

TRANSITION DYNAMICS IN INTERNATIONALLY ASSISTED E-GOVERNMENT PROJECTS: AN ACTOR NETWORK THEORY PERSPECTIVE

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Abstract: The aim of this paper is to explore transition processes in internationally assisted e-government projects for developing countries. The analysis follows some organizational, human, and non-human actors across different project stages. The theoretical framework to guide this analysis is Actor Network Theory (ANT) and its idea of Obligatory Passage Points (OPP). The methodology on the other hand is based on an interpretivist case study approach, provided with empirical evidence from an e-government project in Albania.

This study suggests that governments, donors and technology are at the centre of the strategic decisions throughout the project life-cycle stages. ANT is a satisfactory framework for the purpose of this paper, but the critical discussion and suggestions for further research in the end dedicate some attention to time dimensions and epistemological approaches. The originality and value of this study derives from the insights it gives into the transition stages of e-government projects in developing countries, a different approach compared to the many instrumentalist evaluations of e-government.

Keywords: Actor Network Theory, e-government, transition stages, project life-cycle, international assistance.

1. INTRODUCTION

The formal and informal aspects of e-government projects, actors and reforms can be often related to complex relationships and forces in public administration. Classical project management thinking suggests that a project's legitimacy derives from the project charter, a document approved by the sponsor or project's organization, summarizing the goal and scope based on key stakeholders' expectations (Project Management Institute 2009). The situation can be more complex in e-government projects, especially those where international assistance from third parties to countries that do not have local resources to develop their own systems is involved. This is not the case of classical procurement in project management (Project Management Institute 2009: Chapter 12), because international donors are not simple contractors. Often they provide the funding and can take the lead of the project until its deliverables are handed over to the government. This should have a direct impact on the balances between actors in this complex environment. Therefore the research question this study is trying to answer is the following:

- *How does the network of actors change along e-government project life-cycle stages?*

The specific context of this study is that of a developing country lacking the necessary know-how and financial resources therefore receiving foreign aid from donor countries or international organizations to implement complex e-government reforms through a number of projects and programs. Albania and its reforms in e-government business services assisted by the United States of America would provide the case study evidence in this context.

Although there is plenty of research on e-government projects as holistic case studies, there is a gap in the analysis of transition dynamics during different implementation stages. In this context, the stakeholders' approach considers the salience of actors and issues of power as important forces of interaction between them (Flak, Nordheim 2006). The project management perspective on the

other hand would suggest that e-government stakeholders need to be managed (Chigona et al. 2010) or require some leadership (Luk 2009) in each project stage. More recent studies focus on the idea of stakeholders' inclusiveness (Axelsson, Melin & Lindgren 2009, Cogburn 2009). In reply, the project management approaches relate this stakeholders' collaboration to their knowledge exploitation (Sarantis, Charalabidis & Askounis 2009). What these studies and debates on e-government stakeholders fail to consider is first, the transition of power, alignments, and conflicts of interest in the project networks of actors. Secondly, stakeholder and traditional project management approaches do not pay much attention to non-human actors such as information technology, rules, norms, and artefacts. To address this problem, the dynamics e-government project along their life-cycle stages will be discussed in this research by using Actor Network Theory explained in the next part.

This study does not intend to analyse all possible actors and networks in internationally assisted e-government projects, but follow four of them: 1) the government, 2) the donors, 3) the implementing companies and 4) the information technology system. The following part will continue with a discussion of Actor Network Theory and a review of its application in previous e-government research. This analysis will identify the area where this study advances knowledge. Then an interpretivist case study methodology is introduced, guided by Actor Network Theory, to discuss a specific e-government project in Albania. The empirical findings follow the transition dynamics and actors across the e-government project life cycle, from start to closing and the post-project stage. The critical discussion on transition policies concludes the analysis of findings and leads to the limitations, direction for future research, and final conclusions.

2. ACTOR NETWORK THEORY IN E-GOVERNMENT PROJECT MANAGEMENT

First introduced and developed by Michel Callon (Callon 1986, Callon 1987), Bruno Latour (Latour 1987, Latour 1996, Latour 1999, Latour 2005) and John Law (2003, 1992), Actor Network Theory was intended to redefine the concept of the 'social' by offering a new perspective of looking at associations. According to Geoff Walsham (1999: 42) an Actor Network is a heterogeneous network of interests, people, organizations and standards. This latter perspective has found many applications in information systems research (Walsham 1997) and is going to be adapted also in the case of this study.

The reason for choosing ANT is that the theory considers human and non-human actors two equally important components of most e-government projects, finding an important place in organizational and information technology studies. According to John Law (1987) the purpose of ANT can be summarized in two points: 1) as a framework trying to explain how human and non-human actors including objects, artefacts and technical practices are stabilized and 2) how they take the shape they do. In this context ANT can be used to evaluate technology adoption or rejection in a particular context or network. The choice of ANT as the theoretical framework for this research is related to the fact that methodologically it is often based on stories and case studies. Following this argument, in this research the object of study (Yin 2009: 33) is the case of an internationally assisted e-government programme on electronic services for businesses in Albania.

Moving away from a technology deterministic approach, ANT has been applied to study and explain inter-organizational e-government networks (Stanforth 2006, Heeks, Stanforth 2007). Stanforth (2006) applies Callon's (1986) translation model on an e-government information system in Sri Lanka, assisted by the Asian Development Bank. Their study (Stanforth 2006, Heeks, Stanforth 2007) suggests that different actors are coordinated by a focal actor to achieve specific network goals. In their analysis however, this focal actor is generally predetermined and stable. This study here will argue that this might not be the case in a transitory environment where the focal actors might change throughout the project life-cycle.

The focus of many ANT studies has been on the conceptualisation of policy-making forces and elements. More recently however, ANT is being used in e-government studies to better understand inter-organisational information systems (Underwood, McCabe 2011) and reveal how the stability of systems can be achieved through convergence (Ruikar, Chang 2012). Other uses of ANT in e-government studies are related to the current debates of digital inclusion (Teles, Joia 2011) or contemporary influences on privacy (Bonner, Chiasson 2005).

ANT, however, is more a way of looking at human and non-human objects. Claims that this theory can “*portray the nature of e-government in developing countries*” (Priyatma 2008) often do not go beyond an ontology of study. The studies by Stanforth (2006) and Heeks (2007) discussed in detail before are among the few that associate ANT with a theoretical discussion of e-government projects.

The study extends the translation model of problematisation, interestment, enrolment and mobilisation of allies (Callon 1986) used also by Stanforth and Heeks, to an e-government project life-cycle perspective. Translation is an important concept in this study to explain transitions of actors in project life-cycle stages as they interact with each other (Law, Hassard 1999, Law 2007). Latour (1987) would propose a set of translation strategies such as piggybacking, seduction, detour, reshuffling interests, and becoming indispensable. This last strategy is given more attention in this study that examines how some actors take a leading role in e-government projects. The idea of an **Obligatory Passage Point (OPP)** 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) is important in this context and will be used throughout this study.

This research is about explaining the transition processes through not one, but different Obligatory Passage Points in an e-government project life-cycle. Callon’s (1986) case study of fishermen in St Brieuc Bay describes the translation of entities, obstacles, and goals through one OPP: whether Pecten Maximus attaches itself. The e-government project studied in this case has been broken down into different stages according to the project management literature (Project Management Institute 2009). As the findings will show, there is room to argue that a different OPP can be identified in each stage. ANT explains the alignment of actors at each stage through the idea of **inscription**: a process of creation of artefacts that would ensure the protection of certain interests (Latour 1994). A focal actor on the other hand is considered to be also a **representative**: an actor that speaks on behalf of (or stands in for) other actors (Walsham, Sahay 1999). The use of ANT to explain the transition dynamics of project actors offers a strong alternative to classical stakeholder analysis (Flak, Rose 2005) in e-government research, allowing a better consideration of technology and other non-human elements thus giving a more detailed perspective.

3. THE INTERPRETIVIST CASE STUDY METHODOLOGY

For purposes of research clarity, it is suggested to focus on single actors at a given time when applying ANT and follow them (Sarker, Sarker & Sidorova 2006, Aykaç et al. 2009). The methodological contribution of this research is to explore how this ideal can be extended along the different project life-cycle stages where the focus might have to change along them. Transition is an important process that needs to be considered in the terminology of ANT, referring to the changing roles of actors. Methodologically this can be studied by focussing on actors’ behaviours during the transfer of their powers from one stage to another.

Actor Network Theory, thanks to its vocabulary and suggested ways of looking at actors, translation, processes and networks can be considered as a methodology as much as it is a theory. Its explanatory nature and consideration of technology as an actor has found interest in information systems’ research which is often based on case studies and claims to be generally interpretivist (Walsham 1995, 2006). According to Schwandt (1994) ‘*interpretivism was conceived in reaction to the effort to develop a natural science of the social*’. Interpretivism or

constructivism is often adapted in qualitative studies, as opposed to positivism reflected in quantitative research. However, interpretivism allows also the use of mixed methods to explore some of the “*broad parameters and context of IS*” (Walsham, Robey & Sahay 2007). This research follows this argument, by providing a critical interpretation of the research evidence about an internationally assisted e-government project in a developing country’s context.

The selection of actors and network processes that serve as sub-units of analysis in this interpretivist study is done based on what the researcher perceived to be more important in each project stage. The empirical evidence is based on a case study (Yin 2009) e-government project from Albania about the reform on electronic public services for businesses. The context is that of a developing country and its reforms to modernize the public administration and meet the standards for joining the European Union (Bogdani, Loughlin 2007). The e-government programme discussed here was intended to solve some issues with informality and corruption by introducing an electronic system between the public structures and the private sector in Albania, creating a better environment for economic development and business (USAID 2008). To assist the government of Albania dealing with these problems, the United States Agency for International Development (USAID) and the Millennium Challenge Corporation (MCC) offered a Threshold Programme of funding and technical assistance divided in two stages. The National Registration Center for the electronic registration of businesses, the e-taxation reform for online declarations, and the electronic public procurement system were implemented in the first one between 2006 and 2007. The National Licensing Center for business activity permits and some smaller e-government projects regarding the register of land properties and the judicial system were part of the second stage between 2009 and 2010. The scope of this study however is not to discuss a whole internationally assisted programme, but focus on a specific project and its stages: the National Registration Centre mentioned before.

The research evidence was first collected from national strategies, reports, related laws and donor-government agreements. Documentary review as the first research method in this study consisted of coding and analysing 74 such documents. The preliminary findings were discussed with representatives of government agencies, donors, implementing company, public servants and end-users. 16 such semi-structured interviews were conducted in 2010-2011 for this research. The questions tried to capture the changing roles of organisational, human and non-human actors during the different project stages. Even when non-human actors couldn’t be reviewed or observed separately due to access limitations, their position in the e-government projects could be often determined by their associations with other known actors in the network.

Finally, an online survey was conducted in September 2011 on the perception of international assistance for the creation of the National Registration Centre. 109 replies were received for different business representatives in Albania. Its purpose was secondary compared to the documentary review and interviews mentioned earlier. However, the survey answers served to validate some of the claims gathered from the first two sources, using descriptive statistics. The reason for using multiple research methods was also to provide a level of triangulation in this qualitative analysis (Miles, Huberman 1994). In this contest, the following part presents and critically discusses the research findings.

4. FINDINGS AND ANALYSIS

International assistance plays an important role in Albania, not only in the perception of people, but also in practice like in the case of the National Registration Centre. The interviews and online survey indicate that the involvement of external donors, international experts and information technology companies is justified by the lack of local resources and capabilities in a developing country like Albania. Using ANT to understand the transitional dynamics during the project life-cycle and beyond, the following conceptual diagram summarises the main contribution of this research:

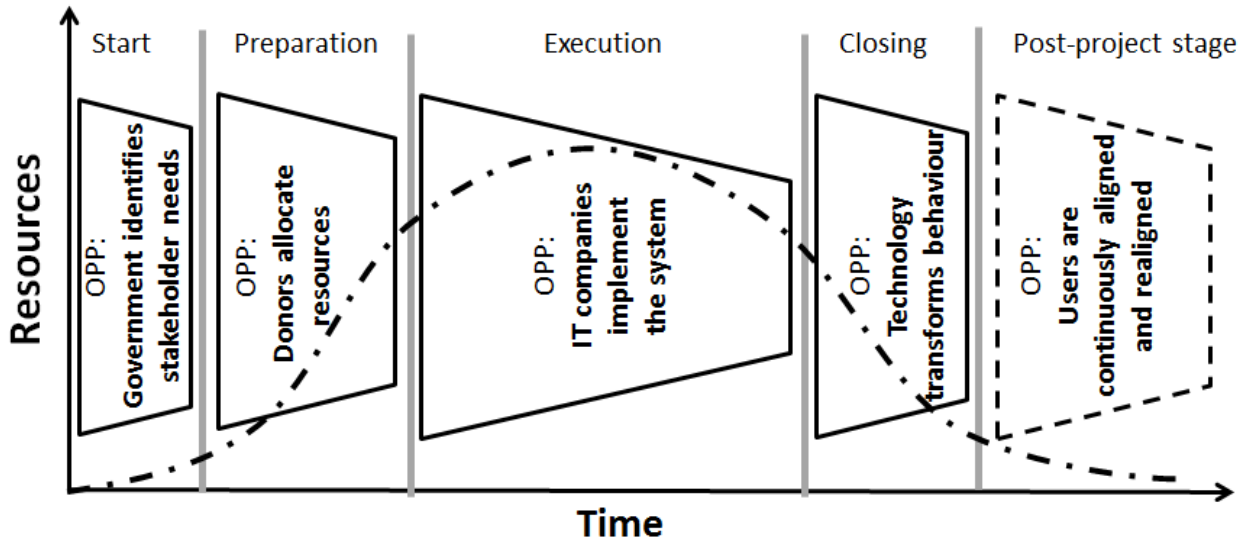


Figure 1: Focal Actors in the E-Government Project Life-Cycle

The conceptual framework applies the idea of life-cycle stages in terms of time and resources (Project Management Institute 2009: 16) in the context of e-government reforms. An Obligatory Passage Point is identified in each stage and explained in the following sections using ANT. The OPP identified in the post-project stage is in a dotted line box, showing that because of its on-going nature, it might change in the future.

4.1. Project starting stage: The government identifies actors’ needs

The National Registration Centre project started when the government of Albania identified the need to have an electronic system to replace the existing paper-based register of businesses in the courts. 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. The Prime Minister and his government made clear provisions about it in the national strategies and government programme of 2005 – 2009 reviewed for this study. Based on Callon’s (1986) translation model of entities, obstacles, and goals that go through an OPP, the project starting stage interpreted in this study is summarised in the following table:

OPP: The government identifies actors’ needs		
Actors	Obstacles	Goals
<i>Business groups of interest</i>	Red tape restrictions	Business efficiency
<i>Existing legal framework</i>	Institutional practices	Conformity of norms
<i>Registration courts</i>	Resources and staff	Rule of law for businesses
<i>Reports on business practices</i>	Limited information	Higher ranking of the country

Table 1: Starting stage OPP and network

The Council of Ministers (CoM) was indispensable at this stage to identify business needs, examine the current business registration processes in the courts, consider international reports on

Albania's business practices, and consult the ministries involved in the process. The constituency of the Council of Ministers elected by the parliament gave legitimacy to the project at this stage.

The process of identifying stakeholders' needs is normal at the starting stage of the project. However, in this case, the e-government reform implied that the actors involved were going to be transformed by it. The needs of the business groups were going to be met better by the system, but at the same time they had to adjust to the new system. The legal framework had to be changed accordingly to accommodate actors' needs and the features of the new system. A crucial issue was the power that was going to be taken away from the registration courts and given to the new National Registration Centre. The e-government transition to a new electronic business registration system was envisaged as a translation from a legal to an administrative process. The different studies on current business practices and needs were only the starting legitimacy mechanism used by the government to move into the project planning stage.

4.2. Project preparation stage: The donors allocate resources

Once the needs for a new electronic business registration system were identified, the government had to look for external financial support to make it happen. This situation created a new OPP in which resources had to be allocated by donors for the reform projects. The government of Albania had to transfer some of their project management powers and attributes to the donors: Millennium Challenge Corporation (MCC) and the United States Agency for International Development (USAID). This decision was dictated by the indispensability of funds, technical expertise and resources. The transition process was examined by analysing the interviews with two project managers on the donors' side, the final project report, and some interviews with representatives from the Department of Strategy and Donor Coordination in Albania. During the preparation stage, the transition appeared as follows:

OPP: The donors allocate resources		
Actors	Obstacles	Goals
<i>Group of international experts by the donor</i>	Limited knowledge of the local context	Coordinate assistance and policies
<i>Group of local experts</i>	Limited IT expertise	Analysis and suggestions
<i>Ministry of Economy</i>	Limited project vision	Coordinate public resources
<i>Directorate of Taxes</i>	Operational power interests	Advice and consult
<i>Registration courts</i>	Administrative power interests	Provide historical information

Table 2: Preparation stage OPP and network

It is clear from the table that a new set of actors were enrolled in the preparation stage. A group of local experts was hired by the donor to study the existing legal framework, perform an economic analysis and come up with suggestions. The interview with an Albanian lawyer and consultant in this process revealed how they had to coordinate every legal aspect of this reform by working together with the IT experts, before starting its implementation. The Ministry of Economy representing the government at this stage took an important role in the background. Its part was to make available some public resources and the premises for the implementation of the project.

The registration courts and the Directorate of Taxes on the other hand had to provide all the local expertise of dealing with business registration so far and pass this knowledge to the new structures under the coordination of the focal actor. Assuring their cooperation was not easy because the new business registration system was going to create a new entity, the National Registration Centre, taking away a lot of their power. The project reports and an executive director in NRC explain how the business registration process changed from a legal one in courts, into an administrative one in the Centre. This was planned and designed during the preparation stage.

The leading role of the donor at this stage was crucial to balance foreign and local capabilities and resources, coordinating the whole project as a focal actor. The whole mechanism of preparation for the project, bringing together the network of actors and aligning them to a common goal, was guided by the allocation of resources by the donors. In some cases the enrolment of actors in the process was strategic and selective. Just to give some examples, the U.S. donors selected a U.S. company to design the information system (Chemonics) and appointed some local consultancies they had worked with before to research (i.e. IDRA) and design the legal and administrative aspects of the reform. The donors were accountable to the government of USA for managing the funds and to the government of Albania for carrying forward the reform, so they had to have control over actors through the allocation of resources. The working plan had to be aligned with the identified needs in the starting stage before starting the project implementation.

4.3. Project execution stage: IT companies implement the system

When the projects' legitimacy was legally assured with the new law for the creation of the agency, of course with the support of the government and the approval of the parliament, it was easier for the donor owning the financial power and coordinating the technical expertise to lead the project to a new Obligatory Passage Point. The nature of the e-government reforms however required that another set of actors with more technical expertise in information systems take the lead. As a consequence, the OPP became the implementation of the new system by IT companies that had to build it at this stage. The translation network in this case appeared like in the following table:

OPP: IT companies implement the system		
Actors	Obstacles	Goals
<i>Foreign supplier of information systems</i>	Limited local knowledge	Design the information system
<i>Local supplier of information systems</i>	Limited technical knowledge	Maintain and adjust the system to local needs
<i>Ministry of Economy</i>	Limited expertise	Assign public resources
<i>The electronic register</i>	Configuration and infrastructure	One-stop-shop registration
<i>Local human resources</i>	Limited training	Operate the system
<i>Directorate of Taxes</i>	Operational power interests	Allow access to business records
<i>Registration Courts</i>	Administrative power interests	Transfer business records

Table 3: Execution stage OPP and network

A foreign supplier, Chemonics, a US company, was hired to design the electronic register and implement it in the execution stage. They outsourced most of the services to a subcontractor,

Alpha-XP which later became IKubInfo, a local IT company in Albania, as a director of the latter explains in an interview. IKubInfo was involved in making the system, but its main responsibility remains to maintain and adjust it to local needs even now at the time of this study, after the international assistance project is over. The involvement of this local actor was intended to assure the technical continuity of the new electronic register. The Ministry of Economy allocated public resources including a new building for the new National Registration Centre that was being created as the one-stop-shop agency of electronic business registration. At the same time, local human resources for the National Registration Centre had to be trained how operate the system. These happened often at the beginning, as one of the front desk officers explains in the interview, but later, as experience was acquired and procedures standardised, they were not needed as before.

Although the donor paid for all expenses from information technology infrastructure and furniture, to trainings of staff, the IT companies played a crucial role as focal actors in designing and building the electronic register during the execution stage. More importantly, the strongly influenced what the other actors were doing at this stage. However, they had to comply with the financial constraints and the legal framework that determined the administrative structure and operations of the new National Registration Centre. An interview with an executive of NRC and some survey answers from businesses revealed also the expectation that the new systems should reflect some of the world best-practices of one-stop-shop business registration agencies. What the IT companies created by having a leading role in the execution stage is discussed in the following part.

4.4. Project closing stage: Technology transforms behaviour

The closing stage of the project was marked by the launch of the National Registration Centre in September 2007. The donor handed over the project deliverables: the Centre and the electronic register, to the government of Albania. However, by starting to operate, the information technology system itself on which NRC's organisational structures and services relied upon, gained a momentum of its own and became indispensable. This non-human entity became the focal actor at this final stage. Because of its brevity and the transitional nature of this stage, it is difficult to map the dynamics of the closing stage translation, but a simple translation network could look as follows:

OPP: Technology transforms behaviour		
Actors	Obstacles	Goals
<i>Ministry of Economy</i>	Conflicting government policies	Allocate operational resources
<i>The donor</i>	End of project mission	Project sustainability
<i>Information technology company</i>	Infrastructure and testing issues	Administrative efficiency

Table 4: Closing stage OPP and network

The most important aspects of the closing stage were the end of project funding and technical assistance by the donor, and the transition of the newly created agency and its electronic register to the government. Since the electronic register was the core of the reform project, it acted as a focal point where all the other actors met in the transitional closing stage.

The extent to which the project objectives were met had to be evaluated against the service and functions of the new electronic system. According to the project final documents, government press releases, and some interviews with representatives of the two parties, this study identified

some different perspectives and approaches. For example, the government highlighted the improved climate of doing business in Albania with the new electronic system, the businesses translated their relationship with the government according to the new system, and the opposition party remained critical on success of the reform. Yet, in some form, the new electronic register and the new National Registration Centre transformed the behaviour and perception of the different actors around it. The lessons learned from the project closing stage were documented in different forms: in detailed public reports by the donor, in non-public technical reports by the implementing companies, and in the experience of people working for NRC in the case of the government. This shows that the transition to the new system remains a challenging process of alignment and realignment as discussed in the next part.

4.5. Post-project stage: Users are continuously aligned and realigned

The post-project stage gave to the National Registration Centre the role of administering the electronic registration system in Albania. However, after the project, going back to the starting needs for the reform, the involvement of and acceptance by the users became indispensable. Although NRC controlled the whole business registration process now as one-stop-shop organization in Albania, it had to focus on the needs of businesses and serve them. In order to do this, using the power assigned by law, the Centre had to coordinate its human resources, the register itself, the relationship to the local supplier and every rule and procedure to carry out the daily operations. The translation model in this case was framed as follows:

OPP: Users are continuously aligned and realigned		
Actors	Obstacles	Goals
National Registration Centre	Conflicting government policies	Coordinate public resources
Business groups of interest	Adjustment to new system	Business efficiency
Local information technology companies	Maintenance and development	Administer the information system
The electronic register	Infrastructure and improvements	Administrative efficiency
Laws and procedures	Conflict with other laws and regulations	Regulate the new registration process
Reports and evaluations	Limited information and historical experience	Performance assessment for improvements

Table 5: Post-project stage OPP and network

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. For example, during the first post-project year, NRC made a strategic use of the donors' (MCC and USAID) reputation and their public acceptance to legitimize the new system and its services among business. However, in return, these end-users influenced the actor network as well by determining the adaptation and success of this project reform in the long run.

The post-project stage embeds in itself the contradicting forces of stabilisation and change, emerging from the dynamics and different interests of actors. Although an e-government project can go through different Obligatory Passage Points as shown in this study, its success depends in

great part by the network of actors in the post-project stage. Their continuous alignment and realignment is influenced by past transformations and decisions, but unfolds in the present depending on its current users. This last sentence gives also an answer to the research question: “*How does the network of actors change along e-government project life-cycle stages?*” The following section provides a critical discussion of this answer and findings discussed in this part.

5. DISCUSSION: TRANSITION OF ACTORS OR CAPABILITIES?

The new electronic business registration system in Albania pushed some changes in the roles of actors during its implementation and in the on-going post-project stage as discussed previously. This session will try to summarise and critically discuss what practitioners and decision-makers in internationally assisted e-government projects can learn from this.

This interpretivist case study identified not only a transition of powers among actors, but also their transformation along a transition of capabilities. From the analysis of findings it was explained that some leading actors were replaced by other actors at different project stages. These transitions were often legitimized in the form of a laws, regulations or standardised relationships and procedures that were created or emerged as new entities in the project network. Locally however, the reform did not consist only of replacing the old paper-based business registers with an electronic system, but transformed the whole process from a legal to an administrative one. To achieve this, temporary experts and consultants responsible to strategically plan this reform, naturally transferred some of their attributes in the network to the laws, rules and regulations they prepared to operate it. Similarly, the foreign technical expertise from the donor, implementing IT company, and other world best practices had to be translated into local capabilities. The best example for this was Chemonics from USA assigned in the beginning to build the system that gave birth to a local company: IKubInfo. This last entity was created for organising local capabilities to build the system, but now it maintains and develops the system independently.

The transition and development of capabilities is not an ending process like the e-government 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 establishment and standardisation of new procedures, rather than to the development of new ones. The institutional forces that operate in this context are important, but their analysis is beyond the scope of this research.

6. LIMITATIONS AND SUGGESTIONS FOR FURTHER RESEARCH

What is difficult to map using ANT tools is the historical background. Certainly these could have been added in the analysis as artefacts, but the ability of ANT to explain why certain actors behave the way they do beyond the ideas of translation at given moments is limited. In the present study this problem was addressed by combining the case study methodology with project management tools and techniques such as the project life-cycle. Future research could advance this position by looking at how ANT could be applied more specifically on project networks. Institutional perspectives could be useful theoretical alternatives in this direction. However, this is far beyond the scope of this study and would require a much deeper philosophical and theoretical debate.

Another limitation of this study is also the single case perspective. Although it is possible to generalise and build theoretical constructs from case studies (Eisenhardt 1989, Eisenhardt, Graebner 2007), the study of multiple cases could contribute to validate more strongly the ideas proposed here in the final discussion. Benchmarking reports (Kromidha 2012) or quantitative analyses of different actors' performance could also contribute towards a better understanding of their involvement in different project stages. From a methodological perspective, although this study takes an interpretivist approach, options remain open to apply ANT also in more positivist project case studies.

7. CONCLUSIONS

The original contribution of this research is related to the discussion of transformations along the different e-government project stages. Previous studies used the mobilization and translation framework to map e-government project stages (Stanforth 2006, Heeks, Stanforth 2007), while this study focused on a life-cycle perspective (Project Management Institute 2009). In both cases ANT gives an important contribution to explain the socio-technical dynamics of e-government networks, thus answering many and “Who?” “What?” and “How?” questions related to the ontologies of considered actors. However, other theoretical approaches could take a more critical and epistemological perspectives to further discuss or advance the findings of this study.

The reasons why actor network transitions in e-government projects happen could be related to strategic and operational objectives. For example, in order to meet the project objectives, the government of Albania had to allow the donor to take control because of its financial and technical resources. From the beginning, as summarised in the Project Life Cycle chart, the Council of Ministers representing the government left its position of focal actor to the donor after the starting stage. The donor on the other hand passed its focal role during execution to outsourced IT companies that made the electronic register. Finally, the information technology system had the project actors shaped by it in the closing stage, being always intended to serve its users thereafter.

From a purely practitioners’ perspective, internationally assisted e-government projects are not only a network of static actors, but rather a mechanism of change where capabilities are transferred together with actors roles and responsibilities. In this context, they do not simply modernize old practices by introducing more efficient information and communication technologies, but assure their development through continuous alignments and changes.

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