



## TOWARDS A PROPOSAL OF A LOCAL AUTHORITY MODEL BASED ON THE SYSTEMIC APPROACH

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### ABSTRACT

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As a result of the evolution of our societies, several types of organizations have emerged. They were designed to meet specific needs. Therefore, each organization has its own purpose and missions. Consequently, these organizations have developed interactions and interconnections in order to achieve their goals. This concerns both public and private organizations. If public and private organizations share the quest of efficiency, public organizations have additional missions which consist of pursuing the common interest. However, modern era which is qualified as instable and uncertain, makes organizations' everyday life becomes more complex and unpredictable. Hence the need for understanding these organizations in order to know how they work, to make a diagnosis and provide an analysis of them. This is particularly true for local authorities, since they have been connected to many internal and external stakeholders, they have been managed by a dual structure combining elected politicians and administrative staff; they have been in charge of many functions including: ensuring local development, guaranteeing citizens' well-being, and providing higher quality services with lower cost. Given their nature and the complexity of their role, modeling this organization becomes a necessity. In this perspective, this paper aims to propose a model of a local authority using [Kast and Rosenzweig \(1985\)](#) and [Meinadier \(1998\)](#) models. Both of those are largely based on Von Bertalanffy's systems theory commonly known as systemic approach. Results show that local authority is an open, complex, and dynamic socio-technical system which is exposed to a wide typology of risks.

**Contribution/Originality:** This study contributes to the existing literature related to public administration and especially local authorities. It proposes a new formula to grasp and understand local authorities by introducing new variables such as time and space evolution. This makes local authority an open, complex, and dynamic socio-technical exposed to risks.

## 1. INTRODUCTION

The main purpose for which local government came into existence and developed in the many forms it has taken since the middle Ages, is to provide services for citizens. The relief of poverty, the provision of public education, the construction of sewers, the provision of hospitals, clean water, highways and public transport services, have all been local governments function, although many are now provided by other than local bodies of various kinds, often responsible for single function or a narrow of functions, until multifunctional local authorities as we know them were established throughout the country at the end of the nineteenth century ([Elcock, 2013](#)).

While Lockard (1963) states that the local government can be defined as a public organization, authorized to establish and administer public policies within a given territory, the latter is a subdivision of the central government. In fact the organization of local government is public organization, changing from private organizations, they are aimed at the general interest of citizens. Hampton (1991) argues that local authorities have clearly defined geographical boundaries, multipurpose or compendious bodies, directly elected and having independent power of raising taxation". According to (Tindal, 1977) cited by Ndreu (2016) it is important to remind that the local institutions are there not only to provide various public services to citizens, but also to represent in the best way possible the will of the people

Presenting the definitions above, led us to state that local authorities are created by law to manage, through a dual structure combining elected officials and administrative staffs, a territory which characterized by geographical, ethnographic, and historical... specificities by accomplishing well defined responsibilities and duties related to social, economic, and cultural development of the administrated territory. Figure 1 illustrates this.

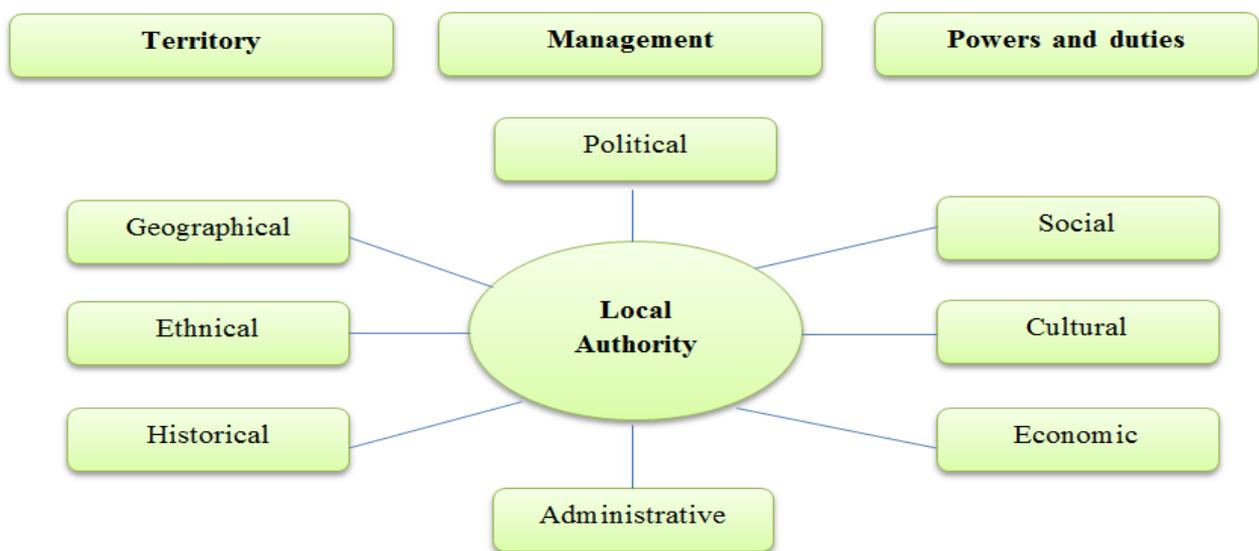


Figure-1. Local authority.

In this order, Ndreu (2016) argues that local authority presents five main characteristics which concern:

- First, this government has statutory status, therefore it is defined, recognized and functions on the basis of the laws of a country (in our country, in Albania, local government bodies are constitutional bodies).
- Secondly, these bodies have the right to decide about their own local taxes on the territory where extend jurisdiction.
- Thirdly, they are characterized by the right of local community participation in decision making process or management of local affairs.
- Fourth, it is known the capacity to act independently from central government bodies, within the limits set by law, through the decentralization process or the principle of local autonomy.
- Fifth, these bodies serve the general interest of the citizens common interest.

Examining local authorities' roles and functions, we find they interact with various stakeholders such as citizens, elected officers, staff, and supervisory authorities; and their missions cover a large and wide of activities related to ensure and maintain sustainable development. This makes local authorities a complex and dynamic organization, since they manage several dimensions related to citizen's well-being, they maintain relations with their internal and external stakeholders, and they pay attention to the evolution of the environment in which they operate.

Given this complex reality, any scholar may be perplexed regarding the choice of an appropriate approach to better grasp and ascertain an organization such as a local authority. Above all, many approaches can be identified in

management sciences. According to Proulx (2006) approaches are tools that allow us to understand organizations and diagnose them. However, since the systemic approach has largely flourished in the understanding and explanation of private sector organizations. Would it not be relevant to utilize it in purpose of reflecting local authorities' reality? To bring some answers to this question, we have mobilized the writings of Kast and Rosenzweig (1985) and (Meinadier, 1998) which are largely inspired by Von Bertalanffy's systems theory. This approach states the properties of thermodynamic systems should be found in any organization. Also, the parameters that manage physical systems should also apply to human systems (Proulx, 2006). This paper is structured into four sections. The first one presents a review of literature regarding the use of systemic approach in management field. The second deals with the methodology we adopt in this paper. The third section consists of a proposal of local authority model. Finally, the fourth section focuses on discussing and interpreting our finding.

## 2. LITERATURE REVIEW

Since it was released, general systems theory has been proposed as a basis for the unification of science. The open systems model has stimulated many new conceptualizations in organization theory and management practice (Kast & Rosenzweig, 1972). Therefore, it has been the main inspiration for many researchers in management field. In this regards, we can refer to the work of Kast and Rosenzweig (1985) and Meinadier (1998) which were based largely on the systemic approach. In this section, we present their models.

### 2.1. Kast and Rosenzweig Model

Kast and Rosenzweig (1985) viewed the organization as an open, sociotechnical system composed of a number of subsystems. Under this view, an organization is not simply a technical or social system. Rather, it is the structuring and integrating of human activities around various technologies (Naoum, 2001). Each subsystem carries part of the organization's mission. This system manages inputs and processes them in accordance with mission requirements to produce outputs (services or products) (Mazouz, Leclerc, & Tardif, 2008).

Kast and Rosenzweig (1985) had highlighted the dynamic relationship between the organization and its environment. This results from the interaction between subsystems and each of them with the environment. This model is useful for providing a complete diagnosis of an organization since it focuses on the different subsystems that make up the environment: purpose, structure, technology, psychosocial aspect, and management. In addition, this model identifies different supra-systems: economic, political, social, demographic, cultural and legislative (Proulx, 2006). Figure 2 shows the model developed by Kast and Rosenzweig.

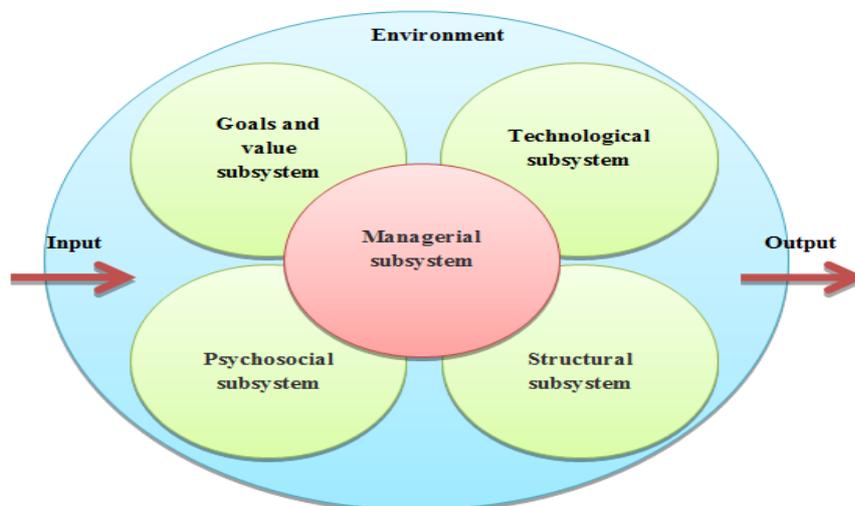


Figure-2. Organization as a system  
Source: Kast and Rosenzweig (1985)

Kast and Rosenzweig (1985) presents the organization as a system composed of subsystems that aims to transform inputs into Outputs. To perform its functions, any system requires inputs from its external environment which are processed to deliver outputs to internal and external environment. But what's about Meinadier's model?

2.2. Meinadier (1998)

Meinadier (1998) considers the organization as a complex socio-technical system. Aloui (2007) argues a system can take the form of a structured set of abstract elements that the observer attributes their properties. According to Bérard (2009) systems are complex when their natural, technical, economic and social components and their interactions are multiple. They are complex too regarding their dynamic behavior's diversity. They are delicate systems because they are composed of many elements interacting with each other in a non-deterministic manner (Gourmelen, 2012).

A Sociotechnical System is a system in which the Man role becomes more significant. In this regards man is considered as a part of the global system (Aloui, 2007). Meinadier (1998) defines a complex sociotechnical system as "a composite set of staff, hardware, and software organized so that their inter-functioning allows, in a given environment, to fulfill the missions it was designed for. He distinguishes two main types of complexity:

- Static complexity related to the architecture of the system, its functions, its components, and its existing interactions.
- The dynamic complexity linked to the dynamics of the interactions between subsystems and components.

In Figure 3, we present the scheme proposed by Meinadier (1998) of a complex system.

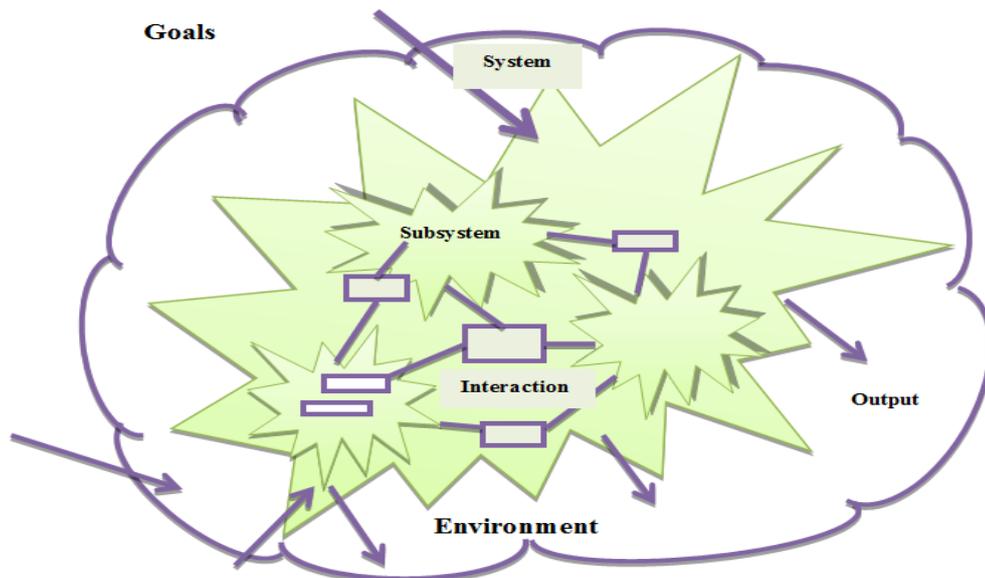


Figure-3. Scheme of a complex system.

Source: Meinadier (1998).

Meinadier (1998) has presented and has defined a complex sociotechnical system. He has focused on the significant of human's role as integrated part of this system. Also, he has highlighted that complexity is a result of system architecture and interactions between subsystems. Studying and analyzing those two models has served as an inspiration for us to propose our model.

3. METHODS

In order to better understand and explore local authority, we chose qualitative research as a research method, we collected by combining secondary and primary data, we analyze data using descriptive content analysis method.

### 3.1. Qualitative Research

Qualitative research is broad umbrella term that covers a wide range of techniques and philosophies; thus it is not easy to define [Hennink, Hutter, and Bailey \(2020\)](#). [Corbin and Strauss \(2015\)](#) argue that qualitative research is a form of research in which the researcher collects and interprets data, making the researcher as much a part of the research process as the participants and the data they provide. It seeks to embrace and understand the contextual influences on the research issues [Hennink et al. \(2020\)](#). ([Denzin and Lincoln, 2008](#)) cited by [Hennink et al. \(2020\)](#) state that qualitative research involves an interpretive, naturalistic approach to the world. This means that qualitative researchers study things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meaning people bring to them.

In our case, we utilized qualitative research because it provides a better understanding and exploration for local authority. In this order, we attempted to study this organization through our research participants' perspectives who are middle and senior officer belonging to four municipalities. Also, we studied officers in their natural setting which allowed us to listen to their stories and experiences about local authority.

### 3.2. Data Collection

To conduct this research, we chose to combine primary and secondary data. We seek to establish a complementarity between these two sources. In this order, data collection was carried out in two steps.

#### 3.2.1. Secondary Data

The first of all, we performed a literature review in order to explore and understand an organization such as local authority. In this order, we identified many sources of secondary data. Secondary data represents data that already exist. It's data generated by others. This type of data may offers new outputs for researcher by analysing and interpreting in the aim of research question. [Thietart \(2014\)](#) distinguish two categories of secondary data: internal and external secondary data. Internal secondary data concern information already produced by organizations or private individuals. They were not collected to meet the researcher's specific needs. However, they are real sources of information for the person who consults them. These sources correspond to archives, notes, reports, documents, written rules and procedures...External secondary data are related to publications emanate from public or private, national and international organizations. They allow permanent contact with the evolution of the research question.

In our case, we utilized external secondary data. In this regard, we identified many scholars who were inspired by Von Bertalanffy's work on general systems theory in exact sciences and intended to transpose it into management field. We mentioned the work of [Kast and Rosenzweig \(1985\)](#) and [Meinadier \(1998\)](#).

Given their general perspective to approach an organization and their complementarity, [Kast and Rosenzweig \(1985\)](#) and [Meinadier \(1998\)](#) models have served as a base for us to model the local authority.

#### 3.2.2. Primary Data

The second step of data collection was conducting multiple case studies. [Yin \(1994\)](#) argues case studies are an empirical inquiry that investigates contemporary phenomenon within its life context especially when the boundaries between phenomenon and its context are not clearly evident. As a qualitative research and given the characteristics of our research question, we used purposive sampling strategy. This strategy provides rich information and also good understanding of selected case.

Given the context of Moroccan local authorities, identifying and negotiating access to research sites were crucial parts of our research process. Indeed, we chose four communities that belong to Tanger-Tetouan-Al Hoceima region. This choice is justified by the importance of this region in terms of economic, industrial, social dynamic.

In this order, we interviewed 124 middle and senior officers. The interviews were Semi-directed to build a trusting relationship to get as much information as possible. Table 1 presents the distribution of officers interviewed in each case.

Table-1. Distribution of officers interviewed.

Municipalities	Senior officers	Middle officers	Total
Case study 1	6	25	31
Case study 2	7	47	54
Case study 3	4	14	18
Case study 4	5	16	21
Total	22	102	124

### 3.3. Data Analysis

Data analysis was performed by the descriptive content analysis method. In this order, we performed data encoding which is consisting of extracting word or phrase that describes the meaning and the context of a sentence, phrase or paragraph. In this perspective, we realize a review of each source contents. This led us to appreciate certain items importance in each document. Indeed, we approached local authority subsystems; also we came out with local authority specificities; and identified risks categories which local authority is exposed to. Table 2 provides a list of items drawn up after encoding process.

Table-2. List of Items.

Analysis level	Items
Local authority subsystems	- legal subsystem, - financial subsystem, - managerial subsystem, - operational subsystem, - human resources subsystem.
Local authority specificities	- open, - complex, - dynamic, - socio-technical,
Risks categories	- legal risks - financial risks - operational risks - managerial or strategic risks - human risks - exogenous risks

Data analysis was performed manually. Therefore, a progressive analysis was conducted to understand and interpret our data. This led us to establish coherence and convergence between different data sources.

## 4. RESULTS

As a system, local authority is made up of subsystems that interact with each other and with the environment. Local authority also borrows Inputs from its environment and transforms them to provide Outputs while evolving in time and space. In Figure 4, we introduce our local authority’s model.

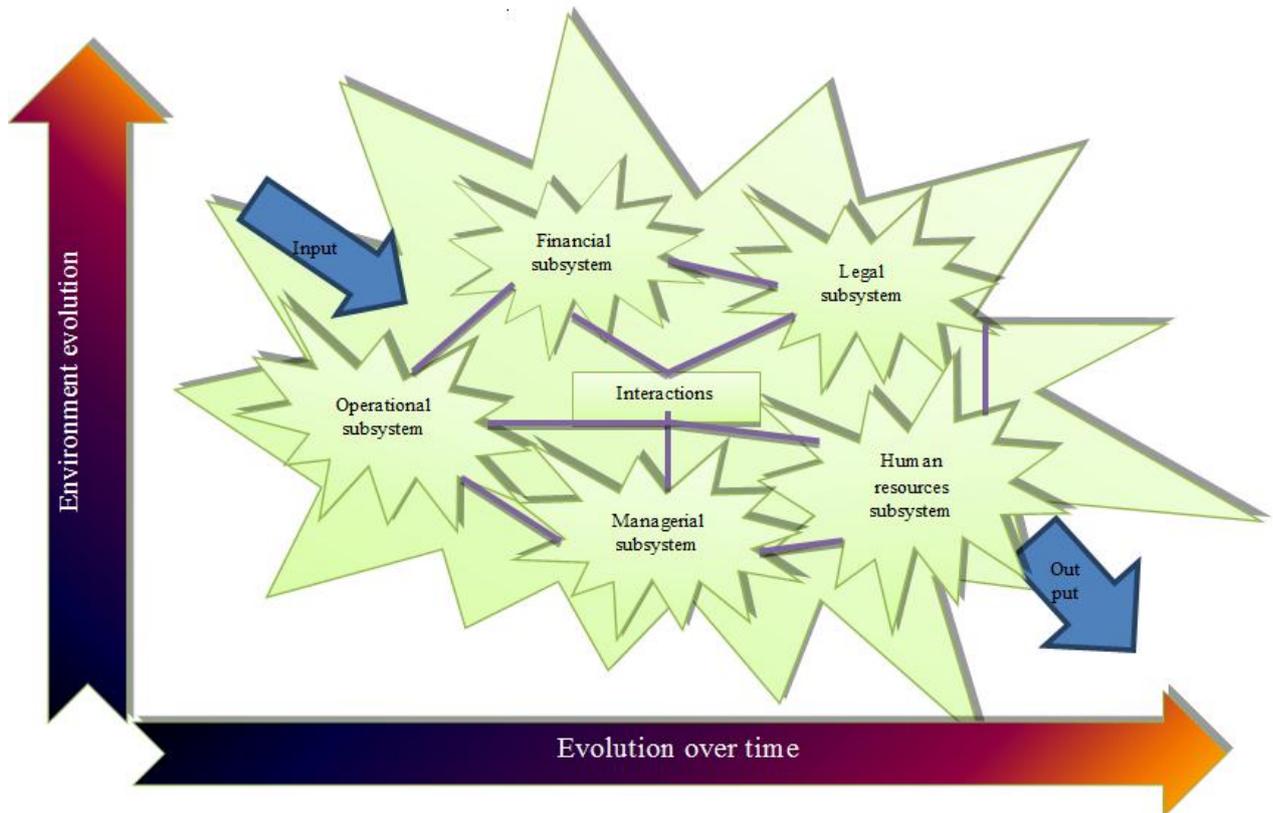


Figure-4. Local authority as an open, complex, and dynamic socio-technical system.

As an open, complex, and dynamic socio-technical system, local authority maintains relationships and interacts with other systems in its environment, to build up a supra-system. Figure 5 introduces this.

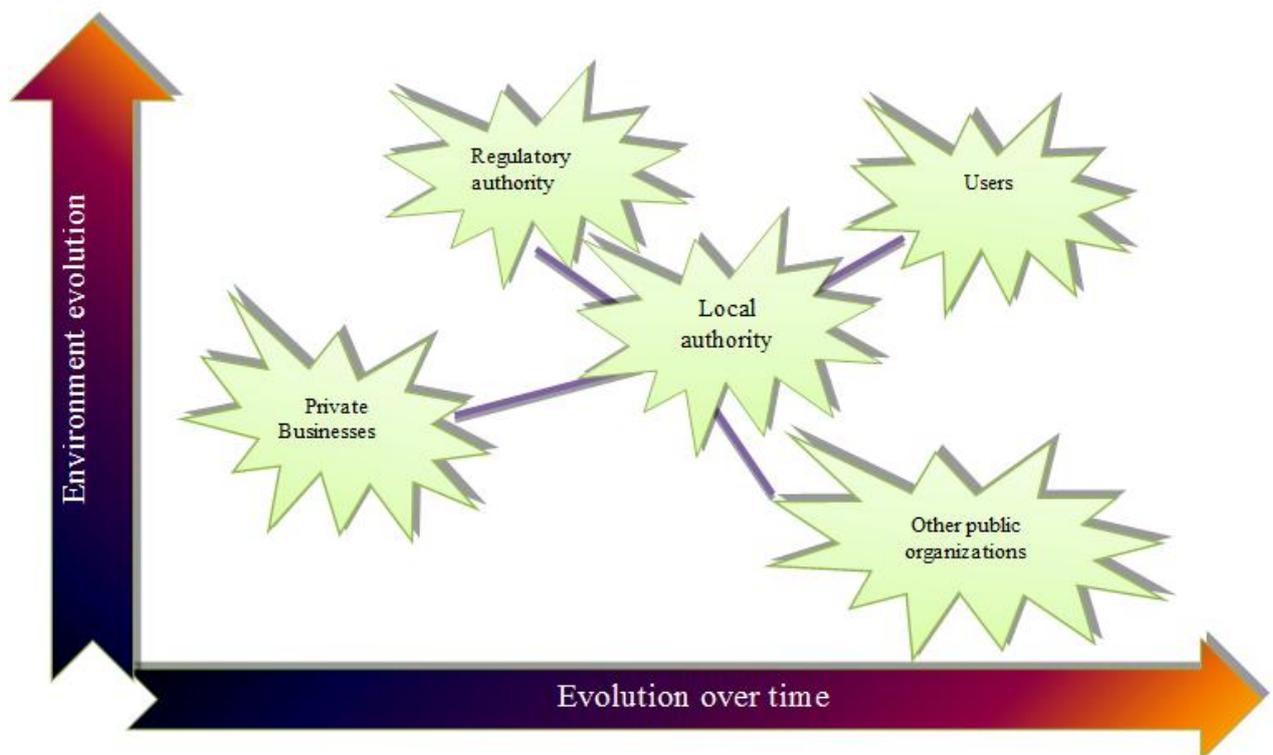


Figure-5. Local authority as an open, complex, and dynamic socio-technical system forming part of a supra-system.

The presentation of our local authority model leads us to interpret them in the next section.

## 5. DISCUSSION

Our model presents local authority as an open, complex, and dynamic socio-technical system which is a part of a supra-system. Also, it brings to light many features related to local authority. Finally, we identified many risks types which local authority is exposed to.

### 5.1. Local Authority as a System

To model local authority, we get inspired by systemic approach and especially by [Kast and Rosenzweig \(1985\)](#) and [Meinadier \(1998\)](#) works. In order to highlight and trace the evolution of the local authority both in time and space, we used an open reference presentation. On the abscissa, we placed the local authority evolution over time. And on the ordinate, we put on its environmental evolution.

To administer a territory properly, local authority is made up of many subsystems which interact consistently with each other. Each one contributes partially to achieve local authority overall missions. Accordingly, each subsystem processes inputs providing from other subsystems or the environment to deliver outputs in accordance with local authority's mission requirements. This led us to identify five subsystems which are legal, financial, managerial, operational, and human resources subsystems.

- Legal subsystem: multiple laws have been enacted with a purpose of providing a legal framework to ensure a proper functioning of local authorities. As a result of setting up their duties and responsibilities, these laws emphasize their multiple activities and define their various relationships and interactions with their different stakeholders. This legal framework is changing consistently to take into account the evolving nature of their environment.

Financial subsystem: to contribute actively to ensuring citizens' well-being, local authority requires a financial subsystem to generate incomes and contain and optimize expenditures. In this regards, local authority incomes are consisting of their own incomes related to local taxation and incomes transferred from the state. While, their expenses fall into three broad categories: operating expenses, capital expenditures, and expenses related to loan interest.

- Operational subsystem: this subsystem covers all activities that local authorities are in charge of in order to administer a territory. As a result of decentralization efforts, local authorities have seen their field of intervention broadened by integrating diverse activities. Indeed, within the limits of their territory local authority exercise powers and duties related to economic, social and cultural aspects to ensure sustainable development while involving multiple stakeholders: citizen, staff, elected officials and regulatory authorities.
- Managerial subsystem: the main characteristic of local authorities is managing a territory based on a dual structure. This combines a legislative sphere and an executive sphere. The first one consists of a council who represents citizen's will and makes decisions; the second one concerns the president and the staff who provide advises to make decisions and materialize those undertaken decisions.
- Human resources subsystem: There is no doubt that workforce is the main asset of any organization. Human resources assumed greater prominence due to their active contribution in organization's quest of efficiency. This is true for local authorities too; however, within local administrations, human resources are influenced by this dual structure including legislative and executive spheres. This considerably affects cultural and managerial issues.

### 5.2. Local Authority Specificities

Local authority as a model based on systemic approach provides features. So that, local authority is a dynamic, open, complex, and sociotechnical system. This subsection explores and explains those specificities.

- Local authority is not a static system; it's a dynamic system which evolves over time and also changes depending on environment evolution. To highlight this dynamic nature of the local authority, our model

used an open reference presentation. In this order, we put on the abscissa the local authority evolution over time. And we placed its evolution in space on the ordinate. In addition, our model focused also on the interactions between local authority and its subsystems that participate in its mission.

- Local authority is an open system: It develops and maintains many relationships and interactions with other systems that make up its environment. In this regards, local authority provides services to the environment composed of various stakeholders, including: the citizens, regulatory authorities, private companies, local development companies, etc.
- Local authority is a complex system: To manage a territory properly, local authority as a system transforms inputs using its different subsystems to provide outputs to others systems which compose the environment. Those interactions between local authority and its subsystems and its environment are a source of complexity. This complexity is also due to the evolution of local authority over time and space. In this order, local authority changes and evolves to fit and meet individual and group's needs. Another source of complexity is related to local authority's nature, functions, and components. In fact, local authority consists of legislative and executive spheres. It exercises various duties and responsibilities covering multiple areas linked to citizens' wellbeing which involves many internal and external stakeholders.
- Local authority is a socio-technical system: local authority exercises powers and responsibilities to ensure sustainable development and satisfy citizens' cultural, economic and social needs using a number of financial, technical, and human resources. In fact, the place and the role conferred to man within local authority are primordial. Therefore, men are elected to create and maintain men's wellbeing utilizing many resources such as technical or financial. As a result of this juxtaposition between human beings and technical tools makes local authority a socio-technical system.

### *5.3. Local Authority is a System Exposed to Risks*

Given its nature as an open, complex, and dynamic socio-technical system, its multiple subsystems which are interconnected with each other, and its various interactions with other systems which made up its environment, local authority becomes a breeding ground for risks. Those risks are perceived differently. If some authors focus only on the downside of risk; others adopt another position, including both downside related to threats and upside associated with opportunities. In this order, we identify six risks types which concern its five subsystems and also its interaction with the environment. Those risks type are related to legal risks, financial risks, operational risks, managerial or strategic risks, human risks, and exogenous risks.

- Legal risks: uncertainty related to the evolution of legal framework that governs duties and powers of a local authority.
- Financial risks: concerns both threats and opportunities that can affect positively or negatively financial balance of local authority.
- Operational risks: summarize hazards a local authority faces when it performs its daily duties and responsibilities.
- Managerial or strategic risks: are risks linked to decision making which may influence local authority's high level goals achievement. This concerns goals that are aligned with and supporting local authority's powers and duties.
- Human risks: are hazardous events related to human resources and their management within local authority.
- Exogenous risks: refer to uncertainty that may occur as a result of local authority external environment.

## **6. CONCLUSION**

This paper has as a purpose of proposing a model that aimed to apprehend, analyze, and provide a diagnosis of local authority. This is based on systemic approach and especially on [Kast and Rosenzweig \(1985\)](#) and [Meinadier](#)

(1998) researches. This led us to identify five subsystems that made up the local authority and contribute to fulfill its duties and responsibilities. Those subsystems are consistently interacting with each other to perform local authority overall missions. Also, local authority is permanently interacting and connected to other systems within its environment. These interactions between local authority, its subsystem, and other systems aimed to transform inputs in purpose of delivering outputs. Furthermore, local authority is continuously changing to fit its environment evolutions. This led us to state that local authority is a dynamic, open, and complex sociotechnical system which is a part of a supra system.

As a result of its nature and main features, local authority becomes a breeding ground for risks. Therefore, we came out with six risks types related to legal risks, financial risks, operational risks, managerial or strategic risks, human risks, and exogenous risks. This risks proliferation may undoubtedly have impacts, whether it's a positive or negative, on achieving goals. In these circumstances, it is critical to have a clear understanding and identification of risks which local authority is exposed to. In this perspective, we believe that our model is useful and show particular promise on studying and analyzing risks. In this order, our future research will focus on developing a risk mapping for local authorities; we will emphasize especially on the case of Moroccan local authorities.

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