-LESCO)

Respondent from IESCO also verified the increased political influences in their routine decisions:

“All time I have phone calls for hiring, firing, transfer… I may refuse eight demands out of ten… but I may not be in a position to refuse two… and if do not refuse those two than what the benefit for refusing the other eight. .. Political interference is all time present in my job.” (R-25-IESCO)

In terms of financial decisions also, companies are provided autonomy in documents but actual situation is different. According to PEPCO’s documentation, the companies are maintaining their independent accounts. Assets and liabilities have been apportioned and Balance Sheet of the companies are being prepared independently as required under Companies Ordinance, 1984. However, respondent in IESCO did not agreed to IESCO’s financial autonomy and presented a powerful argument:

“What is autonomy… autonomy is that I should be liable to pay CPPA’s due and that's it. I should be free to utilize my revenues on my own company. It may be giving incentives to high performers, or investment in profitable projects or investment on my distribution lines or even electricity generation. But, we cannot do this. We cannot do any investment our own.” (R-25-IESCO).

Hence, data revealed that both IESCO and LESCO have considerable formal autonomy (in laws and policy documents) to take financial and administrative decisions. However, there are various mechanisms through which MOWP and PEPCO has considerable control on financial, HR and
other administrative decisions. Moreover, due to interdependencies, some decisions cannot be taken until companies reach a consensus with other companies.

**NPG logic: Collaborative decisions**

Collaborative mode of interaction is also very prominent in embedded organizations. Data revealed that LESCO and IESCO have high levels of interdependencies on other actors in network due to various shared mechanisms. For these shared mechanisms, companies have to collaborate with other actors to have consensus in decision-making. Hence, NPG logic is also largely found in the case of LESCO and IESCO, and this logic presents contradictory pressures to the embedded organizations in the face of (TPA based) control and (NPM based) autonomy logics. Following sub themes are emerged from data on shared mechanisms and interdependency relationships among organizations in power networks.

**Uniformity of policies**

Study found that in the initial stage of unbundling reforms, in 2002, the companies took decisions independent of each other. Which resulted in less integration among various companies and quite different employment and other procurement decisions. Some DISCOs, who were performing better, were giving more benefits to employees as compared to other lost making DISCOs. Employees with less benefits started pressurizing the management to gain equal benefits because employees in all DISCOs shared the legacy of WAPDA Service Rules. The employees, against differentiated service rules in DISCOs, registered various legal cases. Under this pressure, PEPCO was engaged to ensure uniformity of policies among all distribution companies. Since, 2007 PEPCO takes policy decisions (with involvement or under order of MOWP) and it is implemented in all DISCOs uniformly. Following excerpt elaborates this phenomenon:
“PEPCO takes decision and LESCO adopts it as it with no change…. Because rules and policies are same for all DISCOs. If we will not adopt them as it then it will be a challenge to management. Employee will say that, with the same skills and experience, employee are getting different salaries in LESCO as compared to other DISCOs.” (R-02-LESCO)

Respondent from IESCO also verified it:

“Since, all are employees are still considered as WAPDA’s employees, therefore, we are bound to follow uniform rules.” (R-36-IESCO)

A respondent explains the need and process of consensus building, in decision-making:

“Let me explain, why WAPDA service rules are not changed. It is because the process to make any change is very long and needs consensus of many. If we want to make any change in HR policies, we will make an item notes and forward to CEO, then CEO will present it to BOD for approval. After the approval of BOD, it will be sent to PEPCO. PEPCO circulates it in all DISCOs. If they have no object then they will present it before PEPCO’s BOD for approval. If it is approved from PEPCO’s BOD, then it will be implemented in all DISCOs. This is how PEPCO is ensuring the uniformity of policies among all DISCOs.” (R-36-IESCO)

The respondent from MOWP provided another explanation for uniform decisions among companies and the role of a central coordination authority for such purpose:

“Certain level of decision making autonomy is given to companies. But, for uniformity of decision we need a body for which PEPCO was created” (R-32- MOWP)

The above excerpt clearly indicates the presence of three logics faced by the companies. It indicates that LESCO and IESCO are provided with autonomy (NPM logic) but at the same time, certain decision are taken at the central level (TPA logic) because companies are bound to have uniform policies through integrated decision making (NPG logic). Data also revealed that PEPCO (under the direction of MOWP) is maintaining mandated collaboration among DISCOs because they are themselves unable to achieve consensus decisions as indicated in following excerpt:
“In order to bring any change, we need consensus of all DISCO on the change which is very difficult is achieve. That is why DISCOs are dependent on ministry because only ministry can serve as common body among DISCOs.” (R-38-IESCO)

Above excerpt highlights several important points to note. First, embedded organizations (IESCO and LESCO in this study) need consensus (NPG logic) of all DISCOs to bring any change. Secondly, ministry is serving as common body for integration, which indicates that collaboration is mandatory for DISCOs. Therefore, some control (TPA logic) is present even in building consensus. Third, in the process of building consensus, actor’s autonomy (NPM logic) is compromised. The excerpt indicates that IESCO and LESCO cannot take independent decisions rather they have to agree with the uniform decisions. Following is another powerful excerpt that explains the clash between NPG and NPM logic:

“DISCOs have much interdependency. DISCO’s decisions got pending because of the condition of uniformity of policies in DISCOs. For example, LESCO wants to increase the benefits of employees and has the capacity to bear the expenses. But union will not allow LESCO to do so until all DISCOs accept to implement them and such consensus is difficult to reach.” (R-15-LESCO)

The respondent, in the above excerpt, points out that at times decisions get pending in order to develop consensus among various actors (NPG logic), which is a question mark on the autonomy (NPM logic) of the company.

**Integrated basket for finances**

Another significant finding of the study is interdependency of embedded organizations on other network actors for integrated management of finances. After unbundling of WAPDA, although distribution, transmission and generation companies are established as separate and independent companies. However, still all the money is combined together and managed by a centralized agency, which is CPPA. Respondent from IESCO elaborated this process and its impacts in following excerpt:
“All the money is going in a combine basket. Look at our position. We are at the top of distribution companies in meeting performance standards and by the grace of Allah, IESCO is a profit making company. Whereas, there are loss making companies also. If money will not go in combined basket then they cannot meet even the salaries of their employees. This is due to combined basket of finances, that they are surviving with losses. Therefore, this sector may not be supporting each other morally but you see financially we are supporting each other through this mechanism or you can say that we are affected from each other. All the income is being transferred to CPPA on daily basis which is managing all bills.” (R-25-IESCO)

Above quoted is another substantial excerpt, which highlights the presence and contradiction of various logics in embedded organizations. The combined and centrally integrated system to manage finances is certainly the indication of centralized control (TPA logic). On the other hand, it also depicts the need for collaboration (NPG logic) although mandated by central agency. Yet another indication is how autonomy of individual company is compromised to achieve the collaboration among various actors. Here, again the contradiction in NPG and NPM logic is clear. A respondent from IESCO, in following excerpt, more convincingly highlights it:

“But the drawback is that we cannot use our profits for our own company. Otherwise, we could invest our profits to grow our own company.” (R-25-IESCO)

Respondent from LESCO also validates the presence of NPG logic and its contradiction with NPM logic:

“Even if LESCO generates more income than its expenses, the profit will not be retained by LESCO. Rather, it will go to the common pool of CPPA. CPPA is managing all financial transactions among all organizations in power sector.” (R-16-LESCO)

**Integrated seniority and promotion system**

Another indication of NPG logic is integrated system of seniority and promotion in Grade 19 and above for which collaborative decision-making is required among distribution companies. As discussed earlier that although employees are distributed among companies, however, they still
share the legacy of employment under WAPDA Service Rules. Therefore, a combined seniority list is being maintained for training and promotion of employees.

Respondent from PEPCO explained that PEPCO had been implementing the corporatization and Manpower Transition Programs through rendering policy guidelines to unbundled companies. With the application of corporate laws, in 2007, each company was headed by CEO and companies had autonomy for employment decisions. However, employee’s seniority was suffered with this change. All employees were originally belonged to WAPDA and their was a combined seniority list. With the independence of companies, some companies promoted employees earlier whereas some companies could not promote employees because of lack of seats available. This, resulted in promotion of junior employees in some companies and stagnation of senior employees in other companies resulting in dissatisfaction among employees.

In order to safeguard employee’s concern, the matters for BPS-18 and above officers remained with PEPCO on the centralized arrangements. PEPCO was assigned to maintain integrated seniority and promotion policies for all companies. The matters of Grade-18 were resolved and delegated to companies on 2010. The matters relating to BPS 19 and upwards are still with PEPCO.

Through integrated seniority system, employees are promoted according to their time and can be transferred to other companies for this purpose. PEPCO develops consensus among all companies for taking such decisions as indicated in following excerpt:

“PEPCO has made a Selection Board comprised of all CEOs from all companies and one representative from ministry. This Board takes promotion decisions based on performance evaluation reports through KPIs.” (R-22-PEPCO)

Due to integrated seniority system, there are common rules for employees’ promotion in all companies. PEPCO announces integrated promotional vacancies, against which employees from
all companies can qualify. In case, an employee is eligible for promotion, whereas its company has no vacancy, then the employee is promoted to another company. A respondent explained this process:

“For example, if there are eight employees in LESCO who qualify for promotion, whereas LESCO has no seat, then they are promoted to other companies. This is how integrated seniority system is being managed.” (R-01-LESCO)

This integrated system (under NPG logic) presents challenge to the managerial autonomy (NPM logic) of the company as highlighted by a respondent:

“We have autonomy to take decisions up to grade 18. For the promotion of grade 19 and above executives, PEPCO is involved. PEPCO is handling combined seniority and promotion for all DISCOs. It is ironical that we cannot take such crucial decisions for the company. Our very efficient executive may be promoted to some other company.” (R-13-LESCO)

Centralized training system

The training system is working from the time of WAPDA. There is central training system on regional level for grade 1-15. For the employees in Grade 16 and above, WAPDA staff College conducts training periodically. It is an integrated training system, in which employees from different companies participate. WAPDA Staff College conducts management-training programs. Faisalabad Engineering Academy conducts technical trainings. Employees are provided training before promotion. PEPCO nominates employees (in grade 18 and above) for training according to seniority list and it is conducted by WAPDA Staff College. Companies are paying to WAPDA for providing training to their employees. This is a kind of outsourcing of training to WAPDA or taking training services from WAPDA against payment. This training is mandatory for promotion of employees.
A respondent from IESCO shared dissatisfaction with this system and perceived it as a challenge to company’s autonomy to take independent decisions for the betterment of executives. The respondent said:

“My question is why it is compulsory for me to send my employees to WAPDA to get training when we have other better institutes. WAPDA’s training is expensive. It is charging millions of rupees from IESCO. If I spend this amount to LUMS, they will provide us customized training according to the need of employees. Nevertheless, I cannot go for this option because even training from LUMS cannot make my employee eligible for promotion. WAPDA’s training is mandatory to get promotion. (R-25-IESCO)

This excerpt also highlights the contradiction of NPM logic (that prescribe managerial autonomy) and NPG logic (that prescribes joint training system).

From the above analysis, it is inferred that all the three logics are found in the decision making process of embedded organizations. TPA logic prescribes the mean of controls from centralized authorities in major decisions, which is very much evident in the relation of embedded organization with administratively senior organizations. NPM logic prescribes the mean of managerial autonomy, which is evident through the incorporation of LESCO and IESCO as independent public companies under Company Ordinance, 1984. Presence of NPG logic is obvious from the interdependency relations of the embedded organizations with other actors in network, due to which, they are bound to collaborate with other actors in many decisions. Hence, all the three logic are present in the decision-making process and interaction of organizations with other actors in network. Moreover, the logics present contradictory pressures to embedded organizations.

7.3.3- Organizational work practices

Data revealed that the three logic also present divergent pressures to embedded organizations for their professional legitimacy. Different work practices are prescribes by
different logics. TPA logic emphasizes bureaucratic rules, procedures and process based operational practices for professional legitimacy of the organization. On the other hand, NPM logic prescribes use of private sector/business practices in order to make the public organizations modern and efficient. Moreover, pressures from NPG logic are present in form of collaborative practices among interdependent organizations. Here, organizational expertise in the network and sharing of resources with other network actors is important for its professional legitimacy. Table 7.5 presents some excerpts to provide evidences of conflicting pressures from TPA, NPM and NPG logics.

**Table 7.5 Multiple pressures in work practices**

<table>
<thead>
<tr>
<th>TPA logic</th>
<th>NPM logic</th>
<th>NPG logic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adherence to rules, procedures, process and legality</td>
<td>Results, outcomes and use of business practices</td>
<td>Organizational expertise in network/contribution in shared goals</td>
</tr>
<tr>
<td>&quot;We are following same grading system of Federal Government.&quot; (R-39-IESCO)</td>
<td>&quot;DISCOs are implementing revenue protection measure like introduction of smart meters, mobile based meter, technology measures.&quot; (R-24-LESCO)</td>
<td>&quot;The NTDC was asked to provide proper support &amp; guidance to LESCO, in the functioning/establishment of Distribution Codes.&quot; (L-23-LESCO)</td>
</tr>
<tr>
<td>&quot;We handle matters according to rules and regulations. Our rules are defined for all operations.&quot; (R-38-IESCO)</td>
<td>&quot;I have to ensure the efficient use of resources&quot; (R-40-IESCO)</td>
<td>&quot;Financially, we are supporting each other through mechanism of integrated system of CPPA.&quot; (R-38-IESCO)</td>
</tr>
<tr>
<td>&quot;I have to ensure implementation of rules and regulations.&quot; (R-39-IESCO)</td>
<td>&quot;We are working on online meter reading system. In this system, meters will be directly connected with the server and we can take real time information about the consumption of electricity.&quot; (R-23-LESCO)</td>
<td>&quot;We share our expertise with other DISCOs.&quot; (R-23-LESCO)</td>
</tr>
<tr>
<td>&quot;Our policies are well defined. ... There are rules for everything. Criteria are defined. Delegation of power is very clear. It is almost same as in times of WAPDA.&quot; (R-04-LESCO)</td>
<td>&quot;latest IT and ERP system is introduced which was not possible in case of WAPDA.&quot; (R-08-LESCO)</td>
<td>&quot;IESCO has taken the initiative of net metering. Definitely, other DISCO can take our expertise to introduce this idea&quot;. (R-26-IESCO)</td>
</tr>
</tbody>
</table>
TPA logic: Rules and regulations based process orientation

Respondents have largely reported bureaucratic work environment of LESCO and IESCO based on implementation of rules and regulations, process orientation and fulfilment of legal requirements. Although the companies are unbundled from WAPDA, still WAPDA Service Rules are being followed with few changes in rules and criteria.

We are following WAPDA Service Rules. There are some changes but almost 90% of the rules are same as in time of integrated WAPDA.”

Over the period, new policies and rules are introduced by MOWP through PEPCO, which are implemented in all DISOCs. All the DISCOs have to rigorously follow those policies and rules. DISCOs cannot make their own policies or make any change in policies. Policies and rules are same for all DISCOs. A respondent, from LESCO, said:

“PEPCO makes modification in rules based on the policies of federal government and those rules are implemented in all DISCOs. There are no separate (independent) rules or policies of LESCO. (R-15-LESCO)

Respondents, from IESCO, commented

“We handle matters according to rules and regulations. Our rules are defined for all operations.” (R-38-IESCO)

I have to ensure implementation of rules and regulations.(R-39-IESCO)

SOPs are defined for commercial and operational activities. Duties are defined for every job. They were made at the time of WAPDA and DISCOs have adopted them. It indicates that DISCOs are working with the same bureaucratic orientation as it was at the time of WAPDA. Respondents have also reported that decisions are stuck or delayed due to procedural requirements and process orientation.
“There are so many delays in inquiries that they lose impact.” (R-16-LESCO)

**NPM logic: Commercialization and best practices**

NPM logic has prescribed several recipes for bringing change in the public organizations’ work environment. These include use of private sector best practices; IT enabled solutions; modern HR practices; commercialization and market competition to increase efficiency. Various NPM based initiatives are explained in following themes.

*Technology driven initiatives*

Study found many NPM based initiatives in LESCO and IESCO to improve work practices. The companies have adopted new technologies in the system including GIS System, ERP, Distribution SCADA, Smart Metering etc. A respondent said:

“Previously everything was manual. Now everything is computerized… ERP, CIBS, mobile metering… these are all efficiency oriented tasks. There is improvement in LESCO. It is moving towards better management.” (R-24-LESCO)

Commenting on introduction of GIS system, a respondent (from planning department of LESCO) explained that the company is working on system improvements for planning through GIS analysis techniques. The system is shifted from manual work to automated data and they are working online. Planning and analysis is improved through new and latest soft wares. The basic purpose is to improve the capacity of the system and to decrease cost and time. Through GIS analysis employees can work on shortest possible route to provide electricity. Moreover, they analyze to balance the load according to the requirement and demand of different area as indicated in following excerpt:

“Previously, we use to do it manually. Now, with automated data the system is more efficient for accurate planning and analysis.” (R-09-LESCO)
The annual report of IESCO (2014) reported, GIS mapping project, as a major initiative of the company:

“An extensive exercise is being conducted in order to map IESCO’s Transmission lines more accurately using GIS mapping software. Implementation of the GIS mapping system has greatly improved the system.” (IESCO, 2014)

Another significant initiative is implementation of Enterprise Resource Planning (ERP) in both LESCO and IESCO. LESCO has implemented for modules of ERP including HR and administration, finance, billing and material management. The system is A respondent commented:

“ERP system is implemented for speedy work. Transparency has increased. Early we used to do manually. Because LESCO is a commercial organization, so there is more result-based culture. (R-06-LESCO)

The transmission and distribution infrastructures are also being modernized through technology driven ‘Smart Grid’ initiatives. LESCO has installed smart meters on common delivery points (CDPs) to record real time load and energy data. IESCO is also working on smart grid system as explained in following excerpt:

There are two basic objectives of smart grid system: (1) reduce losses through improved energy monitoring, and (2) minimize outage response time ensuring better customer service and increased revenues. Through this initiative, we are moving towards modernizing IESCO’s distribution infrastructure.(R-26-IESCO)

LESCO has taken initiatives to improve recoveries through Automatic Meter Reading (AMR). Respondent explained that meter-reading system is modernized through mobile readings. It will increase the efficiency and accuracy of data. The respondent said:

“Recently mobile meter is on the boom, all the LESCO is shifted on mobile meters in which our linemen take snap short of the meter.” (R-10-LESCO)

IESCO has taken the initiative of ‘Net Metering’ through which IESCO is encouraging consumers to invest on solar panels and sell electricity to IESCO. Net meter provides complete
detail of how much electricity is consumed from IESCO and how much is transferred to IESCO.

The respondent from IESCO said:

“This how we are engaging civil society to solve our energy crisis.” (R-25-IESCO)

_Commercialization and competition_

One of the purpose, of unbundling of WAPDA, was to break the monopoly and create competitive environment and commercialization in the sector. DISCOs are competing with each other for better performance. Moreover, there is more and more pressure for recoveries and generation of income. DISCOs have to meet their expenses themselves with less reliance on government’s subsidies as indicated in following excerpt:

“IESCO is generating it’s revenue. We have no support from government’s budget in form of subsidy. (R-25-IESCO)

Respondent from LESCO also verified it:

“LESCO is on breakeven point with no profit no loss. Subsidies are reduced over the period of time. We completely generate income ourselves.” (R-10-LESCO)

Above excerpts indicate presence of commercial logic in LESCO and IESCO whereby public organizations have to utilize resources in efficient manner and generate income to meet expenses. Government subsidies are reduced and stringent criteria is used for allocation of distribution margin. Another aspect of NPM logic is competitive environment for which mixed results are found. There is evidence that companies have to compete with each other but on the other hand there is no market competition for the companies. Putting in other way, companies have monopoly in their area and therefore they have no pressure of market competition. However, they have to compete with each other on the performance indicators assigned by NEPRA and MOWP. Hence, there is performance competition among companies but market
competition is not yet created, although it was one of the major purpose of unbundling of WAPDA. A respondent from NEPRA commented on this phenomenon:

“Look our policy is to break the monopoly. We have to work on it. But it is only possible when electricity supply is at the level that it becomes abundant. Then you can go for competitive bidding. Nevertheless, currently, we are facing electricity shortage. Therefore, it is not possible. However, one of our objectives is to break monopolies and to bring competitive environment in the energy sector.” (R-26-NEPRA)

Due to monopoly in the area, companies have less pressures for efficiency and reduction in price.

A respondent from LESCO explained that WAPDA is unbundled into several companies. Still it cannot be said that there is market competition in power sector. All DISCOs have monopoly in their respective jurisdiction. So, LESCO and IESCO are not working in market competition.

Respondent from IESCO pointed to the inherent problem associated with lack of market competition in following excerpt:

“Market forces are the best source to meet the demands of the customers. Currently companies have their monopoly in their respective jurisdictions. If you say that you paid extra amount to get meter, or to adjust bill or to have any other facility. Why it is so? This is because you have no other option. If there are other distribution companies, why you would choose IESCO? Only when IESCO provides you reliable and better service. I thing market competition is necessary. It will result in better practices, better services and we will move towards betterment.” (R-25-IESCO)

The respondent also recommended that market competition is not difficult to create. Government has to allow private companies to distribute using the same transmission and distribution lines as explained in following excerpt

“Let’s say there are two distribution companies in Islamabad. What will happen? There will be competition. Let another private company distribute electricity. We do not need separate transmission or distribution lines. It can use existing ones and give rent to CPPA … very much possible ….so you see there are other ways to bring market competition in energy sector. We don’t need to privatize DISCOs for it.”(R-25
Although companies are not bearing pressure of market competition, but they have to compete with each other for performance standards set by NEPRA and monitored by MOWP. In this respect, they have performance pressures from higher authorities.

7.4- **Conflicting situations due to adherence to multiple logics**

Data revealed that management of embedded companies has to face conflicting situations due to their accountability to diverse authorities and interplay of prescriptions coming from diverse logics. Sometimes, the decisions taken from one authority is not acceptable by other authority. At times, it becomes very challenging to satisfy the diverse demands coming from different authorities as noted in following excerpt:

“We needed cars for employees. We got approval of 200 cars from the board of LESCO and placed order. 72 cars are received. Ministry took action against this decision because ministry was not informed about the decision. An inquiry committee was formed for investigation into the decision. So the decision was stopped from implementation. We had a stance that order of cars is placed after BOD approval but it was given no importance. According to Company ordinance, our Board should approve such operational decisions but what about in this case.” (R-15-LESCO)

This excerpt indicates that the hold of MOWP is to such extent that even the company cannot buy cars without approval of MOWP. It indicates conflict in authorities due to overlapping of authorities’ jurisdiction. BOD has the power to approve operational decisions. However, approval from MOWP is also necessary. On the other hand following excerpt indicates the involvement of NEPRA in such decisions.

“NEPRA determines the tariff. Even if LESCO has to buy cars…say 100 cars… it has to get approval from NEPRA. NEPRA has its detailed policy requirements against which it can approve… We have to wait till we get ok sign from NEPRA.” (R-02-LESCO)

Thus, the data revealed presence of all the three logics in mode of governance of embedded organizations (LESCO and IESCO). The companies have to report to political government by regular reporting to MOWP and frequent queries from PEPCO and MOWP,
which indicates that TPA logic is present largely. On the other hand, Board of Directors are also very active in putting performance pressures and questioning from the management which indicates the presence of NPM logic. At the same time, NPG logic is also very prominent since the companies have to regularly report to NEPRA and satisfy the queries coming from the Monitoring and Evaluation Cell of NEPRA. Hence, the embedded companies are answerable to multiple authorities under various logic (actively playing their role) in the governance of the companies. Following excerpt shows how multiple logics are working at the same time with respect to audits of the companies.

“There are three types of audits. First, we have our own internal audit department, which conducts audits throughout the year. Second, statutory audit which is conducted from auditor general of Pakistan. Third is corporate audit where BOD appoint an auditor.”(R-25-IESCO)

Hence, data revealed that embedded organizations (LESCO and IESCO) are faced with multiple logics that create conflicting situations for the organizations. Thus, LESCO and IESCO are experiencing high level of institutional complexity being placed in the governance network.

7.5- Conclusions

This chapter has addressed the level of institutional complexity faced by organizations in governance networks in energy sector of Pakistan. The level of institutional complexity is determined through two dimensions: (1) The multiplicity of institutional logics whereby multiple logics are present in goals and means of organization; (2) Contradiction of institutional logics whereby the goals and means prescribed by different institutional logics are conflicting. This study has examined this phenomena in two organizations (LESCO and IESCO) taking them as embedded unit of analysis in the power network.
The study has found that both organizations are faced with three diverse institutional logics (TPA, NPM and NPG) in their goals, values and means. The contradictory pressures in goals and values included public service orientation (TPA logic), customer orientation (NPM logic) and collaborative orientation (NPG logic). Likewise, LESCO and IESCO are facing conflicting pressures in the means to achieve goals such as performance monitoring mechanisms, decision-making process and work practices to gain professional legitimacy. In terms of performance monitoring mechanisms, three diverse accountability mechanisms are at practice including control from the MOWP, monitoring by the regulator and at the same time questioning from the Board. The management is found vulnerable to these diverse pressures. In terms of decision-making process the management is confused with contradictory pressures such as managerial autonomy for strategic and operational decisions; high ministerial control in most of the decisions and need for collaborative decision making for integrated practices. The inconsistent demands were also found in their work practices. Hence, the embedded organizations are faced with high level of contradictory pressures from three diverse institutional logics.
Chapter 8  Network Characteristics, Organizational Attributes and Organizational responses to Institutional Complexity

8.1- Introduction

This section addresses last two research questions: (1) How network characteristics and organizational attributes influence institutional complexity faced by embedded organizations in governance networks. (2) How organizations embrace (internally manage) institutional complexity by choosing appropriate response?

Using the multilevel analysis framework of Greenwood et al (2011), this study addresses the question at three levels: Macro, meso and micro.

- **Macro level analysis**: How multiple reform models have created institutional pluralism in the public sector?
- **Meso level analysis**: How network characteristics shape the institutional complexity for the embedded organizations (LESCO and IESCO)?
- **Micro level analysis**: How organizational attributes shape institutional complexity for the embedded organizations? In addition; how embedded organizations respond to multiple logics to embrace (internally manage) institutional complexity?

Macro level analysis of energy sector reforms and institutional pluralism faced by the public sector is discussed in chapter 6. This chapter addresses meso level and micro level analysis of institutional complexity.
8.2- Network characteristics and institutional complexity

Based on relational ties among actors in power network, themes were generated on network characteristics. Three network characteristics came out from the interaction pattern of actors in power network: centralization, fragmentation and trust. In following sub-themes, each characteristic is evaluated in terms of its impact on institutional complexity faced by LESCO and IESCO.

8.2.1- Centralization and institutional complexity

Data revealed that power sector is being managed with various centrally controlled mechanisms. Although power network has shifted from highly centralized and vertical system of WAPDA to decentralized and horizontally arranged organizations. However, still government authorities are controlling major strategic, financial and operational activities/decisions of embedded organizations. Although they do not enjoy authority position over embedded organizations (LESCO and IESCO), however, they can greatly influence the decisions. IESCO and LESCO have to follow their instructions. Therefore, some command and control relations exist in the network, which create moderate level of centralization in the network. Evidences of centralization are discussed in following sub themes emerged from the data. Figure 8.1 depicts the codes, categories and themes generated through NVivo.
Centralized financial transactions and decisions

All Financial transactions are integrated through the mechanism of CPPA-G in power sector. CPPA-G was created in 2005 with the mandate to manage procurement process in power sector on behalf of the consumer in transparent and efficient process. It managing all financial transactions among various actors. All invoices and financial transactions take place through CPPA-G. There is no direct financial dealing of actors with each other. This is due to single-
buyer market mechanism. Due to presence of CPPA-G (single buyer) power generation companies and power distribution companies need not to interact with each other. Hence, interaction takes place at central level. A respondent explained it as follows:

“All the invoices are transferred through CPPA. It is central agency to purchase and sale power in energy sector” (R-10-LESCO)

The mission of CPPA-G clearly indicates that it has to facilitate competitive market which necessitates existence of multiple buyers in the market. However, currently power sector is in transition period to reached that goal. Therefore, CPPA-G is working on single buyer model and centrally managing and integrating all financial transaction in power sector as indicated in following excerpt:

“All there is a central power purchasing company (CPPA-G). It is managing all buying & purchasing deals. You can say that it is power-purchasing agent. All payments are done through CPPA-G.” (R-19-NTDC)

In addition to managing financial transactions at central, major financial decisions are also taken at central level. Through the mechanism of CPPA-G, Ministry has high control on managing finances in the sector. Major decisions are taken by the Ministry including allocation of subsidies, investment on projects to increase generation capacity, investment on system upgradation and maintenance etc. Companies have less autonomy to spend their income according to their will. They only get operating margin which they can use. Any income generated more than that margin is put in centralized system and utilized by decision of central authorities as explained in detail by a respondent:

Look at the system, all the money going in combine basket. Now what is the effect? There are loss-making DISCOs. If money will not go in combine basket then they cannot meet even the salaries of their employees. This is due to combine basket for finances, that they are surviving with losses. All the income is being transferred to CPPA on daily basis, which is managing all bills. However, the drawback is that we cannot use our
profits for our own company. Otherwise, we could invest our profits to grow our own company.” (R-25-IESCO)

This excerpt raises an important point to analyze how centralized financial transactions can decrease institutional complexity for the embedded organizations. As explained by the respondent, that due to the ‘combined basket’ of finances, companies have less burden to meet expenses. They can survive even with losses. That means, this centralized system has decreased the pressure of NPM logic for embedded organizations. The pressure of profitability, is handled at the central level, and does not come down on organizational level. The result is reduced institutional complexity faced by the embedded organizations. On the other hand, profit-making DISCOs may find more contradiction among NPM logic and TPA logic because due to centralized decisions, they cannot utilize their profits themselves rather it is decided at central level.

**Centralized system of Price control**

Electricity prices are controlled by NEPRA through the system of tariff determination in generation, transmission and distribution of power. Respondents from regulatory body explained that NEPRA calculates distribution margin for every company. Purchasing price is already determined by NEPRA. Company adds distribution margin in purchase price and then distribute to consumers. A respondent said,

“NEPRA is the regulator of power sector. All tariffs and licenses have to be approved from NEPRA. It determines tariff through a transparent and unbiased process” (R-26-NEPRA).

The tariff process control is evident in following excerpt:

“Any change in tariff is approved by NEPRA whether it is unit price, or surcharge or any tax. NEPRA looks into whether it is viable for customer or not. They give LESCO a format to file petition for tariff. Then NEPRA calls a public hearing. LESCO has to give hearing and provide clarifications for why it is charging such amount.” (R-10-LESCO)
Companies have to justify their distribution margin explaining each and every amount that they claim. NEPRA approves tariff after taking clarifications under each head of expense claimed. Then, NEPRA calls public hearing for which public notice is published in newspapers to invite General Public in hearing. Anyone can come who has reservations related to tariff can join this hearing.

It means that there is a clear process of tariff determination at the central level managed by NEPRA. This mechanism settles the tension between public service orientation (TPA logic) and customer orientation (NPM logic) at the part of embedded organizations. Companies cannot charge high price to increase their profitability. On the other hand, loss making DISCOs are provided government support (in form of subsidy) to satisfy public service logic. In this way, a central mechanism at network level solves the tensions between diverse pressures of NPM and TPA logics. Hence, centralized price control reduces institutional complexity faced by embedded organizations.

*Inter-company collaborations through Ministry*

Although WAPDA is restructured into autonomous public companies but there are still various matters for which companies have lot of interdependencies. However, companies do not coordinate with each other directly. Rather all the inter-company matters are managed and decided by the Ministry through PEPCO. These matters include integrated system of employee training, integrated system of employee promotion and inter-company transfer of employees. MOWP (through PEPCO) is managing various operational activities in which companies need to maintain uniform rules for employees. PEPCO maintains seniority list from all companies. Based on seniority, employees get training from WAPDA and get promotion according to their turn. If a company does not have vacant seat then employee is promoted and transferred to some other
company in the power sector. This is how the system is being managed centrally by the Ministry.

Following excerpt are the evidence of centralized operational activities in the power network:

“There is also an integrated system for training of employees because training is linked with promotion… PEPCO nominates employees in grade 18 and above for training according to seniority list and it is conducted by WAPDA. (R-22-PEPCO)

Moreover, there is centralized system of inter-company employee transfer among unbundled companies. Employees are allowed to get transferred to other companies on the basis of certain conditions. Such matters are also managed by PEPCO.

“We also share manpower with each other. Inter-company transfer is still applicable. Recently a director is posted in IESCO from MEPCO. Another one from LESCO… one of our officer is transferred to Quetta. I was previously posted in GEPCO holding then was transferred here. So, inter-company transfer is quite frequent and routine activity” (R-38-IESCO)

Furthermore, employee’s salary decisions are also handled centrally to maintain uniformity among companies. A respondent from the Ministry explained,

“We also want to have similar and uniform system in all companies. It is not like, in Haider Abad an employee takes ten lakhs and in Lahore an employee takes two lakhs on the same designations. Then people would like to move in Haider Abad. So we want to bring uniformity because the tariffs are uniform….the customers are uniform…so, we cannot afford differences in employees’ salaries. For this uniformity, a coordinating body is must because ministry itself cannot involve in such operational details… So PEPCO is coordinating all these inter-company matters and reports to Ministry” (R-37-MOWP)

In short, companies have interdependencies including maintenance of inter-company seniority list, inter-company promotion, transfer and integrated training system. All these inter-company matters are managed by central authorities (Ministry and PEPCO). Here again, the centralized mechanism helps to settle the tension between NPM logic (independent decisions of the companies) and NPG logic (Companies’ collaborations). NPM logic demands to have decisions that are in the best interests of the company. Such decisions may not be beneficial for other
parties. Such situations can create conflict and bargaining behavior among the companies. However, due to the centralized mechanism, companies need not to go in negotiation and strategic gaming against each other. Hence, institutional complexity is reduced for the embedded organizations in the network.

8.2.2- Fragmentation

Besides centralization, evidence of fragmentation is also found in data. WAPDA’s unbundling reforms have created many autonomous companies and authorities in the network who are placed in horizontal relations with each other. The vertically integrated system of WAPDA is changed into competition and negotiation based relations. Although there are many centralization mechanisms but at the same time fragmentation also exists. The government authorities such as MOWP and NEPRA are although placed central, but they cannot enjoy authority position in network. Actors are challenging the author positions of government authorities. Moreover, presence of multiple authorities has also created fragmented directions in the network. There are overlapping and sometimes conflicting demands from diverse authorities. On the other hand, evidence of conflicting rules and standards is also found. Figure 8.2 illustrates the codes, categories and themes found on fragmentation in power network.
Multiple and overlapping administrative authorities

As discussed earlier, that there are multiple public agencies which are managing activities on central level in the network. CPPA-G is managing all financial transactions. NEPRA is responsible for regulatory requirements. Ministry is responsible for management issues in network and PEPCO is coordinating with ministry and unbundled companies. These authorities
are working independent of each other and separate pressures on the actors in network. Therefore, actors have to bear pressure from multiple authorities at that same time and sometime their demands are conflicting as indicated in following excerpt:

“We are answerable to multiple administrative senior bodies and it creates much confusion at times. When you have multiple directions, definitely it makes the decision making more complex. You are confused” (R-25-IESCO)

In case of performance monitoring, NEPRA has its standards of power generation, transmission and distribution, which all companies have to follow. NEPRA regularly evaluates and monitor the performance of all actors in power network according to the set standards. Companies’ performances are compared with each other on the set standards. Based on its records, NEPRA publishes an annual “State of the Industry Report” on the progress of power generation, transmission and distribution. On the other hand, MOWP is also monitoring performance of public companies (including DISCOs/GENCOs and NTDC) according to its own criteria. It has developed a Dash Board to get real time information on companies’ performance. PEPCO is also involved in this process. In addition to this, every company has its own Board of Directors for which management has to be very responsive. The situation that management has to face due to multiple requirements is clearly depicted in following excerpt:

“There is NEPRA. We have to meet performance standards set by NEPRA. Then there is Ministry, which is also looking into company’s performance. BOD has its own requirements.” (R-25-IESCO)

On the other hand, due to presence of multiple authorities, responsibility and accountability has become ambiguous as indicated in this excerpt:

“I think there is more ambiguity now. No one is responsible and we don’t know who to contact for problems”. (R-19-NTDC)

“We are confused. Sometimes CEO is taking decision. At times BOD is taking decision. At times PEPCO does it. At times ministry.” (R-16-LESCO)
A report of Power Distribution improvement program (PDIP) reported this phenomenon and commented that such situation increases pressures on management:

“The management is unclear as to whether it reports to the Board of Directors, to PEPCO, or to the Ministry of Water and Power. Partly because of this, outside governmental as well as political pressures are commonly and effectively exerted on LESCO senior management - which is itself selected by PEPCO not by the Board of Directors” (PDIP 2010: 67)

These findings indicate that the multiple and overlapping authorities create conflicting situations for the embedded organizations. These situations increase institutional complexity faced by embedded organizations.

**Conflicting rules**

Before restructuring of WAPDA, there was much clarity in rules. WAPDA was following ‘WAPDA’s Service Rules’ which contains a comprehensive set of rules and regulations. After restructuring, WAPDA’s Service Rules were not followed because companies were created under Companies Ordinance, 1984 as independent legal bodies to be governed by Board of Directors. So, companies had to make their own rules and policies. However, to maintain uniformity among companies, they were not allowed to make any major changes on already established WAPDA Service Rules. All companies adapted same rules and PEPCO (in consultation with MOWP) was authorized to rules or policies for all companies. PEPCO has devised various policies, which unbundled companies have to implement. Moreover, under Companies Ordinance, BOD is authorized to approve any policy for the company. On the other hand, companies can also follow Federal Government Rules or Provincial Government Rules under certain conditions. NEPRA also make rules and regulations to be followed by companies. Therefore, after restructuring of WAPDA, there are various sources of guidance that create confusion on the one hand and flexibility on the other hand. This situation can be critical for the
companies, if they are faced with conflicting rules to be followed. However, at the same time, companies can use this situation as flexibility to follow whatever rules suit them as highlighted in following excerpt:

“Application of rules and laws has become ambiguous. Therefore, people try to get advantage from different provisions available in different laws. There is no unified system. There is no single law to follow. There is company’s ordinance, 1984….then WAPDA’s service rules….Then provincial rules… the rules of Federal Government. So, multiple sources are there to take guidance.” (R-17-LESCO)

The situation gets further complicated for the embedded organizations when the authorities challenge the working of organizations under various conditions. The organizations are autonomous and may take decision following certain rules. Whereas, their decisions can be challenged in under other government rules.

“There are so many authorities. Ministry, PEPCO, BOD, CEO all have powers and their jurisdictions overlap. Therefore, everyone tries to use power in his/her capacity and for personal benefits. Rules and regulations are not clear, therefore, there is lot of room for variation in decisions in different situations.” (R-24- WAPDA)

The findings indicate that multiple rules have increased flexibility to take decisions. On the other hand, due to contradiction, authorities can challenge the decisions using some other criteria or rules. Such situations increase institutional complexity faced by embedded organizations.

**8.2.3- Trust**

The third network characteristic is trust for which mixed responses are found in data. There is high level of trust in some actors in network and very low trust level in some other actor. While looking at the pattern of presence or absence of trust in the data, it was found that actors in authority or hierarchical relationships have less trust in each other. Whereas, actors in horizontal relationships have more trust in each other.
Actors, having horizontal relationships, include all companies that are involved in operational activities in power supply chain including power generation, transmission and distribution companies. They cannot exert authority or power against each other. All are playing their provided role in supply chain independent of each other. WAPDA was a large public authority which was unbundled into multiple small companies who are working in their respective jurisdiction. Generation companies are working in market competition because many private sector producers are involved in power generation. Whereas, distribution companies have their monopoly in their respective jurisdiction and have no overlapping areas. For, inter-company matters they coordinate with each other through MOWP and PEPCO.

Respondents have reported high trust level among unbundled companies. Companies do not take advantage against each other. Rather, they cooperate and guide each other. There are strong informal network ties among employees in various companies because they share WAPDA’s legacy. Management cooperate and help each other for common tasks. Companies have lot of interdependencies and they coordinate with each other in these areas. They cooperate in sharing resources and in combine issues. A responded commented,

“Trust level is high because organizations are so much dependent on each other that without trust, things will not work. Generation companies have to take payments from DISCOs. Many times there are less recoveries and delays in payment. They have to trust each other. There is no other way. Otherwise whole system will stop.” (R-24-WAPDA)

It is in the benefit of the companies to cooperate with each other because they are faced with same situations. All of them are facing conflicting situation against multiple authorities after unbundling. Through cooperation and trust in each other, they can better handle the situations as indicated in following excerpts:

“It is beneficial for us to cooperate with each other… we have survival in cooperation… otherwise things will become difficult for us.” (R-10-LESCO)
A respondent from PEPCO explained it from another point of view in following excerpt:

“I would not discount trust level, there is trust deficit but not much. Because everybody knows that, it will ultimately get the amount because ultimately, government is the owner and we are from same family. Therefore, we can say that organizations have to trust each other by compulsion. There is no other way. Hence, they have to.” (R-31-PEPCO)

Respondent, from NEPRA didn’t expressed high trust among actors although there was a general agreement towards cooperation in respondent’s argument.

“We are unbundle WAPDA, several independent /autonomous companies are formulated with separate CEOs. Still WAPDA exists, Chairman WAPDA exists, PEPCO exists, still the financial control, is in the hands of federal ministry. Therefore, whenever there is any national level power issue, all the CEOs of the companies get together for the solution. So, I must say that there is cooperation among them. However, there are many communication gaps also.” (R-28-NEPRA)

On the other hand, MOWP, PEPCO and NEPRA have authoritative relationships with other actors in power network because other actors are bound to fulfill their requirements or orders. Respondents, in companies, have shared lack of trust in MOWP and PEPCO and the same perception is shared by MOWP and PEPCO. A respondent from distribution company said,

“I don’t think that other companies have trust in PEPCO. Companies are generally against PEPCO. This is because PEPCO looks after their affairs.” (R-20-LESCO)

Respondent from PEPCO also accepted it,

“Other companies collaborate with each other against PEPCO and Ministry.” (R-22-PEPCO)

A respondent, in Distribution Company, exquisitely explained it in following excerpt

“But when you talk about ministry, there is a paradigm shift in that case. Look who is sitting in ministry… they are bureaucrats. Whereas, companies are the world of technocrats. A technocrat takes decisions based on ground realities because they know the system constraints. On the other hand, bureaucrats are entirely different in their approach, style… they are authoritative in nature, and they take decisions on surface level because they do not know the ground realities…. so they have different frame of mind… So, how can you expect that they will trust companies…. Secretary ministry is present on Skype to keep in touch with different companies because he has less trust in the
management but the problem cannot be addressed if trust deficit exist between ministry and companies… this trust deficit needs to be addressed…” (R-25-IESCO)

This excerpt clearly depicts that trust deficit exist in case of companies and MOWP. Due to lack of trust MOWP is engaged in operational activities of the companies. MOWP has less confidence that companies can manage their affairs effectively. For the findings, it can be inferred that trust is an important characteristic of governance network to handle complexity. However, it has mixed impacts in increasing/ decreasing institutional complexity for embedded organizations. The high trust among DISCOs decreases the institutional complexity because organizations cooperate with each other and help out each other in critical situations. On the other hand, the distrust of Ministry and DISCOs increases institutional complexity for the embedded organizations because of more and more interference and scrutiny from Ministry.

8.3- Organizational attributes and institutional complexity

Study found various attributes of LESCO and IESCO which are crucial to handle institutional complexity. These attributes are important for the organizations to bear conflicting pressures from multiple logics and to choose appropriate response. These attribute act like filters for organizational members to respond to institutional logics. Data revealed following attributes of LESCO and IESCO, which are important in handling institutional complexity.

8.3.1- Ownership and governance

IESCO and LESCO both are incorporated under Companies Ordinance, 1984 as separate legal entities to be governed by Board of Directors (BOD). According to Corporate Governance Rules (2013), the Board has to be consisted of executive and non-executive directors including independent directors and representatives of minority interests. Independent directors should not be less than 40% of the total members of the Board. Moreover, 51% directors should be from
private sector. Government or other shareholders will appoint the directors. Box 9.1 contains clauses of Corporate Governance Rules (2013) regarding composition of the Board. Respondent from PEPCO commented on the corporate governance of unbundled companies:

“The companies are autonomous to take strategic and operational decisions. According to law, Chairman of the board should be from private sector. Moreover, 51% directors must be from private sector. Government cannot appoint/nominate CEO. CEO is only selected by BOD. BOD has to advertise, shortlist, interview and then recommend three persons for the seat of CEO. The GOP select one out of those three.” (R-22-PEPCO)

The purpose, of creation of independent companies governed by BOD, was to increase the distance of LESCO and IESCO from the government and to enhance company’s autonomy. However, the purpose could not met because the idea was not implemented in true spirit. A respondent explained

“The idea for unbundling of WAPDA was to make independent companies… the companies should take their own decisions. There was a BTA (Business Transfer Agreement) between WAPDA and each company. Still, WAPDA is a shareholder in companies. WAPDA has shares in companies and President of Pakistan has shares. For AGM we need proxy from president as well as from WAPDA then AGM can hold. Directors are appointed by the Federal Government and it has total hold on Board’s decisions” (R-25-IESCO)

Ideally, the management should take strategic and operational decisions with the approval from BOD, which is appointed by the federal government. However, this is not the actual case. The respondents explained that the presence of BOD is actually a formality and fulfillment of legal requirement. Whereas, in reality, government has total hold on LESCO and IESCO. MOWP is involved in day to day affairs of the companies. Several themes were emerged from the data, which authenticated that the governance structure of LESCO and IESCO is misfit to handle institutional pressures. This mechanism has reduced company’s autonomy and enhanced government influence resulting in enhanced institutional complexity faced by LESCO and
IESCO. Most of the respondents (in both LESCO and IESCO) argued that the structure and governance mechanism of integrated WAPDA was better than the current arrangement. WAPDA was created as authority under the act of Parliament and acted as autonomous body. Whereas, in current arrangement, there is lot of opportunity for government to exert direct and indirect influence. Role of BOD is very important to handle multiple pressures but the BOD is itself a source to enhance complexity for the organization. Following themes emerged on the role of governance structure in handling institutional complexity.

**BOD composition and competency**

As per Corporate Governance Rules (2013), the Board should comprise of executive, non-executive and independent directors with a blend of core competence and diversity to govern operations of Public Sector Company. A requisite range of skills, competence, knowledge, experience and approach is needed in Board. The Board composition of both LESCO and IESCO was examined from the profile information of BOD provided on the websites of the companies. Moreover, respondent were asked about the expertise and interest of the Board members. Currently there are twelve members in the BOD of both LESCO and IESCO. Out of twelve, six (50%) members belong to private sector. Both Boards consists of diverse range of skills, competence, knowledge and expertise including corporate finance, corporate law, strategic planning and management and corporate affairs. Some of the directors are engaged in the Boards of other distribution and generation companies. For example, the Chairman of LESCO’s Board is also acting as Board’s Director in IESCO, GEPCO and MEPCO. The Chairman of IESCO is also Director of GEPCO and MEPCO. This is an indication of Board interlocks. The Joint Secretary (MOWP) is also acting as director in the Board of LESCO which can serve as the point of influence from MOWP to LESCO. The same is true in case of IESCO. Additional Secretary of
Ministry of Energy is acting as director in the Board of IESCO, which is a direct source of influence from the Ministry. The influence of Ministry was further revealed, in interviews, in LESCO and IESCO. Government nominates the Directors of LESCO and IESCO. Respondents remarked that appointments of directors are mostly reference based instead of merit based appointment. A respondent, from IESCO, said:

“BOD members are not appointed on merit. All are appointed with some reference or political affiliations. Some are political people, some are industrialists. All appointments are done by ministry and they serve for the interest of ruling party.” (R-38-IESCO)

Respondents, in LESCO, also pointed out that that the Board members are selected on the basis of their political affiliations. Due to their political affiliations, decisions of the Board are largely controlled by the government as expressed in following excerpt of a respondent from LESCO:

“For independence of board there should be no political affiliation and there should be no government portfolio of the members of the board. Whereas, the ex-Chairman of our board was holding a political seat. Dr. Musaddiq Malik who was the spokesperson of the Prime Minister of Pakistan. A direct influence was there through the Chairman”. (R-01-LESCO)

Respondents highlighted that Board need representative from the technical field to have core competence to understand viable solutions. Currently, none of the Director has technical expertise (i.e no one is engineer by qualification) except the CEO of the company. Since all belongs to general management, therefore, they overlook technical realities. There should be combination of core competence and diverse general expertise, which is also a requirement of Corporate Governance Rules (2013). Box 9.1 contains the relevant clause. Although, there is a blend of directors from public and private sector but there should be more representation of technical experts (engineers) in the Board. One of the Director in IESCO is MBBS (Doctor) by qualification but none of them is engineer by qualification. Respondent from LESCO and IESCO, expressed reservations on the expertise of Board members:
“Directors are not competent and have less expertise to watch company’s management.” (R-26-IESCO)

A respondent commented that Federal Government and Ministry is controlling the affairs of LESCO through the Board:

“In private sector, the Board is fully independent in governing company’s affairs. It is not the case in LESCO. BOD is answerable to ministry. The Minutes of Meeting of the Board are sent to the Ministry. Government and Ministry is basically governing LESCO through the board.” (R-05-LESCO)

The composition of the Board and its appointment process increases political involvement in the affairs of the company, which enhances the pressures from TPA logic. Whereas, presence of the Board, itself creates pressures of NPM logic. Hence, the Board composition enhances institutional complexity for the LESCO and IESCO. Representatives of public sector, particularly those who hold position in MOWP, enhance influence of government in the Board. On the other hand, directors from private sector have emphasis on private sector practices which enhance pressures of NPM logic. In this way, the composition of Board enhances institutional complexity for the organization.

**Interests of BOD**

Data revealed a fundamental problem that lies in the application of corporate governance mechanism in the context of public sector companies. LESCO and IESCO are public utilities whose primary goal is provision of electricity to public at large. This goal does not match with the motives of industrialists who are primarily interested in increase in profitability instead of general public’s interest. Therefore, representatives from private sector in BOD can increase institutional complexity for the companies due to the conflict of interest. A respondent thoroughly explained this conflict of interest:
“The problem lies in the interest of BOD members. BOD comprises of 51% from private sector. They are industrialists. An industrialist is least interested in general public’s interest. Their motive is profitability of the company. If companies are owned by private owners, they will focus on recovery and rate of power supply. Definitely, they will provide more electricity to industry where bill recovery is high and they can charge high rates. Then what about power supply to government departments, where bill recovery is most problematic. Currently, the companies are owned by government and government takes care of general public’s interest i.e. provision of electricity to all in affordable rates. Government is also more conscious for general public interest for political repute of party.” (R-22-PEPCO)

Above excerpt clearly explains that industrialists (Directors from private sector) in BOD are misfit to govern Public Sector Company because their priorities does not match with the interests of public. Moreover, every industrialist has its own stake in LESCO and IESCO since their industries are also taking electricity from the companies. Respondent highlighted that the Directors are interested to take advantage from the companies in terms of provision of electricity at lower rates. Moreover, they also try to determine less tariff rates in their respective industries. They influence management for their personal benefits instead of focusing on governance of the company as indicated in following excerpt:

“Boards are political. Ministry nominate the Directors who serve either ministry or their self-interest. Recently meeting fee is increase from Rs.10, 000 to Rs.35, 000/ per meeting. Director are not interested in companies’ interest. They influence management for their personal benefits. I can remember time, when we had such Directors in our Board who did not take fee for the meeting. Now, the situation is opposite. They not only change fee but also claim travelling and hotel expense. I really feel sad to see the professionalism of Directors. Recently, a Director gave me such insulting remarks for delay in his reimbursement claims. Whereas, the receipts were not eligible for reimbursement. (R-15-LESCO)

There is another reason for less effectiveness of Directors, from private sector, in the Boards of LESCO and IESCO. There is a difference in case of private and public ownership. In case of private company, the board members are the investors and elected by shareholders to watch the interest of the company. In such model, BOD make decisions in the best interest of the company
because their own investment is at stake. Whereas, in case of IESCO and LESCO, the board members are not the investors of the company. They are trustees of the government; therefore, their primary interest is not to watch company’s interest rather to watch the interest of the ruling party. A respondent commented:

“If directors are the investors, they would be concerned for the performance of the company for it would be ultimately the question of their profit/loss on investment. However, this is not the case. The government owns company’s shares. Therefore, directors are less concerned for the performance of the company and show less interest. No regular meetings of BOD are held. Decisions remain pending for long time. Their primary interest is not to watch company’s performance rather to watch the interest of the ruling party”. (R-12-LESCO)

Above excerpt indicates that there is inherent conflict of interest in Director’s and companies’ motives. Therefore, BOD presents conflicting situations for the management and enhances its own pressures on management. The same is true in case of Directors from public sector. They are also interested in ruling party’s interest or self-interest rather than the interest of public at large. They also try to influence management for their petty issues. Furthermore, through their presence, government has more direct influence on the decisions of the Board. Hence, the conflict of interest of both public and private sector directors increase institutional complexity for LESCO and IESCO.

**BOD as formality and source of complexity**

Respondents highlighted that BOD serves only as formality in paper (on record) with less effectivity. It only serves as additional authority or pressure for management. If, Ministry has to control all affairs of the company, then there is no need to have another mechanism (BOD) to govern companies.
A respondent, from IESCO, suggested that BOD can only be effective if government let them watch company’s affairs while giving autonomy to management. The direct hold of MOWP, in day-to-day management of the company, makes the system complicated as indicated in following excerpt:

“Board of directors are the trustees of government. Government should ask them for the performance of the companies rather than controlling everything itself.” (R-25-IESCO)

Respondent pointed out that creation of BOD has made the arrangement more complex.

“They have created public companies in public sector governed by the Board… the Board is nominated by government so government influence is full. What has changed is now we have multiple authorities to answer…Board, Government, CPPA, and Regulator… therefore, our department is facing many complications.” (R-I-LESCO)

Above excerpt indicates that BOD is a source of increased complexity for LESCO. Another respondent commented on the redundancy of this mechanism:

“BOD members take high remuneration for each meeting. This is another expense, that companies are bearing. If ministry has to take decision, then why should the company bear so much expense on BOD meetings.” (R-24-WAPDA)

A common theme generated was that the mechanism of corporate governance has resulted in more complex arrangement for LESCO and IESCO. This is a source of increased influences on management from various sources including directors from private sector, directors from public sector and the government itself. Each source has its own interests and influencing power which is not only complex to handle but also expensive for the organization. As compared to current arrangement, the governance mode of WAPDA was less complicated. WAPDA was an authority incorporated under Act of Parliament governed by the Chairman and four members. They had technical expertise to implement the policies of the government. Since, public organizations have to implement the policies of the government with less discretion of strategic autonomy, therefore, technical experts are in better position for implementation of policy. Hence, the
current governance mechanism creates more challenges for IESCO and LESCO to handle institutional complexity. A respondent said:

“Either the company should be privatized or it should be a completely public organization. Just like WAPDA was created under Public Act. Currently, it is neither a public company nor a commercial entity.” (R-17-LESCO)

The above excerpt also highlights the ambiguous identity of the organization created under the current governance structure. This ambiguous identity is also a source of increased complexity for the organizations. Appendix III provides the requirements for the composition of the Board as per Public Sector Companies (Corporate Governance) Rules of (SECP, 2017).

8.3.2- Role of CEO

The role of CEO is perhaps the most prominently emerged theme in handling multiple institutional pressures. Respondents highlighted that it is the CEO who has to bear all pressures coming from diverse authorities and has to politically handle the situations in a way that company performs well. Visionary, professional and powerful persons are required to hold this seat. Whereas, this study found that the seat of CEO is the most vulnerable position in the hand of government. Various themes were emerged on the weak position of CEO to handle institutional complexity.

Appointment of CEO

The Company Ordinance, 1984 contains provisions for appointment of CEO. Moreover, Security and Exchange Commission of Pakistan (SECP) has provided Appointment of Chief Executive Guidelines (2015) for Public Sector Companies. Box 9.2 contains briefing of these guidelines. According to these guidelines, BOD has to advertise the post, shortlist the candidates, interview and present three recommended candidates to the Ministry for the post of CEO. Ministry will
select and appoint CEO out of these three recommended candidates. If, Ministry has any reservation, it refer the matter back to the Board for reconsideration and identification of additional candidates for final selection. Ministry can also provide direction for the expertise/qualities required in the candidate. However, Ministry cannot itself appoint the CEO. Section 2 (1) of Appointments of Chief Executive Guidelines (2015) clearly states:

“The Board shall initiate the appointment process, at least three months before the term of the incumbent chief executive is going to expire, by issuing a public advertisement in the print media, inviting applications for appointment against the vacant position.”

According to this provision, the seat of CEO has to be advertised by the Board to have open market competition so that best candidates can come out. Further, shortlisting, scrutiny and then interviews have to be conducted. Such a rigorous process is made to ensure that the fitness and expertise criteria, for the seat of CEO, are met. However, respondents reported that this process is rarely followed:

“Ministry appoints the CEO and then BOD also approves the appointment. (R-17-LESCO)

Respondents explained that most of the time, Ministry appoints the CEO with the endorsement from the Board. Whereas, actually the Board is not involved in selection process and no public advertisement is placed for the seat. Whereas, according to the SECP guidelines (2015), Board is authorized to appoint CEO on the concurrence from ministry. That means the appointment process, mentioned in the SECP Guidelines, is not being followed as authenticated in following excerpt:

“According to law, BOD have to advertise the post, interview and shortlist three persons for the seat and then ministry will appoint CEO out of those three…. However, it is not followed actually. Currently out of 14 companies, only two or three CEOs are appointed through proper mechanism. Rest of all, are appointed by the government till further order.” (R-25-IESCO)
It means that most of the time the proper appointment process is not followed and ministry is enjoying high control on the seat of CEO of the companies. The control of ministry, to such extent, is critical for the companies and enhances complexity for them. Respondents also reported that it is in the benefit of Ministry to have less competent person on the seat of CEO because that person will be more receptive and accommodating to political interference. More competent and expert person can resist undue involvement from Ministry and other indirect political interference in company’s affairs. Moreover, a CEO with leadership abilities, may come up with its own vision to lead the management and therefore, will be a threat to day-to-day ministerial involvement in operational decisions. Therefore, it is in the best interest of the Ministry to have a mediocre person on the position CEO. On the other hand, it is in the best interest of the company to have an expert and professional CEO with leadership abilities. Such a CEO can use the powers and autonomy entrusted by law and can control undue ministerial involvement. Thus, will be in better position to handle outside pressures and control internal matters. Hence, pressures from TPA logic and NPM logic may be better handled. Since, companies lack such leadership; therefore, they are more vulnerable to pressures from multiple institutional logic.

**Position of CEO**

The SECP’s Appointment of Chief Executive Guidelines (2015) clearly specify that the Board will offer a contract letter with specified terms and conditions to the CEO at time of appointment:

> “Upon concurrence of the competent authority, the Board shall appoint the chief executive and issue him a contract letter, with the requisite terms and conditions of appointment, signed by the Chairman, or other person authorized by the Board.” [Section 7 (1); SECP Guidelines (2015)]
Such contractual agreement is important to provide a stipulated time to the CEO to visualize and plan line of action in the said time. It also important to evaluate the effectiveness of the CEO.

However, data revealed that the appointment of CEO is not always based on contractual agreement because a proper appointment process in not followed. The ministry appoints CEO and issues a letter of appointment as highlighted in following excerpt

The CEO is the weakest position in the Company. Ministry issues letter specifying that Mr/Ms.so and so is appointed as CEO until further order. Now you can imagine that even I have more security of my position as compared to my CEO because I have permanent appointment.” (R-01-LESCO)

This excerpt points to the weak position of the CEO. The appointment of CEO is not based on any permanent/contractual agreement. There is no time fixed for how long the CEO has to serve the company. The government at any time can remove the CEO. Respondents in IESCO, further authenticate it:

“CEO is appointed by government and remains in office till further government’s order. There is no contractual agreement. No notice period. We do not know when our CEO will be changed. It may be tomorrow or any time at the will of the government. Therefore, this position is quite vulnerable to political influences.” (R-17-LESCO)

This excerpt not only substantiate the weak position of CEO in IESCO but also highlights the effect of such position. Political pressures can easily influence the CEO. Respondents also compared the capacity of current position of CEO and the position of WAPDA’s Chairman to handle political and other pressures. The seat of Chairman of WAPDA was very powerful. Government could not influence that seat because Chairman had permanent position and could not remove by the government. Whereas, in current mechanism, the CEO is quite vulnerable to political pressures. Majority of the respondents agreed that CEO has a major role in controlling political influences. Due to the defenseless position of CEO, political influences are greatly enhanced in the companies as compared to the time of integrated WAPDA. However, one of the
respondents presented the other side of the picture that the CEO has more room to misuse of power as compared to WAPDA’s Chairman. The respondent from WAPDA elaborated the effect of the helpless position of CEO as well as the other side:

“Now CEO has weak position. CEO is appointed by the ministry and can be removed any time by ministry. Therefore, ministry can easily influence the CEO. Even MPAs/ MNAs or anyone who can use its reference to federal government can influence the CEO. On the other hand, CEO can also misuse the position due to lack of rules and more flexibility in application of various laws.” (R-24-WAPDA)

This respondent has highlighted the other side of the current arrangement. There was more clarity of rules in WAPDA and Chairman was bound to follow and apply the specified rules. Whereas, now there are various laws which allow the CEO more flexibility to take decisions which can also result is negative consequences. A respondent even said:

“It’s a one man show now. But that man is not a professional, rather a puppet in the hands of ministry or you can say the government. Earlier, committee used to take decision according to Rules.” (R-17-LESCO)

However, largely the respondents authenticated the vulnerability of CEO in current arrangement.

Another powerful excerpt is quoted here:

“Each government appoints its own CEO who serves their best interest. Secondly CEO is not appointed on permanent or contractual basis. He is acting till the government order. This is against corporate governance practice. The permanent hiring of CEO will give better results otherwise CEO will have to obey every order of the government to secure his seat. He will watch the interest of ruling party. (R-08-LESCO)

The respondents further explained that in many cases ministry appoints CEO from the hierarchy. Such cases also generate conflict of authority. Our previous CEO was the Senior Engineer in the company and acting as CEO. Now in such condition, he came under the CFO in seniority and grade. Whereas, being CEO he was in authority position of CFO. In such cases, CEO has weak position to exercise his/her powers. Furthermore, it was highlighted that the CEO is not in a
position to plan and envision future directions for the company because there is no fixed term for his appointment. According to a respondent:

“The government can remove CEO anytime. In such dangling position, how you can expect long-term planning from CEO.” (R-25-IESCO)

Respondents in LESCO and IESCO shared the similar reservations on the capacity and position of the CEO for strategic planning. Moreover, the CEO also remain fully occupied to satisfy the demands from ministry and BOD as indicated in following excerpt:

“The position of CEO is strategic in nature. Can you expect that CEO can take independent decisions? There is lot of interference from ministry and even from BOD. BOD members are always interested in their own meters, bills, transfers. They are not interested in company’s management. Even the law says that BOD should not intervene in company’s day to day affairs”. (R-25-IESCO)

From the above analysis, it is evident that the role of CEO is very critical to handle pressures from multiple logics. However, the CEOs of both LESCO and IESCO have very weak position because the ministry (government) appoints CEO and it serves at the will of government. Since, government can remove the CEO at any time, therefore, the person is not in position to challenge the orders from ministry or resist other political influences. Such dangling position of CEO increases institutional complexity for the organizations. Appendix IV provides the procedure for appointment of chief executive as per requirement of (SECP, 2017).

8.3.3- Task

Another influential attribute of organization to handle complexity was task, which was pointed out by most of the respondents in LESCO and IESCO. Distribution of electricity is a very sensitive task performed by LESCO and IESCO. Uninterrupted provision of electricity is even more sensitive then provision of health or education facilities in Pakistan because it immediately calls for the aggression in general public. Particularly, with the increased power crises in
Pakistan, this matter is associated with political repute of the ruling party. Provision of electricity is important to take votes from public. Hence, the political salience of the task of LESCO and IESCO invites more involvement of ministry in operational matters.

“As you know, power sector is the most important and critical sector for the economy of Pakistan and for public. General public needs affordable and uninterrupted power supply. Moreover, power supply is most critical for industry. If, there is any problem in power supply, our industry’s performance will be affected. Therefore, power supply is a very sensitive and critical task and performance of DISCOs is very important for the country. Therefore, government is very much concerned for their performance.” (R-22-PEPCO)

As compared to electricity distribution, other tasks in the power supply chain have less political salience. The root cause of power crises majorly lies in power generation rather than power supply. However, since the public has to deal with the ultimate supplier, therefore, all the pressure arises at this level. Power generation companies and power transmission companies are not expose to this pressure. Ministry also need to be more vigilantly govern the distribution companies because it is ultimately answerable to public if any issue arises. One of the respondent said:

“All times I have requests from MNAs MPAs for their billing or meter issues. Such influences are not present in NTDC. It is quite simple that NTDC has to transmit electricity to us. So, people have to approach us to get benefits. It is not the business of NTDC.” (R-38-IESCO)

Furthermore, it is the supply of electricity where the major political influences are present for various demands including reduction of bills, power meter arrangements, and supply at lower rates etc. Whoever, has some contacts in federal government or has some influential position, tries to influence the company for his/her demands. Hence, the nature of task is an important attribute that enhances institutional complexity for LESCO and IESCO.
8.3.4- Position of organization in network

The study found that LESCO and IESCO are not enjoying influential position in power network due to their small size, limited scope and low status in the network. The unbundling of WAPDA resulted in creation of fourteen organization each of which is performing a specialized task in the supply chain with a reduced scope of operation in the network. LESCO and IESCO are supplying electricity with other eight companies in the same role. Their operation is restricted to a specified jurisdiction. This restricted scope of operation has significantly increased their dependency on other actors in network. On the other hand, other actors have less dependency on LESCO and IESCO. It is evident from their relational ties in network (earlier explained in section 6.3.4). A respondent commented:

“LESCO has dependency on different organizations particularly Ministry, CPPA, NEPRA and PEPCO.” (R-12-LESCO)

This excerpt indicates LESCO’s vulnerability to the demands coming from other organizations in the network. On the other hand, following excerpt indicates that DISCOs does not enjoy such status to influence the major decisions in network.

“Ministry provide instructions and DISCOs implement them. We have to incorporate their demands. Major decisions are from Ministry or NEPRA. We have to follow the requirements”. (R-40-IESCO)

These excerpts show that LESCO and IESCO have low status to influence the decisions in network. Moreover, the unbundling of WAPDA and division of tasks has significantly reduced the size and scope of DISCOs providing them peripheral position in network. Compared to this positions, WAPDA used to have central position in network and could significantly influence the decisions in network as commented by a respondent:

“The chairman of WAPDA was a very influential position. Even the president of Pakistan could not influence him. The Chairman had significant saying in power policies. Now,
the CEO has least role in policies. He has to fulfill every demand from Ministry”. (R-23-IESCO)

Hence, with small size, limited scope of operations and low status in decision-making process, LESCO and IESCO have peripheral position in power network.

8.4- Organizational responses to institutional complexity

In order to explore the organizational responses to institutional complexity, the study has evaluated the absorption of institutional complexity in intra-organizational processes. For this purpose, this study has evaluated HR practices and process. Interviews were conducted with executive directors down to the functional officers in both IESCO and LESCO in order to explore the HR practices in detail. The perspectives at various levels in hierarchy were triangulated to explore the realities. The interviews, down the hierarchy, revealed that IESCO and LESCO has developed a complicated system in which prescriptions of different logics are either practiced in parallel or mixed up into some new or hybrid HR practices that satisfy two or more logics at the same time. Dual systems are most common in various HR practices including compensation, performance management, promotion and training. Data found presence of various prescriptions belonging to all the three logics. Moreover, data revealed that different HR practices are in use at different levels in hierarchy with either prominence of single logic or amalgamation of two or more logics. Following sub-themes were generated on how organizations internally manage institutional complexity.

8.4.1-Strategic presence of HR department

There was no HR department at the time of WAPDA and administrative department was responsible for human resource activities. After unbundling, the same norms prevailed. It was in 2010, that a separate seat of HR Director was introduced by PEPCO. After the creation of this
seat, the reporting lines of HR and administration were bifurcated and HR department and
administration department were considered as separate departments. In other words, the role of
HR was recognized on strategic level through the presence of HR Director. Following excerpt
indicates that till 2010, there was no seat of Director HR in LESCO. That means the strategic
presence of HR was altogether missing in the company. Even the creation of the seat is not based
on vision towards strategic presence of HR. Rather, it is more of situation handling by PEPCO:

“In 2010, in LESCO the seat of director HR & administration was already occupied.
PEPCO appointed a person (after deputation) on the same seat. The previous director put
case in court. Court decided to bifurcate the seat of Director HR and Director Administration. The person already in position got the seat of Director HR and the new
joinee became Director Administration”. (R-51-LESCO)

Bifurcation of Director HR and Director Administration is also present in IESCO. However, it is
still not practiced in some other DISCOs.

“In 50% DISCOs there is single seat for Director HR and Administration. Whereas, 50%
DISCOs have separate Director for HR. In IESCO HR Director and Administration
Directors are separate.” (R-46-IESCO)

In addition to the seat of HR Director, HR Committee is also present in BOD of both LESCO
and IESCO. However, HR Director has no representation in HR Committee, which is a question
mark on strategic presence of HR in the companies. The presence of HR Director and HR
Committee of BOD is a clear indication of acceptance of NPM logic. However, still HR role is
not recognized at strategic level, which means that the logic is not absorbed in practice. It is
more of window dressing that the companies are using modernized HR practices. One of the
respondent in IESCO explained the evolution of HR department:

“HR has developed a lot. Initially we had administration department who used to look
into employees’ matters as well. Then it became personnel management department, then
HR and now it is strategic HR. But change is name will not help. We need to change
practices as well. Can we change practices without autonomy?” (R-25-IESCO)
The above respondent has clearly stated that the changes (new logics) introduced are more of changes in name with less real impacts. Moreover, lack of autonomy is highlighted as the major hindrance to implement any change. Views of employees in various levels in hierarchy were captured to note how much strategic presence the HR has. None of the respondent was of the opinion that the seat of HR Director has made any change in HR practices. Largely, the respondents agreed that HR has no strategic role in the company. All the strategic and major operational directions are received from the ministry and implemented with least change. Under this environment, HR Director has least opportunity to contribute strategically.

“I am an HR manager here but I don’t think there is any concept of corporate HR prevailing in IESCO. The same rule and regulations, which were followed at the time of WAPDA, are still being followed. You can say that there is a modified version of administration department.” (R-15-LESCO)

It means that (in IESCO and LESCO) NPM logic is embraced to the extent that structural changes are made with the creation of separate HR department headed by HR Director and HR committee in BOD. However, as compared to NPM logic, TPA logic is more dominant in the system because the HR is only involved in operational HR activities seriously lacks expertise and opportunities for strategic HR role.

**8.4.2- HR system**

LESCO and IESCO are following the grading criteria of Federal Government of Pakistan. There are two cadres:

- Officials Cadre (from Grade 1 to Grade 15);

- Officers Cadre (from Grade 16 to Grade 21)
According to an informant, DISCOs have not make their own cadres and HR policies. The companies are using WAPDA Service Rules. There are few changes made in WAPDA Service Rules but those changes are introduced at central level by PEPCO and implemented in all DISCOs as reported in following excerpt:

“The few changes that are done so far are from PEPCO and implemented in all DISCOs.” (R-39-IESCO)

A respondent said that there is only change in title of designation for examples the title of XEN has been changed into AM (Associate Manger). Table 8.1 presents the previous titles in officers cadre and the new titles.

### Table 8.1 Change in Designations in LESCO and IESCO

<table>
<thead>
<tr>
<th>Grades</th>
<th>New Titles</th>
<th>Previous Titles</th>
</tr>
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<tbody>
<tr>
<td>Grade 17</td>
<td>AM (Assistant manager)</td>
<td>SDO (Senior Divisional officer)</td>
</tr>
<tr>
<td>Grade 18</td>
<td>DM (Deputy Manager)</td>
<td>XEN (Engineer)</td>
</tr>
<tr>
<td>Grade 19</td>
<td>GM (General Manger)</td>
<td>SE (Senior Engineer)</td>
</tr>
<tr>
<td>Grade 20</td>
<td>Director</td>
<td>CE (Chief Engineer)</td>
</tr>
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</table>

The respondent further explained that pay structure, hiring rules, compensation rules and all other rules are same as WAPDA Service Rules. There is no change. All companies are following WAPDA’s Service Rules. Companies have not made their own pay scales. The respondents in IESCO and LESCO complained that the central authorities (Ministry and PEPCO) bound them to follow WAPDA Service Rules. On the other hand, the respondent from PEPCO commented:

“Companies are independent. They can make their own HR policies and get them approved by their BOD but it is their motivation not to go for that.” (R-22-PEPCO)
It means, by law, the companies are not bound to follow WAPDA Service Rules. They can get their policies approved by BOD. Government cannot enforce them to follow WAPDA’s rules. The respondent from PEPCO even said that it was companies’ motivation not to make their policies. Further exploration of the phenomenon revealed that the unbundling of WAPDA has resulted in quite a complicated arrangement to make any changes in the rules and policies by any DISCO. In fact, DISCOs are bound to follow uniform rules and policies due to the requirement of the employees not the central authorities. After unbundling of WAPDA, companies got the status of independent companies. The management of the companies made changes in WAPDA’s rules without consultation with other companies or Ministry. It resulted in quite diverse policies in different DISCOs. Some DISCOs had high opportunities and resources to provide benefits to employees. Whereas, other loss making DISCOs could not provide benefits to employees at that level. The situation got further complicated when some junior employees were promoted in some DISCOs and senior employees got stagnant in their career in other DISCOs. It created dissatisfaction among the employees because all employees were hired under WAPDA Service Rules and they took it as their right to be promoted on the basis of their seniority. Hence, they filed cases in court against the management. To handle these conflicts, the government had to jump in the situation as explained in following excerpt:

“Companies were asked by government to make their own policies, rules and regulations and get them approved from BOD, till then, WPADA’s rules and regulations will hold.”

(R-52-PEPCO)

Ministry authorized PEPCO to play the role of central body and third party to resolve the conflict among the companies. The respondent from IESCO authenticated:

“After unbundling of WAPDA, 2007 was the turning point when PEPCO made policy that until companies make their own policies and rules, WAPDA Service Rules will be
followed. Till today, mostly we are following WAPD Service Rules because IESCO has not made its own service rules for employees.” (R-36-IESCO)

According to the respondent from MOWP, if ministry does not keep the policies same among DISCOs, it can generate serious dissatisfaction among employees and conflicts among DISCOs.

For this reason, the ministry through PEPCO is centrally managing the changes in WAPDA’s rules. Any required change is approved by the ministry and then implemented in all DISCOs to maintain uniformity in policies. Respondent from IESCO said that the process is so long that it is really difficult to think of any change in policies. The respondent explained the process:

“Let me explain, why WAPDA Service Rules are not changed. It is because the process to make any change is very long and needs consensus of many parties. If we want to make any change in HR policies, we will make an item notes and forward to CEO, then CEO will present it to BOD for approval. After the approval of BOD it will be sent to PEPCO. PEPCO circulates it in all DISCOs. If they have no objection then they PEPCO will present it before PEPCO’s BOD for approval. If, it is approved from PEPCO’s BOD, and then it will be implemented in all DISCOs. This is how PEPCO is ensuring the uniformity of policies among all DISCOs. (R-36-IESCO)

A respondent from LESCO said that the company had all capacity to make its own HR policies and get them approved from BOD. The major constraint is to build consensus of all DISCOs to get them implemented. Moreover, the respondent also provided another explanation for proceeding with the same system:

“LESCO has made its own HR policies but they are not implemented. I must say that it cannot be implemented because these policies, if implemented, will be in contradiction to already existing government policies. BOD has the authority to approve HR policies; BOD has asked to formulate policies. Management has formulated also but it is not implemented because a consensus has not been developed for their implementation.” (R-42-LESCO)

In the above excerpt, the respondent has pointed out two important reasons for proceeding with WAPDA Service Rules. First, the change require consensus among all DISCOs which is hard to develop. Secondly, even if corporate HR polices are approved, they are difficult to be implemented because they will be in sharp contrast to existing polices. The respondent has used
the word ‘contradiction’ to explain the difference between government policies and corporate polices. In light of these findings, it can be said that TPA logic is the most dominant logic in the HR system. On the other hand, it was largely emphasized by the respondents that companies need to bring corporate HR polices (NPM logic). Efforts are also being exerted but they there is less success due to contradiction of corporate HR practices with the existing rules and policies. Moreover, NPG logic is making the situation further complicated through pressures of building consensus among DISCOs for introducing any change.

**8.4.3- Automation of HR process**

LESCO and IESCO have taken the initiative of Enterprise Resource Planning (ERP) implementation. Under ERP, the database of HR and other departments is automated. A respondent from MIS department said:

“**The systems are ‘GO LIVE’. Data is updated with the day-to-day activities.”** (R-30-LESCO)

The respondent further explained that the computers and laptops are connected to the system and data can be accessed even on the mobiles of the employees. Employees are provided the system login and passwords. Employees can access the system online and place their request. For example, if an employee wants to take leave, he/she can put request through employee portal and the immediate boss will approve the request and then forward to next authority for approval. Respondent commented that this system is easy and quick to access and will provide relief from long and time consuming manual file processing system. The manager HR authenticated the automated HR system:

“**All computers, laptops and even employees’ mobiles are connected to the system. Employees are provided their login and passwords. They can access themselves.**
However, it is only accessible within the organization not from home. However, we have to do file work due to the requirement of the organization.” (R-16-LESCO)

The above excerpts indicate that HR data is available online and the system is operational. However, evidences were found that the previous system is also in use. Moreover, the system is operational within the organization. Employees cannot access it from home or some other place. The respondents in HR and MIS departments asserted that the limited access is due to maintenance of data security purpose. They claimed that they are putting their efforts towards implementation of the system. HR database is available to managers and employees. Moreover, managers and employees can use it to process HR functions online. In this regards, the basic achievement (on which major work is finalized) is the access to data of employees in the organization as reported by a respondent:

“All the process like recruitment, selection, payroll and leave process are automated. Every employee can log in to their portal and easily update their information.” (R- 21-LESCO)

Employees also validated that the system is operational and they can access it online:

“We can log in from our mobiles also.”(R-20-LESCO)

These excerpts indicate that data is available to managers and employees on employee portal and various day to day activities can be performed online. However, until now it is not being used efficiently. The MIS manager explained that due to less competency of employees, to use the system, a focal person (from MIS department) is assigned to each department for data entry and use of the system. For efficient use of the system, the end users need to use the system themselves. Until LESCO puts serious efforts for this, the system will remain limited to data entry by focal purpose. Using focal persons means the use of extra resources instead of decrease is a human resource.
Respondents also believed that the new system is costly for the organization due to use of double systems. The previous manual file processing system is still in use and side by side LESCO and IESCO are using automated system for data maintenance purpose. Hence, the data is being entered both in manual files and online database as indicated in following excerpts:

“Both manual and automation are going side by side.” (R-30-LESCO)

A respondent explained that the major reason was lack of competency and motivation at higher level management. Up to middle level, employees are using computers but the higher level managers do not work on their systems. Whereas, all the approvals are to be made by higher level managers. If they do not open their systems for approvals, the new system cannot be effective. The respondent revealed that the system got stuck when it comes to the approval of any case. The higher management asks to make note manually and send it for approval. In this way, both systems are running side by side. Following excerpt explicitly explains the phenomenon:

“But I must say that we are habitual of file work and we have to work for immediate orders. When there is an immediate order, then I cannot rely on this system. I have to make manual file immediately and send it above. We are running ‘Double System’. They ask me go for both systems… (the respondent remained silent and stressed for a moment)… How is it possible that my team do manual entry first and then do it in computers? Then give me resources for both manual and automated work. (R-30-LESCO)

In the above excerpt, the respondent clearly admitted that they are running double system. Both manual and online systems are being maintained at the same time. Moreover, the double system has increased the burden on employees who are using it. Either the company has to bear extra cost and resources to maintain two parallel systems or they will increase burden on employees. The respondent was bold enough to openly criticize the implementation of ERP in the context of public sector organization:
“We are government organizations. We follow government rules and regulation. ERP is based on best practices. It requires that the system should be changed accordingly. It has no customization. All the government organizations need to modify their rules and regulations for HR and administration process according to the requirements of ERP. Now, until and unless we change culture accordingly, we will face problems. Our style of work is very different. I know, whenever I have to make a case, I have to note down the points manually on the case before I send it upper in hierarchy. We are in this practice for years. Our seniors are not comfortable with computers. They demands manual files with notes.” (R-30-LESCO)

The above excerpt revealed various facts about the HR system in LESCO. Firstly, it indicates that the HR system is being modernized under ERP program. That means, the prescription of NPM logic (automated system) is introduced in the system. Secondly, the new system does not fits into the already existing rules and regulations. The company needs to make drastic changes in the existing rules and regulations according to the requirements of ERP system. Thirdly, currently, both systems (manual and automated) are in practice in parallel to each other. That means TPA logic is also present in the system. Fourthly, the higher management lacks the motivation towards actively changing the existing system. Rather, they are promoting previous work practices due to which TPA logic is largely prevailing in the system.

8.4.4- Hiring Process

The HR manager from LESCO explained that the hiring process is almost the same as at time of WAPDA with few new changes. One of such changes is outsourcing of hiring services. The respondent from HR department of IESCO commented on the new trend of outsourcing of hiring services:

“I would like to mention a change that previously IESCO used to do all the process itself. Now we are outsourcing the initial process including advertisement and test. Establishment division has given us instructions to outsource these activities to other government agencies e.g. NTS, BTS. For this purpose, we give tender. Whoever qualifies the bidding, is hired for this activity. After taking test, the company gives us the short listed candidates.” (R-36-IESCO)
Another change is hiring contractual services (in Grade 20) from open market which was not practiced before. Up to Grade-19, people are still promoted from within, whereas, for Grade-20 companies can hire from open market. WAPDA employees can also apply for these vacancies but they have to come on contract. However, they maintain their lien with the parent company. After completion of contract, the employee may rejoin the parent company again. In contractual employment, the contract may or may not be renewed. In addition, the companies are not bound to provide long-term benefits to the employees such as pension. On the other hand, company can attract professional persons from market on competitive pay. According to the HR manager in LESCO:

“Some DISCO are still promoting from within but LESCO is one of those who is hiring persons from market on competitive rates and on contract basis.” (R-01-LESCO)

There is another benefit of hiring contractual services. PEPCO is not involved in any matter of contractual hiring in grade 20. The companies have full autonomy for hiring and compensation decisions for contractual employees with least interference of PEPCO.

“Decisions for Grade-19 and above are controlled by PEPCO but it is not in case of contract based hiring. Therefore, we prefer to hire contractual/consultancy services.” (R-01-LESCO)

It means that, in contractual mode of hiring, management enjoys more autonomy and the demands of NPM logic can also be satisfied. It also serves as a way to avoid PEPCO’s involvement which is otherwise present in case of permanent employees in Grade-19 and above. Employment on Daily wages (in Grade 1-15) is another type of hiring which was rare before. The companies need to fulfill long requirements to initiate permanent hiring process. Whereas, daily wage employment is easy to create. The company offers daily payment to the worker with no other benefits. Both contractual and daily wage employments are less costly for the organization. However, they may not create loyal and committed employees.
Except these new trends (such as outsourcing, contract based hiring and daily wage workers), there is little change in hiring policy and procedures. The same WAPDA Service Rules are being followed. According to a respondent:

“Hiring policy and procedures are almost same. For example, if we see hiring procedures 20 years before then for the job of administration offices. Any master degree was sufficient but now there is modification that master of business or public administration is required. Therefore, there is only change in qualification otherwise process is the same.” (R-16-LESCO)

Respondents from IESCO also endorsed that WAPDA service rules are still in practice with least changes introduced:

“There is no difference in WAPDA rules and IESCO rules. Particularly for recruitments and hiring, same rules are being implemented in IESCO” (R-36-IESCO)

It means that WAPDA’s legacy is largely present in LESCO and IESCO particularly in case of permanent hiring. Although, there is less change in the hiring process, however, the process looks quite transparent for hiring on merit basis. It was highlighted in HR department:

“LESCO has very transparent hiring and recruitment process. We advertise the post, conduct test, take interview and then select the person on merit.” (R-17-LESCO)

However, official personnel down the hierarchy and even the senior management in other departments had serious reservations on the transparency of hiring process. The collective views of respondents in both LESCO and IESCO were that there are lot of political interference in hiring decisions. In addition to this, PEPCO and Ministry is involved in hiring decisions of the top-level executives in grade 19 and above. One of the respondent explicitly exposed the reality:

“Recently LESCO has hired 400 employees on different lower level positions like line man, field officers. Most of the hiring is political. The ruling party has distributed these jobs in their area for taking votes in election. In addition, these are not distributed free rather these are sold for 1-1.5 lacs and all the money has gone in the accounts of the ruling party. The same has done PPP in Karachi with PIA. Political parties distribute seats in government organizations for their political purposes.” (R-09-LESCO)
To summarize, it was largely noted that TPA logic is most prominent in hiring process. WAPDA’s hiring policies and procedures are being followed with minor changes in qualification criteria. On the other hand, certain NPM based trends are also adopted including outsourcing of advertisement and testing services, contract based hiring and increased use of daily wage workers. Moreover, political influences are principally reported in hiring decision. Direct ministerial and PEPCO’s involvement in hiring decisions is also found. Proof of collaborative hiring decisions are not found. Therefore, NPG logic is not found in hiring process. Furthermore, the prescriptions of TPA and NPM logics are being used in parallel at various level in hierarchy. In light of these findings, Table 8.2 summarizes the prescriptions of TPA and NPM logics being practiced in hiring process of LESCO and IESCO.

Table 8.2 TPA and NPM logics in hiring process

<table>
<thead>
<tr>
<th>TPA logic</th>
<th>NPM logic</th>
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<tbody>
<tr>
<td>- Permissions from administrative seniors to initiate hiring process</td>
<td>- Approval from BOD to initiate hiring process</td>
</tr>
<tr>
<td>- WAPDA’s legacy in hiring policies and procedures</td>
<td>- Outsourcing of partial advertisement process to increase transparency</td>
</tr>
<tr>
<td>- Political hiring</td>
<td>- Contractual hiring at executive level</td>
</tr>
<tr>
<td>- Lack of transparency in hiring decisions</td>
<td>- Daily Wages workers</td>
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<td>- PEPCO’s and ministerial involvement in hiring decisions</td>
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8.4.5- Performance evaluation system

At time of WAPDA, there was ACR (Annual Credential Report) system which is now replaced with PER (Performance Evaluation Report) in both LESCO and IESCO. PER is introduced only in Grade 16 and above. In Grade 1-15, ACR is still in use. In PER, employee performance is
evaluated against pre-defined key performance indicators (KPIs). The Head of the Department or immediate boss evaluates and narrates the performance of employee. Then, it is moved to the section in-charge. Respondent from HR department commented:

“We have made key performance indicators and employee performance is evaluated against those KPI’s.” (R-02-LESCO)

Use of PER is an indication that NPM logic is in practice. It is the modern HR trend to develop KPIs for each employee and evaluate performance based on pre-determined targets. On the other hand, most of the respondents had the point of view that although KPIs are developed, however, they are general and not specific to different jobs. A respondent from IESCO explained:

“For each category, we have the same format. Definitely, it should be designed according to the seat / department. I mean a person in finance should not be evaluated same as a person sitting in customer service department because their parameters are very different.” (R-25-IESCO)

It was further verified in LESCO where respondents showed extreme dissatisfaction with the PER system. A respondent even said:

“PER is totally rubbish. The indicators on PER are vague. PER has no link with salary or leaves. It is used at the time of promotion only.” (R-56-LESCO)

Some of the respondent had the view that ACR was more comprehensive and could analyze performance better. This perception was found in both LESCO and IESCO and mostly in Grade 17 and above. One of the respondents explained:

“ACR was more objectively defined to rate employees. It gave pen picture of employee performance. First, it had profile information section that was filled by employee. Second section was about employee fitness. This section was filled by MO (Medical Officer). Third section contained various items to rate employee’s performance, attitude and behavior. IO (Initiating officer) rated this section; which was mostly the immediate supervisor/manager of the employee. Then, SRO (Senior Reporting Officer) signed it. Then, it was approved by NSRO (Next Senior Reporting Officer). Therefore, the form
was counter signed by authorities to ensure that employee was fairly rated. The section of employee fitness ensured healthy employees of WAPDA.” (R-41-LESCO)

A respondent made comparison of the systems and explained that previous system of ACR was more effective. For example, in ACR medical checkup was must, which ensured employees’ fitness. It had two separate columns to evaluate personality and working of employee on precise indicators to be evaluated on 1-5 rank/ scale. In PER, fitness section is altogether removed. Due to its general remarks, employee’s behavior and attitude is also not evaluated. Further, it needs not to be counter signed by authorities. Therefore, employee has dependency on immediate boss to get good evaluation as indicated in following excerpt:

“The employee need to keep his immediate boss happy to get good remarks in PER. ACR was better system because it was counter signed by authorities to ensure fair rating of employee.” (R-01-LESCO)

Moreover, it was also largely reported that PER is not filled regularly. PER is filled only one or two times when it was introduced. After that, it was not taken very seriously. Many respondents said that it has been long that PER is filled by them. A respondent remarked that PER is as confidential as ACR. The feedback is not shared with employees and therefore, PER is less effective to improve performance. The subjectivity of PER was also criticized by many respondents. Following excerpt is the evidence:

“PER is very subjective. Maximum people don’t know how to fill PER. I have not filed it for last four years.” (R-39-IESCO)

This excerpt not only highlights the subjectivity of PER, but also points that the system is not in use. Another respondent said that it is only used at the time of promotion. That means employee’s performance is not being evaluated on regular basis. It indicates that neither PER nor ACR is in practice as evident in following excerpt:
“Ideally, it should be filled and submitted to the planning department annually. However, actually it is not filled on regular basis. Even if filled, it is only a paperwork with least impact on performance improvement.” (R-36-IESCO)

Respondents in HR department also accepted that the system is new and not implemented in full spirit. However, some of them shared positive notes showing the other side of the picture:

“But things are improving; if we further develop KPIs according to the specific job of the employee then it can better indicate the performance of employee. Currently, it is quite general format, which may not be ideal but it is a right step towards right direction.” (R-25-IESCO)

In light of above findings, it can be concluded that LESCO and IESCO are using two systems of employee performance evaluation at the same time: ACR and PER. ACR system is the legacy of WAPDA and based on TPA logic. Whereas, PER is the new system introduced under corporate management trend based on NPM logic. No evidence of NPG logic is found in performance management system of LESCO and IESCO. ACR is filled in Grade 1-15 annually. Whereas, in Grade 16 and above, ACR is replaced by PER. However, the new system is not implemented in true spirit and therefore, it could make less improvement in employee performance.

8.4.6- Compensation and rewards

WAPDA’s policies are followed in LESCO and IESCO for compensation and benefits in each grade. These are the same Grades and salaries being used for federal government organizations. As independent companies, LESCO and IESCO can change the compensations policies, but until now they have not introduced any change. Salaries are raised according to announcement of federal government in the budget. A respondent explained:

“We do not take salaries from FG budget but since we have derived our policies from Federal Government (EESTA code of Establishment Division), therefore we are following the same policies”. (R-15-LESCO)
There is a regular mechanism of increase in pay as per the announcement of the government. A fixed percentage, announced by the government, is increased for all. In addition, the study found that Ministry can also decide additional bonus or other rewards schemes for employees.

Recently, Ministry used performance based rewards as a tool to motivate employees:

“This time ministry announced a month before that meter readers will get bonus according to their performance. If their meter-reading matches with the meter picture on bill and their reading is 95% correct then they will get 150% bonus. 91-95 % reading will get 100% bonus, for 86-90%, the bonus will be 75% and for 80-85% will get 50% bonus. Below 80% will not get bonus. So, the ministry tried to created competition among employees. Many employees got either 150% bonus or 100% bonus. However, some people did not get the bonus. This system was applied in all over the company in different divisions. This is a particular case introduced to encourage mobile reading system in the company” (R-23-LESCO)

This excerpt not only points to the use of performance based incentives but also highlights the involvement of ministry in compensation decisions of the company. Another respondent also shared a positive picture the good performance is appreciated but that appreciation may not result in tangible benefits.

“My personal experience is that most of the chiefs appreciate the people who perform better and if you are working definitely you will be highlighted somehow. “ (R-10-LESCO)

Other than that, all the respondents said that there is no concept of performance based salary in LESCO and IESCO. Employees get salary increment according to their grade, irrespective of performance. According to a respondent, “every employee is considered equally for benefits. Workers and non-workers are not differentiated.” (R-20-LESCO). Since, performance is not linked with compensation and benefits, therefore, high performing employees are at disadvantage as compared to non-performers.

“There is difference between a worker and a non-worker. Worker is not getting any reward here and the life of worker is very tough here. Whereas non-workers have some
political reference, do not work and have lot of ways not to do job and still takes benefits.” (R-01-LESCO)

Same kind of remarks were received in IESCO. According to a respondent:

“I am not satisfied with HR policies because there is no difference between good workers and bad workers. Both enjoy equal benefits. Therefore, IESCO lacks corporate work culture.” (R-38-IESCO)

Interviews with the top management of LESCO, revealed that the top management wanted to introduce performance based pay and they also wanted to revise the salary scales. However, LESCO is not allowed to make any change without involving other DISCOs. Any change in policies require consensus of all DISCOs, which is quite difficult to have. Respondent explained:

DISCOs have much interdependency. DISCO’s decisions got pending because of the condition of uniformity of policies in DISCOs. For example, LESCO wants to increase the benefits of employees and has the capacity to bear the expenses. But union will not allow LESCO to do so until all DISCOs accept to implement them and such consensus are difficult to reach.

The condition of uniformity is important because all the employees in DISCOs were originally hired as WAPDA’s employees. WAPDA had clear policies for the seniority based increments in salaries. If employees get benefits/increments in one DISCOs, the employees in other DISCOs can also pressurize to have same benefits. A respondent explained:

Rules and regulations are same for other DISCO’s. If we have any change, it will be a challenge to management. Employee will say that with the same skills and experience employee are getting different salaries in LESCO as compared to other DISCO’s. (R-02-LESCO)

This shows that companies need to have consensus of all DISCOs for initiating any change in compensation and benefits. Hence, the evidence of NPG logic is found in compensation decisions. However, it is not very dominant. The most dominant logic in compensation practices is TPA logic. It is because there is least change introduced in WAPDA’s compensation policies.
Moreover, no effort is found on linking the salary raise with the performance of the employees which indicates that NPM logic is not embraced in compensation and incentives.

8.4.7- Promotion and placement

Promotion is only possible based on availability of vacancy in LESCO and IESCO. Policies and rules for promotion are same as WAPPDA Service Rules. Criteria for promotion is seniority-cum-fitness. Seniority means completion of required length of service to be promoted. For example promotion from Grade 17 to Grade 18, needs minimum 5 years of service in 17 grade. Fitness includes various requirements. Firstly, employee has to pass departmental promotional exam. Secondly, employee has to take promotional training. Thirdly, employees’ five years performance evaluation form should be available and there should be no adverse remarks/enquiry/disciplinary action against him/her. So far, none of the DISCOs has made any change in its promotional polices. A respondent said:

“LESCO has made its own promotional policy but so far it is not implemented. Even it is not approved from BOD. So, LESCO has made no change in WAPDA Service Rules. (R-15-LESCO)

Employees is promoted according to availability of vacancy and seniority-cum-fitness criteria available in WAPDA Service Rules. Management takes promotional decisions until Grade 18. For Grade 19 and above, PEPCO centrally manages decisions with the involvement of all DISCOs. PEPCO has maintained an integrated seniority list for all employees in DISCOs. Employees are promoted according to that seniority list. If an employee is promoted but its company has no vacant vacancy, then the employee is promoted to some other DISCO.
Employees shared considerable reservations with the promotional policies. None of the respondent shared positive views about promotional polices and process fairness. Seniority based promotion was questioned by the respondents:

“Promotion criteria should be changed. Promotion should be based on employee performance instead of seniority list.” (R-40-IESCO)

Moreover, they questioned the involvement of PEPCO in company’s promotional decisions.

“IESCO is unbundled from WAPDA. It is an independent organization. Still, we are working with the same WAPDA Service Rules. WAPDA Service Rules were good at the time of WAPDA. The rules were well defined. Promotion paths were clear. Now, I feel stagnancy. Promotion is based on seniority list, which is maintained by PEPCO for Grade 19 and above. Therefore, it is like a third party decides who will be promoted and where to be promoted. I may be promoted to some other organization. My performance will not be count in my promotion. Good and bad employees are equal to take benefits.” (R-39-IESCO)

The respondents in HR departments also accepted that employees are promoted based on seniority instead of their performance. However, a HR manager explained a mechanism to provide performance based promotion in exceptional cases. There are two types of promotions in LESCO: Normal promotion and Accelerated promotion. In normal promotion, promotion is made on availability of vacancy and in accordance to seniority list. Seniority list seniority list is maintained on the basis of hiring merits & experience. Seniority cum fitness is the criteria for promotion. Accelerated promotion is based on five year excellent performance. The respondent remarked:

“Accelerated promotion is very rare, although it is practiced. You can say that accelerated promotion is based on employee’s excellent performance.”. (R-15-LESCO)

From the above findings, it can be concluded that all the three logics are present in the promotion practices of LESCO and IESCO. TPA logic is largely present with the dominance of the WPADA’s promotional policies which are still in use with least change. NPG logic is penetrated
due to interdependencies of DISCOs for the promotion decisions for top executives in Grade 18 and above. These decisions are taken collaboratively under the central system of PEPCO. Presence of NPM logic is only in case of accelerated promotion, which is very rarely practiced.

8.4.8- Training and development

WAPDA conducts training of employees of all unbundled companies. There are specialized institutes of WAPDA including Faisalabad Training College and WAPDA Staff College. Faisalabad Training College provides technical trainings in Grade 1-15. WAPDA Staff College provides professional and technical training courses for Grade 16 and above. Training programs and schedules are well defined and periodically these trainings are conducted according to the stipulated time. Companies are asked to nominate and send their employees to join the training session. Respondents explained that the training provided at the time of integrated WAPDA is continued with same contents. Whereas, companies training requirements are quite different as compared to the integrated WAPDA. The respondent from IESCO did sharp criticism on WAPDA’s training system:

“You will be surprised to know that even today the employees of DISCOs and GENCOs get training from WAPDA staff College and there is no change in the content and syllabus of WAPDA. Even not 0.001%. The same content was taught before unbundling. There is no input from any company in the syllabus or content of WAPDA. Now you tell me, are the training requirements of employees same after unbundling and if they are same, then what change we are expecting in the working culture. The trainers do not know anything about corporate culture; neither have they bothered to develop the content accordingly” (R-25-IESCO)

It is evident from the excerpt that WAPDA’s training content is outdated and general. It does not cater the specific needs of the companies. WAPDA does not take training needs and requirements from companies to design courses. Rather, the courses are already designed at the time of integrated WAPDA. The respondent in LESCO explained:
“There is no such concept of provision of training based on employee needs or company’s strategic requirements. Employees are provided training according to seniority list. Training is conducted by WAPDA Staff College. It is quite generalized training with very outdated contents. Our needs have changed drastically particularly after unbundling of WAPDA. But training contents are the same as at the time of integrated WAPDA.” (R-15-LESCO)

It means that need based training is seriously missing in the company. With the new corporate culture, employees need various professional trainings to change their mindset. Nevertheless, this area is seldom addressed. Even the technical trainings are not aligned with employee’s need. The IT manager highlighted the need to provide technical training to employees to use ERP system. WAPDA’s training courses are general. They do not cater the company specific training needs. The respondent shared dissatisfaction with the role of HR in provision of need based training:

“Formal training is area of HR but HR is not very active in terms of capacity building to use ERP. We are responsible for user’s queries for using this software. We provide assistance whenever they require. HR should be more active in providing formal trainings to end users.” (R-21-LESCO).

On the other hand, respondent is HR department shared the constraint that they are bound to send employees to WAPDA. Whereas, the company has the capacity and resources to conduct trainings themselves or send their employees to better institutes for latest and relevant training. Getting training from WAPDA is a necessary condition for promotion of employees. The HR department had the view that WAPDA’s training is costly for the organization. Companies are paying to WAPDA for providing training to their employees. This is as if companies have outsourced training to WAPDA or they are taking training services from WAPDA. This training is mandatory for promotion of employees. The HR representative in both companies (LESCO and IESCO) raised questioned on this system. The respondent from LESCO said, “My question is, why it is compulsory for me to send my employees to WAPDA to get training when we have other better institutes” (R-01-LESCO). The respondent in IESCO had similar views:
“WAPDA’s training is expensive. It is charging millions of rupees from IESCO. If I spend this amount to LUMS, they will provide us customized training according to the need of employees, but I cannot go for this option because even training from LUMS cannot make my employee eligible for promotion. WAPDA’s training is mandatory to get promotion. (R-25-IESCO)

From above discussion, it is evident that the training system in LESCO ns IESCO is largely dominated by TOA logic. The same WAPDA training system is continued. Training is conducted on seniority basis rather than need basis. NPM logic is not found in any respect in the training system. However, NPG logic is found with respect to integrated seniority list for training, maintained by PEPCO. The promotion decisions are attached with training of employees. Therefore training decisions (in Grade 19 and above) is centrally managed by PEPCO with involvement of all DISCOs. Companies have interdependencies for the top management training and for this purpose, they collaborate with each other. Hence, NPG logic is present in training process in Grade 19 and above.

8.4.9- Hybrid solutions

The study found that the prescriptions (from TPA, NPM and NPG logics) are spread vagrantly with less creative or new solutions to deal with different logics. Mostly the companies are handling double systems at either the same time or satisfying different logics at different levels in hierarchy. Few efforts were found regarding amalgamation of logics for creating hybrid solutions. On of such efforts, is the creation of hybrid designations (in both LESCO and IESCO) that satisfy different logics through integrated solution.

The HR manager explained that they had less autonomy to make any change in the salaries and benefits of exiting designation. Moreover, employees could also not be promoted due to lack of vacancy available. This situation created stagnancy in employees’ career path and demoralized the employees. DISCOs have jointly come up with a solution to this problem by
creating new designations of Additional DM, Additional GM and Additional director. The respondent explained:

“For example, an employee is currently an Assistant Manager (Grade 17) and we want to promote him to next level (Grade 18). Since the promotion rules are very rigid and take a lot of time which create demoralization in employees, therefore we have created seat of Additional Deputy Manager (ADM). On this designation, the person takes salary of Grade 18 and also enjoys 50% of the powers of Deputy Manager. This is a mechanism to reduce stagnation otherwise employees used to remain in same Grade (level) for decades and it created de-motivation and stagnation in employees. With promotion as ADM, they feel satisfied to some extent” (R-15-LESCO)

The hybrid designations are shown in Figure 8.3

**Figure 8.3 Hybrid designations in LESCO and IESCO**

The respondent explained that the role of Additional Deputy Manager (ADM) is a mixture (hybrid form) of Associate Manger (AM) & Deputy Manager (DM). Although it does not promote the employee, still the employee feels like promoted due to increase in salary and powers. The respondent said:
“The purpose is that employees should not feel more authority for financial power and should not be de-motivated. Although it is not promotion but employees feel like promotion due to increase in salary and power.” (R-13-LESCO)

This hybrid designation can satisfy the pressures of different logics. It has not changed the already existing system and structure, thus satisfied TPA logic. NPM logic is satisfied by giving additional benefits to the employee. Moreover, NPG logic is satisfied by creation of this seat in all DISCOs. The respondent from IESCO also explained how the creation of additional seats have satisfied multiple pressures:

“In case of Additional Deputy Manager position we have come up with a middle way to hold the promotion and giving the promotion benefits to employee. This is because we cannot promote employee without PEPCOs permission but on the other hand, we need to satisfy our employee as well. Therefore, creation of this seat has served both purposes. (R-36-IESCO)

While discussing in detail, a respondent revealed that, WAPDA Service Rules have gradually changed over the period of time and many new arrangements are adopted such as the hiring modes have drastically changed. With the more and more change in existing policies, the companies are moving towards mixed arrangements. The respondent said:

“Our practices are quite mixed. We have neither purely federal government policies not private sector policies. We are mixing both modes and coming up with new solutions wherever possible and taking different mode for employment.”

Hiring contractual services is another arrangement which satisfies both TPA and NPM logics. The management cannot increase salary and benefits of Grade 20 employees. Moreover, the major decisions for this designation are controlled by PEPCO. In order to attract competent persons from open market at competitive salary, the mode of contractual services is a better arrangement instead of increasing the pay of permanent employees. It satisfies TPA logic because there will be no change in the existing system of Grade 20 employees. On the other hand, company can offer competitive market pay to the persons hired on contractual basis thus
satisfying NPM logic. However, such practices create parallel/double systems as indicated in following excerpt:

“Double practices are prevailing in the system. There are WAPDA Service Rules. There are company’s rules. Some matter are proceeding in traditional style. Some changes are introduced in system. Both systems are working in parallel.” (R-13-LESCO)

Many other evidences of parallel systems are quoted in above discussion including parallel systems (manual and online) of HR data handling and parallel systems of performance management (ACR and PER). A respondent even said,

“We are messed up with dual system in practice. Both are running in parallel to each other” (R-36-IESCO).

Based on the findings, Table 8.3 summarizes different logics found/not found in HR process.

### Table 8.3 TPA, NPM and NPG logic in HR process

<table>
<thead>
<tr>
<th>HR process</th>
<th>TPA logic</th>
<th>NPM logic</th>
<th>NPG logic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hiring</td>
<td>✓</td>
<td>✓</td>
<td>X</td>
</tr>
<tr>
<td>Performance Management</td>
<td>✓</td>
<td>✓</td>
<td>X</td>
</tr>
<tr>
<td>Compensation</td>
<td>✓</td>
<td>X</td>
<td>✓</td>
</tr>
<tr>
<td>Promotion and placement</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Training and development</td>
<td>✓</td>
<td>X</td>
<td>✓</td>
</tr>
</tbody>
</table>

Table 8.3 indicates that TPA logic is the most dominant logic in LESCO and IESCO which is present in all the HR practices. NPM logic is not found in compensation and training process. Whereas, NPG logic is not found in hiring and performance management process.

Overall, it can be concluded that all the three logics are spread in the HR process of LESCO and IESCO.
8.5- Conclusions

In this chapter, this study has analyzed institutional complexity managed by public organizations from three aspects: (1) Role of network characteristics in enhancing/reducing institutional complexity for embedded organizations in network (2) Role of organizational attributes to handle institutional complexity (3) Internal organizational processes to embrace multiple logics.

The study found that network characteristics (specifically centralization, fragmentation and trust) play important role in influencing the level of institutional complexity for embedded organizations. Centralization reduced the contradiction of multiple logics whereas fragmentation enhanced the contradictory pressures for embedded organizations. Whereas, trust was found as critical factor to handle conflicting situations in the network.

The critical organizational attributes, to handle institutional complexity, included governance structure, role of the CEO, task and organization’s position in network. The study found that the embedded organizations were more vulnerable to institutional complexity due to political involvement in governance structure, defenseless position of the CEO, politically salient task and less influential position of IESCO and LESCO in power network.

To analyze how public organizations embrace (internally manage) multiple and conflicting institutional logics in their internal system and processes, the HR process of embedded organizations (IESCO and LESCO) was explored including hiring process; performance management; rewards and compensation system; promotion and placement policies; and training and development practices. Major findings can be concluded as following:
• There is strong legacy of WAPDA in most of the HR policies and procedures. Due to this legacy, TPA logic is most prominently found in HR process particularly in Grade 1-15 where WAPDA Service Rules are still in practice with least changes.

• Many interventions are introduced to modernize HR process under NPM logic. These include structural change in HR department, new hiring practices, development of KPIs, ERP implementation and performance management system. These changes are most prominent in Grade 16-18 where management enjoys most autonomy.

• After unbundling of WAPDA, integrated human resource development plan was initiated by PEPCO in all distribution companies, which is continued. Under this program, human resource decisions are taken collaboratively through central arrangements under NPG logic. Such integrated practices are most prominent in Grade 19 and above where management has less discretion and central authorities take HR decisions.

• Changes in HR process are very subtle and sluggish. Some change initiatives could not implemented due to high level of resistance from the employees and overall culture of the organizations. Some changes took decades of interventions to take place.

• The embedded organizations (both IESCO and LECO) are struggling to satisfy and incorporate all the three logics (TPA, NPM and NPG) in their HR process. In this struggle, the companies are handling double systems or satisfying different logics at different levels in hierarchy. Mostly, the prescriptions from different logics are attended through separate mechanisms. However, the study also revealed the creation of hybrid designations that satisfy different logics through integrated solution.
Chapter 9   Discussion

9.1- Introduction

This chapter discusses the findings of this research, presented in the previous chapters, in light of the existing literature. The study aims to evaluate how public organizations manage institutional complexity embedded in governance networks in the public sector. In particular, the argument of organizational indecisive conformity to institutional demands under new institutionalism (DiMaggio & Powell, 1983; Meyer & Rowan, 1977), is revised with evidence, found by the study, that organizations use their discretion to develop new solutions in their effort to incorporate contradictory institutional logics. This study, thus, strengthens the argument of discretionary agentic behavior to change the institutions in light of institutional logics perspective (Thornton & Ocasio, 1999). Organizations may avoid or symbolically accept the logics in the short run; however, eventually, they have to adopt a combination of the intact prescriptions from multiple institutional logics to satisfy the referent audience. Such adoption, of institutional logics, is quite indigenous to the very context of the organization which organization develops while blending the logics remaining in its constraints. The study also explains how public sector reforms are exposing the public organizations to diverse institutional logics and governance networks; the role of network characteristics in presenting institutional pressures to the embedded organizations; and organizational attributes that can enable the organization to manage institutional complexity. Exploring the macro level institutional pressures and meso level network characteristics, the study moves to micro level organizational attributes and intra-organizational analysis to analyze how various institutional logics are embraced/ internally managed in the process. Thus, this study attempts to provide the multi-level analysis of
institutional complexity in the public sector organizations embedded in governance networks in the energy sector in Pakistan. Energy sector is taken as the case to study public sector reforms. Power network is taken as an embedded unit of analysis in the energy sector in Pakistan to study network characteristics. LESCO and IESCO are taken as embedded organizations in the power network, to study how embedded organizations adopt the contradictory institutional logics in intra organizational processes.

The chapter is organized in six sections. Section 9.2 evaluates the emergence of governance networks in the public sector in light of the major reform trajectories in the energy sector in Pakistan. Further, it describes the current structural arrangement and characteristics of governance networks. Section 9.3 discusses how organizations experience institutional complexity due to the contrasting pressures coming from multiple institutional logics in performance monitoring practices, decision-making processes and interaction with other actors in the network. Section 9.4 discusses the role of network characteristics in mitigating the institutional pressures for embedded organizations. Section 9.5 explains the role of organizational attributes to handle institutional complexity. Section 9.6 evaluates the adoption of contradictory institutional logics in HR processes and explains organizational responses to institutional complexity.

9.2- Public sector reforms and governance networks

The literature on public management reforms and governance networks is reviewed in literature review (Section 2.2- Approaches to Public Management; 2.3- Governance networks in the public sector) Three popular public management reforms are reviewed and compared including traditional public administration (TPA), new public management (NPM) and new public governance (NPG). The dominant logics, under each reform model, are conceptualized in
the framework of the study (chapter 4; section 4.3). Moreover, the emergence of governance networks, in the public sector, is assessed in light of current thoughts emerging in the mainstream literature. The study also reviewed literature on various typologies of networks and the expected relationships among various actors in governance networks. Furthermore, the structure and characteristics of governance networks is described in light of the arguments found in literature. This section discusses findings of the study; and compares and contrasts them to the existing research on governance networks and public sector reforms.

9.2.1- Institutional pluralism and emergence of governance networks

A critical feature of public sector reforms is, globalization of famous reforms, whereby popular reform models are adopted by most of the countries in different time periods (Dolowitz and Marsh, 2000). Among the globally accepted and widespread public sector models, the most famous models include Traditional Public Administration (TPA), New Public Management (NPM) and New Public Governance (NPG). This study has found all the three famous reforms in the context of energy sector reforms in the public sector in Pakistan.

The energy sector of Pakistan has gone through various reform trajectories during the last two decades including liberalization reforms, unbundling reforms, regulatory reforms and integration reforms. Energy sector reforms, in the context of public sector of Pakistan, are described in detail in chapter 5. Table 5.1 Major trajectories in the energy sector reforms in Pakistan summarizes major reform trajectories, in the energy sector in Pakistan and Table 6.1 Energy sector reforms and emergence of governance networks maps these trajectories with famous public sector reform models (TPA, NPM and NPG) in the existing literature and finds various reforms under TPA, NPM and NPG models. The existing literature has recognized that each public sector reform model has prescribed different jargons, targets, contents and
prescriptions (Jadoon and Jabeen, 2012) which are contradictory to each other (Christensen and Laegreid, 2010). Hence, each reform model is based on an institutional logic, which is contradictory to other reform models. Presence of multiple institutional logics creates institutional pluralism in the field where contradictory institutional logics exist at the same time (Greenwood et al., 2011). Since the energy sector of Pakistan has gone through different reform models (TPA, NPM and NPG), therefore, it can be inferred that various reforms have exposed the energy sector to institutional pluralism. Table 6.1 provides the evidence of the phenomenon of institutional pluralism in the energy sector in Pakistan. The energy sector is exposed to multiple logics including TPA, NPM and NPG logics, which have contrasting and contradictory goals and means (presented in conceptual framework; chapter 3; Table 3.1).

TPA has its roots in the work of Weber's (1946) bureaucracy and Wilson's (1887) politics-administration dichotomy. Traditional public administration is marked by control of centralized state over public sector with large bureaucracies and centralized decision-makings. It appears to be true in case of the energy sector in Pakistan with large bureaucratic arrangements and high control of state during 1952-1977. This phase of reforms introduced TPA logic in the energy sector of Pakistan with the features of hierarchical controls, formal rules and regulations, standardization and equality.

The second major phase, of energy reforms in Pakistan, started in 1990s with multiple directions such as involvement of private sector in energy sector through liberalization, structural disintegration of WAPDA, creation of independent regulatory authorities and autonomous public agencies and use of business practices. These reforms correspond to the wave of NPM reforms in the literature (Hood, 1991; Osborne and Gaebler, 1992; Denhardt & Denhardt, 2000). These reforms have exposed public sector to a new institutional logic based on the principles of
efficiency, profitability, managerial practices and market competition. Instead of large bureaucracies, this logic prescribes small autonomous organizations with a specific task which are contradictory to TPA logic.

Another dominant intervention, in the energy sector of Pakistan, is creation of integrating and coordinating organizations such as PEPCO, NTDC, CPPA-G. Such integration reforms are conceptualized as new public governance reforms in the literature (Klijn and Koppenjan, 2016). Thus, the study has found evidence of various reforms which are highlighted under famous public sector reform models in the literature. These reform models have exposed the energy sector of Pakistan to multiple and contradictory institutional logics which Greenwood et al., (2011) has conceptualized as institutional pluralism.

The multiple models of reforms have also brought drastic structural changes in the public sector. Christensen and Lægreid (2011) argued that public sector is moving towards increasingly complex and hybrid arrangements due to its adherence to variety of reforms on an accelerated pace. Likewise, Koliba, Meek and Zia (2011) pointed to the emergence of governance networks in the public sector with the cross-sectoral involvement, to solve the complex societal issues. They have argued for the emergence of governance networks in the public sector due to two critical developments: NPM based fragmentation and Post-NPM based integration.

This study has witnessed the emergence of governance networks in the case of energy sector in Pakistan. Due to adherence to various reforms, on an accelerated pace, the energy sector has moved towards quite complex network arrangements. The WAPDA’s unbundling, into fifteen autonomous public companies, has resulted in fragmentation in the field. The fragmentation is further enhanced due to involvement of private sector organizations. On the
other hand, the study has also found various integrating bodies (PEPCO, CPPA-G, NEPRA) which are especially created for integration and collaboration purposes. As compared to present structure, the previous arrangement (Figure 6.1: Power network before restructuring of WAPDA) was based on highly centralized and vertically integrated public utilities which is changed into a web of autonomous organization who are placed in horizontal relationships (depicted in Figure 6.3). Hence, this study provides empirical evidence of the two critical changes (fragmentation and integration reforms) in the public sector (Koliba et al., 2011) that are responsible for emergence of governance networks. The findings of the study, also, strengthens the argument of Klijn and Koppenjan (2016) that variety of reforms have created governance networks in the public sector with web of autonomous yet interdependent actors across government, business and civil society.

From the above discussion, two important developments can be inferred from the energy sector reforms in Pakistan. First, various reforms have exposed the public sector of Pakistan to institutional pluralism where multiple institutional pressures are present at the same time. Second, governance networks are emerging in the public sector in Pakistan. Figure 9.1 presents these two important developments in the energy sector through causal loop diagram.
9.2.2- Structure of governance networks

The literature has identified different network typologies (chapter 2) including hierarchical versus market networks (Benson, 1975); clan network (Ouchi, 1980); bureaucratic, managed partnership and market type networks (Considine & Lewis, 2003) and self-governed/lead/NAO networks (Provan and Kenis, 2007). These topologies are based on the inter-organizational relations among the network actor. The structure of power network (under study) is discussed in light of these typologies.

The study has taken the power network as embedded unit of analysis in the energy sector in Pakistan. The study found that the power network is comprised of variety of actors and diverse relational ties among actors. The key actors in the power network and their relational ties are
summarized in chapter 6 (Table 6.11: Interaction among Actors in Power Network). There are
diverse relational ties among different actors in power network, including negotiation-based
relations; control and command based relations; and collaboration based relations. Due to diverse
relational ties, the structure of power network has similarities with different network typologies
found in the literature such as market network (Benson, 1975), hierarchical network (Provan &
Kenis, 2007) and collaborative network (Hardy et al., 2003) . However, neither of the famous
typologies in literature (such as market, hierarchy or collaborative) can be purely applied in case
of power network. Rather, power network is a hybrid form of all these pure network types with a
combination of market, hierarchical and collaborative mechanisms of interactions. Koliba, Meek
and Zia (2011) differentiated three forms of network (market, hierarchy and collaborative) and
suggested that a mixed-form governance network is most likely to be present in the context of
public sector. This study supports the proposition of Koliba et al., (2011) through empirical
evidence of the presence of mixed-form governance network in the energy sector in Pakistan. In
the similar vein, Provan and Kenis (2007) argued that the pure form of network rarely exist in
reality. Thus, scholars in the extant literature has already pointed to hybrid form of network. This
study supports the arguments of Provan and Kenis, (2007) and Koliba et al., (2011) by providing
empirical evidence of hybrid governance networks found in the energy sector in Pakistan.

9.3- Institutional complexity in public organizations

The literature on institutional analysis of organizations (Chapter 2; Section 2.4) suggests
that organizations are faced with multiple institutions and that they present separate rationalized
myths which the organizations have to incorporate (Alford and Friedland, 1985; Brunsson, 1989;
Thornton, 2004). Each institution is characterized by an inherent logic, which prescribes the
appropriate goals and legitimate means that may present contradictory pressures to the
organizations. This thesis has observed this phenomenon in case of the embedded organizations (LESCO and IESCO) under study. Both organizations are exposed to contradictory institutional pressures from TPA, NPM and NPG logics in terms of the appropriate goals (Table 7.1 and Table 7.2). The diverse goals have exposed embedded organization to three contradictory expectations including public service orientation, customer orientation and collaborative orientation. Such conflicting expectations, in terms of goals, are also noted in literature (Pache and Santos, 2013; Purdy and Gray, 2009). Pache and Santos, (2013) noted that social enterprises have conflicting goals under social enterprise logic and commercial logic. Likewise, Purdy and Gray, (2009) found conflicting expectations over the mission of dispute resolution offices under democratic versus bureaucratic logics. Such contradictory expectations expose organizations to institutional complexity, which is found in case of LESCO and IESCO.

The three logics (TPA, NPM and NPG) not only present divergent expectations in goals, but also prescribe varying means in terms of performance monitoring mechanisms (Table 7.4); decision-making process (Table 7.5); and work practices for professional legitimacy (Table 7.6). Likewise, Pache and Santos (2010) noted difference in means in terms of organizational forms, sources of control and professional legitimacy under welfare and commercial logics. Pache and Santos, (2013) explored divergent controls and performance expectations in case of social enterprises because multiple referent stakeholder were in position to pressurize the enterprises to incorporate their prescribed practices. Westphal and Zajac (2001) also found that different groups had divergent controlling modes in case of stock market repurchase programs in US corporations. Such divergent control mechanisms create conflicting situations for the organizations. The findings of this study supports the exiting literature by providing evidence of the divergent control mechanisms in embedded organizations. Both LESCO and IESCO have to
comply with overlapping or conflicting standards of performance under multiple control mechanisms including MOWP, PEPCO, BOD and NEPRA.

The literature has also found that different institutional logics prescribe different legitimate practices, which present contested pressures to the organizations. Naveed et al., (2017) highlighted that public enterprises in Pakistan are incorporating private sector HR practices, which are in sharp contrast to the existing traditional personnel administration. Likewise, Meyer and Hammerschmid (2004:1003) found contradiction between old administration orientation based on “terminology of duties, procedures and obligations” and new managerial logic reflected in terminologies such as “performance and result, efficiency and effectiveness, and managerial competence and prudence”. Such contradictory pressures, in work practices, are also observed in case of the embedded organizations of the present study. Bureaucratic practices based on rules, regulations and process are well ingrained in LESCO and IESCO. Additionally, they incorporated various private sector management practices including ERP implementation, modern HR practices, GIS system of planning and analysis, mobile meter reading and net metering. These private sector work practices are contrary to the bureaucratic practices. The incompatibility in institutional logics enhances the level of institutional complexity for the organization (Greenwood et al., 2011).

Vast literature has captured institutional complexity faced by the organization due to contrasting pressures of two institutional logics (Dunn and Jones, 2010; Reay and Hinings, 2009; Palermo et al., 2016; Meyer et al., 2014; Laurel et al., 2014). In contrast to the existing literature, where most of the studies have catered the contradiction of only two institutional logics, the present study has incorporated multiple institutional logics (TPA, NPM and NPG) in analysis. Although earlier scholars recognized multiplicity of logics (Friedland and Alford, 1991; Heimer,
1999), however, it received less attention in the vast literature produced on contradiction of institutional logics. Greenwood et al., (2011) argue that incorporation of two logics results in over simplification of the phenomenon of institutional complexity. They call for incorporating multiplicity of logics (more than two) with the argument that the sheer number of logics is important to determine the level of complexity faced by organization. In this respect, this study has explored greater level of institutional complexity by incorporating multiple institutional logics in the context of public sector.

From the above discussion, it can be inferred that the embedded organizations in the power network are confronted with higher level of institutional complexity due to two important reasons. First, they are exposed to multiple institutional logics (TPA, NPM and NPG) regarding the appropriate goals and legitimate means. Secondly, the goals and means present diverse and contradictory pressures to the embedded organizations resulting in high level of institutional complexity. Figure 9.2 presents a conceptual diagram of the contradictory pressures confronted by embedded organization in power network.
9.4- Network characteristics and institutional complexity

Field characteristics play fundamental role in shaping institutional complexity faced by organization (Thornton et al., 2005; Scott, 2008; Pache and Santos, 2010; Greenwood et al., 2011). Greenwood et al., (2011) argue that the nature and extent of institutional complexity is shaped by the structure of organizational field particularly with respect to fragmentation or centralization of actors in the field. Fields are the arenas where external actors are most active for
building pressures on organizations. Field characteristics can enhance or decrease the institutional pressures. This study supports this argument while finding three characteristics of power network (fragmentation, centralization and trust) that can influence the level of institutional complexity faced by embedded organizations.

**Fragmentation** in the power network is found to be the most critical factor to influence the level of institutional complexity faced by embedded organizations. There are multiple central authorities who can separately put demands on embedded organizations and at time these demands are contradictory. These multiple and uncoordinated central authorities increase the level of institutional complexity for LESCO and IESCO. This finding echoes with the early argument of D’Aunno et al., (1991:636) that organizations experience fragmented environments in which “multiple independent actors put forth their demands which are uncoordinated”. Meyer, Scott and Strang (1987) empirically substantiate that high level of fragmentation increase institutional pressures on organizations due to lack of consistent and predictable demands. In congruence, Pache and Santos (2010) propose that fragmented fields are comprised of uncoordinated actors, each supporting and enforcing contrasting institutional demands on embedded organizations. Hence, from the empirical evidence from power network under study, it can be inferred that the fragmentation in governance networks makes the embedded organizations more vulnerable to contradictory institutional pressures.

Another critical network characteristic is **centralization**. Meyer et al., (1987) note that field level centralization reduces the institutional pressures for organizations due to unified and better-specified rules. This study strengthens the argument of Meyer et al., (1987) with the evidence that the centralization reduces the contradictory pressures for embedded organizations in the power network. For example, due to centralized financial system of CPPA-G, companies
have less burden to meet expenses. They can survive even with losses. That means this centralized system has decreased the pressure of NPM logic for embedded organizations. The same is true in case of tariff determination process, which is centrally controlled by NEPRA. The tension between TPA and NPM logics is resolved by the central authorities and does not trickle down to the embedded organizations. Likewise, PEPCO manages integrated HR systems and makes rules for all actors. The presence of uniform rules and policies reduces the need of negotiations among network actors. Greenwood et al., (2011:338) explain the relation of field level centralization and institutional complexity:

“Organizations in such contexts… face little institutional complexity because competing demands are worked out at a higher level, either by negotiation between field-level actors and/or by dominant actors enforcing compliance. In contrast, the lack of a centralized actor exposes organizations to competing yet authoritative institutional demands—such that institutional complexity increases in the absence of unifying (centralized) field-level arrangements.”

The study provides empirical evidence to the argument of Greenwood et al., (2011), that whilst field level fragmentation exacerbates institutional complexity, field centralization reduces institutional complexity experienced by organizations.

In terms of trust, this study has found mixed results. There is high trust among unbundled companies (NTDC, DISCOs and GENCOs) whereas high trust deficit between unbundled companies and centralized authorities (MOWP, NEPRA, PEPCO and CPPA-G). However, in both cases, it is evident that trust based relations among network actors can drastically reduce institutional complexity for embedded organizations. Trust is recognized as crucial factor in inter-organizational relations for exchange of resources (Nooteboom, 2002); for facilitating cooperation among actors and reducing transaction cost (Sako, 1998; Lane and Bachman, 1998); for stability in relations (Parker & Vaidya, 2001) and for handling complexity (Klijn et al.,
The findings of this study support the argument of Klijn et al., (2013) that trust based relations can enable organization to better cope with complexity in governance networks. Actor in the power network have lot of interdependencies and they coordinate with each other in these areas. It is in the benefit of the companies to cooperate with each other because they are faced with similar conflicting situations against multiple authorities after unbundling. Through cooperation and trust in each other, they can better handle the situations. This finding fits comfortably with the existing literature that trust among actors can reduce the level of institutional complexity.

On the other hand, high trust deficit was noted among central authorities and other companies in the network. Commenting on the relation of MOWP and DISCOs, a respondent said, “Companies trust each other. However, when you talk about ministry, there is a paradigm shift in case of people in the Ministry. They have different frame of mind. How can you expect that they will trust companies?” On the other hand, the relations among central authorities also lack trust that is the major reason of uncoordinated authorities in the power network. Lack of trust generates uncoordinated network constituents for the embedded organizations, which enhance unpredictable demands for organizations. Thus, the study has found that trust deficit among actors in governance networks enhances institutional complexity for public organizations. In light of this discussion, Figure 9.3 depicts the how network characteristics influence the level of institutional complexity faced by embedded organizations.
9.5- Organizational attributes and institutional complexity

Study has found various attributes of LESCO and IESCO which are crucial to handle institutional complexity. These attributes are important for the organizations to bear conflicting pressures from multiple logics and to choose appropriate response. Greenwood et al., (2011:324) conceptualized them as organizational ‘filters’ that mitigates how organization may choose their response to institutional complexity. This study has found four critical organizational attributes
to handle institutional complexity including governance structure of the organization, CEO’s position, position of organization in the power network and nature of the task of organization.

*Governance structure* of the company is a critical attribute of public organizations to handle institutional complicity. Literature suggests that independent legal status give more autonomy to the public sector organizations (Painter et al., 2010). It is argued that agencies having their own governing boards can be insulated from ministerial interventions and controls from the center (Verhoest et al., 2010; Zahra and Jadoon, 2016) and can enjoy more autonomy (Christensen et al., 2007). Hence, according to the literature, the mechanism of independent BOD can decrease ministerial intervention in company’s affairs. Contrary to the existing literature, the findings of this study revealed that presence of BOD has increased ministerial influences and reduced company’s autonomy. The study has found that the model of presence BOD is misfit in the context public sector organizations. The respondents have provided considerable evidences/arguments (Section 8.3.1) which indicate that corporate governance has resulted in more complex arrangement for LESCO and IESCO. The BOD is actually a formality and fulfillment of legal requirement. Whereas, in reality, government has total hold on LESCO and IESCO. This finding does not fit comfortably with the arguments found in literature that presence of board increase company’s distance in hierarchy and reduces ministerial influences (Christensen et al., 2007, Verhoest et al., 2010; Zahra and Jadoon, 2016). Contrary to the arguments in literature, the study has found that the representatives of public sector, particularly those who hold position in MOWP, enhance influence of government in the Board. On the other hand, directors from private sector have emphasis on private sector practices which enhance pressures of NPM logic. In this way, BOD is a source of increased influences on management from various sources including directors from private sector, directors from public sector and the
government itself. Each source has its own interests and influencing power which is not only complex to handle but also expensive for the organization. Hence, this governance structure has reduced company’s autonomy and enhanced challenges for IESCO and LESCO to handle institutional complexity. Therefore, it can be inferred that governance structure of organization is associated with organization’s capacity to handle institutional complexity; Higher the ministerial control the more vulnerable the organization will be to handle diverse institutional logics, whereas higher the autonomy of organization the better it can handle institutional complexity.

The position of CEO is perhaps the most prominently emerged theme in organizational attributes to handle multiple institutional pressures. Respondents highlighted that the CEO has to bear all pressures coming from diverse authorities. The role of CEO is very critical to handle pressures from multiple logics. Whereas, the study found that the CEOs of both LESCO and IESCO have very weak and defenseless position to handle political pressures. Rather, CEO serves at the will of government due to various reasons including appointment of the CEO from the government, lack of transparency in CEO’s appointment procedure, no fixed term of appointment and removal from the government. According to a respondent:

“The CEO is the weakest position in the Company. Ministry issues letter specifying that Mr/Ms.so and so is appointed as CEO until further order. Now you can imagine that even I have more security of my position as compared to my CEO because I have permanent appointment.” (R-01-LESCO)

Since, government can remove the CEO at any time, therefore, the person is not in position to challenge the orders from ministry or resist other political influences. Such defenseless and weak position of CEO increases institutional complexity for the organization. The study has found that the CEO remains fully occupied to satisfy the demands from ministry and other political pressures can easily influence the CEO. Furthermore, the CEO is not in a position to plan and
envision future directions for the company because there is no fixed term for his appointment. From this discussion, it is inferred that CEO’s powerful position is an influential attribute of the public organization to handle institutional complexity.

Another critical attribute is the **position of organization in the network**. The distinction of organizational position in the field is found in terms of ‘central’ versus ‘peripheral’ position (Greenwood et al., 2011:341). This distinction is well established with considerable work produced (Davis, 1991; Leblebici et al., 1991; Greve, 1998; King, 2008; Greenwood et al., 2011). The study found that LESCO and IESCO have peripheral position in the network because both are small organizations and have low status in the network. It is argued, in literature, that large, high status organizations (being the central organizations) are more immune to institutional pressures as compared to small, low status organizations having peripheral position (Kostova et al., 2008; Greenwood & Suddaby, 2006). Central organizations have the capacity to reject the incoming institutional logic due to their high status, and thus they are in a better position to protect their system from external pressures. Whereas, peripheral organizations have to incorporate external pressures to ensure their legitimacy and survival. This finding is in congruence with the arguments found in literature. Due to the peripheral position of LESCO and IESCO, they are found to be more vulnerable to the pressures from external actors. Therefore, the findings of the study strengthen the argument that large, high status organizations are better able to handle institutional complexity as compared to small, low status organizations.

Another influential attribute of organization to handle complexity is the nature of the **task** of organization. Lioukas, Bourantas and Papadakis (1993) argue that high political visibility of the task of the public organization, attracts government attention which results in more ministerial intervention. In the similar vein, Pollitt et al., (2004) assert that political salience of
the task of the organization is particularly important to understand the pressures on organization. They contend that in the area of welfare and social policy, public organizations have face-to-face interaction with relatively larger proportion of citizens which make their task more politically salient. The findings of this study empirically strengthens these arguments. The political salience of the task of LESCO and IESCO invites more involvement of ministry in operational matters. Both organizations have direct dealing with larger proportion of the citizens and are engaged in the sensitive matter of uninterrupted supply of electricity. Verhoest et al., (2010:215) assert that such political salience invites more controls from government which is pointed out by most of the respondents in LESCO and IESCO. Ministry needs to more vigilantly govern the distribution companies because ministry is ultimately answerable to public if any issue arises. Hence, due to the critical task of LESCO and IESCO, there is more ministerial interventions in company’s decisions resulting in lower autonomy of the organization. Likewise, literature has identified that task is important for ministerial controls and organizational autonomy (Verhoest et al., 2010). Furthermore, it is the supply of electricity where the major political influences are present for various demands including reduction of bills, power meter arrangements, and supply at lower rates etc. Hence, the nature of task is an important attribute that enhances institutional complexity for LESCO and IESCO. Therefore, it is argued that the more the political salience of the task of the organization, the higher the level of institutional complexity faced by the organization. In light of above discussion, Figure 9.4 presents the mitigating effects of organizational attributes to handle institutional complexity.
9.6- Organizational responses to institutional complexity

The extant literature has identified various responses of organizations to cope with institutional pressures such as replacement of old logic with the new logic (Thornton, 2002); rejection of new logic (Kraatz & Block, 2008); decoupling (Zajac & Westphal, 2004); co-existence of logics (Reay & Hinings, 2009) and blending of old and new logics (A. C. Pache & Santos, 2013). This study has found that the embedded organizations have developed a complicated HR system in which prescriptions of all the three institutional logics (TPA, NPM and NPG) are either practiced in parallel or mixed up into some new or hybrid HR practices that
satisfy two or more logics at the same time. Parallel systems are most commonly revealed in the HR process including compensation, performance management, promotion and hiring. Although corporate HR trends are introduced (under NPM logic), however, WPDA Service Rules (under TPA logic) are still in practice. Moreover, collaborative HR practices (under NPG logic) are also present in the system. For example, HR system is being automated through Enterprise Resource Planning (ERP) implementation for online HR system. However, study found that employees are required to maintain both manual and automated HR data records. It can be inferred that TPA logic (manual data maintenance) is not replaced with NPM logic (automated data), rather both logic are present at the same time. This finding is in congruence with the argument of Greenwood et al., (2011) that the existing logic is not replaced by the incoming logic. Rather, both logics may co-exist. Such co-existence of institutional logics is well recorded in the literature (Reay and Hinings, 2009; Dunn and Jones, 2010). This mechanism is also conceptualized as compartmentalization of logics where separate subunits deal with particular logics with compartmentalization of different mindsets, identities, practices and processes (Kraatz and Block, 2008; Pratt and Foreman, 2000). The present study has found that dedicated resources (from IT) are assigned the task of maintaining automated data, whereas manual data is handled largely the HR officers. Hence, through compartmentalization, both logics are being incorporated in the system. Greenwood et al., (2011) put this organizational response under the category of differentiated hybridity through which organizations incorporate more than one logic at the same time.

This strategy of differentiated hybridity is largely used by the embedded organizations to satisfy multiple logics. The contradictory hiring prescriptions of TPA and NPM logics are being used in parallel in different cadres (Table 8.2). The same is true in case of performance
evaluation system. The embedded organizations are using annual confidential report (ACR) in officials cadre to satisfy TPA logic and performance evaluation report (PER) in officers cadre to respond to NPM logic. The strategy of hybrid differentiation has enabled the organizations to address the pressures from both logics separately in the hierarchy. Such parallel system are largely reported in the HR system. A respondent even said, “*We are messed up with dual system in practice. Both are running in parallel to each other*”.

From above discussion, it can be inferred that in case of LESCO and IESCO, the new logics of NPM and NPG are incorporated in the already existing TPA logic. While, the new logics have made their place in the system, they have not replaced the already existing TPA logic. Rather, TPA is still the most dominating logic in HR process. Largely, the study found that all the three logics are attended separately. The prescriptions are spread vagrantly with less new solutions for integration of logics. Mostly, companies are handling either parallel/double systems (such as manual and automated data entry) or different systems at different levels in hierarchy (such as ACR and PER) to satisfy conflicting logics. This finding has similarity with the analysis of Reay and Hinings (2009) and Dunn and Jones (2010) who find that contradictory logics can co-exist and their rivalry can be managed by handling them separately. Likewise, Pache and Santos (2013) find that social enterprises selectively coupled intact elements prescribed by commercial and welfare logics through specific hybridization patterns whereby some elements from new logic was strategically incorporated in the existing one resulting in differentiated hybridity. However, this finding is in contrast to the studies that argue for replacement of existing logics with the new logics (Westphal and Zajac, 1994; Haveman and Rao, 1997; Lounsbury, 2002; Meyer and Hammerschmid, 2006).
In addition to incorporating logics in parallel system, the embedded organization have also developed integrated solutions where by different logic are blended with each other. One of such solutions is creation of hybrid designations such as Additional Deputy Manager (ADM), Additional General Manager (AGM) and Additional Director (AD) depicted in figure 8.1. The role of ADM is a mixture (hybrid form) of Associate Manager (AM) & Deputy Manager (DM). Although it does not promote the employee, still the employee feels like promoted due to increase in salary and powers. This hybrid designation can satisfy the pressures of different logics. It has not changed the already existing system and structure, thus satisfied TPA logic. NPM logic is satisfied by giving additional benefits to the employee. Moreover, NPG logic is satisfied by creation of this seat in all DISCOs. Through creation of hybrid designations, the organizations (under study) can satisfy pressures from all the three logics. This is a perfect example of blending of different institutional logics. This strategy of organization to handle institutional complexity, is conceptualized in literature as ‘blended hybridization’ (Greenwood et al., 2011:352) and ‘blended hybridity’ (Skelcher and Smith, 2015:440). In this response strategy, organizations attempt to combine prescriptions from different logics and develop new solutions that can satisfy contradictory logics. Murray (2010) found emergence of distinctive/ hybrid logic due to contestation of overlapping institutions. There is agreement in literature that hybridized solutions can secure endorsement from both external and internal referent audiences (Tracey et al., 2011; Battilana and Dorado, 2010). In the context of public sector, various researchers have explored this strategy such as creation of new shared governance logic (Fan and Zietsma, 2017) neo-bureaucratic logic (Berg and Pinheiro, 2016) and hybrid innovative practices (Broek, Boselie and Paawe, 2014).
From the above discussion, it can be concluded that all the three logics are spread in the HR process of LESCO and IESCO. The companies have addressed all the three logics separately absorbing them in different levels in hierarchy and different HR practices. However, some hybrid solutions are also found where various logics are combined to satisfy multiple referent audiences. Thus, the embedded organizations have responded to institutional logics by largely using the strategy of ‘differentiated hybridity’. However, few attempts are also made to use the strategy of ‘blended hybridity’. In light of above discussion, Figure 9.5 depicts how public organization experience and manage institutional complexity being embedded in governance networks in the energy sector of Pakistan.
Figure 9.5: Institutional Complexity and Responses of Public Organizations

Figure 9.5 presents the phenomenon of institutional complexity (experienced by public organizations) on macro, meso and micro level. The diverse public sector reforms trends (particularly TPA, NPM and NPG reforms) have created institutional pluralism in the energy sector in Pakistan. Furthermore, due to multiple reforms, the energy sector has shifted from
vertically integrated system to web of autonomous organizations placed in network arrangements. The institutional pluralism has exposed the public organizations to institutional complexity due to multiple and contradictory pressures in goals and means (such as performance monitoring mechanisms, decision making process and work practices) to achieve goals. Network characteristics (in particular centralization, fragmentation and trust) play critical role in mitigating the effect of institutional complexity for embedded organizations. Moreover, organizational attributes (such as network position, task, governance structure and leadership) can enable the organizations to better handle conflicting situations. The organizations have embraced multiple pressures from contradictory logics through the strategies of differentiated and blended hybridity.

9.7- **Theoretical implications**

The literature on institutional theories and organizational responses identify three broad categories of organizational responses to manage institutional complexity: Rejection (argued by old institutionalism); passive acceptance (argued by institutional isomorphism); and active acceptance (argued by institutional logics). Old institutionalism argues that organizations reject incoming pressures if they offer contradictory prescriptions to already prevailing practices (Selznick, 1949; Parsons, 1956). According to new institutionalism, organization accepts the incoming institutional demand as a passive recipient, which makes them isomorphic with each other (Meyer and Rowan, 1977; Zucker, 1977; DiMaggio and Powell, 1983; Meyer and Scott, 1983). Contrary to these arguments, the institutional logics perspective argue for the active acceptance of intuitional demands by the organization through developing new mechanisms or innovation in current practices (Alford & Friedland, 1985; Thornton and Ocasio, 2012). The findings of this study supports the argument of active acceptance of logics under institutional
logics perspective (Thornton and Ocasio, 2012) while rejecting the arguments of rejection or passive acceptance of institutional logics.

This study has differentiated the institutional complexity confronted by organization and institutional complexity embraced by the organization in its processes. An organization may exposed to high level of institutional complexity but may not incorporate it by either rejecting or symbolically responding to institutional complexity. This study argues that organizations can absorb higher level of institutional complexity through blending multiple logics in new practices.

There is another important point of departure of this study, in terms of disagreement with the widely accepted argument of institutional isomorphism. Institutional isomorphism argues for the shift in organizational structure and practices due to incoming dominant institutional logic (Zajac & Westphal, 2004; Thornton and Ocasio, 1999; Lounsbury and Pollack, 2001; Greenwood and Suddaby, 2006). Whereas, most of the scholars have analyzed replacement of existing organizational practices due to incoming new institutional logic, this study reports the presence of all the three logics at the same time. This study has found that incoming logics (NPM and NPG) have not replaced the already present (TPA logic). Rather, all the three logics are present at the same time. In this respect, this study extends the recent development in literature towards capturing the co-existence of competing logics. additionally, whilst most of the studies have catered the co-existence of only two logics (Reay and Hinings, 2009; Dunn and Jones, 2010) this study provides empirical evidence of co-existence of multiple institutional logics and multi-layering of institutional logics (Polzer, 2016).

The argument of new institutionalism have attracted a wide community of scholars for explaining isomorphic influences on organizations (DiMaggio and Powell, 1983; Zajac and
Westphal, 2004; Boxenbaum & Jonsson, 2008). Nevertheless, this study contends that the arguments of institutional isomorphism provide only a nuance understanding of organizational response to institutional pressures whereby organization acts as a passive recipient of incoming new logics. Whereas, institutional logics provide more comprehensive explanation of diverse responses of organizations recognizing the power of actors for the creation and transformation of institutions (Thornton et al., 2012). The phenomenon of institutional logics is quite complex and that the simple replacement of existing logic with the incoming new logic is rarely possible in reality. Rather, existing logic also continue in the system side by side the incoming logic as evidenced by this study. Moreover, this study supports the argument that different institutional logics can be used by agency instrumentally to change institutional logics (Thornton and Ocasio, 1999). Greenwood and Suddaby (2006) argue that actors take innovative solutions by manipulation of the given logic. This argument is further extended in literature towards institutional transformation and institutional entrepreneurship. The empirical findings of this study is a contribution in support of this literature.

9.7- Conclusion

This study is an effort towards systematic analysis of institutional complexity catering multiple logics in a framework of multiple levels of analysis of institutional complexity. Capturing the role of macro level institutional pressures in creating institutional pluralism and meso level network characteristics in filtering institutional pressures for the embedded organizations, the study moves to the micro level analysis of organizational attributes to handle complexity and its strategies to absorb/manage institutional complexity. In this way, this study makes systematic efforts to analyze institutional complexity on macro, meso and micro level. Such multi-level analysis of institutional logics is a rarely catered area in the literature.
Furthermore, this study has incorporated more than two logics which was also much desired.

This is an important point of departure of this study from the extant literature produced on institutional complexity.
Chapter 10  Conclusions

10.1- Introduction

This study aimed at an overarching research question of how organizations manage institutional complexity embedded in governance networks in the public sector. This overarching research question was elaborated in detailed sub-questions that aimed to study the phenomenon of institutional complexity covering the macro level (layering of diverse reform models in the public sector) meso level (emergence, structure and characteristics of governance networks in the public sector) and micro level (organizational attributes) to explore how organizations internally manage institutional complexity. The study adapted the framework of multi-level analysis of institutional complexity (Greenwood et al., 2011) in the context of the public sector and selected the energy sector in Pakistan as the case for analysis.

This chapter presents the findings of this study, contribution in literature, practical and theoretical implications and future directions. The following section concludes the major findings of this study against each research question. Section 10.3 comments on the research design of the study and its methodological contributions. Section 10.4 presents the theoretical contributions of this study in the existing literature followed by the practical implications of the study in Section 10.5. The penultimate section provides some useful suggestions for future research directions and further extension of this thesis. The chapter ends up with concluding remarks on the strength of this study to handle the complex phenomenon with multi-level analysis.
10.3- Research design and methods

This study aimed at multi-level analysis of institutional complexity in the context of the energy sector of Pakistan. Taking the stance of critical realism, the researcher accepted that reality was objective, however, it was explored and interpreted through the social conditioning involving both mental and physical aspects (Sayer, 2000). Critical realism allowed the researcher to interpret reality through social lenses. In addition to that, it also allowed multi-level analysis of reality to explore it from different lenses. Institutional complexity was studied on multi levels including energy sector, power network and the embedded organization. Each level had the potential to enrich researcher’s understanding about the phenomenon.

Case study research design was used taking the energy sector as the case; power network as an embedded unit of analysis in the energy sector; and LESCO and IESCO as the embedded unit of analysis in the power network. Case study was the most suitable design for this research which allowed the researcher to study the phenomenon while remaining in real life context (Yin, 2003). The study adopted abductive approach with elements of induction and deduction throughout the research study. The study incorporated an explicit conceptual framework (Chapter 3) before data collection. It adapted the framework of Greenwood et al., (2011) for multi-level analysis of institutional complexity in the context of public organizations embedded in governance networks. The constructs of study were conceptualized and operationalized (Table 3.2). Relationship among variables were proposed (Figure 3.3) and an interview guide was prepared (Appendix-I). It served as template for investigation (Crabtree and Miller, 1999).

The researcher developed a case study protocol before starting the fieldwork. Data sources included interviews (unstructured and semi-structured) and documents (reports, companies websites, policy documents). Data was collected in three phases. After each phase,
data was analyzed and interview guide was revised according to further understanding of the issue. It allowed the researcher to analyze data in an iterative process moving from macro to meso to micro level of analysis of the phenomenon. Data was triangulated through two approaches: triangulation of data from multiple sources and triangulation of perspectives from diverse participants.

Data was analyzed through thematic analysis in first cycle coding (etic, emic, attribute and verses coding techniques) and second cycle coding (pattern, axial and theoretical techniques). Using the criteria of Yin (2003), the study applied various tactics to enhance construct validity, internal validity, external validity and reliability of the case study. Moreover, the study took appropriate measures to make sure that ethical principles were duly addressed by seeking organizational permission through authority letters, seeking respondent’s informed consent, providing right to withdraw, protecting the anonymity of respondents and confidentiality of the data.

10.2- Research Questions and Findings

Based on the overarching research question, the study aimed at five sub-research questions. Table 10.1 lists down the key findings against each research question.
Table 10.1 Key Findings against Each Research Question

<table>
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<th>Research Questions</th>
<th>Major Findings</th>
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| **What is the structure of governance networks in the energy sector in Pakistan?** | - Power network comprises of variety of actors (from public and private sectors) and diverse relations including control and command; negotiation and bargaining; collaborative and cooperative.  
- Power network is a hybrid form of the pure network types (such as hierarchical, market and clan) with a combination of control, negotiation and collaborative relational ties. |
| **Why do public organizations face institutional complexity in the governance networks in energy sector in Pakistan?** | - Energy sector is exposed to different reform trajectories under three major public sector reform models including TPA, NPM and NPG.  
- The reforms have introduced three different institutional logics (TPA, NPM and NPG) in energy sector which have contradiction with each other.  
- NPM reforms have created fragmentation in the energy sector due to creation of autonomous bodies, independent regulatory agencies, public private partnerships and involvement of privates sector.  
- NPG reforms have created integrating agencies, collaborative mechanism and capacity-building agencies to cater NPM based fragmentation.  
- NPM and NPG reforms have brought change in the structure of energy sector from vertically integrated few bureaucracies to a complex web of autonomous organizations, from public and private sector, which are horizontally tied with each other for public policy making and implementation.  
- Energy sector of Pakistan has moved from simple vertical arrangements to complex governance networks.  
- Embedded organizations are faced with multiple institutional logics including TPA logic, NPM logic and NPG logic.  
- The three institutional logics present contradictory demands in the goals and means of the organizations resulting in high level of institutional complexity faced by embedded organizations. |
| **How network characteristics influence institutional complexity faced by embedded organizations in governance networks?** | - Three critical network characteristics are identified and their role is explained in shaping institutional complexity for embedded organization: fragmentation, centralization and trust.  
- The high fragmentation in the power network resulted in the increase in the institutional complexity faced by the embedded organizations.  
- The High centralization in the power network reduced the institutional complexity for embedded organizations.  
- The high trust level among network actors enabled them better handle the multiple institutional pressures. |
How organizational attributes enable the embedded organizations to handle institutional complexity?

- Four critical organizational attributes are identified to handle institutional complexity: Governance structure, organizations’ position in network, CEO’s position and task
- The high ministerial control in the BOD has made the embedded organizations more vulnerable to political demands.
- Due to the peripheral status in the Power network, the embedded organizations have weak position to handle multiple and diverse institutional demands.
- The political salience of the task of embedded organizations have increased the ministerial intervention in the operations of the organization resulting in increased institutional complexity.
- The CEO’s weak position make the embedded organizations more vulnerable against institutional pressures.

How organizations embrace (internally manage) institutional complexity?

- Embedded organizations have largely used the strategy of differentiated hybridity by incorporating the prescriptions separately in the HR process.
- The strategy of blended hybridity is also used by the embedded organizations in which hybrid solutions are developed through blending of different logics.
- The study supports the argument of institutional logics perspective that organizations actively response to the incoming institutional pressures by developing indigenous solutions.

1-What is the structure of governance networks in energy sector in Pakistan?

The study has taken Power network as embedded unit of analysis in the energy sector in Pakistan. The study found that the structure of power network is a hybrid form of three network typologies found in literature including hierarchical network (Provan and Kenis, 2007); market network (Benson, 1975) and clan network (Ouchi, 1980). It contains the authoritative relational ties (found in the hierarchical networks); the negotiation based relational ties (found in the market networks) and the collaborative ties (marked by the clan network). Since, variety of relational ties are witnessed in the power network, therefore, neither of the famous typologies in the literature can be applied in the case of power network. In this respect, the study provides empirical evidence to the argument of Koliba et al., (2011) that governance networks are mixed-
form hybrid networks that incorporate the features of hierarchical, market and clan forms of network. The variety of actors (from public and private sectors) and diverse relational ties among network actors (including control and command; negotiation and bargaining; and collaborative and cooperative), makes the governance networks quite complex and hybrid. Figure 6.3 depicts the structure of power network.

This study identified three critical characteristics of the governance networks. First, the governance networks are marked by centralization due to presence of public authorities (such as MOWP, NEPRA and PEPCO in power network) who can exert their power on other actors in the network and due to which command and control relations exists in the network. Second, the governance networks are quite fragmented due to autonomous and uncoordinated actors. In the power network (under study), it was noted that the authorities are uncoordinated and put separate pressures to the actors who are dependent on them. Third, there is high trust among the actors in horizontal relations and they are quite cooperative with each for common issues. Whereas, there is high trust deficit among actors who are placed in authoritative relations such as the relation of PEPCO with DISCOs comprised of high trust deficit.

2- Why are public organizations facing institutional complexity in the governance networks in the energy sector in Pakistan?

The study found that the energy sector of Pakistan is exposed to different reform trajectories at an accelerated pace (Table 5.1 and Table 6.1) under three major public sector reform models including Traditional Public Administration (TPA), New Public Management (NPM) and New Public Governance (NPG). These reform models have introduced three different institutional logics (TPA logic, NPM logic and NPG logic) in energy sector, which have
contradiction with each other. The contradictory prescriptions of these models is well recognized in literature (Christensen and Laegreid, 2010; Jadoon and Jabeen, 2012).

A critical result of these reforms is penetration of governance networks in the public sector. The study witnessed a drastic change in the energy sector which is moved from a highly integrated and vertically arranged arrangement to a web of autonomous and horizontally placed agencies. The emergence of governance networks in the public sector is explained under NPM based autonomous and fragmented agencies and NPG based integrating agencies (Koliba et al., 2011). TPA logic prescribed state-led development, through public monopolies, which resulted in vertically integrated large bureaucracies in the public sector. Four public sector monopolies (WAPADA, KESC, SSGC and SNGPL) remained dominant in the energy sector under TPA reforms. Under NPM logic, the energy sector observed several trends including liberalization reforms, restructuring reforms and deregulation. This phase of reforms resulted in fragmentation in the energy sector with unbundling of WAPDA into fifteen autonomous public companies; involvement of private sector for energy generation projects and independent regulatory agencies. The NPG reforms created integrating agencies, collaborative mechanism and capacity-building agencies to cater NPM based fragmentation.

Hence, NPM and NPG reforms have brought change in the structure of energy sector from vertically integrated few bureaucracies to a complex web of autonomous organizations, from public and private sector, which are horizontally tied with each other for public policy making and implementation. This emergence of governance networks in the energy sector in Pakistan is depicted in Figure 9.1.
Various reforms have exposed the energy sector to institutional pluralism with three institutional logics: TPA logic, NPM logic and NPG logic. In line with the framework of Pache and Santos, (2013), this study has analyzed the contradictory elements of these institutional logics in terms of prescribed goals and means. Two organizations (LESCO and IESCO) were taken an embedded units to analyze institutional complexity in public organizations. Whist most of the studies have incorporated only two institutional logics to analyze institutional complexity (Greenwood et al., 2011), this study has captured the phenomenon more realistically while incorporating three contradictory institutional logics.

The embedded organizations (under study) are exposed to conflicting expectations over the goals. Whilst NPM logic is dominantly present in the vision and mission statements, all the three logics are present in the values of the organizations. Both organizations are clear about their goals of profitability and efficiency. However, different themes emerged with respect to the values including public service orientation (TPA logic), customer orientation (NPM logic) and collaborative orientation (NPG logic). TPA logic is based on continuous provision of electricity to public (even at losses) with the values of equity and fairness. Whereas, NPM logic takes the public as customer and the embedded organizations are expected to focus on bill’s recoveries, efficiency and profitability. Yet, NPG logic put other expectations of interaction, participation and collaboration. The embedded organizations are expected to share their expertise with other organizations and play their fare role in resolving energy crises in Pakistan.

The contradictory pressures are also present in the prescribed means of the three institutional logics with respect to performance monitoring mechanism (Table 7.4); decision making process (Table 7.5) and the work practices (Table 7.6). Embedded organizations are bearing multiple modes of controls with respect to their performance monitoring and evaluation. TPA logic is
present with respect to accountability to political government through various mechanisms including regular meetings of LESCO and IESCO with MOWP and PEPCO; submission of progress reports; questioning in case of low performance, appreciation for good performance and annual audit by Auditor General of Pakistan. At the same time, NPM logic puts its pressures in form of questioning and monitoring from board of directors. Institutional complexity is further enhanced due to monitoring and evaluation from the regulator (NEPRA). NEPRA has its own standards of performance against which, it scrutinizes the performance of embedded organizations and compares their performance against each other. In case of non-compliance to the specified standards, companies are fined and corrective measures are taken by NEPRA.

The three logics are also present in decision making process of embedded organizations. Government has great control not only in the policy decisions but also in day-to-day operational and financial matters of LESCO and IESCO. On the other hand, under Companies Ordinance (1984), the companies are autonomous in their policy and managerial decisions and government cannot interfere in their matters. At times, the decisions taken by the management are challenged by the ministry which present conflicting pressures in making decisions. Further, some decisions are taken through collaboration or consensus among organizations in various matters including uniformity of policies, integrated financial system, integrated seniority and promotion and centralized training system. This is another pressure in decision making process of LESCO and IESCO. It implies that embedded organization are confronted with high level of institutional complexity. Figure 9.2 illustrates the contradictory pressures confronted by embedded organizations in the power network.

3- How do network characteristics and organizational attributes influence institutional complexity faced by embedded organizations in governance networks?
The study found the power network as the arena where the external actors are most active to exert pressures on the embedded organizations. Hence, the network characteristics can enhance/ decrease the institutional pressures for the organizations. The three characteristics of governance network play critical role in shaping the institutional complexity confronted by embedded organizations (Figure 9.3).

The study noted that centralization in the network could reduce the level of institutional complexity for the embedded organizations with certain mechanisms such as resolution of common issues at the central level; uniform rules to be followed by all actors; less financial burden on actors; less direct negotiation in horizontally placed actors in the network. Meyer et al., (1987) also found the relation of field centralization and reduced external pressures confronted by the organizations.

On the other hand, the fragmentation in the power network exacerbated the institutional pressures for the embedded organizations. The study found multiple and uncoordinated central authorities in the power network who strengthened different institutional logics. For example MOWP and PEPCO enhanced the pressures of TPA logic due to high control mechanisms. On the other hand, NEPRA enhanced NPM demands in form of performance competition among DISCOs and commercial orientation. Yet another authority was BOD, which also frequently inquired for companies performance. Embedded organizations were frequently faced with contradictory and uncoordinated demands from different centralized authorities. Hence, the fragmentation in the network, increased institutional complexity for the embedded organizations.

Mixed results were found in terms of trust based relations in the power network with high trust level in horizontal relations and high trust deficit in authoritative relations. High trust
reduced the institutional pressures whereas trust deficit intensified the institutional pressures for the embedded organizations. In this respect the findings of this study also fits to the literature that highlights trust as the most critical factor to handle complexity in network (Klijn et al., 2013).

In terms of organizational attributes, four attributes were emerged in themes that can enable organizations to better handle institutional complexity (Figure 9.4). These attributes include governance structure, organizations’ position in network, CEO’s position and the task of the organization. Organization’s position in the network was emerged as most important to handle institutional complexity. The embedded organizations in the study had peripheral position in the network with small size and low status due to their dependencies on the actors in the network. With these attributes, they had weak position to influence other actors in the network. On the other hand, other actors could easily influence them. Thus, their position further intensified institutional complexity for them. Another attribute is CEO’s weak position, which made the embedded organizations more defenseless against multiple pressures from external actors. In addition to that, the political salience of the task of the embedded organization invited further ministerial intervention in their operational matters.

The embedded organizations are incorporated as separate legal entities to be governed by the BOD. This governance structure is highly recommended by the NPM reformers with the argument that presence of BOD increases company’s distance in hierarchy and reduces ministerial influences (Christensen et al., 2007, Verhoest et al., 2010; Zahra and Jadoon, 2016). Contrary to the arguments in literature, the study found that the mechanism of corporate governance has resulted in more complex arrangement for embedded organizations. The of BOD is actually a formality and fulfillment of legal requirement. Whereas, in reality, government has
great control in the strategic and operational decisions of LESCO and IESCO. The representatives of public sector, particularly those who hold position in MOWP, enhance influence of government in the Board. On the other hand, directors from private sector emphasis on private sector practices which enhance pressures of NPM logic. In this way, BOD is a source of increased influences on management from various sources including directors from private sector, directors from public sector and the government itself making the organizations more vulnerable to handle multiple pressures.

4-How do organizations embrace (internally manage) institutional complexity?

This study has differentiated the level of institutional complexity confronted by the organization and the level of institutional complexity actually incorporated by the organization. The study argues that an organization may confront high level of institutional complexity but may incorporate a lower level of institutional complexity by rejecting the incoming logics. On the other hand, organizations can manage to incorporate high level of institutional complexity by blending the logic or developing indigenous solutions that can enable the organizations to handle multiple institutional demands. The study has explored the HR process of embedded organizations, in detail, to comprehend how organizations have incorporated conflicting pressures from TPA, NPM and NPG logics in the HR system.

The embedded organizations in this study have incorporated conflicting institutional logics while using the strategies of differentiated hybridity and blended hybridity. Differentiated Hybridity is largely used in the HR process whereby the contradictory prescriptions, from different logics, are separately addressed in different levels in hierarchy. For example, for performance evaluation process, LESCO and IESCO are using ACR system in official Grades
(which satisfy TPA logic) and PER system in officer’s grade (which satisfy NPM logic). This strategy has resulted in co-existence of institutional logics in embedded organizations with parallel systems found throughout the HR process. In addition to differentiated hybridity, the embedded organizations have also used the strategy of blended hybridity by integrating the prescriptions of different logics such as creation of hybrid designations. However, this strategy is rarely used. A critical reason can be the weak organizational attributes of the embedded organizations to handle institutional complexity. Each of the four attributes of embedded organizations has made them more vulnerable to handle institutional complexity including weak position in the network; defenseless position of CEO; task that invites for ministerial involvement; and the governance structure that increases political interferences. Strong attributes can enable organizations to better handle institutional complexity by developing more integrated solutions under the strategy of blended hybridity. However, it is found that the embedded organizations have either incorporated prescriptions of different logics separately (using differentiated hybridity) or modified prescriptions by developing integrated version (blended hybridity). Therefore, the study supports the institutional logics perspective that argues that the actors actively accept the institutional pressures and play their role in modifying them (Thornton and Occasis, 2013).

The study provides evidence that the phenomenon of institutional logics is quite complex and that the simple replacement of existing logic with the new logic is rarely possible. Rather existing logic continues in the system with the incoming logic resulting in co-existence of institutional logics (Reay and Hinings, 2005). Hence the passive acceptance of institutional pressures by embedded actors under institutional isomorphism (DiMaggio and Powell, 1983; Zajac and Westphal, 2004) is rejected by this study. On the other hand, the findings of this study
also do not fit with the argument of rejection of incoming institutional logic. Literature argues that organization might become an institution in itself which immunizes it from external pressures (Kraatz and Block, 2008). Nevertheless, this study found that the embedded organizations are not in position to reject the incoming institutional logics for two important reasons. First, they have weak and defenseless position in the network to reject institutional pressures. Second, it is more than two decades that the embedded organizations are bearing pressures of NPM and NPG logics. Hence, it is concluded that organizations may reject (or symbolically accept) the incoming logic in the short run, however, eventually, they have to incorporate the multiple pressures to gain legitimacy and important resources from external environment (Scott et al., 2000).

10.4- Contribution in knowledge

This thesis has contributed in knowledge by providing theoretical contribution and empirical contribution.

10.4.1- Theoretical contribution

Although the literature on institutional logics has received considerable attention of the researchers, however, there are several neglected areas in this field which are calling for researchers ‘attention. This study attempts to respond to various gaps in literature. First, Pache & Santos, (2010) call for the need of systematic analysis of institutional logics,

“while institutional scholars acknowledge that organizations are often exposed to multiple and sometimes conflicting institutional demands. . . existing research makes no systematic predictions about the way organizations respond to such conflict.” (P.450)

Further, Greenwood et al., (2011) argues to incorporate vertical complexity (multi- levels) in analysis
“Admittedly, some studies do explicitly embrace the nestedness of field-level logics, and this way imply vertical complexity… but for most part field-level studies ignore the vertical nestedness of logics in order to give attention to horizontal complexity” (P.322)

Additionally, Greenwood et al., (2011) put a sharp critique on the existing literature with respect to over simplification of the phenomenon of institutional complexity. They call for incorporating multiplicity of logics (more than two) with the argument that the sheer number of logics is important to determine the level of complexity faced by organization.

This study has addressed these neglected areas through a framework of how pressures of plural institutional logics, refracted through network characteristics and organizational attributes, are experienced by the embedded organizations and how the organizations respond to these institutional pressures. In this way, this thesis has theoretically contributed in literature by providing a systematic multi-level analysis that incorporates vertical nestedness of institutional complexity. Additionally, whereas most of the studies, in the existing literature, have catered the contradiction of only two institutional logics, the present study has provided essential contribution in literature by incorporating multiple institutional logics (TPA, NPM and NPG) in the analysis.

Furthermore, the study has contributed in the arguments of institutional change and transformation by providing empirical evidence of the active agentic behavior of embedded organizations in the power network. Both LESCO and IESCO have struggled to strategically incorporate the incoming logics while maintaining the existing logic. In this struggle, they have developed hybrid solutions which can satisfy the pressures from contradictory logics. Hence, the study challenges the arguments of passive agentic behavior under institutional isomorphism.
10.4.2 Empirical contribution

This study has also provided significant empirical contribution, particularly in three major areas. Firstly, it has described the structure of power network in the energy sector in Pakistan including how various actors are linked with each other and what are the mechanisms of their interaction. Network structures are scarcely addressed area particularly in the public sector of developing countries. Whereas, inter-organizational relations are drastically changed with various reform interventions in energy sector. This phenomenon is rarely captured and reported by the researchers in Pakistan. In this regard, the empirical data of this thesis provides critical understanding of the current dynamics of inter-organizational relations in the power network, which are quite different from the integrated WPADA.

Secondly, the thesis provides empirical evidence of the three institutional logics confronted by the public organizations in the power network in Pakistan. The conflicting pressures from these logics is reinforced by the network actors which exacerbates the complexity for the embedded organizations. In this respect, the study also identifies the critical attributes that the embedded organizations require to handle institutional complexity. Thirdly, the study provides in-depth exploration of the adoption of contradictory institutional logics in the HR process and empirically verify how organizations internally manage the contradictory prescriptions.

10.5 Implications for policy and practice

A prominent feature of public administration is presence of complex governance networks of actors who are tied in horizontal interdependencies for important resources. Irrespective of whether the governance networks are developed deliberately (as policy tools) or
unintentionally (by various reform interventions), it is critical for the government to realize the presence of governance networks and changing relations of government with other actors in network. The role of government in policy processes has diminished, or at least changed for being only a part of the governance process. In addition to this, it has to realize that no government has the capacity to solve complex societal problems alone and that the private and non-profit sector has important resources to share. This study raises an important voice that the government needs to include all critical actors in the policy making and implementation process. In this respect, for making any policy or to introduce any reform it is important to involve all the network actors/stakeholders. Even a briefing of reform agenda to all stakeholders can make the process more participatory and consultative. This may bring all the stakeholders to coordinate for the reform agenda in advance and make necessary preparations of their own to coordinate for any legal, financial and operational processes at their end.

Data revealed that there is still significant control and command relations in the power network. Particularly, the relations of DISCO’s with Ministry and PEPCO are majorly authoritative. Government needs to realize that with the changing dynamics in inter-organizational relations, the actors should operate autonomously. Instead of hierarchical controls, the authorities should use network management strategies, participatory approach and consensus building methods to reach decisions. The restructuring of WAPDA was based on the expectations that the unbundled and decentralized autonomous companies (assigned with specialized tasks), will deliver better service and the decaying system of large WAPDA will be improved (ADB, 2014). However, even after three decades, of drastic energy sector reforms, no sustainable solution to the energy crises could be devised; rather the situation has worsened (Khalid & Ifthhar-ul-Husnain, 2016). Hence, the decision of restructuring of WAPDA has received considerable debate in terms of its
socio-economic benefits. It also raises the question of whether the shift from vertical system to networked arrangement can promise better solutions for public policy making and implementation.

The unbundled companies (from WAPDA) are incorporated under Companies Ordinance, 1984, with independent legal status and governed by BOD. However, high level of ministerial and political interferences was noted. The government majorly controls both policy and operational decisions. Unless the organizations are provided managerial autonomy, their performance cannot be improved and the purpose of the reforms cannot be achieved. The interventions from Ministry and PEPCO should be completely controlled and the companies should be autonomous to manage their affairs. It is only possible, when the companies have competent leadership and professional boards. Currently, both the boards and the CEOs of the companies are selected at the will of the government. Unprofessional board members watch the interest of the ruling party rather than the company’s benefits. Under such situations, companies cannot work professionally and independently. The appointment process in less transparent. CEO is not provided any fixed term appointment; rather, he/she can be removed any time at the will of the government. Such defenseless position of the CEO has enhanced political influences. Therefore, professional board members and competent leadership is the first step to have better results. The process of the appointment of the CEO should be transparent. Moreover, a contractual agreement with the CEO is a necessary step to have outcome based results.

It is also observed that the embedded organizations have incorporated prescriptions of private sector HR practices (under NPM logic). However, these are not implemented in true spirit and, still, the traditional/existing practices are dominantly present. Moreover, the companies have still not developed their own companies’ HR policies. WAPDA Service Rules are being followed majorly. WAPDA Service Rules are based on traditional personnel practices
and have less capacity to differentiate employees based on their performance. HR policies should be formulated to have engaged employees. Instead of seniority based rewards and promotions, employees with better performance should be rewarded and should have better chances of promotion. Performance based rewards and good financial rewards is the week area of LESCO and IESCO. Every employee is considered equally for benefits. Workers and non-workers are not differentiated. It is recommended that performance based promotion should be implemented. Efficient workers should be appreciated through accelerated promotion.

Finally, the Ministry of Water and Power should rethink its role in the power sector. Ministry should focus on policy formulation and should provide autonomy to the companies in operational matters. Currently, the Secretary of the ministry is handling the operational matters of the companies through PEPCO. Due to this, the ministry’s original role is compromised. It is overseeing day to day operational matters of companies which is against company’s autonomy. Instead, the Ministry should focus on policy formulation and policy implementation process.

10.6- Limitations and Future Directions

This thesis highlights several ways for future research directions. First, the fields of institutional analysis and institutional complexity critically needs multi-level analysis which is rarely addressed by the researchers. Although, this study has made an attempt to address this area, further work is needed in future. Secondly, although the study has captured the contradiction in multiple logics, however, it has not captured the contradiction present within the public sector logics. For example there is an inherent contradiction in NPM logic with respect to managerial prescription and market-based prescriptions. Similarly, the TPA logic had inherent contradictions with respect to bureaucratic prescriptions and political influences. Future
researchers can target the explore the inherent contradictions within these logics which will further enrich the analysis of institutional complexity in the context of public sector reforms.

Furthermore, this study has taken two embedded organizations who are involved in the same task and have same attributes. The purpose of this study is not to compare the embedded units, rather to enrich the data from two similar cases. The future researcher can take the embedded organizations with different tasks and varying attributes to compare the organizations on their attributes. It will further enrich the analysis with respect to the enabling organizational attributes to handle institutional complexity.

Moreover, this research can be further extended by a comparative analysis of two networks in the energy sector in Pakistan including power network and gas network. The power network has witnessed more fragmentation as compared to the gas network. Therefore, the network characteristics may greatly vary in both networks and may modify the level of institutional complexity for embedded organizations.

10.8- Concluding remarks

This thesis studies the phenomenon of institutional complexity in the context of public sector organizations embedded in the governance networks taking the case study of the energy sector in Pakistan. The study has used a framework of multi-level analysis of institutional complexity incorporating the macro level energy sector reforms that create institutional complexity, the meso level network characteristics that shape the institutional complexity and micro level organizational characteristics that enable organizations to handle institutional complexity. The study has found that energy sector reforms have exposed the sector to three competing institutional logics including TPA logic, NPM logic and NPG logic. Due to these
competing logics, the public organizations are confronted with the phenomenon of institutional complexity. Another, critical impact of these reforms is the penetration of governance networks in the public sector, which has drastically changed the structure of energy sector. The energy sector has moved from vertically integrated arrangement to web of autonomous organization, which are placed in horizontal relations. With this development, the inter-organizational relations are changed from (previously dominated) hierarchical relations to (currently found) mixed relations including control and command; negotiation and bargaining; and collaboration and cooperation. The characteristics of governance network (in particular the centralization, fragmentation and trust in network) essentially shape the level of institutional complexity for the embedded organizations. Moreover, the organizational attributes (including position in network, task, governance structure and CEO’s position) can mitigate the level of institutional complexity by enabling the organizations to better handle the multiple pressures. Accordingly, organizations respond to the institutional complexity by choosing appropriate strategy. The embedded organizations in this study have played their role as active agencies against institutional pressures by using the strategies of differentiated hybridity and blended hybridity.
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Appendix- I: Case Study Protocol

Case study Protocol

1. Authority letter
2. Consent form
3. Interview Guides
4. Interview contact summary sheet
Date

To whom it may concern

Subject: Permission to collect data from Ministry of Water and Power

Dear Sir/Madam

I am currently doing my PhD research at Institute of Administrative Sciences, University of the Punjab on “Managing Complexity in Governance Networks: The Case of Energy Sector in Punjab”. For the purpose of my research, I have to conduct interviews from organizations under Ministry of Water and Power. Moreover, I also need access to official documents and reports. The interviews will be quoted anonymously, and the identity of research participants will be kept confidential.

Kindly allow me to collect data from managerial level employees in organization under the ministry and access official reports and documents. The data collected will be used solely for academic purpose and will be used in the best interest of the ministry.

Thanking you in anticipation.

Sincerely,

Shabana Sultana
I ……………………..………….., voluntarily agree to participate in this research project entitled "Managing Complexity in Governance Networks: The Case of Energy Sector in Pakistan". Shabana Sultana, the doctoral scholar of Institute of Administrative Sciences, University of the Punjab, is conducting this research. The researcher has explained the purpose and benefits of this study to me. Moreover, I have been assured that all the information provided by me will be kept strictly confidential and will be used for research purposes only. Furthermore, I can withdraw from the participation in this research project at any time without prejudice and penalty.

____________________ ____________________
Signature of Researcher Signature of Participant
<table>
<thead>
<tr>
<th>Research Questions</th>
<th>Objectives</th>
<th>Direct/ Interview Questions</th>
</tr>
</thead>
</table>
| How governance networks have emerged in the energy sector in Pakistan?             | To examine energy sector reforms and development of governance networks.    | - What reform interventions are introduced in energy sector of Pakistan since unbundling of WAPDA?  
- Please provide historical developments in WAPDA. (report/documents)  
- What were the arrangements before unbundling of WAPDA?  
- Why was WAPDA unbundled? What were the motivations/ reasons behind it?  
- What are the current arrangements? How are they different from integrated WAPDA?  
- Is this way of managing and structuring different from the previous (integrated WAPDA)? How? |
| How are governance networks structured in the energy sector in Pakistan?          | To identify the key actors in power network their characteristics.          | - When was your organization established in its present legal status?                      
- What are the goals of your organization?                                       
- What is the role of your organization in power network?                         
- Have your organization a legal identity separate from state/parent ministry?     
  if yes, under which law?                                                        
- Please identify your primary and secondary tasks (policy formulation/ regulation/collection of money/ licensing/settling disputes/ service delivery/education/business/ any other). |
| To examine the relational ties among actors in power network                      |                                                                            | - Please identify other organizations in the network of your organization.                
- Explain the matters on which your organization has to interact with other organizations in your network.  
- Explain the role of your organization in the network.                          
- What type of relations your organization has with other actors in network? (authority/dependency/interdependency) |
<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>How frequent is the interaction of your organization with other actors in network?</td>
<td>- How frequent is the interaction of your organization with other actors in network?</td>
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<tr>
<td>How do you resolve issues when working with other organizations?</td>
<td>- How do you resolve issues when working with other organizations?</td>
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<td>What are the characteristics of governance networks in the energy sector in Pakistan?</td>
<td>- Who are the major decision making organizations in the network?</td>
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<td></td>
<td>- Explain the role of each powerful organization in the network.</td>
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<td></td>
<td>- How coordinating bodies interact with your organization.</td>
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<td></td>
<td>- Explain the decisions that are taken by the central organizations in the network.</td>
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<tr>
<td>To determine the level of centralization in power network</td>
<td>- Are there more than one powerful actor in the network? Please explain.</td>
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<tr>
<td></td>
<td>- How powerful actors interact with each other.</td>
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<td></td>
<td>- Explain the dependency of your organization on other actors in network.</td>
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<td></td>
<td>- How powerful actors present their separate demands to your organization.</td>
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<tr>
<td>To determine the level of fragmentation in power network;</td>
<td>- How would you characterize the trust (very good---poor) among various organizations in the power network?</td>
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<td></td>
<td>- Do you think that organizations cooperate with each other in power network? How? In what matters?</td>
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<td></td>
<td>- Do organizations live up to the agreements made with each other?</td>
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<td></td>
<td>- Are organizations in the power network working together for the common purpose of energy crises?</td>
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<tr>
<td>To determine the level of trust in power network.</td>
<td>- Explain the involvement of ministry/ administrative senior units in setting of goals of your organization?</td>
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<td></td>
<td>- What kind of indicators are used by the ministry/ administrative seniors to measure your goals/ performance?</td>
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<td>- How frequently your organization reports results and achieved goals to ministry/ administrative seniors?</td>
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<td>- Who evaluates goal attainment of your organization?</td>
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<td></td>
<td>- BOD/ ministry/ other body</td>
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<td></td>
<td>- How many board members appointed?</td>
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<td></td>
<td>- How many board members belong to following groups:</td>
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<td></td>
<td>- Central government representatives</td>
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<tr>
<td>How organizations respond to institutional complexity?</td>
<td>To explore how embedded organizations internally manage multiple logics in their HR system and process.</td>
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<td>--------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------</td>
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<tr>
<td>-Other government representatives</td>
<td>-Who appoints CEO?</td>
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<tr>
<td>-Representatives of employee organizations</td>
<td>-What is the type of contract of CEO? (permanent position/fixed term)</td>
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<tr>
<td>-Representatives of shareholders</td>
<td>-By whom or what actors, is the performance of the CEO formally and regularly evaluated?</td>
</tr>
<tr>
<td>-Top management of the organization</td>
<td>-Explain the involvement (if any) of other organizations in the major strategic and operational decisions of the company.</td>
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<td></td>
<td>-Please explain the changes introduced in your HR process and practices after unbundling of WAPDA?</td>
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<td></td>
<td>-What is the current system of Grades/Cadres/Designation in your organization? How is it different from the previous system in integrated WAPDA?</td>
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<td></td>
<td>-Please explain the hiring process and various changes introduced after WPADA is unbundled.</td>
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<td></td>
<td>-How employees’ performance is evaluated and rewarded? How these practices are different/similar with the previous system?</td>
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<td></td>
<td>-What are the promotion and placement policies? Please explain the changes (if any) after unbundling of WAPDA.</td>
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<td></td>
<td>-Please explain the training and development practices of your organization.</td>
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<td></td>
<td>-Do you have any other observation regarding the changes in the HR system and process? Please comment on the effectiveness of the changes introduced in the system.</td>
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<tr>
<td>Intv.</td>
<td>Organization</td>
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### Appendix II- List of Documents

<table>
<thead>
<tr>
<th>Document</th>
<th>No of Doc</th>
<th>Type (policy documents/ manual/ audit report/ company report/ minutes of meeting/ consolidated reports)</th>
<th>Source</th>
</tr>
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<tbody>
<tr>
<td>Prelude to full autonomy for power sector corporatized entities (PSCEs) 2010</td>
<td>1</td>
<td>Report</td>
<td>PEPCO</td>
</tr>
<tr>
<td>Reformation of power sector (2007)</td>
<td>1</td>
<td>Minutes of meeting _ CCOR’s meeting</td>
<td>PEPCO</td>
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<tr>
<td>Restructuring of Public sector enterprises (2010)</td>
<td>1</td>
<td>Minutes of meeting _ CCOR’s meeting</td>
<td>MOWP</td>
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<tr>
<td>Reconstitution of BODs of DISCOS, NTDC and GENCOs (2007)</td>
<td>1</td>
<td>Memo of creation of the boards of Public Sector enterprises</td>
<td>PEPCO</td>
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<td>Guidelines for reconstituting BODs of PSEs</td>
<td>1</td>
<td>Minutes of meeting _ guidelines devised by CCOR’s</td>
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<td>Prioritization/ implementation of the austerity measures</td>
<td>1</td>
<td>Minutes of meeting _ Cabinet Division</td>
<td>PEPCO</td>
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<td>Concept paper on power sector restructuring</td>
<td>1</td>
<td>Report on review of power sector reform process</td>
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<td>IESCO Annual Report (2010-2016)</td>
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<td>Report</td>
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<td>IESCO Balance Sheets ( 2010-2015)</td>
<td>5</td>
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<td>LESCO Audit Report</td>
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<td>Electric forum</td>
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<td>Newsletter- issued quarterly by NEPRA</td>
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<td>Power market Survey (2013-14)</td>
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<td>Report</td>
<td>NTDC</td>
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<td>Power System Statistics (2013-14)</td>
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<td>SECP</td>
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<tr>
<td>Public Sector Companies (Corporate Governance Compliance) Guidelines, 2013</td>
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<td>Policy document</td>
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<td>Policy document</td>
<td>GOP</td>
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<tr>
<td>Public Sector Companies (Corporate Governance Compliance) Guidelines, 2013</td>
<td>1</td>
<td>Policy Document</td>
<td>SECP</td>
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<td>Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997</td>
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<td>Policy Document</td>
<td>GOP</td>
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<td>Minutes of meeting on commercial code review panel</td>
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<td>Performance evaluation report of distribution companies &amp; k-electric (2013-14)</td>
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<td>Implementation of Distribution code review panel</td>
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<td>Memo</td>
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<td>NEPRA Workshop on Performance Standards (Distribution) Rules 2005 and Distribution Code</td>
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<td>Proceedings of training workshop</td>
<td>LESCO</td>
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<td>Pakistan energy sector restructuring reforms</td>
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<td>Evaluation report by ADB</td>
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<td>Monitoring Report on Pakistan Energy Reform Program (2013)</td>
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<td>An Overview of Electricity Sector in Pakistan by Islamabad Chamber of Commerce &amp; Industry</td>
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<td>Report</td>
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*Total documents collected = 46*
Appendix III: Requirements of BOD Composition

(1) The Board shall consist of executive and non-executive directors, including independent directors and those representing minority interests with the requisite range of skills, competence, knowledge, experience and approach so that the Board as a group includes core competencies and diversity considered relevant in the context of the Public Sector Company's operations.

(2) The Board shall have forty percent of its total members as independent directors within the first two years of this notification, which shall be raised to a majority of independent directors in the next two years, and the majority shall be maintained subsequently. The Public Sector Company shall disclose in the annual report Non-executive, Executive and Independent directors.

(3) No Independent Director shall participate in share options or any similar schemes of the Public Sector Company, which entitle him to acquire any interest in the Public Sector Company.

(4) Any casual vacancy in the Board shall be filled up by the directors at the earliest but not later than ninety days thereof.

(5) No person shall be elected or nominated as a director of more than five Public Sector Companies and listed companies simultaneously, except their subsidiaries.

(6) The appointing authorities, including the Government and other shareholders, shall apply the fit and proper criteria given in the Annexure in making nominations of the persons for election as Board members under the provisions of the Ordinance.

Source: Public Sector Companies (Corporate Governance) Rules (2013) of SECP, GOP.
Appendix IV: Procedure for Appointment of Chief Executive

**Procedure for Appointment of Chief Executive**

1. Development of Job Profile/Job Description: The Board shall develop a job profile containing job description for the chief executive in the light of the job requirements and the fit and proper criteria specified by the Commission.

2. Advertisement for the Position: (1) The Board shall initiate the appointment process, at least three months before the term of the incumbent chief executive is going to expire, by issuing a public advertisement in the print media, inviting applications for appointment against the vacant position.

3. Shortlisting process: The Board shall shortlist the applicants from the following sources: (1) Those shortlisted through the database, (2) Those applying against the public advertisement, and (3) Those derived through the succession plan.

4. Evaluation of Candidates: The Board shall undertake evaluation of the shortlisted candidates based on the Fit and Proper Criteria specified by the Commission.

5. Interviewing Process:

6. Recommendation from the Board to the Competent Authority: The Board shall recommend a minimum of three candidates to the line ministry for appointment to the position of Chief Executive.

7. Appointment of Chief Executive: Upon concurrence of the competent authority, the Board shall appoint the chief executive and issue him a contract letter, with the requisite terms and conditions of appointment, signed by the Chairman, or other person authorized by the Board.

*Source: Schedule (1) of Public Sector Companies (Appointment of Chief Executive) Guidelines (2015) of SECP, GOP.*
Appendix V: Transcriptions

A sample transcription is provided here.

**Interviewee:** Assistant Director, Customer Service Department, LESCO  
**Code assigned to the respondent for cross reference:** R-10-LESCO  
**Interview Setting:** Interview was conducted in the office of the respondent in the Head Office of LESCO in Lahore. The interview was conducted at 3:30 pm. The duration of interview was 35 minutes.

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**Interviewer:** I am doing Ph.D. from Institute of administrative Sciences, University of the Punjab.

**Interviewer:** Why was WAPDA unbundled? What were the motivations behind it?

**Respondent:** Instead of centralized powers, they had the idea that powers should be decentralized. It has is a kind of change management process. When power is decentralized, the people feel more responsible for it. They feel obligated for their responsibilities for example previously if you needed to take approval from authority but now you can decide yourself. Then it’s a bigger responsibility at your shoulders because now you are answerable for your decisions. It is like power coming with responsibility. Now everyone is responsible to take decisions and will be accountable for such decisions.

**Interviewer:** Is this way of managing and structuring different from the previous (integrated WAPDA)? How?

**Respondent:** On the one hand, power is decentralized and on the other hand, lot of authorities are there to which we are answerable including ministry, NEPRA, PEPCO and many more. Previously you used to look at WAPDA house for every task. At that time things were less discrete. Now things are more discrete.

**Interviewer:** Please explain the interaction of LESCO with other actors in power network.
Respondents: In authorities, we have PEPCO, Ministry of Water & Power, and NEPRA. If anything is discussed about LESCO in National Assembly then the standing committee can coordinate with us, if any question is raised then the speaker of the assembly forwards it to PEPCO and PEPCO asks us for clarification and complains.

First, let us talk about Pepco. Pepco is coordinating with ministry and then they call our meetings regarding loss recoveries, load shedding plans, private interest, public interests, performers, non-performers, defaulters etc. These meetings are held on monthly basis usually on the mid of the month. Recently mobile meter is on the boom, all the LESCO is shifted on mobile meters in which our linemen take our snap short of the meter. Pepco is also monitoring us about our progress in mobile meter reading. In conclusion, we can say PEPCO and ministry coordinate with each other a lot regarding questioning from LESCO. If there is any query from ministry it is forwarded to PEPCO, PEPCO forwards it to us and reports to ministry. Ministry can directly call us too. PEPCO has to gather all the information from different companies and then reports/ coordinates with ministry. They also developed a dashboard, which was developed on the request of secretary of water and power to check out the performance. Good performance is appreciated. Low performance is questioned. This is how we have relations with different organizations. The dashboard has running information about (maintained under efficiency monitoring system) business billing, CPPA receivables, cost, surcharge, remittances, subsidies, billing, targets, losses, all charges detail…it is maintained down to sub-division level. It daily status, graphical status, then monthly reports, and quarterly, yearly all records are being maintained.

Interviewer: You mean LESCO and other actors in power network have to frequently interact with PEPCO.

Respondent: Yes, PEPCO is like an intermediary between all companies and ministry. You know ministry need an agency, which can collect and maintain data/information from several different companies on a certain level and then complies and reports to ministry. For example, PEPCO has created a dashboard for secretary of
ministry to take look on integrated data. If each company would do it itself then, each would do it with separate format and with different patterns. It would be difficult for ministry to gather information. Now every company is doing in the same lines. PEPCO’s volume is very less. But it is effective because it is to take data from all the companies in all over Pakistan, then complies and shows the picture on national level that what the current situation of energy sector min Pakistan is. For instance, what are losses of energy sector in Pakistan or what is the generation capacity.

Interviewer: Please explain how LESCO has to interact with NEPRA?

Respondent: NEPRA is another very important authority. It approves our tariff and all the matters related to tariff are handled by NEPRA. Besides this, NEPRA also regulates other matters related to our performance and efficiency. Any change in tariff is approved by NEPRA whether it is unit price, or surcharge or any tax. NEPRA looks into whether it is viable for customer or not. They give LESCO a format to file petition for tariff. Then NEPRA calls a public hearing. LESCO has to give hearing and provide clarifications for why it is charging such amount. A certain amount of our tariff goes to CPPA which is central power purchasing authority. It purchases electricity and then we pay that amount to them. A small amount if this is distribution margin which you can say is our pocket money from which we have to bear our all expenses for distribution of electricity and other administrative expenses. We have to justify our distribution margin explaining each and every amount that we claim for it. And upon that basis tariff is approves. Then NEPRA calls public hearing for which public notice is published in newspapers to invite general public in hearing. Mostly, associations of our industrial and agricultural customers are active to participate in hearings. Anyone can come who has reservations related to our tariff can join this hearing. NEPRA is acting as unbiased authority which looks into the interest of customers. It’s a state authority. NEPRA does not to report to ministry rather it can object on the act of ministry as well. Ministry can also tell NEPRA to revise certain documents. Ministry and NEPRA have coordination but they are not in authority position.
from each other. GOP cannot decide by itself to include any tax in tariff, it has to be approved by NEPRA. NEPRA is regulating all the different companies in energy sector including all DISCOs, GENCOs, NTDC and IPPs etc. All the companies have to get their tariff approved from NEPRA and the process is very transparent. No one can make unrealistic profits. For generation and sale of electricity IPPs have to take license from NEPRA.

Interviewer: What is the role of CPPA in power network and how LESCO interact with CPPA?

Respondent: It is a central organization to coordinate the process of generation and distribution power. It handles all the financial transactions. It comes between power generation and distribution companies. LESCO has to pay purchasing cost to CPPA. CPPA then transfer this amount to power generation companies. All invoices travel through CPPA that’s why I am saying that it is a central organization. We cannot pay (to deal with) GENCOs directly. All transactions have to take place through CPPA. So it is centralized. Even if LESCO has earned some extra revenue then estimated, that also goes to CPPA. For example if the tariff is Rs.90 including Rs. 80 as electricity purchase price and Rs.10 as LESCO’s distribution margin. Whereas, LESCO collects Rs.100. then the remaining Rs.10 will go to CPPA. And then it can be utilized/ invested for power generation or any other priority in energy sector. So, LESCO gets only distribution margin. There is lot of transparency in all type of financial and other transactions. … All the invoices transfer through CPPA. It is central agency to purchase and sale power in energy sector.

So, what I have observed is, autonomy of companies has increased and we can take independent decisions but at the same time, controls have also increased. When it is decentralized, your accountability is increased. Number of people to which you are accountable is increased.

Interviewer: Identify other actors in network, with which LESCO has to interact.
Respondents: NTDC is for transmission of electricity from GENCOs to DISCOs. NTDC is an electricity dispatch company. It takes electricity from GENCOs and then step down it till 220 and 150 KV…then DISCOs distribute it stepping down to 11 kv. The most influential actor is the ministry. We have much dependency on ministry. Ministry regularly monitors the performance of LESCO.

Interviewer: Explain how LESCO’s performance is monitored?

Respondents: LESCO is accountable to different authorities. The most important one is Ministry of water and Power. MOWP had developed a detail criteria to monitor our performance including billings loses, recoveries, revenues, technical lose, distribution lose, administrative lose, surcharge, GST collection, income tax collection, remittance to FBR, damaged transformers, meter readings and new connections.

Interviewer: Right.

Respondent: Another important authority is BOD. The directors conduct different meetings. BOD has different committees. HR committee, Finance committee, audit committee. These committees decide different matters and then these are finalized in BOD meetings. For, internal matters BOD take decisions. BOD deals with LESCO’s internal matters and for internal matters, they have full powers. BOD questions a lot from management. For internal matters, BOD has autonomy.

Then, there are internal and external audits. BODs appoint external auditors. There are financial audits, administrative audits. Internally there is an auditor on WAPDA’s level and they go to different companies. The designation is additional chief auditor is allocated to LESCO…Biannually and annually.

LESCO is also accountable to NEPRA. There is regular monitoring and evaluation from NEPRA.

Interviewer: Is government providing subsidy to LESCO?
Respondent: Yes, but it has reduced over the period. In fact government has its own priorities for subsidies, may be government gives more subsidies to GENCOs so that electricity can be produced on cheaper prices.

Interviewer: How government protects the interest of general public in bill price?

Respondent: Mainly NEPRA is there to protect the interest of general public. Tariff is not in our hand, it is decided by NEPRA

Interviewer: How much pressure does LESCO has to face from general public?

Respondent: Not much…Even we are not responsible for load shedding, government has to own the pressure. We can only have pressure in case of wrong billing and for this matter public is very responsive. LESCO is a public company dealing with public and for this we have customer service center to listen to all queries from general public. Media has its own role, if there is any interruption in provision of power it will appear on media immediately and we have to respond to it.

Again, I must say it is a public company. When you are dealing with public, it is more sensitive. With customers, you have contractual relations. When you are dealing with customers there are no emotions involved whereas dealing with public is a sensitive matter. If they will pay you, you will provide electricity otherwise not but in case of public, your orientation is different.

Interviewer: Right. You mean, there is lot of pressure from public due to the sensitivity of your task. Would you please share it in more detail.

Respondent: There are different entities, which LESCO has to bill, and get recoveries from them. for instance Punjab government, federal government offices which come under LESCO. Regarding receivables from these organizations, we have much dependency. Our receivables start being piled up. They do not pay us on monthly basis rather it can be quarterly or even on annual basis. Because they say that, we will pay you once we get budget from federal government. So, we are really pressurized when our authorities ask for our recovery targets. In case of private sector, our recoveries are very easy but in case of public institutions, it really gets
tough. From our private customers our recovery is almost above 90%... I would not say 100% because 100% recovery is just impossible in any business. So, mostly our quota gets disturbed due to public sector entities that we have to pressurize for recoveries. We have to conduct meetings with them. Due to increase in tariff ministries, get very active. Then many private actors also approach ministries for their demands. For instance, currently we are dealing with the case of Kisan Etihad. Ministry passes the bill that their case is under consideration, so we cannot collect arrears until the decision. We can collect only current bill... So, in this situation we really feel like paralyzed to take any action to recover our bill. NEPRA is our regulatory authority who sets our monthly and yearly targets. When we do not achieve our targets, then their accountability becomes very shaky at time because NEPRA is the authority and we are answerable to it. They simply say to disconnect the connection. Now can we disconnect connection of a public hospital or a sensitive area where there are streetlights? So ultimately, pressure comes on us.

Interviewer: I am greatly thankful to you for your time. Your participation would be highly valuable for my research. Thanks once again.

Respondent: My pleasure, please do not hesitate if you need any further help.