"Pragmatic model for sustainable energy policy: Networking between the government and key players in Bahrain"

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PRAGMATIC MODEL FOR SUSTAINABLE ENERGY POLICY: NETWORKING BETWEEN THE GOVERNMENT AND KEY PLAYERS IN BAHRAIN

Abstract

To fill the current literature gap, this paper strives to empirically determine the networking process between the government of Bahrain and the key players in the formulation and implementation of sustainable energy policy. The literature review divulges that policy network approach represents a useful tool for the analysis of public policy, since this approach permits a thorough explanation of the interaction between the network's members. A questionnaire was distributed to key decision-makers involved in the elaboration of sustainable energy policy in Bahrain. The results of this paper revealed that the government of Bahrain has adopted successful policies of sustainable energy in reaching the intended results. Nevertheless, the current structure of networking might be described as a "Clientelist Network". This paper proposed a pragmatic model for sustainable energy policy to reinforce the networking process between the government and the key players into a rational approach of "Pluralistic networks". In this network, formal associations have to be established to embrace the industry, energy and environmental sectors. Accordingly, this type of networking will ensure direct and strong frequent ties. Also, this pluralistic network will provide further comparative advantages in terms of the power of control over resources and the flow of information among all key actors.

Keywords	sustainable energy, sustainable development, policy formulation, public policy networks, 2030 vision
JEL Classification	Q38, Q48

INTRODUCTION

At the national level, in its 2030 Economic Vision, the government of Bahrain has a strong focus on sustainable energy policy (From Regional Pioneer to Global Contender – Our Vision – the Economic Vison 2030 for Bahrain, p. 22). At the international level, the Kingdom of Bahrain is dedicated to achieving Goal 7 of the United Nations Millennium Sustainable Development Goals (SDGs) (SEU, 2018, p. 6). To formulate a reliable framework of sustainable energy policy, the government focused on three leading pillars: the regulatory framework, the policy framework, and the institutional framework.

To elaborate the regulatory framework, the government went through a consistent process of consultations with key players. The regulatory body is represented by the National Oil and Gas Authority (NOGA) (www.noga.gov.bh/). The significant public energy company in Bahrain is the Electricity and Water Authority (EWA) (http://www.ewa.bh/en).

The National Monitoring Committee was established to formulate the energy-efficiency policies (SEU, n.d. a). The policy framework of sus-

tainable energy is rooted in the Government Action Plan (2015–2018) to enhance the utilization of electricity and water (SEU, 2018, p. 6). Furthermore, the Action Plan of the National Energy Efficiency and the National Renewable Energy were elaborated in 2016 to reach the national target of energy efficiency policy between the years of 2017 and 2025 (SEU, n.d.). The National Energy Efficiency Action Plan (NEEAP) embedded two foremost national initiatives: "The EWA Energy Efficiency Action Plan 2015–2020 (EWA-EEAP)", and the "Kingdom of Bahrain Energy Efficiency Program (KEEP)" (SEU, 2017, January, p. 32).

The Sustainable Energy Unit (SEU), officially recognized in November 2014, represents the institutional framework of the sustainable energy policy. Its principal goal is to endorse all practices of energy-efficiency through an adjacent relationship and steady networking with the key players in Bahrain (SEU, n.d. a).

A literature review reveals the fragmentation of the energy sector, vulnerability of policy framework and little inducements to attract investments of private sector, represent concrete challenges facing sustainable energy in Bahrain (SEU, 2018, p. 4). This gap in the formulation and implementation of sustainable energy policy in Bahrain highlighted the importance of this research paper, which strives to empirically explore the networking process existing between the government of Bahrain and the key players, in addition to proposing a pragmatic model to strengthen these networking processes.

The paucity of empirical research and the recent emphasis by scholars on the subject matter of this research paper, especially in the Gulf region, clarify the importance of the study.

Contemporary literature review shows that a public policy network approach represents a paradigm shift in the analysis of public policy. Hence, relying on this approach to analysis makes it possible to grasp the subject of this study using a different approach compared to previous studies.

1. LITERATURE REVIEW

Public policy network approach appears to be one of the most dynamic frameworks of public policy analysis (Ouimet & Lemieux, 1999). Rhodes (1997) has exposed that policy networks are important in defining the roles of key players; also, through specific rules of the game, the networks determine the actors' behavior. Hence, depending on a reliable analytical framework of policy making makes it possible to study and understand the diversity of aspects related to the policy process (Howlett et al., 2015).

In general, the literature divulges that the public policy networks approach is characterized by profound divergences over the definition and operation of networks. Nevertheless, the advocates of this approach agree that networks represent the "*subsystems*" where public policy is formulated through the interaction between different state and civil society actors (Walker, 1974, 1977; Katzentsein, 1978; Richardson & Jordan, 1979; Rhodes, 1981, 1986; Le Galés & Thatcher, 1995, p. 39).

Public policy network enables us to understand and explore the relationship between key actors and the influence of their ideas, interests, and values during the process of decision-making and policy formulation (Atkinson & Coleman, 1992, 1996; Kooiman, 1993; Rhodes, 1997; Marsh, 1998).

Policy network provides a significant framework to study the interaction process between the government and key actors of the society, and also to examine their governance structure in confronting contemporary problems in a shared vision to lead the change (Börzel, 1998; Muller & Surel, 1998; Lieberman, 2000; Greer, 2002; Kenis & Raab, 2003).

This approach provides a systematic framework to explore the formulation process of a specific public policy. It presents an exhaustive description of the context where public decisions are taken. Hence, the study of the networks' structure allows understanding their significant impact on the elaboration of public policy (Klijn,

1996; Kickert et al., 1997; Knoepeel & Kissling-Näf, 1998; Pemberton, 2000; Kopperenjian & Klijn, 2004; Klijn & Koppenjan, 2016, 2000).

On the one hand, the public policy network proposes a thorough examination of both formal and informal networking processes between key players throughout the development of public policy (Rhodes & Marsh, 1992; Börzel, 1998).

On the other hand, public policy network provides not only an understanding of how institutional arrangements influence the formulation of public policy, but also a description of the cognitive approach of key players to understand how their ideas and interests affect public decisions (Laumann & Knoke, 1989; Sabatier & Jenkins-Smith, 1993; Knoke et al., 1996; Marsh, 1998).

For Börzel (1998) and Kenis and Schneider (1991), policy networks represent a non-hierarchal structure of interactions between the public and the private spheres, where the collaborative approach takes place to oppose the traditional distinct governance approaches of bureaucracy and markets.

In this endeavor, several contemporary researchers introduced the notion of "*Hollow State*" (Milward, 1993, 2000; Rhodes, 1994, 1996; Laforte, 1997, p. 173; Peters & Pierre, 1998, pp. 223-224; Howlett, 2001). This notion focuses on the new interactive structure where the government is not the only actor for public policy elaboration. However, instead, many other civil society actors currently play a significant role in the process of decision-making.

Likewise, Peters and Pierre (1998, pp. 223-224) stated that the government today has a new role to play to manage the network structure and to influence the players of networks during the process of decision-making and problem-solving in contemporary governance arrangements.

Ouimet and Lemieux (1999) presented one of the substantial frameworks to demonstrate the development of public policy networks in strong or weak "ties" between key players, in addition to the presence or absence of "structural hole" (Ouimet & Lemieux, 1999; Lemieux, 1999, 2000, 2002; Lemieux & Ouimet, 2004).

In their study, Ouimet and Lemieux (1999, pp. 22-23) attempted to examine public policy networks in terms of the "power of control over resources", as well as the "flow of information" in public policy networks. The authors stated that their proposed model represented an attempt to configure the networking process between the government and the key players of civil society. The model is likely to be elaborated further with more empirical studies to be conducted by other scholars.

Ouimet and Lemieux (1999) were stimulated by the work of Granovetter (1973) and Burt (1992). Granovetter (1973) focused on the dissemination of information and the mobilization of resources in individual and institutional arrangements. The author disclosed that there was a special strength of weak ties, which enabled actors to access strong networks, nevertheless, strong ties were reinforcing connections that might create general division (Granovetter, 1973, p. 1378). In the same vein, Burt (1992) presented the notion of "*Structural Holes*", where the is no close connections between actors but, instead, there will be a comparative advantage for a "*Broker*" and "*Mediator*" to get access to exhaustive information.

Hence, Ouimet and Lemieux (1999) presented three significant structures of public policy network: "*clientelist*", "*corporatist*", and "*pluralist*". In the *clientelist network*, the government establishes client relationships with intermediaries and subordinates. These links are weak because they are not frequent even if they are close, therefore, a structural hole may exist. In the *corporatist network*, intermediaries have weak ties with each other and with the government, but the links between the subordinate and their intermediary organization are relatively strong ties. In the *pluralistic network*, there is a mixture of diverse ties which represent the characteristics of pluralism (Ouimet & Lemieux, 1999, pp. 22-23).

Ouimet and Lemieux (1999) stated that the links between actors were strong or weak. Strong ties are generally transitional, frequent and close, while weak ties are frequent without being close or close without being frequent. Moreover, an actor is in a better situation within a network once he has contacts because the number of connections measures the size of his social capital. Besides,

strong links allow an actor not to be locked in "*structural holes*". Nevertheless, the weak links put an actor into these structure holes then will enable him to lock other actors (Ouimet & Lemieux, 1999, pp. 22-23).

To conclude, a public policy network has flourished to the extent that this approach nowadays represents a significant framework for public policy analysis.

2. AIMS

The aim of this research is to explore the networking process existing between the government of Bahrain and the key players for the formulation and implementation of the sustainable energy policy. This study was inspired by the work of Ouimet and Lemieux (1999) who presented one of the significant models to illustrate the formulation of public policy networks. In specific, this study intended to investigate the networking process in terms of the "power of control over resources" and the "flow of information between key actors".

3. METHODS

A questionnaire, including six structured questions, was formulated to reach the purpose of this research paper (Appendix 1). The questionnaire was distributed to 40 decision-makers who were participating in the Conference of Bahrain Future Energy organized by Bahrain Small and Medium Enterprises Society (Bahrain SMEs) in the capital Manama taking place on two days and running on the 4th and the 5th of December 2018. The interviewees were from the government and non-governmental sectors who are basically involved in the formulation and implementation of the sustainable energy policy in Bahrain. The selection of interviewees was random and anonymous.

After data collection, the responses of interviewees were analyzed using the software SPSS that allowed studying the relationship between the variables of this study. The conceptual framework suggested in this paper permitted the organization of the qualitative data in various patterns for analysis purposes.
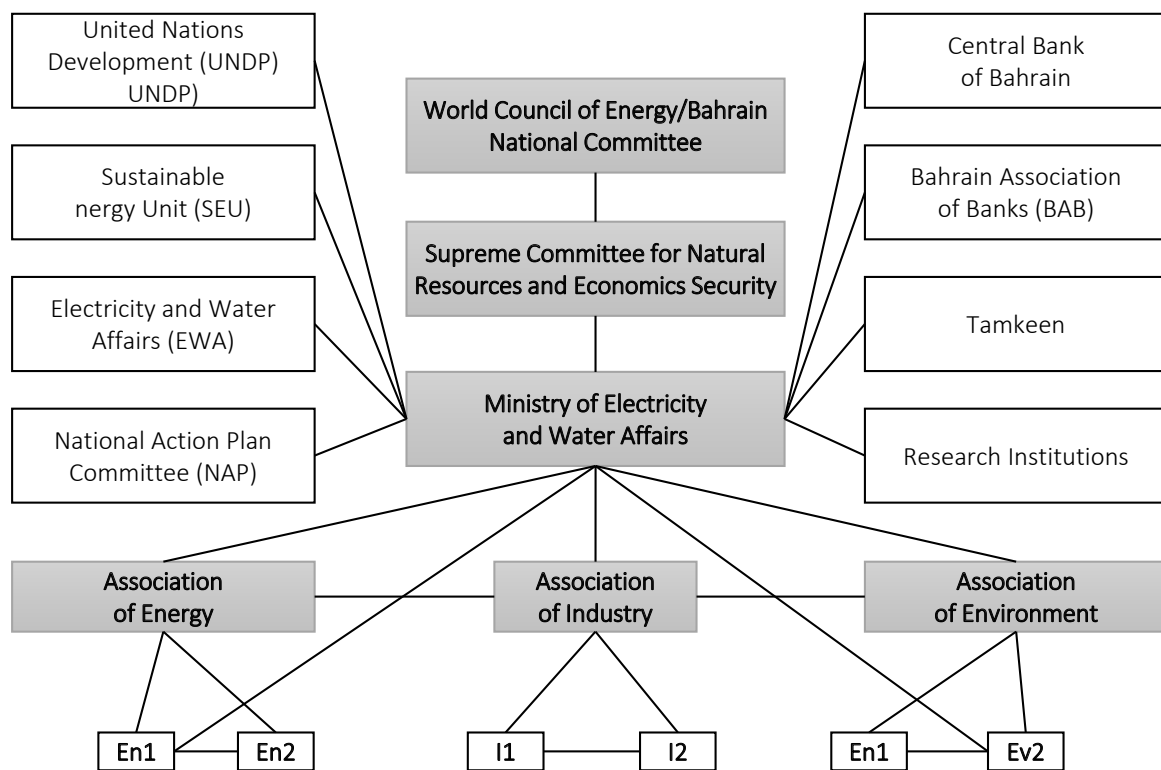

Figure 1. A pragmatic model for sustainable energy policy: Networking between the government of Bahrain and key players

4. RESULTS

After the analysis of the data collected, it was concluded that the structure of networking existing between the government of Bahrain and other key players might be described as "*Clientelist Network*".

This type of Clientelist network's structure affirmed that the government of Bahrain enjoys a relatively comparative advantage in terms of the power of control over resources and the flow of information. The government of Bahrain and the key actors affiliated to the industry, energy and environmental sector have direct ties; however, these ties are considered not frequent.

Moreover, the results confirmed that the key players belonging to the industry, energy and environmental sector have less comparative advantage in terms of the power of control over resources and the flow of information. The principal cause of this relatively less comparative advantage situation might be vindicated, since formal associations of industry, energy, and environmental sector are not established. The key players allied to these sectors face a "*structure hole*", since their ties with the government and other key players might be described as mostly to be informal and not frequent.

The results revealed the importance of adopting the "Pluralistic Network" approach through the proposed pragmatic model for sustainable energy policy (Figure 1). In this model, the establishment of official associations from the industry, energy and environmental sector must be fully taken into consideration to secure direct and strong frequent ties and to attain further comparative advantages with regard to the power of control over resources and the flow of information between key players. Moreover, the model anticipated the pluralistic networking process to embrace the financial framework and the technical framework in order to ensure the vital funding and the evidence-based practices to the network's members.

5. DISCUSSION

This paper attempted to investigate the networking process taking place between the government of Bahrain and the key actors for the formulation and implementation of the sustainable energy policy. The study suggested adopting the following "*Pluralistic network*".

This network supports the fact that direct and strong frequent ties between the World Council of Energy-Bahrain National Committee and the Supreme Committee for National Resources and Economic Security are crucial. Accordingly, Bahrain's sustainable energy policy will be in line with international standards and the United Nations Millennium Sustainable Development Goals. Moreover, direct and robust frequent ties have to embrace the office of the Minister of Electricity and Water Affairs in this networking process.

Concerning the formulation and implementation of the sustainable energy policy, it is important for the United Nations Development Program (UNDP), the Sustainable Energy Unit (SEU), the Electricity and Water Affairs (EWA) and the National Action Plans Committee (NAP) to develop further direct and strong frequent ties with the office of the Minister of Electricity and Water Affairs.

Regarding the financial framework, the Central Bank of Bahrain and the Bahrain Association of Banks (BAB) along with Tamkeen government agency have to build robust networking. These entities have to elaborate more direct and strong frequent ties with the office of Minister of Electricity and Water Affairs to formulate an evidence-based policy to provide the significant funding necessary for the industry, energy and environmental sector.

For the technical framework, the pluralistic network supports that the research institutions of Bahrain might elaborate further direct and strong frequent ties with the office of Minister of Electricity and Water Affairs. This networking will provide necessary significant academic support for the industry, energy, and environmental sector.

The pluralistic network approach showed that it is central to create formal associations for the industry, energy and environmental sector

to be managed by the office of the Minister of Electricity and Water Affairs with the primary goal to deliver the vital technological, financial and technical support. These formal associa-

tions have to embrace further direct and strong frequent ties inside the same association, among its members, as well as outside the associations among each other.

CONCLUSION

Sustainable energy policy is a fundamental challenge for policymakers around the world to meet the UN-SDGs. In this research paper, a public policy network approach permitted to explore the interaction process that exists between key actors.

The results of this paper show that the government of Bahrain has made substantial efforts to elaborate an effective sustainable energy policy in order to achieve the goals of Bahrain 2030 Economic Vision. Nevertheless, the structure of the current networking might be described as *"Clientelist Network"*. This type of Clientelist network's structure affirmed that the government of Bahrain enjoys a quite relative advantage in terms of the power of control over resources and the flow of information. However, the key players belonging to the industry, energy and environmental sector have less comparative advantage. The results revealed that there is informal networking, not formal relationships. Also, the study disclosed that formal associations are not yet entirely established to systematize the relationship between key actors.

This study attempted to illustrate the networking process taking place between the key actors in Bahrain. The paper proposed a model for rational sustainable ene7rgy policy between the key players in a dynamic *"Pluralistic networks"* approach. In this model, the study stressed the importance of developing official associations from the governmental and non-governmental subdivisions belonging to the industry, energy, and environmental sectors in order to enhance the funding processes and improve the exchange of empirical-academic researches of sustainable energy policy. Hence, the networking process would be more reciprocal pluralistic networking through shortest and consistent connections to increase the effectiveness and efficiency of the sustainable energy policy in Bahrain. Moreover, such a pluralistic networking will provide better advantages in terms of power over resources and the circulation of significant data among network members in the Kingdom of Bahrain.

Future research

Further empirical research could be undertaken to increase the efficiency of sustainable energy policy in the Kingdom of Bahrain. These empirical studies have to examine the networking process between the government of Bahrain and the industry, energy, and environment sectors with the primary goal to reinforce the networking process in a reciprocal beneficial system between key policy actors.

Further evidence-based research might be elaborated to study the networking process regarding the power of control over resources and the flow of information that exists between the government of Bahrain and the industry, energy, and environment sector in the Kingdom.

It would be important to explore other structures related to public policy networks in order to describe a new networking process between key actors contributing to agenda-setting, formulation, implementation, and evaluation of sustainable energy policy in the Kingdom of Bahrain.

AUTHOR CONTRIBUTIONS

Conceptualization: Naglaa Fathy El Dessouky.
Data curation: Naglaa Fathy El Dessouky.

Formal analysis: Naglaa Fathy El Dessouky.
Investigation: Naglaa Fathy El Dessouky.
Methodology: Naglaa Fathy El Dessouky.
Project administration: Naglaa Fathy El Dessouky.
Resources: Naglaa Fathy El Dessouky.
Software: Naglaa Fathy El Dessouky.
Supervision: Naglaa Fathy El Dessouky.
Validation: Naglaa Fathy El Dessouky.
Visualization: Naglaa Fathy El Dessouky.
Writing – original draft: Naglaa Fathy El Dessouky.
Writing – review & editing: Naglaa Fathy El Dessouky.

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APPENDIX A

Questionnaire
Analysis of the networking process between the government of Bahrain and key players for sustainable energy policy

1. There is direct and frequent networking between the government of Bahrain and the industry, energy, and environmental associations.

    Yes (with which frequency?)   No

2. There is direct and frequent networking between the government of Bahrain and the members of industry, energy, and environmental associations.

    Yes (with which frequency?)   No

3. There is direct and frequent networking between the industry, energy, and environmental associations.

    Yes (with which frequency?)   No

4. There is direct and frequent networking between the industry, energy, and environmental associations and their members.

    Yes (with which frequency?)   No

5. There is direct and frequent networking between the industry, energy and environmental associations, and other associations' members.

    Yes (with which frequency?)   No

6. There is direct and frequent networking between the members of industry, energy, and environmental associations.

    Yes (with which frequency?)   No

    Please provide any additional information:
    ....
    ....
    ....
    ....
    ....