

WORKING PAPER

LEBANON'S TOBACCO CONTROL POLICY

*A network analysis of the relationship
between policy-relevant stakeholders*

**Sawsan Allam, Stephanie Tanielian,
Amal Samha, Sam Selsky, and
Nasser Yassin**



**AUBPOLICY
INSTITUTE**

Issam Fares Institute for Public Policy and International Affairs

Published by the Issam Fares Institute for Public Policy and International Affairs,
American University of Beirut.

This report can be obtained from the Issam Fares Institute for Public Policy and
International Affairs office at the American University of Beirut or can be downloaded
from the following website: www.aub.edu.lb/ifi.

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Acknowledgments

Special thanks go to Hala Alawie and Lama Al Aridi for their help in the data collection
process, and to Joanne Constantin who assisted in developing the Appendices.
We are also grateful for Roula Zeidan's guidance throughout the IRB approval process.
We extend our thanks to the stakeholders who participated in this research and were
generous with their time during the interviews.

WORKING PAPER #42

LEBANON'S TOBACCO CONTROL POLICY A NETWORK ANALYSIS OF THE RELATIONSHIP BETWEEN POLICY-RELEVANT STAKEHOLDERS

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"Policy network analysis provides a language and methodology to examine relationships in order to facilitate the achievement of goals, such as implementing policy, or to identify roadblocks to successful implementation."

LIST OF ACRONYMS AND ABBREVIATIONS

AUB	American University of Beirut
AUB-TCRG	American University of Beirut-Tobacco Control Research Group
CSO	Civil Society Organization
FCTC	Framework Convention on Tobacco Control
IndyAct	The League of Independent Activists
ISF	Internal Security Forces
LMIC	Low and Middle-Income Countries
MoET	Ministry of Economy and Trade
MoF	Ministry of Finance
MoI	Ministry of Interior
MoJ	Ministry of Justice
MoPH	Ministry of Public Health
MoT	Ministry of Tourism
NGO	Non-Governmental Organization
PPHC	Parliamentary Public Health Committee
TCCW	Tobacco Control Citizen Watch
TFI	Tobacco Free Initiative
TPF	Tourist Police Force
UOP	Union of Professions
WHO	World Health Organization

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KEY MESSAGES

- ▶ Policy network analysis enables the mapping and measurement of the inter-organizational interactions of actors involved in the tobacco control policy in Lebanon to facilitate the achievement of goals, and to identify roadblocks to successful implementation.
- ▶ Even as non-governmental organizations have asserted themselves more forcefully in the tobacco control policy-making process, our analysis highlights the central role that the government continues to play with the Ministry of Public Health being the actor to play, with the highest degree of centrality.
- ▶ Both contact and information exchange networks reveal a low density of ties between organizations which implies a slower speed for the dissemination of information between institutions hence hindering implementation efforts.
- ▶ The social capital and access to information that employees in senior positions transfer with them as they join organizations has been a source of influence that even mitigated the organization's low financial influence.
- ▶ Structural weaknesses including poor coordination and duality in roles among the tobacco policy related organizations in Lebanon, together with having multiple of them issuing fines, benefit the tobacco industry and its allies and creates loopholes for proper enforcement.

ABSTRACT

Policy-making is a complex process in which multiple actors are involved throughout its different stages, especially in the implementation phase. Tobacco control policy is one major policy example that portrays the complex interlink of roles present among different actors. This paper looks at the case of Lebanon, where the Lebanese parliament approved the Law No. 174 on 17/8/2011 that bans smoking in public places. The law, which was the culmination of concerted efforts of multiple actors, is not yet fully implemented. Our study uses a network analysis tool to understand the relationships among policy actors involved in the implementation of the tobacco control policy. Semi-structured interviews were used to collect quantitative and qualitative data on the contact, flow of money and information exchange among actors. The network structure was assessed based on centrality, betweenness, and density indicators. The network analysis revealed some key structural weaknesses that have hindered implementation efforts, particularly regarding the poor coordination between stakeholders. Our analysis also highlights the central role that the government continues to play, even as non-governmental organizations have asserted themselves more forcefully in the policy-making process.

INTRODUCTION

Health policy-making is increasingly being influenced and shaped by a multiplicity of actors, state and non-state (Reich 2002). Still, governments exert the most influential role by deciding on what goes into the agenda, formulating legislations, funding, and developing an action plan that is implemented and monitored by governance and accountability structures. Their peripheral units are the ones that mostly contribute to translating policies into action (Tantivess & Walt 2008). In addition to the conventional role of governmental organizations, non-governmental organizations (NGOs) have become more involved in health policies from setting the agenda and advocating for certain directions to having a role in implementation. The influence by NGOs follows an insider strategy when they work closely with governments and provide them with policy recommendations and advice. It follows an outsider strategy when they use campaigns, lobbying activities, boycotting and civil arousal (Costa e Silva 2013; Lencucha et al. 2011; Tantivess and Walt 2008). Research and its translation play a visible role in attempting to influence policy-making; a case in point is the role of evidence in the development, adoption and the implementation of 6 of the 11 tobacco control policies areas in developed countries compared to a 'moderate' improvement in LMIC (Warmer & Tam 2012).

Part of the transformation towards more openness in policy-making can be attributed to the socio-technological changes in the past few decades, which have positioned complex network-based interactions at the forefront of social organization (Castells 1996). Network governance approaches to policy-making acknowledge this development and assume that the degree of involvement by networks in the governance process has a crucial impact on outcome (Head 2008). Torfing (2005) defines governance networks as "(1) relatively stable horizontal articulations of interdependent, but operationally autonomous actors who (2) interact with one another through negotiations that take place (3) within a regulative, normative, cognitive and imaginary framework that is (4) self-regulating within limits set by external forces and which (5) contributes to the production of public purpose." Taking a network governance perspective, Torfing argues, allows us to evaluate the policy-making process in a way that accounts for the increasingly fragmented, complex, and dynamic nature of modern society.

As Rhodes (2007) points out, governance is broader than government, and as NGOs and other non-state actors have become more involved in the policy-making process, the boundaries between private and public sectors have grown increasingly "shifting and opaque". In the realm of policy-making, networks are formed through formal and informal linkages among governmental and non-governmental stakeholders who share negotiated beliefs throughout the policy cycle including the implementation phase (Rhodes 2006). The network logic is apparent in non-governmental actors' strategies to influence policy, particularly when it comes to global CSOs collaborative initiatives, which have been increasingly active and networked in advocating for policy reforms. Additionally, they have become more and more able to create their own political negotiation spaces, based on knowledge and know-how, where they can invite political institutions to these spaces rather than the opposite (Lencucha et al. 2011). By involving a multiplicity of institutions, each with their own unique sets of information, knowledge, and assessments, the networks become more than a sum of their parts and form an important basis for making 'intelligent' policy choices (Torfing 2005). The need for collaboration between a broad range of stakeholders is especially apparent in complex policy contexts where a simple technical solution is not relevant or feasible (Head 2008).

The increasing complexity of social networks involved in governance necessitated the development of network analysis as a means of visualizing and evaluating the members' interactions with one another. For our purposes, the term "policy network" refers to the meso-level framework that looks at the interactions and exchange of resources between public agencies, private agencies and civil society actors. Policy networks, as Borzel (1998) notes, incorporate "all actors involved in the formulation and implementation of a policy in a policy sector," including private-sector actors, government agencies and civil society groups. A meso-level framework, which places emphasis on the inter-organizational rather than interpersonal network analysis, "enables us to describe and analyze interactions among all significant policy actors, from legislative parties and government ministries to business associations, labor unions, professional societies and public interest group" (Knoke et al. 1996, p.3). Within this framework, different networks are distinguished based on the closeness of relationships between the involved actors.

Significance of Policy Network Analysis

Rather than providing a cross-sectional view of each individual institution, policy network analysis focuses on the relationships between these institutions and seeks to understand the overall structure that is created through their interactions with one another (Kothari et al. 2014). Numerous authors have argued that the shape of this structure plays a key role in policy implementation. In their study of emergency response networks, Choi and Brower (2006) show that the most successful networks share several key organizational characteristics that lend themselves to more efficient flows of resources and information. Because social networks play such an important role in policy outcome, network analysis “provides a language and methodology to examine relationships in order to facilitate the achievement of goals, such as implementing policy, or to identify roadblocks to successful implementation” (Mischen & Jackson 2008, p. 324).

Network analysis is a particularly vital tool within the realm of public health, which Moreno evinced as early as 1934 when he represented graphically the relations among students in order to understand the fast spread of an epidemic (Moreno 1934). More recently, Kothari et al. (2014) argued that network analysis can be a uniquely powerful tool for public health experts due to its capacity to identify gaps in communication links and reveal the absence of key players. Seeing healthcare from a system perspective embeds social networks at its heart. For health authorities to monitor

The most successful networks share several key organizational characteristics that lend themselves to more efficient flows of resources and information.

health across different spatial and administrative scales (districts, sub-districts, villages), a relationship is established among the different actors and at the different functional stages of the system (stewardship, financing, service delivery). Understanding the interactions among them through network analysis affects the outcomes especially that an event at the level of one subsystem impacts that of another hence influencing the network institutions (Blanchet 2011).

Network Analysis and Tobacco Control Policy in Lebanon

Tobacco control policy is one major policy example that portrays the complex interlink of roles and functions present among the different organizations throughout the policy landscape. On the global scale, this is best exemplified through the World Health Organization’s Framework Convention on Tobacco Control (FCTC) international treaty, which resulted from a worldwide negotiation process of different governmental and non-governmental institutions leading to a global binding policy promoting global health. NGOs in particular played a global diplomatic role in which they managed the challenge of conveying the public interest in “inter-state negotiations in a predominantly state-centric system of governance” (Lencucha et al. 2011, p. 405). Canadian NGOs played a central role in brokering information and channeling funds for NGOs in low and middle-income countries participating in tobacco control. Despite the various interactions present in such a policy, to our knowledge none apply the network analysis mechanism to understand those linkages and this instrument has not yet been applied for policy-making in the Middle East region or in Lebanon specifically.

Despite the various interactions present in such a policy, none apply the network analysis mechanism in the Middle East region or in Lebanon specifically.

Tobacco-caused diseases kill an estimated 6,500 people in Lebanon each year (WHO 2016). Additionally, research on the socioeconomic costs of tobacco use concludes that smoking costs Lebanon’s population at least \$326.7 million per year (Salti et al. 2014). These factors highlight the need for stronger regulations. Past attempts at mitigating tobacco use and advertising have had limited success, partly due to the tobacco industry’s ability to harness alliances with key political actors in order to undermine regulatory legislation (Nakkash & Lee 2009). From the 1970s to the 1990s, the Lebanese parliament approved limited advertising regulations as well as several laws requiring the presence of health warnings on cigarette packs (Nakkash 2013). Lebanon ratified the FCTC in 2005, and in 2011 the Lebanese parliament approved Law No. 174, the country’s first comprehensive tobacco legislation. Although Law No. 174 provided a comprehensive framework to regulate advertising, selling and use of tobacco, its provisions have not

been effectively enforced. While the FCTC Article 8 and Law 174 call for a ban on smoking in all indoor public spaces such as restaurants and public transport, recent research has indicated the low level of compliance with the ban (Chaaya et al. 2016). This is largely due to resistance from the tobacco industry and its allies in Lebanon who view the law as a threat to their interests. See Appendix 1 for the timeline on the development of the tobacco control policy in Lebanon.

Non-governmental actors played an integral role in Lebanon's tobacco control policy process. They were the ones who helped move tobacco control to the forefront of the national agenda by meeting one-on-one with parliamentarians, developing evidence-based position statements and letters on draft bills to heavily lobby parliamentarians for a comprehensive tobacco control law. They intensively issued press releases, and used the media to bring public attention to the issue in addition to organizing campaigns and public conferences to bring stakeholders together and advocate for tobacco control. Two previous studies, Harris et. al (2008) and Luke et. al (2013) that utilized network analyses to investigate tobacco policy networks highlighted the central position health departments had in the implementation process in the US. With the narrative of heavy NGOs involvement in Lebanon and given the relatively limited authority of the Lebanese government, an initial reading of the situation would hypothesize that non-governmental actors are more prominent in this system, which may have important implications for future efforts in implementing tobacco control measures.

A broad terrain of health policy analysis articles in LMICs showed that policy analysis is at its infancy in LMICs and Middle East (Gilson and Raphaely, 2008). Only seven articles among the 391 identified ones studied tobacco health policy. Those studies rarely employed a clear analytical framework or incorporated quantitative data, and hugely neglected the institutions and networks involved in developing and implementing policies. To our knowledge very few scholars have conducted network analysis for tobacco control policy, and none have done so in the Middle East. The majority of research is related to issues such as prevalence of use and associated diseases. This study therefore addresses these gaps and responds to a recent call by other scholars in Lebanon for further research in order to understand the underlying factors behind the lack of effective enforcement of Law 174 (Chaaya et al. 2016). As such, this study may also serve as an initial reference point for later research aiming to analyze the challenges of FCTC implementation in other countries in the region where many (16 out of 18 countries) have ratified the FCTC.

The unique situation of Lebanon's tobacco policy also serves as an important model for studying tobacco control programs in other countries. In developing countries, the group-government system is becoming increasingly open and anti-smoking groups, regional NGOs, and domestic NGOs are becoming increasingly capable of challenging the dominance of transnational tobacco companies (Cairney et al. 2012). Lebanon is one of only a small handful of countries to have passed tobacco control laws since the FCTC became international law in 2005, even though almost all developing countries have ratified it (Cairney et al. 2012). Thus, by analyzing how the policy network structure has limited the implementation of Law 174, this study presents some obstacles that persist even after the passage of tobacco legislation, and offers some ideas to overcoming them.

This paper aims at understanding the inter-organizational dynamics in the tobacco policy implementation stage in Lebanon using the network analysis, which will help identify both the network's most influential institutions and the ways in which central and peripheral organizations interact with one another. We will be examining the centrality of governmental institutions relative to that of non-governmental ones; whether the former would be lessened due to the rise of NGOs involvement. This process will in turn inform the direction of further future interventions. Following other authors' discussions about the utility of network analyses within public health contexts, our analysis can expose communication gaps that have weakened tobacco control efforts in Lebanon. Additionally, by showing which institutions wield the most influence, this research will show how these actors can be harnessed to address the network's deficiencies. Research by Wipfli, Valente and Fujimoto (2010), which revealed how inter-state networking impacted the international adoption of the FCTC, has shown the utility of network analysis in understanding the complex process of tobacco control. Within the Lebanon context, network analysis can help highlight systemic inefficiencies that have hampered efforts at effectively enforcing tobacco regulation and FCTC adoption.

METHODS

Our study is based on a mixed method research design in which data from both quantitative and qualitative analyses complement each other for a wider understanding of the relation among the different institutions and their influence on the implementation of the tobacco control policy. Previous research by Wieshaar et al. (2014) has indicated that combining quantitative and qualitative network analyses provides a more complete picture of the tobacco policy network structure and its key features like coalition-building and leadership than either of these methods can on their own. We considered the implementation phase to span from the time when the action plan was being discussed before the enactment of the law (April 2011) until the point of data collection (April 2013). The study focused on this stage for two main reasons: first, because it was widely being discussed at that time, and second, to reduce recall bias.

Combining quantitative and qualitative network analyses provides a more complete picture of the tobacco policy network structure.

Given that our study looks at the meso-level, the units of analysis are organizations involved in the tobacco control policy. In this paper, we use the words ‘organization’ and ‘institution’ to denote these units of analysis according to which term is most contextually appropriate. We used a modified fixed list sampling method to identify the key organizations involved in the making and implementation of tobacco control policy (See Appendix 2). The list was developed by consulting with the research team and professors at AUB who were dedicated to studying the tobacco consumptions and related policies in Lebanon. A modified fixed list helped us develop a list of organizations that is stable throughout the data collection process hence allowing us to draw the network among all the included.

Semi-structured interviews were conducted with the key informants in the respective organizations. Key informants will more accurately represent their organizations if they are in higher hierarchical positions (thus granting them superior access to information) and if their work specifically focuses on the phenomenon under study (i.e. tobacco control) (Homburg et al. 2012). For our purposes, therefore, the key informants were individuals appointed by the organization to speak on their behalf on the tobacco control policy given their knowledge and involvement in that policy. They were also the heads of their respective departments within the organization. They were identified by referring to the media review and contacting the organization they represent. Participants’ contact information was compiled from publicly available information, especially organizations’ websites. After we contacted the informants and obtained their consent, two members of the research team conducted semi-structured face-to-face interviews with them in which one interviewer led the interview while the other took notes. Interviews with informants who agreed to be taped were recorded.

The interview guide was divided into three sections: “Contact among the organizations”, “Money flow across organizations” and “Information exchange between organizations”. Each section consisted of quantitative and qualitative components. Quantitative data were fed into UCINET 6 software (Borgatti et al. 2002) which allowed us to display the policy networks between organizations according to the network measures mentioned below. Data of the qualitative semi-structured questions were analyzed based on a thematic approach. The first author reviewed the transcripts and set of codes to identify emerging themes and subthemes, which were then organized and synthesized into matrices. The second author reviewed independently the transcripts and verified the themes and subthemes obtained by the first author. The two authors discussed disagreements in order to resolve them.

Network Measures

Quantitative network measures related to “frequency of contact”, “flow of money” and “information exchange” were adapted from the works of Krauss et al. (2004) and Harris et al. (2008).

Frequency of Contact

In tobacco control policy networks, the frequency of contact can highlight the overall levels of connectivity and suggest how central an organization is within the network (Krauss et al. 2004).

The frequency of contact between organizations was identified through the following question:

How often does the organization you represent have contact with organization X?

The response categories were: daily, weekly, monthly, quarterly, yearly, and no contact. To determine the frequency of contact each response category was assigned a number from 0, for no contact, to 5 for daily contact, which were later on dichotomized to 0 or “no contact”, for agencies having contact quarterly or less, and 1 or “contact” for agencies having contacts more than quarterly. This dichotomization reflects our interest in representing only frequent communication between organizations in the tobacco policy network. The results were then represented in an adjacency matrix format commonly used in the representation of relational data and then imported to UCINET. Afterwards, measures of centrality, betweenness and density were extracted.

Contact among institutions is represented on the policy network by a line between the institutions. If multiple respondents were interviewed from one organization, we calculated a mean of responses. In case one party of a pair of organizations failed to respond then we used the response of the other party in order to reduce the number of missing data. This flows from the logic that if organization A had contact with organization B then organization B would have contacted organization A as well. In cases of discrepancies in answers among a pair of organizations an average of values was taken.

Flow of Money

Studying the flow of money between organizations can help show the degree of influence that certain organizations wield within the tobacco control network (Krauss et al. 2004). This can in turn elucidate which actors are most capable of shaping the policy implementation process.

The flow of money measure was assessed through the question:

Does the organization you represent send or receive money from institution X?

Response categories include: send, receive, both (send/receive), and none. Answers were dichotomized into “send money” or “do not send money”. Since most stakeholders did not mention receiving or sending money from/to any other organization, we were unable to draw a network. Therefore, we relied on qualitative data to describe relations among organizations regarding the money flow.

Information Exchange

According to Slonim et al. (2007), the exchange of information between organizations is critical for the success of public health programs, as this allows the individual organizations to more efficiently utilize their limited resources to the benefit of the network as a whole. Similarly, Krauss et al. (2004) note that tobacco control program cannot be achieved solely by one organization, its success lies in the collaboration between public health groups. Investigating information exchange, therefore, will help describe the process of implementing a comprehensive tobacco control program.

Data on information exchange was collected through the question:

How do you best describe the current relationship and sharing of information between the organization you represent and each of the other organizations?

The answer categories, which are shown in Box 1, were adapted from another tobacco network analysis conducted by Harris et al. (2008). Each response category was assigned a number from 0, for not exchanging at all, to 5 for fully exchanging. We dichotomized the responses into “no information exchange” to include: not exchanging at all, communication, cooperation and “information exchange”, which is represented by a line between organizations, to include: coordination, collaboration, partnership and fully exchanging. This dichotomization separates institutions that work side-by-side to pursue common tobacco policy goals from those that occasionally share information and resources.

Box 1

Information exchange categories

INFORMATION EXCHANGE CATEGORIES	EXPLANATION
No exchange at all	We do not work together at all and have separate or even opposing goals.
Communication	We share information only when it is for the benefit of the tobacco control policy goals.
Cooperation	We share information and work together when any opportunity arises.
Coordination	We work side-by-side as separate organizations to achieve common tobacco control policy goals (activities of the two organizations are distinct; however, there is coordination to prevent duplication and overlap).
Collaboration	We work side-by-side to pursue the same goals and actively seek out opportunities to work together, but through an informal agreement with no contract.
Partnership	We work together under a formal agreement like a Memorandum of Understanding with clearly outlined responsibilities for each agency in order to accomplish shared program goals.
Full exchange	We plan, evaluate together and share resources to achieve common program goals.

Policy Network Indicators

The generated policy networks in this study were assessed based on the centralization, adjusted betweenness centrality and density network indicators (Scott 2012). These are the most basic policy network indicators found across the literature. Organizations constitute the nodes within the network and ties between them represented by lines reflect the relation and exchange of resources which could be edged in a non-directional relation or arched in a directional one.

Centralization and Centrality

Centralization is an overall network indicator that indicates how much variation exists in the centrality of the nodes. Centralization of a network is compared to the star-shaped network with a 100% centralization having all ties connected to one single stakeholder who is the central one (Wasserman and Faust 1994).

Institutions centrality represents the number of ties a node has; the higher the number of ties the more central and hierarchical the position of the institution is. *In-degree* centrality represents the ties received by an institution while *out-degree* centrality indicates providers and allows us to identify institutions mostly providing information and involved in contact with other institutions. These centralities are represented by the arrow of the line joining institutions in the network. Centralization is a measure of the whole network whereas centrality is a nodal measure.

Betweenness Centrality

It is a node level adjusted measure indicating the frequency with which the node lies on the shortest path connecting other nodes. If nodes A, B, C were connected as follows: $A \rightarrow B \rightarrow C$ node B would have a high betweenness centrality since it falls on the shortest path between A and C. Institutions with high betweenness centrality are gatekeepers who bridge information between institutions in the network that are not connected. They are important since they control the spread of information hence influence policy processes. On the other hand, the effectiveness and efficiencies of interventions could be enhanced through making use of those gatekeepers.

Density

The density represents the number of existing ties as a proportion of number of all possible ties present in the network. Denser networks indicate more tightly knit institutions while sparser network indicate more loose relations.

RESULTS

Among the 17 identified stakeholders, 10 were interviewed (Box 2). Two of those who were not interviewed were contacted but no response was received from them, namely the Ministry of Tourism and Bloomberg. The Syndicate of Owners of Restaurants refused to participate due to a preconception that the research team would take a biased stance against them despite our several attempts to explain to them the objectives of this research. The remaining four organizations (Ministry of Justice, WHO, Internal Security Forces (ISF) and Unions of Professions) were not contacted due to the absence of a key informant or due to having the minister themselves as the only key informant. In that case where one party was missing, we used the response of the other party.

While a policy network for the frequency of contact and information exchange could be drawn, most stakeholders did not mention receiving or sending money, hence the policy network for the flow of money could not be delineated. Information and recurrent themes on financing sources were nevertheless still identified from the participants and qualitatively analyzed.

Box 2

Participants list of the tobacco control policy stakeholders

MINISTRY	NGOS	REGIE
Ministry of Public Health (MoPH)	Tobacco Control Citizen Watch (TCCW)	Tourist Police Force (TPF)
Ministry of Economy and Trade (MOET)	American University of Beirut -Tobacco Control Research Group (AUB-TCRG)	Regie Libanaise des Tabacs et Tombacs
Ministry of Interior (MOI)	Tobacco Free Initiative (TFI)	
Parliamentary Public Health Committee (PPHC)	The League of Independent Activists (IndyAct)	

Quantitative Findings: Policy Networks

After dichotomizing responses (with “monthly” to be the minimum cut-off for the contact network and “coordination” to be the minimum cut-off for the information exchange network), the contact network and information network were drawn using UCINET 6 and measures of centrality, betweenness and density were reported. The nodes represent the different institutions, their size represents the degree centrality while their color represents different types of institution or groups of bodies who were holding regular fixed common meetings.

Frequency of Contact Policy Network

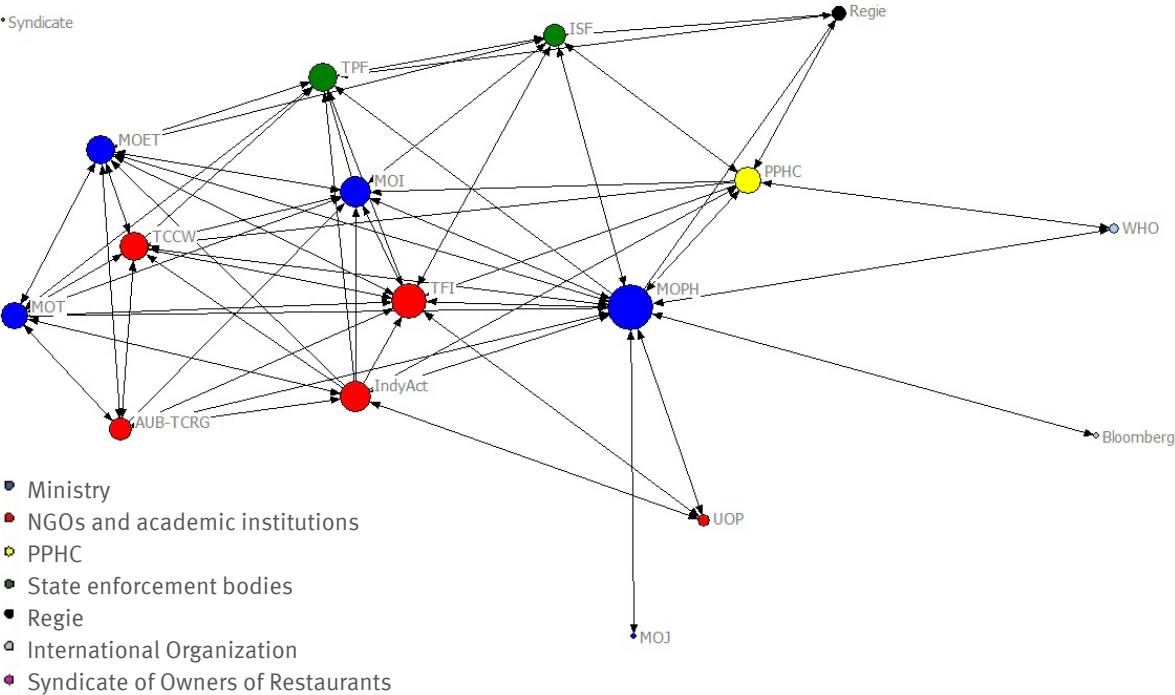
Figure 1 illustrates the frequency of contact network among the institutions. The overall network measures (Table 1) shows that network centralization reached 0.39 with a density of 0.35 indicating that among 272 possible ties 94 currently exist among the institutions. The institution centrality, which helps delineate the institution with the highest contacts, reveals that the Ministry of Public Health (MoPH) is the most contacted (in-degree centrality) and the most contacting (out-degree centrality) body. The MoPH also has the highest betweenness centrality (0.41) that is far beyond the betweenness centrality of the other institutions, meaning that it frequently acts as a bridge of contact between disparate organizations. As the ties between the nodes reveal, the MoPH is the only institution in contact with Bloomberg and the Ministry of Justice; if one is to remove those contacts alone, the MoPH centralization hugely drops to reach a value of 0.25. On another line, it is shown that the Syndicate of Owners of Restaurants is not in contact with any other stakeholders. In the interviews, almost all stakeholders mentioned being in contact with the syndicate at the beginning, especially prior to the start of implementation. The relationship was brought to an end once significant disparities necessitated cooperation, as was the principle behind the law. One stakeholder further elaborated that the syndicate agreed on the law in the beginning but the pressure exerted by tobacco companies led it to change its opinion during the implementation phase.

Table 1
Frequency of contact network indicators

	INDEG	OUTDEG	BETWEENNESS
MoPH	0.81	0.94	0.41
MOET	0.50	0.50	0.012
MOT	0.50	0.50	0.041
MOI	0.56	0.38	0.0075
MOJ	0.063	0.063	0
ISF	0.44	0.44	0.0614
TPF	0.56	0.13	0.0093
PPHC	0.31	0.38	0.031
AUB-TCRG	0.38	0.44	0.0049
TFI	0.63	0.50	0.0385
IndyAct	0.25	0.63	0.0195
UOP	0.19	0.19	0.001
TCCW	0.38	0.44	0.0053
WHO	0.13	0.13	0
Regie	0.13	0.19	0
Syndicate	0	0	0
Bloomberg	0.063	0.063	0

Network centralization Index	39.09%
Density	0.35
Mean betweenness	3.799

Figure 1
Frequency of contact network



Information Exchange Network

Figure 2 illustrates the degree of information exchange among the different institutions. The centralization index and density are 0.24 and 0.28 (Table 2) respectively. One notices that the information exchange network is less dense than the contact one. Similar to the previous network, the MoPH has the highest in-degree (0.63), out-degree (0.75) and betweenness (0.26) centralities. Here also the MoPH is the only actor exchanging information with the funding institution, Bloomberg. The TFI is second in its centrality measures after the MoPH reaching 0.56, 0.63 and 0.13 respectively. Both the Regie (the public organization responsible for the manufacture, trade and transport of tobacco products across Lebanon) and the syndicate show no information exchange with any of the other stakeholders.

Table 2

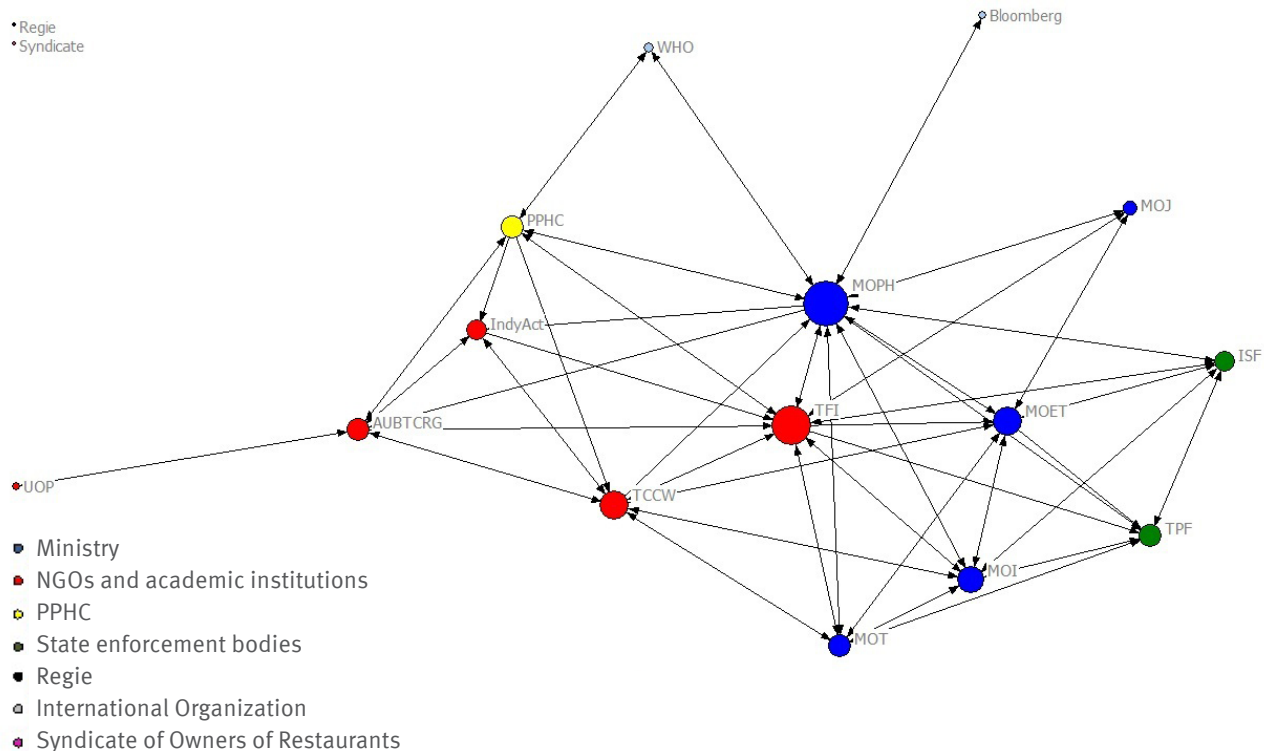
Information exchange network indicators

	INDEG	OUTDEG	BETWEENNESS
MoPH	0.63	0.75	0.26
MOET	0.44	0.38	0.016
MOT	0.38	0.38	0.021
MOI	0.44	0.44	0.027
MOJ	0.19	0.19	0.00083
ISF	0.31	0.31	0.13
TPF	0.38	0.19	0.0017
PPHC	0.25	0.38	0.033
AUB-TCRG	0.38	0.31	0.12
TFI	0.56	0.63	0.13
IndyAct	0.25	0.19	0.0014
UOP	0.063	0.063	0
TCCW	0.38	0.44	0.048
WHO	0.13	0.13	0
Regie	0	0	0
Syndicate	0	0	0
Bloomberg	0.063	0.063	0

Network centralization Index	23.81%
Density	0.283
Mean betweenness	3.971

Figure 2

Information exchange network



Qualitative findings from interviews

In this section, we discuss several recurring themes that our interviewees brought up related to the flows of money between organizations, the influence of certain institutions, and the overall network structure.

Flow of Money

The MoPH was the major participant who gave an elaborate description around the flow of money. Bloomberg, as the respondent noted, is the most influential party: “[...] *the milestone, it was Bloomberg! Without it, believe me until now we wouldn’t have even had a policy*”. A proposal primarily aiming at re-establishing and refurbishing a tobacco control unit within the MoPH to draft and pass a tobacco control legislation was developed and it succeeded in bringing in half a million dollars. That proposal was sent in the name of MoPH since its official status was regarded to be the most influential.

Later, after the issuance of the policy, a re-investment was done for the implementation phase and a grant of \$400,000 was obtained. The Union in Cairo was the institution technically channeling the money to the other organizations and the one supervising the grant. Other funding organizations of lower contributions included the IDRC, Tobacco Free Kid and World Lung Foundation. According to the same respondent, those benefitting from the money were the ministries, internal security, tourism police, parliamentary committee, AUB-TCRG, TFI, Indy Act, TCCW, and the media. The money received was mostly used for workshops, educational material, campaigns, and staff.

At the first stage, receiving the grant increased interest in the issue dramatically and pushed efforts towards legislation given that there is no budget allocated within the ministry for tobacco control as the two MoPH representatives had mentioned. The Ministry of Interior (MoI) denied having any role in receiving or sending money; as it was chiefly concerned with enforcing the law alongside the TPF, it saw the MoPH to be the body responsible to provide information on the money flow. A contradiction is noticed between stakeholders with regards to who were the beneficiaries. While the MoPH and IndyAct mentioned that the TFI, a local NGO fighting tobacco smoking, was one among other beneficiaries, the latter stressed on not receiving any sort of money.

Several NGOs relied on volunteering, sponsorship and fundraising, which in their view is not sustainable and hinders implementation efforts. According to the TCCW, money has to be ensured in order to encourage activists. In addition to volunteers, the TFI depended on sponsorship, fundraising events and a grant it had received from the WHO. Moreover, the personal contacts and relationships NGOs had, especially with media institutions, helped them hold a large media campaign which would have otherwise cost them millions of dollars. Having more financial resources was interlinked with having more “influence”. Both the AUB-TCRG and TFI saw that they could be much more influential if they had more financial resources, especially if one is to look at tobacco companies whose finances are a major source of power.

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Influence

Two main causes were attributed with inducing a higher influence - both *awareness and information* and *money*. One way that AUB-TCRG uses to resolve non-compliance with the policy is by providing institutions with the best available knowledge on how to approach certain problems. The MoPH also emphasized the role played by education early on in life in influencing the whole implementation of the law and inducing a tobacco-free culture. This is further translated in its aim to collaborate with schools and the Ministry of Education. On the other hand, the AUB-TCRG, TFI, IndyAct, PPHC, Regie and the MoPH emphasized the influence of money in the implementation of the law. The former five, including the Regie, see the tobacco companies and restaurants as highly influential due to their financial resources and media lobbying capabilities and the latter considered Bloomberg’s grant as the main reason for issuing the tobacco control policy in the first place.

Another theme brought up in relation to influence is the *moral support*. The WHO was the main organization viewed by several stakeholders to offer a moral support through its “name” as a UN and an international organization. For instance, it is occasionally invited to events and this is done whenever an image support is needed. Despite its

limited technical contribution to implementation (e.g., through funds) especially after the signature of the FCTC agreement, the country office of WHO is still regarded as an irreplaceable actor whose presence is essential due to that particular form of influence that it plays. AUB-TCRG is also considered by IndyAct and TFI to give a positive moral support image through being a “scientifically credible body”. One key informant of the IndyAct views the Ministry of Tourism to reflect the law’s image hence if the MoT does not commit to the implementation of the law then people will not believe in its seriousness and will violate it even more, regardless of whether other ministries commit to it or not.

Having different fines issued by different ministries with no unified electronic database is leading to duplication in roles and is creating loopholes.

The media also is powerful and may be even used as a threat by those advocating for the policy and those who are against it. For instance, one institution mentioned using the media whenever a minister expresses an opinion against the law. Using that tool is very influential in several instances especially since ministers are concerned with the image portrayed to the public - the voters. As previously mentioned, the tobacco industry through its high financial status also uses the media to press against implementing the policy.

Influence of Civil Society Organizations

Interviewees placed special emphasis on the influence of NGOs advocating for the policy. The MoPH noted that a bottom-up approach is to be used with NGOs which was proven to be more effective than imposing ideas on them in a top-down approach. The Ministry of Economy and Trade (MoET) gave a role to the civil society institutions and NGOs in coordinating and specifying the responsibility of each entity. Moreover, the PPHC, MoPH, MoET and IndyAct agreed on the greater support that could be received from NGOs in the implementation process specifically in monitoring it and requesting for a larger compliance. In other words, if an NGO detects a violation it can go on the media to report it, unlike the ministry, which is more restricted in doing the same thing.

Duality of Roles and Limited Coordination among Organizations

A duality in roles was voiced in the interviews. The key informant of one NGO considered himself to be representing another NGO at the same time. One of the ministries considered a couple of NGOs along with the media to have the same representative. The person representing one of the NGOs mentioned: “I work from a personal initiative under the umbrella of ‘NGO’, I started with them the project but they also have their own show running”. An informant of a governmental organization was concurrently a consultant for another key organization. The same informant viewed the TFI, IndyAct and AUB-TCRG to be one client.

Stakeholders perceived several barriers to the implementation of the policy and which fall within this paper’s focus on the inter-organizational network. On the one hand, having different fines issued by different ministries with no unified electronic database is leading to duplication in roles and is creating loopholes. According to the law, restaurants must suffer more severe penalties as they accumulate fines for tobacco-related offenses, and a repeat offender is at risk of being shut down. However, as several organizations had mentioned, if fines are issued from different bodies then these infringements are seen as separate cases and the fines do not accumulate. Moreover, the bureaucracy in processing the fines was considered to be inefficient and laborious causing a delay in their issuance and payment. On the other hand, not having a single central leader and a clear hierarchical structure creates confusion as to who is the reference, which in turn weakens implementation. Likewise, the IndyAct mentioned that the syndicate is taking advantage of the current fragmentation to resist the law. On the same line, the high turnover of ministries with the absence of a fixed technical committee makes it difficult to keep on convincing new governmental figures of the necessity of adopting the law without compromise in order to ensure sustainability of the policy.

The high turnover of ministries with the absence of a fixed technical committee makes it difficult to keep on convincing new governmental figures of the necessity of adopting the law with no compromise.

Stakeholders' View of the Future of the Network

When asked about the future of the tobacco control policy network, participants in the study suggested several options. These include having one committee representing the different stakeholders, independent if possible, which governs the tobacco control policy. Some suggested having the Ministry of Finance (MoF) and MoET represented but there were opposing opinions about whether the Syndicate of Owners of Restaurants should be represented or not.

These include having one committee representing the different stakeholders, independent if possible, which governs the tobacco control policy.

Many felt the need for a clear definition and a proper division of roles and responsibilities among the different institutions as well as a framework of work, especially with regards to enforcement. Likewise, the AUB-TCRG focused on not only having a committee at a ministerial level which is essential to reflect a political will, but also emphasized the need to hold meetings at an executive level with minutes reported to outline implementation procedures. A key informant of the MoPH and the AUB-TCRG emphasized the leadership role that must be taken by the MoPH in organizing the ministerial committee meetings, implementing the law and having the capability to close non-compliant restaurants.

DISCUSSION

Our network analysis reveals a complex web of interactions between governmental and non-governmental actors that corresponds with other research on the understanding of modern governance structures. Within the Lebanese tobacco policy network, various civil society groups like AUB-TCRG and government institutions like the MoPH work together as autonomous actors with the aim of contributing to the “production of public purpose,” (Torfin 2005) which in this case is the mitigation of the harmful impact of tobacco consumption in Lebanese society. Our interviews showed that NGOs and the AUB-TCRG played an important role in advocating for the tobacco policy and in spurring action by the government. Furthermore, our interviewees’ calls for increased support from NGOs in monitoring compliance with the 2011 law demonstrate that there is a possibility for these organizations to become even more influential within the network. As our study shows, influence could be in the form of ‘moral support/image’ which might not appear quantitatively, yet grants some organizations a powerful precedence over others. The frequent contact and collaboration between disparate governmental and non-governmental actors in the policy-making process corresponds with Rhodes’ (2007) assertion that modern governance arrangements have made the lines separating the public and private sectors increasingly “shifting and opaque.”

Despite the prominence of non-governmental actors within the tobacco policy network, our quantitative and qualitative results emphasize the primary role that the government continues to play. This runs contrary to our initial impression that non-governmental organizations may be occupying a more central position within the network. It could be because non-governmental organizations are adopting more of an outsider strategy requiring less frequent contact and information exchange. Through its various ministries, which maintain frequent contact with NGOs, act as knowledge and information brokers between other organizations, and issue fines to non-compliant restaurants, the Lebanese government is a constantly active player in the implementation of the tobacco law. This is in accordance with other authors’ claims that novel network governance arrangements supplement, rather than replace, traditional bureaucratic authority (Head 2008).

John Scott (2012) states in his book “Social Network Analysis” that centralization and centrality measures of policy network are better judged on a comparative

basis. Therefore, in order to comment on the centralization indices of our networks, we must refer to similar studies. A cross-study comparison can also help us construe our networks’ density scores. For our purposes, we can compare our results to those of two other studies, which compare the tobacco policy networks of American states (Harris et al. 2008; Luke et al. 2013). Given the profound differences between the political and social contexts of Lebanon and the United States, we should be cautious in interpreting the comparisons between our results. However, as these are the only comparable studies available and because the American and Lebanese tobacco policy network structures share basic similarities with each other, the US studies can help us understand our quantitative results.

In a study conducted by Harris et al. (2008) that compared eight state tobacco networks, the mean betweenness centralization and density indices for the contact networks were 0.23 and 0.48 respectively, while the mean betweenness centralization and density indices for the integration (i.e., information exchange) networks were 0.26 and 0.46 respectively. Meanwhile, in Luke et al. study (2013), which also compared the tobacco policy networks of eight American states, the mean betweenness centralization and density indices for the contact networks were 0.15 and 0.56 respectively, while the mean betweenness centralization and density indices for the collaboration (i.e., information exchange) networks were 0.19 and 0.51 respectively. Compared to these figures, the betweenness centralization of our contact network (0.39) is relatively higher while that of the information exchange network (0.24) is about average. The densities of both the contact network (0.35) and information exchange network (0.28) are relatively low.

A low density for both our contact and integration networks implies a slower speed for the dissemination of information between institutions, as it takes longer to pass information when fewer ties exist. A study by Long et al. (2013) finds that densely-linked networks are able to diffuse information amongst members more efficiently than sparsely-linked groups. Similarly, research by Moreland-Russell and Carothers (2015) concludes that high levels of connectivity between stakeholders are crucial for successful tobacco policy development and adoption. While some scholars have argued that too much density can hinder network performance (Valente et al. 2007), even these authors note that networks require a

minimum density level to ensure productive transfers of knowledge and innovation. While it is unclear what exactly this minimum level is, our interviewees' call for higher inter-organizational communication suggests that the lack of contact and information exchange between non-central actors is in fact hindering policy implementation efforts.

Interviewees call for higher inter-organizational communication.

We can better understand the centralities of our network's institutions by comparing their betweenness scores, which measure the frequency with which they lie on the shortest path connecting other institutions. In doing so, we notice that within the information exchange network the centralities of the Ministry of Economy and Trade (0.016), the Ministry of Tourism (0.021), and the Ministry of the Interior (0.027) are similar, which puts them on equal grounds compared to one another. This similarity could be partly explained by the fact that these different bodies are responsible for issuing different penalties in the absence of a unified fine processing system. Having different institutions with the same role confirms the previously mentioned inefficiency and raises the concern of having loopholes within the system. Moreover, Zheng et al. (2010) point out that when governmental institutions are hierarchically equal it might be a result of non-willingness of each to compromise; hence, the observed similarity in centrality could be attributed to an unwillingness of every ministry to compromise its role with respect to the issuance of fines.

These structural weaknesses benefit the tobacco industry and its allies, such as the Syndicate of Owners of Restaurants. Although our research showed that the syndicate and the Regie Libanaise des Tabacs et Tombacs have poor contact and information exchange with other stakeholders, these organizations have strong ties with key political actors outside of this network, which they have utilized to their advantage. Since the tobacco law passed in 2011, the Syndicate has lobbied the government to rescind or relax the tobacco law, and it claimed to have won the support of the Minister of Interior for an amendment weakening the law after meeting with him in early 2015 (The Daily Star 2015). Previous research has demonstrated that the tobacco industry has historically been effective at mobilizing alliances within the Lebanese government to hinder regulation (Nakash & Lee 2009), and this appears to have persisted after the tobacco law came

into effect in 2012. In one instance, a minister agreed to postpone and weaken the law's requirement of placing warning labels on cigarette packages after meeting with the Regie (Al-Akhbar 2013). The relatively fragmented, poorly linked nature of the regulatory network may be impeding the task of countering this sort of pushback by the tobacco industry and its allies. In addition, our interviews show that the Regie and Syndicate gain further influence through their use of the media as a political tool. Later research, then, could focus on the relationship between these organizations and the different media institutions in order to depict the dynamics among them.

In addition to revealing the flaws and inefficiencies within the tobacco network structure, our analysis underscores the highly influential status of the Ministry of Public Health. Its centrality was comparable to that of departments of health of some of the states in the US. The MoPH has a significantly higher betweenness centrality than the other organizations. Having a higher centrality than the other governmental institutions, confirms Cairney's (2012) observation about the change in focus that institutions have gone through, whereby governmental departments of health have assumed a greater responsibility in tobacco policy, replacing departments focused on finance, economy, trade, and agriculture. The MOPH is also the only organization in contact with Bloomberg and the MoJ, and one of only two stakeholders in contact with the WHO, hence putting it at a privilege over its counterparts. This is in line with previous research indicating that Ministries of Health play an active role in developing countries' tobacco control efforts by providing a focal point for transnational networks or links between domestic and international anti-tobacco interests (Cairney 2012). The information exchange with Bloomberg could be further explained by the fact that a prior key informant worked as a consultant for both Bloomberg and WHO concurrently. As previous studies underscore, personal relationships and inter-organizational relationships are inexorably linked and often inseparable from one another (Carroll and Sapinski 2011, Jolink and Dankbaar 2010). When employees, especially those in senior-level positions, join organizations, they transfer their social capital, providing their organizations with access to new information and social connections (Smith and Lohrke 2008). Personal relationships, which are revealed through our qualitative interviews, drive the dynamics of the network as a whole. NGOs were able to launch a massive media campaign for free because of their personal relationships; influence through individual links mitigated their low financial influence. By taking professional experience and personal connections into account when appointing new personnel, therefore,

organizations like the MOPH improve the quality and quantity of their inter-organizational relationship, making them more influential.

The MOPH's centralization would hugely drop if its contacts with Bloomberg and the MOJ were to be removed. Therefore, the MoPH gains its influence over the other institutions through being the only one able to reach those bodies. In other words, the money influence pertaining to Bloomberg is indirectly transferred to the MoPH, which acts as a mediator between Bloomberg and the other institutions. Moreover, we perceive that the previously mentioned WHO's influence through moral support is also transferred to the MoPH which in turns gives it a higher influence. The larger the degree of an organization's partnership with institutions ranking high on an international hierarchy, the more its appreciation by other organizations (Rindova et al. 2005), for instance, some actions are fortified by the UN's international reputation (Roberts 1993). Among all participants, AUB-TCRG betweenness centrality scored the highest increase from the contact to the information exchange network. Luke et al. (2013) study shows the strong relationship between the collaboration and the dissemination of best practices guidelines; dissemination reached 78% more likelihood when two agencies had a collaboration tie. This relationship reinforces AUB-TCRG mission to transfer evidence of best practices to decision makers.

The MoPH's central position within the tobacco network may provide an opportunity to address the network's aforementioned issues. Establishing a single committee representing all stakeholders, as our interviewees recommended, could result in a more efficient network, provided that it is properly designed. Given our quantitative findings, if such a committee is to be established, the MoPH could be the best one to lead it, as it already has the highest in-degree, out-degree and betweenness centralities. Such a finding agrees with the governance structure that must be present in a country. With its high betweenness centrality, the MoPH is also a "knowledge broker" that lies on the shortest path between institutions. It hence acts as a gatekeeper over the information flow between institutions that are not connected. It is worth noting, however, that the MoPH aims at involving NGOs and civil society even more in the implementation and is delegating some responsibility to them to enhance the bottom-up approach. Such a transfer of responsibility to NGOs corresponds with the current understanding of these institutions as important contributors to the success of the program (Mason 2004; Lee and Goodman 2002).

LIMITATIONS

The study was able to interview 10 stakeholders rather than the complete list because of the reasons mentioned previously (no clear key informant, no response, refusal to participate) along with the time constraint of the project which, for instance, limited us from taking appointments from ministers when no other key informant could be identified. The resultant missing data was minimized by accounting for the response of the one party as a means to cover for the response of the non-interviewed actor. This flows from the logic that if institution A had contact with institution B then institution B would have contacted institution A as well. It's necessary to make particular note of the syndicate of restaurants' refusal to participate. Given the aforementioned means to cover responses of non-interviewed organizations, we believe that it is unlikely that this non-participation significantly influenced our quantitative results. Our qualitative results, however, would be more complete had the Syndicate agreed to participate. We partially compensated for this missing data by reviewing media sources that have discussed the Syndicate's political activity since the law passed.

Additionally, the lack of previous research on tobacco policy networks in nations outside of the United States and Western Europe limits our capacity to interpret our quantitative results on a comparative basis. The significance of our network's density and centralization scores would be clearer if other tobacco network analyses had been previously conducted in similar political, economic and social contexts. Given this limitation, our study can help direct future research efforts, as it may serve as an initial point of reference for analyses of tobacco policy networks in other developing countries.

CONCLUSION

To the best of our knowledge, this is not only the first study conducted in the Middle East to employ a policy network tool to assess the complex relationships among institutions involved in tobacco control policy, but also the first research in the region to study any kind of policy network through network analysis. Our analysis revealed some important structural issues in the network, such as poor linkages between organizations and overlap in roles that have weakened its overall effectiveness. This highlighted the need to establish a single registry for fines through, for instance, a unified information system. It also showed that the MoPH possesses the most integral position with respect to the contact and information exchange, allowing it to be mostly in control of the flow of information. Furthermore, being the only body in contact with the major funding institution gives it an advantage over its counterparts with respect to financial influence. Such a finding underscores the advantage the MoPH has over the other institutions, which it could use in order to transmit its own agenda regarding the implementation of tobacco control policy, which according to its responsibility would be to optimize the health of the nation. Deciding to enhance the role of NGOs in the implementation might affect the centralization of the network, hence making it an interesting subject to be pursued for further research.

As Parag (2006) highlights, a policy network analysis gives more insight once it is employed to assess the whole policy process rather than just one stage of it. Therefore, this paper sets the grounds for future network analysis by serving as a point of reference from which to evaluate future shifts in relationships between institutions. Given the growing prominence of NGOs in governance networks, later analyses may reveal an even greater role for these players. Although the government will remain the primary instrument of governance, other institutions will become increasingly influential (Keohane 2002; Slaughter 2003).

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APPENDICES

Appendix 1: Timeline of the tobacco control policy development in Lebanon between 1970-2013

1970 - 2002

- ▶ Smoking bans were introduced in hospitals, pharmacies, universities, public transport and government offices
- ▶ Health warnings (HW) were introduced on packages and advertisements (HW must be present at all times during advertisement time)
- ▶ The distribution of free cigarettes to underage youth was prohibited

2003

- ▶ A comprehensive law to ban advertising was signed by 10 MPs, with the support of several non-governmental actors, and was proposed to the Council of Ministers
- ▶ Parliamentary Health Committee (PHC) met to review the total advertising ban proposal and discussed the adoption of Framework Convention on Tobacco Control (FCTC)

2004

- ▶ Lebanon signed the FCTC
- ▶ The total advertisement ban law was rejected
- ▶ Discussions took place (on advertising restrictions, health warnings, smoke-free places and tar and nicotine labeling) to strengthen the tobacco control policy in light of the FCTC agreement.
- ▶ PHC approved some of the articles of a second proposed Law

2005

- ▶ Lebanon ratified the WHO-FCTC in December
- ▶ PHC continued discussions on the second proposed law and approved most of its articles

2006 - 2007 - 2008

- ▶ In light of the limited scholarly studies, this period was marked by efforts directed towards research
- Studies employing various research methodologies were conducted to address an array of topics including: smoking behaviors across gender and age groups, the effect of media and tobacco policies on people's behaviors and the environmental effects of a smoke-free law

2009

- ▶ Tobacco control policy remained poorly informed by research which lead to the launch of a 2 year campaign whose main objective is to have an evidence-based law

2010

- ▶ Mobilizing the media, and NGOs and decision-makers through advocacy campaigns, press conferences and petitions.

2011 - 2012

- ▶ Law No.174 "Tobacco Control and Regulation of Tobacco Products' Manufacturing, Packaging and Advertising" was published in the national gazette in September, 2011
- ▶ Implementation was divided into 3 phases:
 - 3 September 2011:** 100% indoor smoking ban in all enclosed public places excluding hospitality sector. Ban on selling & serving tobacco products to underage youth
 - 3 March 2012:** Ban on all forms of tobacco advertisement and promotion both direct and indirect including sponsorship.
 - 3 September 2012:** 100% indoor smoking ban in hospitality sector. HW must cover 40% of tobacco packaging.

2013

- ▶ Compliance to Law 174 dropped as a result of resistance and due to campaigns held by the tobacco and restaurants industry

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Appendix 2: Profile of the tobacco control policy stakeholders in Lebanon

ACTOR	PROFILE	RESPONDED OR NOT	REASON
MoPH	A National Program for Tobacco Control was established in 1997 in Lebanon as a joint program between the Ministry of Public Health and the World Health Organization. The program's main role is to develop, conduct, and support strategic efforts to protect the public from the harmful effects of tobacco use and second-hand smoke through a holistic approach (National Tobacco Control Program).	Responded	-
MOET	The Ministry of Economy and Trade is involved in shaping the overall property privatization policy as well as improvement of legal basis of domestic and foreign trade sectors. The MOET coordinates the development of the Long-Term Development Strategy of the State which identifies measures aimed at accelerating economic growth (About the Ministry of Economy and Trade 2016). The Ministry was asked to administer the supply of the new tobacco control law. The Agency for Consumer Protection within the Ministry of Economy and Trade is in charge for implementation (Salloum et al. 2013).	Responded	-
MOI	The Ministry of Interior was asked, among others, to enforce the delivery of the new law (Salloum et al. 2013).	Responded	-
PPHC	The Parliamentary Public Health Committee's had a main role in the legislation of the tobacco law 174. They often send representatives to events related to the tobacco control policy.	Responded	-
TCCW	Tobacco Free Initiative, along with AUB Tobacco Control Research Group and IndyAct coordinated with different NGOs around Lebanon to build a network of volunteers to work together under the umbrella of the Tobacco Control Citizen Watch in order to monitor the enforcement of the Law 174 (American University of Beirut- Tobacco Control Research Group).	Responded	-
AUB-TCRG	The American University of Beirut- Tobacco Control Research Group mainly focuses on circulation and translation of research to policy, in addition to developing a regional network of researchers concerned with tobacco control and, especially, water pipe tobacco use. Follows an interdisciplinary approach to include: medicine, epidemiology, biostatistics, health promotion, health policy, health management, chemistry, economics, environmental policy and engineering (American University of Beirut Tobacco Control Research Group).	Responded	-
TFI	Tobacco Free Initiative is a local NGO created in May 2000 whose mission is to create a healthy environment and fight tobacco smoking. Its members include: businessmen, businesswomen, doctors, lawyers, psychologists and journalists (Created in May 2000, Tobacco Free Initiative 2009 & American University of Beirut Tobacco Control Research Group).	Responded	-
IndyAct	The league of independent social and cultural activists established during the July 2006 War in Lebanon, when a group of experts and skilled activists from different nations agreed to work on the environmental disaster resulting from the bombing of the Jiyeh power plant (South Lebanon). It cooperates and partners with international networks and organizations (About the League).	Responded	-
TPF	Based at the Ministry of Tourism, the Tourist Police Force issued 75 reports one year after the issuance of the law against establishments and individuals who did not abide by the law (Alkantar, B. 2013).	Responded	-
Regie	The Regie is a public organization under the control of the Lebanese Minister of Finance that organizes tobacco, tunbac and its derivatives, manufacturing, trade and transport across Lebanon. The Regie is also in charge of subsidizing tobacco farmers. The Ministry of Finance controls the Regie's finances (Regie Overview 2015).	Responded	-

<i>ACTOR</i>	<i>PROFILE</i>	<i>RESPONDED OR NOT</i>	<i>REASON</i>
MOT	The Ministry of Tourism has a main role in applying laws and regulations related to tourism and tourism enterprises. It observes compliance to the new tobacco control law, by supervising the extent to which restaurants are abiding to the terms and conditions of the law (Introduction and History of the Ministry of Tourism 2011; Salloum et al. 2013).	Did not respond	No answer
Bloomberg	Bloomberg is a privately held financial software, data, and media company. In 2006, Michael Bloomberg, philanthropist and former Mayor of New York City, launched a global initiative to reduce tobacco use in low- and middle-income countries (About the Bloomberg Initiative 2009).	Did not respond	No answer
Syndicate of Owners of Restaurants	Founded in Beirut in 1946, they represent the official non-profit organization that combines entrepreneurs & owners of food, drink, & entertainment organizations in Lebanon (Mission/Vision Syndicate of Owners or Restaurants Cafes, Night Clubs & Pastries in Lebanon 2012).	Refused to participate	Preconception that research team will take a bias stand against them
MOJ	The Ministry of Justice is responsible for organizing judicial affairs and ensuring proper enforcement of its legislations. The MOJ also develops draft laws and regulatory texts that have been assigned to it and represents the State before the courts (DL 151 dated 16/9/1983).	Not contacted	No clear key informant can be identified
WHO	The World Health Organization primary role is to direct and coordinate international health within the United Nations' system. The WHO Framework Convention on Tobacco Control (WHO FCTC) is the pre-eminent global tobacco control instrument, containing legally binding obligations for its Parties, setting the foundation for reducing both demand for and supply of tobacco products and providing a comprehensive direction for tobacco control policy at all levels (Global Health Observatory Data Tobacco Control 2016).	Not contacted	No clear key informant can be identified
ISF	The Internal Security Forces are general armed forces, and its mandate covers all the Lebanese lands as well as the territorial waters and airs. It encompasses administrative and jurisdictional supervision units. The ISF plays a role in executing juridical assignments and writs, and in implementing judgements and legal orders (The Interior Security Forces 2014).	Not contacted	No clear key informant can be identified
Unions of Professions		Not contacted	No clear key informant can be identified

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Civil Society and Policy-making

The increased role of civil society actors is a major recent phenomenon attributed to the advancement in communication as well as to the social, political and economic transformations. This program looks at a wide spectrum of civil society actors and their role in policy-making. We study how civil society actors organize themselves into advocacy coalitions and how policy networks are formed to influence policy processes and outcomes. We also look at policy research institutes and their contribution to the translation of knowledge to policies. The media's expanding role, which some claim to be a major player in catalyzing protests and revolutions in the Arab world, will also be explored.

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We are committed to expanding and deepening policy-relevant knowledge production in and about the Arab region; and to creating a space for the interdisciplinary exchange of ideas among researchers, civil society and policy-makers.

Main goals

- ▶ *Enhancing and broadening public policy-related debate and knowledge production in the Arab world and beyond*
- ▶ *Better understanding the Arab world within shifting international and global contexts*
- ▶ *Providing a space to enrich the quality of interaction among scholars, officials and civil society actors in and about the Arab world*
- ▶ *Disseminating knowledge that is accessible to policy-makers, media, research communities and the general public*

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