

Transitions of power in multi-actor information system projects

Dr Endrit Kromidha

Lecturer in Entrepreneurship and Innovation

School of Management - Royal Holloway University of London

Endrit.Kromidha@rhul.ac.uk

Abstract

Power and politics play an important role in multi-actor information systems where balancing change and stability becomes a goal in itself in order to preserve organizational equilibriums. To investigate this, the paper looks at a project on the implementation of the electronic system of business registration in Albania, a developing country in transition. The study introduces the concept of Obligatory Passage Channels (OPCs), building on Actor-Network Theory (ANT) and the Circuits of Power Model (CPM). An OPC is defined as the mechanism that gives momentum to the flows of power in a multi-actor project network. Findings show that the social circuit of causal power is characterized OPCs related to need and vision. The systemic circuit of facilitative power is shaped by OPCs related to coordination and capabilities. The episodic circuit of dispositional power is characterized by the inter-operability OPC. This study contributes to a better understanding of the network politics in multi-actor information system projects and the transitions of power therein.

Keywords: Actor-Network Theory, circuits of power, obligatory passage channels, multi-actor projects, network politics, innovation, change.

1. INTRODUCTION

Increasingly complex multi-actor information system (IS) projects are being implemented in both public and private sectors. In practice, the focus of discussion moves between technical development, project implementation and power structures in work processes (Torvinen & Jalonen, 2000). However, the study of power in management information systems research has been rather peripheral and poor in terms of theoretical constructs (Jasperson, Carte, Saunders, Butler, Croes and Zheng, 2002).

The purpose of this paper is to explore transitions of power in multi-actor information system projects by looking at the design and implementation of an e-government project in a developing country, Albania. This study contributes by revisiting and redefining the Obligatory Passage Point (OPP) concept initially proposed by ANT (Callon, 1986) according to the CPM (Backhouse, Hsu and Silva, 2006; S. R. Clegg, 1989) for a better understanding of power dynamics in multi-actor projects.

Political behavior related to transitions of power among organizational actors is labeled by previous research as either pluralistic (Markus, 1983), in order to manage conflicting goals among actors for accomplishing project objectives, or rational (Kling & Iacono, 1984), focusing on efficiency and productivity. The duality supports the argument that management and governance need to be considered separately (Too & Weaver, 2014) due to their complexity (Pitsis et al., 2014). These previous works identify the problems and key issues related to project management and power, but what happens inside the project networks remains largely unexplored.

From a theoretical point of view, the pluralistic perspective can be linked to theoretical approaches about stakeholders, and the rational perspective to project management and implementation views on power. Stakeholder theory (Flak & Nordheim, 2006) has been used in information systems research to provide some theoretical conceptualization of power in projects by looking at the salience of actors and their interactions. Research on e-government stakeholders suggests that they

need to be managed (Chigona, Roode, Nazeer and Pinnock, 2010) and require leadership (Luk, 2009). The idea of shared power through stakeholder inclusiveness (Axelsson, Melin and Lindgren, 2009; Cogburn, 2009) has also captured the interest of researchers. It appears that the intensity of engagement among stakeholders can have diverse effects on single projects or project portfolios (Beringer, Jonas and Kock, 2013). Mapping the relative power distribution over time can help to explain changes in implementation processes (Cavaye & Christiansen, 1996). A consolidating view on network dynamics in complex mega-projects suggests that power has to be understood as relational effects (S. R. Clegg & Kreiner, 2013). This would mean that higher project complexity is associated with more formal authority (Hekkala & Urquhart, 2013).

On the other hand, the project management perspective tries to combine stakeholders' collaboration with their exploitation of knowledge (Sarantis, Charalabidis and Askounis, 2009), but we already know that the transition of project values from one phase to another is problematic (Van Marrewijk, 2007). Cicmil and Hodgson (2006) advance this argument by exploring how the relationships between employees and the project organization are produced and reproduced, and how power relations create and sustain social relations. However, the project life-cycle model of initiating, planning, execution and closing (Project Management Institute, 2013) is limited to explaining power in complex multi-actor projects due to its deterministic and instrumental nature (Hodgson & Cicmil, 2006; Hällgren & Lindahl, 2012; Packendorff, 1995; Pollack, 2007). Cicmil (2006: 681) criticizes the instrumental rationality of the project life-cycle model, which is served as “a universal representation of the true nature of ‘projects’”, and as “a decision-making tool with predictive and explanatory power”, for often being contrary to practical wisdom.

More recent views propose forward-looking activities (Havas & Weber, 2017,) or recognize the predictive power of planned value towards earned value (Chen, Chen and Lin, 2016) as being possible drivers to project-based changes. In trying to reconcile the dichotomy mentioned earlier, these views recognize the relationship between transitions as processes that need to be managed

carefully (Wittmayer & Loorbach, 2016) and projects as mechanisms of change. In e-government projects, for example, the problem can be attributed to complexity, vision failure, or lack of clear goals and commitment that may originate from conflicting value traditions which are often poorly understood (Rose, Persson, Heeager and Irani, 2014). Governance and management have to be understood separately, the former being the framework under which the latter operates (Too & Weaver, 2014). However, the ever-changing, non-linear, and often unpredictable nature of a megaproject (Hodgson & Cicmil, 2006; Maaninen-Olsson & Müllern, 2009) requires better theoretical conceptualization to explain power dynamics. Research on the reconciliation of change and stability in public sector information system projects identifies the role of discourse in institutional reforms and e-government transformations (Kromidha & Córdoba-Pachón, 2017). Yet, without a careful look at the mechanisms of power within or across project organizations, our understanding remains limited.

This study adopts the view that project management is a way of exercising power, but suggests a new way of looking at it by focusing not only on the actors, but also on the situations in which it is expressed. The e-government project reform can provide a good background for investigating power and cross-level network phenomena (Brass, Galaskiewicz, Greve and Tsai, 2004) because it involves multiple actors. These include the government, donors, information technology (IT) companies, civil society organizations and end-users, with none of them having ultimate control over the project. Focusing on a developing country on the other hand will add another layer of complexity related to transitions of power in changing environments, an area of research we still know little about.

Introducing the structure of this paper, the following section presents a new framework based on Obligatory Passage Channels (OPCs), informed by ANT and CPM in order to study the transitions of power and network politics in multi-actor projects over time. The proposed framework is then used to design a research methodology by following organizational actors and

their expressions of power in different project processes and stages. A critical discussion of power dynamics in a multi-actor project environment in Albania then concludes the analysis by summarizing the contributions of this study and leading to directions for future research.

2. ACTOR-NETWORKS AND CIRCUITS OF POWER

Actor network theory (ANT) introduced by Michel Callon (1986; 1987), Bruno Latour (1996; 1999; 2005; 1987) and John Law (1992; 2003), has emerged as a prominent theory which studies the heterogeneous arrangements of interests, people, organizations and standards (G. Walsham & Sahay, 1999: 42). An important aspect of ANT is power, which is summarized in the following paradox: when an actor has power, nothing happens and the actor is powerless, but when an actor exercises power, others are performing the action and not the actor itself (Latour 1986).

ANT has been identified as a sense-making framework for understanding complex change programs (Pollack, Costello and Sankaran, 2013). This research shows that a stable actor–network of practitioners and researchers can contribute to the effectiveness of project management information systems (ibid.). However, ANT is not just an alternative way of looking at human and non-human actors equally and in general. The framework has been applied to explain inter-organizational e-government networks (Heeks & Stanforth, 2007; Stanforth, 2006) where the topic of power cannot be ignored. Stanforth (2006) applies Callon’s (1986) translation model to an e-government project in Sri Lanka, assisted by the Asian Development Bank, in a similar context to the one of this study. Following Latour’s ideas, she summarizes that “*power over something is a composition that is made by many – the primary mechanism – and attributed to one – the secondary mechanism*”. Stanforth (2006) follows by explaining that the amount of power exercised depends on the number of actors in the network, thus summarizing the consequence of a collective action, but without being able to explain what holds the collective action in place.

ANT has been criticized for having a naturalizing ontology, an almost nonexistent epistemology and performative rather than anti-performative politics (Whittle & Spicer, 2008). To address this

problem, CPM (S. R. Clegg, 1989) builds on the ideas of ANT, in that power is relational to the network of actors by adding a more reflexive epistemology which explains power flows in multidimensional networks. Clegg (1989), in his model, combines insights from Lukes (1974), Weber (1978), Callon (1986), Latour (1987) Foucault (1980), Giddens (1984) and Mintzberg (1983). He categorizes power as facilitative, dispositional and causal.

According to Clegg (1989), facilitative power is related to system integration and domination, where exogenous contingencies influence innovation in techniques of discipline and production that can empower or disempower social relations. Dispositional power is about integration and rules that determine relations of meaning and membership. These rules are also influenced by exogenous contingencies. They facilitate or restrict innovation in techniques of discipline and production, and fix or redefine social relations. Causal power determines the interaction between social relations, agencies, standing conditions and outcomes. Agencies are considered to control or contest OPPs through which facilitative and dispositional types of power are translated on a causal and episodic level.

Silva, Backhouse and Hsu (Backhouse et al., 2006; Silva & Backhouse, 2003) are among the first to apply Clegg's model in information systems research. Backhouse et al. (2006) for example use it to analyze the creation and development of the first standard in information security management in UK by exploring three circuits: 1) episodic, positioned between actors that are not necessarily limited to the concept of agencies; 2) social, explaining the continuous definition of meanings and membership in the network; 3) systemic, defining discipline and production constructs. In this revised model, the social circuit can be understood as more related to causal power in Clegg's original framework, the episodic circuit to dispositional power, and the systemic circuit to facilitative power, although there are overlaps of circuits across the three different types of power. However, depicting the standard as an OPP for episodic, social and systemic integration (Backhouse et al., 2006) is not entirely consistent with its original meaning. In ANT an OPP is

defined as a situation that has to occur in order for all the actors to satisfy the interests attributed to them by this focal actor (Callon, 1986). According to Clegg (1989), the notion of a focal situation is relational and different from that of a focal agency or tool such as a standard.

More recent applications of the CPM (Inglesant & Sasse, 2011; Smith, Winchester, Bunker and Jamieson, 2010) highlights its critical emphasis on environmental factors, but without giving us a more dynamic understanding of the OPP concept in relationship to power. What is missing from these models is a clearer representation of the driving forces that give momentum to the flows of power in the three circuits. Understanding how power is shaped and not just expressed in the actor-network requires a more careful look at the converging points where actors and interests meet. Therefore, this study proposes replacing the notion of a single OPP with that of multiple Obligatory Passage Channels (OPCs) as explained in more detail in the following methodology section.

3. A METHODOLOGY FOR INVESTIGATING OBLIGATORY PASSAGE CHANNELS

An OPC is the concept introduced in this study to connect ANT and CPM instead of the more static and general OPP. An OPC can be defined as the mechanism that gives momentum to the flows of power in a multi-actor project network. The concept complements the ideas which are expressed in the circuits of power by considering in more detail the individual characteristics of relationships between organizational actors. OPCs also bring a structured time dimension into the discussion of power, something generally ignored by other studies. For an empirical examination of OPCs, the research methodology of this study offers a number of propositions and research questions informed by ANT and CPM, which are summarized in the following table:

Table 1: Theoretical propositions and questions		
Propositions	Related theory	Questions
Specific OPCs can be	CPM, ANT	What are the OPC characteristics for each circuit of

identified for each circuit of power.		power? Who are the key actors in each case?
The intensity of OPCs increases in situations of change.	ANT	How are actors mobilized for change? What defines more broadly their level of involvement for promoting or resisting change in the specific circuits in the actor-networks?
OPCs and actors are jointly redefined by each-other over time.	ANT, CPM	How do the roles of organizational actors evolve over time? Are these roles defined by the actors themselves, their institutionalized identities or their relational interactions with each other?
Control over OPCs is important for strategic leadership.	CPM	How can focal actors become indispensable over time? How do they maintain their power-related position?
Better integration of OPCs and power circuits strengthen the network.	CPM, ANT	How are agreements achieved? How are conflicts settled? How do the interests of the overall network take priority over the individual preferences of actors?

In order to apply these theoretical propositions and questions in practice, the first step to assure research rigor and validity would be to identify the focal actors in each circuit and follow them (Aykaç, Jouan de Kervenoael, Kasap and Eryarsoy, 2009; Sarker, Sarker and Sidorova, 2006). The transitions of power can then be studied by focusing on actors' behavior in each OPC. Since power is relational, (S. R. Clegg & Kreiner, 2013; S. R. Clegg, 1989) actors and processes they engage in should be considered jointly. The key assumption here is that actors are not static but multifaceted, able to react differently according to the relational dynamics of power in each OPC and circuit over time.

The interpretivist case study approach in this research allows an in-depth exploratory analysis of complex information systems (G. Walsham, 1995; 2006) such as the multi-actor e-government project network. According to Schwandt (1994) 'interpretivism was conceived in reaction to the

effort of developing a natural science of the social'. Furthermore, an interpretivist approach can be used to accommodate mixed methods for exploring some of the broad parameters in the context of information systems (G. Walsham, Robey and Sahay, 2007). The triangulation of multiple research methods to validate the empirical evidence in this case would lead to consistent interpretations by the researcher and the reader based on the rich research narratives provided.

The study context is that of a multi-actor e-government project in Albania. Developing countries are illustrative of complex and dynamic project environments. They demonstrate a continuous conflict between forces of governance reforms for change and the need for stable institutions (Holmes, 1997). Research shows that e-government developments in transition economies draw lessons from developed countries, not only on project management, but also on political, fiscal, social, strategic and organizational issues (Weerakkody, El-Haddadeh, Sabol, Ghoneim and Dzapka, 2012). This makes the case study representative for this research, considering the earlier propositions of OPCs and interactions in the circuits of power, more evident in situations of change and transition.

Documentary review was the first research method used in this pilot study to investigate the propositions and questions listed earlier. This consisted of analyzing 74 materials such as national strategies, reports, related laws and donor-government agreements. In addition, 16 semi-structured interviews were conducted with representatives of government agencies, donors, implementing company, public servants and end-users at different points in time during 2010-2015 to clarify some of the key points.

The reason for using multiple research methods was to triangulate the research evidence for more reliability in this qualitative exploratory study (Miles & Huberman, 1994). The goal is to understand particular situations by investigating the perspectives and behavior of people and organizations (Kaplan & Maxwell, 2005), in this case, on power dynamics in complex projects. The list of propositions and questions informed by ANT and CPM in Table 1 was used in practical

terms for collecting the data from the semi-structured interviews and documents. These propositions and questions are applied on each of the three broad theory-led (Gehlert, Schermann, Pohl and Krcmar, 2009) themes for analysis and presentation of findings: 1) the social circuit of causal power; 2) the episodic circuit of dispositional power; 3) the systemic circuit of facilitative power. These themes were the starting point, but more codes emerged later during the analysis of documents and interviews. The choice of using electronic vs. manual coding is justified by the large size and complexity of the project being studied, and the inclination and expertise of the researcher and author (Basit, 2003). This was done using Atlas.ti (Friese, 2014). Comparing different qualitative research software (Franzosi, Doyle, McClelland, Rankin and Vicari, 2013), the choice of Atlas.ti was justified by its flexible and user-friendly interface, and the researcher's experience and familiarity with it.

Thematic sentences for reporting qualitative research were used to enhance the utilization value of findings for diverse and larger audiences of users (Sandelowski & Leeman, 2012). For this purpose, codes and their groundedness referring to the number of related citations, are used as thematic sentences and research evidence. A thematic analysis is widely used in psychology and health studies (Braun & Clarke, 2006; Braun, Clarke, Terry, Rohleder and Lyons, 2014; Vaismoradi, Turunen and Bondas, 2013), but it is rarely acknowledged in management and social sciences, although it offers an accessible and theoretically flexible approach to analyzing qualitative data (Braun & Clarke, 2006). Using it in this research offers a relatively novel approach to report the findings in comparison to previously studies in management and information systems. The narrative presentation of findings and analysis is the result of multiple rounds of iterations with codes, forming conceptual frameworks, arranging them into themes and trying to identify patterns (Miles & Huberman, 1994: 55-71). This type of analysis should allow the reader to decide on its trustworthiness when it comes to credibility, dependability, conformability, transferability,

and authenticity (Elo, Kääriäinen, Kanste, Pölkki, Utriainen and Kyngäs, 2014) as well as in the broader context of research and practice.

4. FINDINGS AND ANALYSIS

4.1. Legitimacy of actors for meaning and membership in the social circuit of causal power

Business registration has been a time consuming and expensive process in Albania since the opening up of the country to the market economy in 1991. The system was based on a legal process in the courts followed by multiple visits to different government offices. Businesses had to appoint lawyers and public notaries as legal representatives to prepare incorporation documents and follow the court registration procedures. Once business registration was approved and filed in the court, the businesses could start operating, but they had a limited time to register with the Central Tax Authority, the local authorities, the Work Inspectorate, the chambers of commerce, the Institute of Social and Health Insurance, or any other office for additional business licenses and permits.

The National Registration Centre (NRC) project started when the government of Albania identified the needs of the businesses and planned on having an electronic system to replace the existing paper-based register of businesses in the courts. The new electronic system centralized the application in one agency.

On a causal power level, business groups of interest shaped the social context of exogenous contingencies to set the government agencies and mechanisms in motion for this reform. However, the reform of modernizing the system through a new information system and agency started as a top-down political decision. An expert in the Department of Strategy and Donor Coordination in Albania explains in an interview that the leading legitimizing actor for starting this reform was the

Council of Ministers. An interpretation of the codes in Table 2 would suggest that need and vision were the OPCs for the social circuit of causal power.

Table 2: OPCs and actors in the social circuit of causal power			
Obligatory passage channel	Lead actors and nature of power	Influenced other actors	Related codes for analysis with number of citations
Need	<i>Local businesses</i> Socially embedded and practical for local and foreign businesses.	Citizens; Government; Foreign businesses.	Public communication (56); Processing time (23); Simplifying procedures (22); Evaluation by users (18); Corruption problems (15); Legal problems (5); Need to catch-up (10); Users expectations (4); Users suggested solutions (6); Business climate improvement (3).
Vision	<i>Government</i> Instrumental for better local governance and international recognition.	Businesses; Citizens; Foreign partners.	Legal changes (33); Past negative (23); Historical background (20); Division of powers (20); Strategic change (17); Transparency (13); EU integration (12); Political goals (7); International recognition (7).

The strategic goal of the government was to make the business registration process faster, more efficient, less costly, and the country more attractive to foreign investments. To assure the legitimacy of the reform, the existing legal framework had to be changed. The Prime Minister and his government made clear provisions about this in the national strategies and the government program. A representative of the National Agency for the Information Society, who was involved since the beginning with the strategy-making process, explained the ideology behind the creation of the center as follows:

“The creation of NRC originates in the objectives set in the business strategy because, when we talk about information society, this is something horizontal. The information and communication technology is like a floor, based on which, all the other sectors are built

and developed, to change the way of offering the services, the way of behaving in governance, and finally, helping towards increased transparency and increased efficiency.”

However, the introduction of this new technological solution didn't pass without some degree of skepticism concerning its management. The following statement by a business representative highlights this:

“There is no need for changes in the system itself. The management and the maintenance of the system needs a change.”

The actors in this network shaped and were shaped in great part by the business end-users, but also by the administrative legal, operational and technical users of the system. After the project, going back to the starting needs for the reform, the involvement of, and acceptance by, the users became indispensable. For example, during the first post-project year, NRC made a strategic use of the donors' reputation and their public acceptance to legitimize the new system and its services among business. However, in return, in the long run these end-users influenced the actor network by determining the adaptation and success of this project reform. On a causal power level end-users recognize the merits of the system, but some of them remain skeptical towards the human factor in it, showing the resilience of embedded social norms regardless of information technology changes.

4.2. Stakeholder expectations and exogenous variables in the episodic circuit of dispositional power

The donor agencies, United States Agency for International Development (USAID) and Millennium Challenge Corporation (MCC), took the lead in the business registration reform because they had both the funding and the expertise to lead the project with an authority given by the government. From this point, a project management network was created and then followed by an administrative network of actors. The donors appointed the Institute for Contemporary Studies to research the current situation in the country. This was crucial to plan and to operationalize the

interoperability of the system, balancing needs, vision, coordination and capabilities as suggested by the codes in Table 3.

Table 3: OPCs and actors in the episodic circuit of dispositional power			
Obligatory passage channel	Lead actors and nature of power	Influenced other actors	Related codes for analysis with number of citations
Interoperability	Project management agency (Donor, NRC)	Businesses; Other government agencies; International partners.	Inter-organizational relations (43); Centralization (36); change implementation (31); system integration (29); interoperability (21); evaluation by users (18); problem handling (17); consultation meetings (14); legal-IT integration (14); legal enforcement (11); matching priorities (10); avoidance of responsibility (9); limited trust (9); rejection of authority (9).

The transition to the new system was a challenging process of alignment and realignment of organizational actors and forces. The Registration Courts and the Directorate of Taxes contributed with their local expertise of dealing with business registration. However, their cooperation was not easy because the new National Registration Centre was taking away a lot of their facilitative power. The interviews with two project managers and some involved lawyers demonstrated that the donor managed communication channels between local stakeholders by bringing key actors into the debate strategically to solve problems and gain acceptance for the desired changes. One of USAID's top project managers described this process as follows:

“We used a change management approach with working groups whenever we could, taking on problems one at a time and trying to get user buy-in in the institutions as soon and as much as possible. We also involved civil society groups in monitoring and advocacy

in order to increase public awareness and exert pressure on the government to implement the reforms.”

Although NRC now serves as a one-stop-shop for the tax, employment or local authorities, it is not replacing these agencies. Beyond the registration process, businesses will have to contact each agency separately as NRC explained in one of its informative leaflets:

“NRC will inform the tax administration, social and health insurances, as well as the Work Inspectorate about the registration of your business. It will inform also the city hall where the head office of your business is. All registered businesses will continue to communicate directly with these authorities for issues concerning obligations towards each of them.”

On a larger scale, the same donors, USAID and the Millennium Challenge Corporation, supported also the National Licensing Center, the Electronic Procurement Agency and the Taxation Directorate with their electronic systems under the same program as NRC. Because they share many common features, integration and communication between them is easy, as they were planned together from the beginning as parts of the same reform. Although the systems communicated well with each-other, they were not merged due to local political reasons and their dependency on different ministries and power structures.

NRC later created offices in City Halls and Chambers of Commerce across Albania. These affiliated offices had a dual administrative dependency. Conflicts in these inter-organizational relationships were kept under control by the supervision NRC exercises towards these agents, either through the system, or its final decision making power. Communication at different levels was also a problem with this institutional integration as a business representative explains:

“It is necessary to have more co-operation between local and central authorities”.

To expand its administrative network of influence and actors, NRC continued working on further relations with other institutions and organizations such as public notaries and lawyers' offices,

who can be the intermediaries between the center and businesses. Automatic connection of the system with European and international business registers was also planned, but had not yet been made possible at the time of this study.

4.3. Regulations and standards for discipline and production in the systemic circuit of facilitative power

The whole mechanism of preparation for the project of bringing together the network of actors, aligning them to a common goal and finally implementing it, was guided by the donors that exercised facilitative power through leadership and coordination. The OPC of coordination that organizational actors negotiated and reached with each other, and the OPC of capabilities which relates also to resource allocation determined the environmental contingencies on a facilitative power level, is suggested by the codes in Table 4.

Obligatory passage channel	Lead actors and nature of power	Influenced other actors	Related codes for analysis with number of citations
Coordination	<i>Consultants</i> Political, managerial and technical in the project.	Businesses; Government	Standard procedures (41); legal changes (33); change resistance (21); change in services (18); public relations (18); work structure (18); strategic coordination (17); intermediary role (16); contingency management (14); best practices (13).
Capability	<i>IT system providers</i> International and local expertise and resources.	Donor agencies; Government	System functions (40); IT infrastructure (25); International indicators (24); Local capabilities (22); limited human capability (21); unstandardized procedures (20); system limitations (18).

Once the new law for NRC was on the right track, the most important and difficult part was building the electronic system and embedding in it all the legal elements and regulations mentioned in the previous section. Representatives from the legal experts' group, and the outsourcing company who designed the software, confirmed that they worked closely with each other on this. A lawyer involved in this process explained as follows:

“We have worked in parallel, and parallel to our group which was dealing with the legal side was the group of ITs that were involved with the system's design. How to say, the system itself is designed parallel with the law. We have had a lot, almost every 2-3 days we had meetings with ITs and we discussed, we drafted some part of the law, sent it to ITs to look at it so they could understand how they could implement it. They asked questions, wanted clarifications, and we have discussed the workflow of the system in detail.”

Most of the experts who provided the capabilities and expertise for the project were Albanian. Their consultation meetings and communication were closely monitored by the donor and the government. The focus was on the replacement of the old system with a new one, embedding the legal changes into the electronic system. Its functions were designed and implemented in accordance with the purpose of the agency to serve as a one-stop-shop for business registration. To make this happen, clear roles had to be defined for different actors. The government had to make sure legal changes were smooth and well-coordinated within the time schedule. Lawyers who designed the law and certain regulations had to explain it, and translated it into simplified requirements for the IT experts.

Managing the network of actors required strong-handed leadership and coordination. The use of foreign expertise was justified by the lack of local skills in such large projects, but also to avoid taking sides amongst local companies associated with specific political actors. That is why Chemonics USA was appointed to design the IT system initially, but later it subcontracted Alfa-XP, which gave birth to IKubInfo, the Albanian software company that actually made the system

and currently maintains it. The coordination of international and local leadership was necessary to align legal and IT, and the different capabilities needed for the completion of the project.

5. DISCUSSION: ROLE IDENTITIES IN THE EVOLVING CIRCUITS OF POWER

This interpretivist case study identified not only a transition of powers among actors, but also their transformation along a transition of capabilities. Five OPCs could be identified in this study. The first is related to the need for translating exogenous contingencies of stakeholders’ expectations into endogenous meaning and membership for the actors involved in the project. The second is related to capabilities aligned to the same stakeholders’ expectations of what actors can actually do. The third OPC is related to combining needs for interoperability where capabilities, meaning and membership is put to the actions of discipline and production in order to implement change. This change leads to the final two OPC, one on vision for assessing and revising the legitimacy of actors, and the other on coordination to turn operational changes in laws and standards. A graphical representation of these dynamics is given in Figure 1.

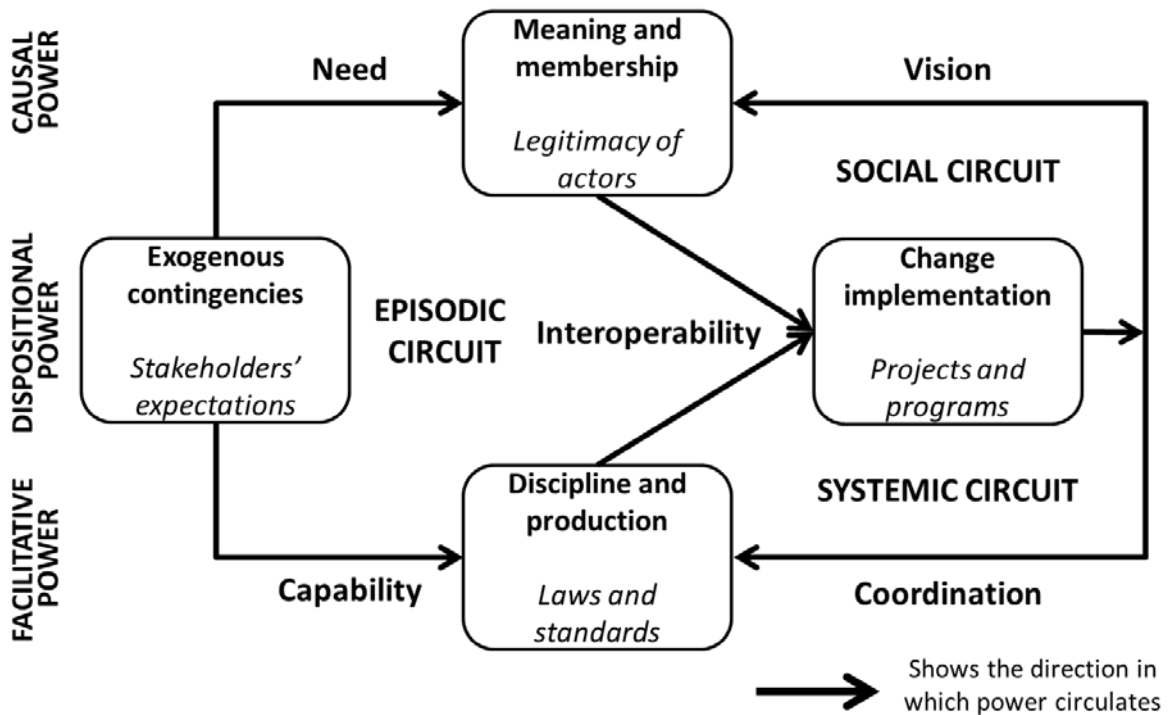


Figure 1: Obligatory passage channels of power transition in the actor-network

In the e-government project examined in this study, these transitions were evidenced through documented formal and informal interactions between the project members. This study shows that a project network of actors seeks to establish a sustainable OPC that would facilitate power dynamics in the causal, dispositional and facilitative circuits even beyond the project's life-cycle.

Time appears to be very important in this study. It can be risky by-passing obligatory OPCs in any power circuit for enforcing faster transformations unilaterally. It might result in conflicts and possible failures, and the post-project stage embeds in itself the contradicting forces of stabilization and change which emerge from the dynamics and different interests of actors. A multi-actor project can go through different OPCs stages and circuits of power. Its success depends in great part on the alignment of the actors' network over time. Their continuous alignment and realignment is influenced by past transformations and decisions, but unfolds in the present depending on its current users.

The transition and development of the capabilities of each actor is not an end process as in a project. The whole actor network changed along the project stages, and continues to change even after it is handed over to the government. The only difference is that, during the post-project stage, changes are more related to the standardization of new procedures rather than to the development of new ones, until the need for another radical innovation becomes imminent.

This study identified temporary project structures such as intermediaries, experts and consultants that play an important role in the circuits of power and OPCs, and which allow changes to take place. These actors are often responsible for strategic planning and implementation, but they only have vested power allocated by the larger and more established organizational actors such as the government agencies, donors, companies and the civil society organizations featured in this study. These intermediaries would naturally transfer their expertise in the form of laws, rules and regulations for the network, but because of their dependencies and vested interests, their contribution is rarely valueless. Temporary intermediaries and actors can become permanent if

they decide to be invested in the project reforms. To give an example from the case study discussed here, the foreign information technology company appointed by the donor for technical expertise in the beginning, Chemonics USA, gave birth to a local Albanian company, IKubInfo that continued to maintain the system afterwards.

Power can be exercised by some actors willing to preserve their institutionalized position to de-institutionalize what can empower others. The example from this study was given in the way the government decided to deinstitutionalize the role of the courts for business registration processes. This legitimized the new National Registration Centre controlled by the Ministry of Finance, shifting powers from the judiciary to the executive system. It confirms what previously worked on the circuits of power (Backhouse et al., 2006) that have been mentioned, in that the institutionalized identities of actors define their power in the project network (Backhouse et al., 2006). What a more detailed analysis of OPCs in this study shows is that, as actors help to legitimize or resist changes, their own power and legitimacy is also influenced by the power dynamics they engage with.

In the post-project stage the point of concern was the power of NRC to enforce its own interpretation of the law politically to favor certain business groups of interest. With the absence of intermediaries and regulators of the project stage, the watchdog's role up to date is played by opposition parties and general business users. The focal point of such power conflicts and rejection of authority, remains the human element in the leadership of NRC, after the system implementation associated with the fear of the problem of corruption that NRC offered to solve in the very beginning.

Regardless of conflicts of interests, fear of control, surpassing of competences or non-involvement problems, NRC became stable, with laws and regulations turning into routine standard procedures. Rather than focusing on problems and taking extreme positions, the different actors recognized the legitimacy and benefits of the new system, thus turning it into a success story.

6. CONCLUSIONS AND DIRECTIONS FOR FUTURE RESEARCH

The purpose of this paper was to explore transitions of power in multi-actor information system projects. This research is more of a starting point than a definite answer to the problem of power transitions in project management. The study confirms that in complex multi-actor projects the lead policy-making actors remain just a handful of power structures at a central level. Their policy changing tools are often projects involving multiple actors and agencies. However, due to the complexity of such multi-actor project networks, power at different levels is not held by a single actor. A number of OPCs are proposed in this study to capture the power transitions in multi-actor complex projects. They are defined as the mechanism that gives momentum to the flows of power in each circuit over time, depending on the relationships between actors. In this context, the study makes a number of theoretical, methodological and practical contributions as follows, suggesting also directions for future research.

Theoretically speaking, OPCs of need, vision, coordination, capabilities and interoperability help towards a better understanding of power along the social circuit of causal power, the systemic circuit of facilitative power and the episodic circuit of dispositional power. However, this study also shows that transitions of power would hardly generate any change if they didn't build on institutionalized constructs recognized by relevant actors in the network at any given stage. The bridge between ANT and CPM proposed by these findings appears to be a function of bounded rationality, negotiating and timing. Ultimately, political transition and circulation of power seem to be induced by strategic and operational objectives, but are sustained by the need for stability and balance among actors, power circuits and OPCs for the system to operate efficiently.

From a methodological perspective, this interpretivist study used thematic analysis for coding, an approach that offers more rigor in theory-driven qualitative analysis (Braun & Clarke, 2006). This can be adapted by more future studies on project management and information systems research to advance the OPC concept by providing a more longitudinal approach. Open data initiatives,

continuous monitoring of multi-actor public sector projects, a higher level of transparency and automated reporting are some of the tools that could be used to investigate this further using both qualitative and quantitative methods.

From a purely practitioners' perspective, internationally assisted e-government projects should not be perceived as networks of static actors, but rather as mechanisms of change where capabilities are transferred in conjunction with actors' roles, power and responsibilities. In this context, old practices are not simply modernized by introducing more efficient information and communication technologies, but can help support their development through continuous alignment of actors, their power balances and changes. An important conclusion is that power transitions are not only intrinsic to organizational actors, but also discursive and therefore political for each network transformation stage and level.

Some of the questions that remain unanswered are: "How can end-users engage more in public administration reforming projects?" "How does the participation of different actors influence power structures in e-government projects?" "How can information technology projects change the participating actors in changing environments?" These questions emerge naturally after interpreting the findings of this study on the understanding, researching, and interpreting of complex multi-stakeholder projects in public administration reforms. Future research should look beyond power dynamics within project networks to investigate environmental and institutional forces in more detail, and aim to understand how power transitions and OPCs transform organizational actors in the long run. These directions can be summarized under the field of participatory project management, an area that is not thoroughly researched nor clearly understood in the context of large, multi-actor, international projects.

Findings from this study should provide valuable insights towards a conceptual interpretivist analysis of OPCs and circuits of power in complex multi-actor projects. They can be generalized in a broader context of complex e-government projects in developing countries, or other

transitional economies (UNCTAD, 2011). Actor interactions are revealed through the clashes of old and new governing forces, and the need for international integration and co-operation with international actors (Dunleavy, Margetts, Bastow and Tinkler, 2006; Margetts, 2009; Pollitt & Bouckaert, 2011). The theoretical conceptualization, analysis and empirical evidence from this study is not meant to provide a definite answer on the transitions of power in multi-actor information system projects, but to serve as a starting point for more research in this direction.

7. REFERENCES

- Axelsson, K., Melin, U., & Lindgren, I. 2009. Developing public e-services for several stakeholders-A multifaceted view of the needs for an e-service. Paper presented at 17th European Conference on Information Systems ECIS 2009.
- Aykaç, D., Jouan de Kervenoael, R., Kasap, N., & Eryarsoy, E. 2009. An actor-network theory (ANT) approach to turkish E-government gateway initiative. Paper presented at 1st International Conference on eGovernment & eGovernance (ICEGEG 2009).
- Backhouse, J., Hsu, C. W., & Silva, L. 2006. Circuits of power in creating de jure standards: Shaping an international information systems security standard. *MIS Quarterly*, 30(Special Issue): 413-438.
- Basit, T. 2003. Manual or electronic? the role of coding in qualitative data analysis. *Educational Research*, 45(2): 143-154.
- Beringer, C., Jonas, D., & Kock, A. 2013. Behavior of internal stakeholders in project portfolio management and its impact on success. *International Journal of Project Management*, 31(6): 830-846.

Brass, D. J., Galaskiewicz, J., Greve, H. R., & Tsai, W. 2004. Taking stock of networks and organizations: A multilevel perspective. *Academy of Management Journal*, 47(6): 795-817.

Braun, V., & Clarke, V. 2006. Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2): 77-101.

Braun, V., Clarke, V., Terry, G., 2014, Chapter 7: Thematic Analysis in Qualitative Research in Rohleder, P., & Lyons, A. (Ed.), *Clinical and Health Psychology*. Basingstoke, UK: Palgrave Macmillan.

Callon, M. 1986. Some elements of a sociology of translation: Domestication of the scallops and the fishermen of St Brieuc Bay. In Law, J., (Ed.) *Power, action and belief: a new sociology of knowledge*. London, UK: Taylor & Francis: 196–233.

Callon, M. 1987. Society in the making: The study of technology as a tool for sociological analysis. In W. E. Bijker, T. P. Hughes, & T. J. Pinch (Ed.), *The social construction of technological systems: New directions in the sociology and history of technology*. London, UK: The MIT Press: 83-103.

Cavaye, A. L., & Christiansen, J. K. 1996. Understanding IS implementation by estimating power of subunits. *European Journal of Information Systems*, 5(4): 222-232.

Chen, H. L., Chen, W. T., & Lin, Y. L. 2016. Earned value project management: Improving the predictive power of planned value. *International Journal of Project Management*, 34(1): 22-29.

Chigona, W., Roode, D., Nazeer, N., & Pinnock, B. 2010. Investigating the impact of stakeholder management on the implementation of a public access project: Case of smart cape. *South African Journal of Business Management*, 41(2): 39-49.

Cicmil, S., & Hodgson, D. 2006. New possibilities for project management theory: A critical engagement. *Project Management Journal*, 37(3): 111-122.

Cicmil, S., Williams, T., Thomas, J., & Hodgson, D. 2006. Rethinking project management: Researching the actuality of projects. *International Journal of Project Management*, 24(8): 675-686.

Clegg, S. R., & Kreiner, K. 2013. Power and politics in construction projects. In N. Drouin, R. Muller, & S. Sankaran (Ed.), *Novel approaches to organizational project management research. translational and transformational.*: 268-293. Copenhagen, Denmark: Copenhagen Business School Press.

Clegg, S. R. 1989. *Frameworks of power*. London, UK: Sage Publications.

Cogburn, D. L. 2009. Enabling effective multi-stakeholder participation in global internet governance through accessible cyber-infrastructure. In A. Chadwick (Ed.), *Routledge handbook of internet politics*: 401-426. London, UK: Taylor & Francis.

Dunleavy, P., Margetts, H., Bastow, S., & Tinkler, J. 2006. New public management is dead--long live digital-era governance. *Journal of Public Administration Research and Theory*, 16(3): 467-494.

Elo, S., Kääriäinen, M., Kanste, O., Pölkki, T., Utriainen, K., & Kyngäs, H. 2014. Qualitative content analysis. *Sage Open*, 4(1): 2158244014522633.

Flak, L. S., & Nordheim, S. 2006. Stakeholders, contradictions and salience: An empirical study of a norwegian G2G effort. *Proceedings of the 39th Annual Hawaii International Conference on System Sciences (HICSS'06)*.

Franzosi, R., Doyle, S., McClelland, L. E., Rankin, C. P., & Vicari, S. 2013. Quantitative narrative analysis software options compared: PC-ACE and CAQDAS (ATLAS. ti, MAXqda, and NVivo). *Quality & Quantity*, 47(6): 3219-3247.

Friese, S. 2014. *Qualitative data analysis with ATLAS. ti*. London, UK: Sage Publications.

Gehlert, A., Schermann, M., Pohl, K., & Krcmar, H. 2009. Towards a research method for theory-driven design research. Paper presented at *Wirtschaftsinformatik* (1): 441-450.

Hällgren, M., & Lindahl, M. 2012. How do you do? on situating old project sites through practice-based studies. *International Journal of Managing Projects in Business*, 5(3): 335-344.

Havas, A., & Weber, K. M. 2017. The ‘fit’ between forward-looking activities and the innovation policy governance sub-system: A framework to explore potential impacts. *Technological Forecasting and Social Change*, 115: 327-337.

Heeks, R., & Stanforth, C. 2007. Understanding e-government project trajectories from an actor-network perspective. *European Journal of Information Systems*, 16(2): 165-177.

Hekkala, R., & Urquhart, C. 2013. Everyday power struggles: Living in an IOIS project. *European Journal of Information Systems*, 22(1): 76-94.

Hodgson, D., & Cicmil, S. 2006. *Making projects critical (management, work and organizations)*. London, UK: Palgrave Macmillan.

Holmes, L. 1997. *Post-communism: An introduction*. Cambridge, UK: Polity Press.

Inglesant, P., & Sasse, M. A. 2011. Information security as organizational power: A framework for re-thinking security policies. Paper presented at the 2011 1st Workshop on Socio-Technical Aspects in Security and Trust (STAST).

Jaspersen, J. S., Carte, T. A., Saunders, C. S., Butler, B. S., Croes, H. J., & Zheng, W. 2002.

Review: Power and information technology research: A metatriangulation review. *MIS Quarterly*, 26(4): 397-459.

Kaplan, B., & Maxwell, J. A. 2005. Qualitative research methods for evaluating computer information systems. In Anderson, J., & Aydin, C. (Ed.), *Evaluating the organizational impact of healthcare information systems*: 30-55. New York, USA: Springer.

Kling, R., & Iacono, S. 1984. The control of information systems developments after implementation. *Communications of the ACM*, 27(12): 1218-1226.

Kromidha, E., & Córdoba-Pachón, J. 2017. Discursive institutionalism for reconciling change and stability in digital innovation public sector projects for development. *Government Information Quarterly*, 34(1): 16-25.

Latour, B. 1996. On Actor-Network Theory. *Soziale Welt*, 47(4): 369-381.

Latour, B. 1999. On recalling ANT. In J. Law & J. Hassard (Ed.), *Actor Network Theory and after*: 15-25. Oxford, UK: Blackwell.

Latour, B. 2005. *Reassembling the social: An introduction to Actor Network Theory*. Oxford, UK: Oxford University Press.

Latour, B. 1987. *Science in action: How to follow scientists and engineers through society*. Cambridge, MA, USA: Harvard University Press.

Law, J. 2003. *Notes on the theory of the actor network: Ordering, strategy and heterogeneity*. Centre for Science Studies. New York, USA: Springer.

Law, J., & Callon, M. 1992. The life and death of an aircraft: A network analysis of technical change. In W. E. Bijker & J. Law (Ed.), *Shaping technology/building society: Studies in sociotechnical change*: 21-52. Cambridge, MA, USA: MIT Press.

Luk, S. C. Y. 2009. The impact of leadership and stakeholders on the success/failure of e-government service: Using the case study of e-stamping service in Hong Kong. *Government Information Quarterly*, 26(4): 594-604.

Maaninen-Olsson, E., & Müllern, T. 2009. A contextual understanding of projects—The importance of space and time. *Scandinavian Journal of Management*, 25(3): 327-339.

Margetts, H. 2009. Public management change and e-government: The emergence of digital-era governance. In A. Chadwick (Ed.), *Routledge handbook of internet politics*: 114-127. London and New York: Routledge/Taylor and Francis.

Markus, M. L. 1983. Power, politics, and MIS implementation. *Communications of the ACM*, 26(6): 430-444.

Miles, M. B., & Huberman, A. M. 1994. *Qualitative data analysis: An expanded sourcebook*. London, UK: Sage Publications.

Mintzberg, H. 1983. *Power in and around organizations*. Englewood Cliffs, NJ, USA: Prentice-Hall.

Packendorff, J. 1995. Inquiring into the temporary organization: New directions for project management research. *Scandinavian journal of management*, 11(4): 319-333.

Pitsis, T. S., Sankaran, S., Gudergan, S., & Clegg, S. R. 2014. Governing projects under complexity: Theory and practice in project management. *International Journal of Project Management*, 32(8): 1285-1290.

Pollack, J. 2007. The changing paradigms of project management. *International Journal of Project Management*, 25(3): 266-274.

Pollitt, C., & Bouckaert, G. 2011. *Public management reform: A comparative analysis-new public management, governance, and the neo-Weberian state*. Oxford, UK: Oxford University Press.

Project Management Institute. 2013. *A guide to the project management body of knowledge (PMBOK® guide)*. Newton Square, PA, USA: Project Management Institute.

Rose, J., Persson, J. S., Heeager, L. T., & Irani, Z. 2014. Managing e-Government: Value positions and relationships. *Information Systems Journal*, 25(5): 531-571.

Sandelowski, M., & Leeman, J. 2012. Writing usable qualitative health research findings. *Qualitative Health Research*, 22(10): 1404-1413.

Sarantis, D., Charalabidis, Y., & Askounis, D. 2009. An ontology for stakeholder collaboration and knowledge exploitation in e-government project management. Paper presented at Proceedings of the 3rd International Conference on Theory and Practice of Electronic Governance.

Sarker, S., Sarker, S., & Sidorova, A. 2006. Understanding business process change failure: An actor-network perspective. *Journal of Management Information Systems*, 23(1): 51-86.

Schwandt, T. A. 1994. Constructivist, interpretivist approaches to human inquiry. In N. K. Denzin & Y. S. Lincoln (Ed.), *Handbook of Qualitative Research*: 118-137. London, UK: Sage Publications.

Silva, L., & Backhouse, J. 2003. The circuits-of-power framework for studying power in institutionalization of information systems. *Journal of the Association for Information Systems*, 4(6): 294-336.

Smith, S., Winchester, D., Bunker, D., & Jamieson, R. 2010. Circuits of power: A study of mandated compliance to an information systems security de jure standard in a government organization. *MIS Quarterly*, 34(3): 463-486.

Stanforth, C. 2006. Using actor-network theory to analyze E-government implementation in developing countries. *Information Technologies and International Development*, 3(3): 35-60.

Too, E. G., & Weaver, P. 2014. The management of project management: A conceptual framework for project governance. *International Journal of Project Management*, 32(8): 1382-1394.

Torvinen, V., & Jalonen, K. 2000. Stimulating power games as a part of systems development. *European Journal of Information Systems*, 9(1): 16-24.

UNCTAD. 2011. *Information economy report*. New York and Geneva: United Nations.

Vaismoradi, M., Turunen, H., & Bondas, T. 2013. Content analysis and thematic analysis: Implications for conducting a qualitative descriptive study. *Nursing and Health Sciences*, 15(3): 398-405.

Van Marrewijk, A. 2007. Managing project culture: The case of environ megaproject. *International Journal of Project Management*, 25(3): 290-299.

Walsham, G. 1995. Interpretive case studies in IS research: Nature and method. *European Journal of Information Systems*, 4(2): 74-81.

Walsham, G. 2006. Doing interpretive research. *European Journal of Information Systems*, 15(3): 320-330.

Walsham, G., Robey, D., & Sahay, S. 2007. Foreword: Special issue on information systems in developing countries. *MIS Quarterly*, 31(2): 317-326.

Walsham, G., & Sahay, S. 1999. GIS for district-level administration in india: Problems and opportunities. *MIS Quarterly*, 23(1): 39-65.

Weber, M. 1978. *Economy and society: An outline of interpretive sociology*. Oakland, CA, USA: University of California Press.

Whittle, A., & Spicer, A. 2008. Is actor network theory critique? *Organization Studies*, 29(4): 611-629.

Wittmayer, J. M., & Loorbach, D. 2016. Governing transitions in cities: Fostering alternative ideas, practices, and social relations through transition management. In Loorbach, D., Wittmayer, J.M., Shiroyama, H., Fujino, J., Mizuguchi, S. (Eds.), *Governance of urban sustainability transitions*: 13-32. New York, USA: Springer.