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**THE MACTOR METHOD FOR ANALYSING THE
MANAGEMENT PROCESSES OF DEVELOPMENT
PROJECTS AND PROGRAMS IN AFRICA**

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Abstract. The proliferation of development projects in Africa in general and in Cameroon in particular over the last decade contrasts with their performance, which in most cases remains mixed. These performances depend to a large extent on the strategies and decisions taken by the interacting actors. Strategic analysis is therefore a fundamental approach to better understand the performance of development programs. The MACTOR method (Godet, 2007) fits into this framework; an application of actantial rationality in the analysis of human interactions. It makes it possible to identify all of the active and passive actors involved in a project and to define the matrix of alliances, conflicts, strategies, tactics, and objectives pursued by these actors. This method opens the way to an actantial analysis of the management of development projects in order to better identify their strengths and weaknesses. This article is a systematic review of the issues at stake in this method and its application in the Cameroonian context. It highlights the theoretical determinants of the method and its relevance in the managerial analysis of projects under an actantial rationality.

Keywords: MACTOR, actors, stakeholders, project, program.

EL MÉTODO MACTOR PARA ANALIZAR LOS PROCESOS DE GESTIÓN DE LOS PROYECTOS Y PROGRAMAS DE DESARROLLO EN ÁFRICA

Resumen. La proliferación de proyectos de desarrollo en África en general y en Camerún en particular durante la última década contrasta con sus resultados que en la mayoría de los casos son ambiguos. Estas actuaciones dependen en gran medida de las estrategias y decisiones adoptadas por los actores que interactúan. El análisis estratégico es, por tanto, un enfoque fundamental para comprender mejor los resultados de los programas de desarrollo. En este marco encaja el método MACTOR (Godet, 2007), una aplicación de la racionalidad actancial en el análisis de las interacciones humanas. Permite identificar a todos los actores activos y pasivos que intervienen en un proyecto y definir la matriz de alianzas, conflictos, estrategias, tácticas y objetivos que persiguen estos actores. Este método abre la vía a un análisis activo de la gestión de los proyectos de desarrollo para identificar mejor sus puntos fuertes y débiles. Este artículo es una revisión sistemática de las cuestiones en juego en este método y su aplicación en el contexto camerunés. Destaca los determinantes teóricos del método y su relevancia en el análisis de gestión de proyectos bajo una racionalidad actancial.

Palabras clave: MACTOR, actores, partes interesadas, proyecto, programa.

Introduction

Social change is a delicate and sensitive undertaking. In developing countries, social and economic change is a necessity to eradicate poverty and social inequality. To achieve this ideal, developing countries are jointly building economic and social programs to improve the living conditions of their populations. These countries are moving decisively towards a development planning perspective through projects and Rapid Winning Initiatives (IRRs). While these initiatives are commendable, the expected results are rather mixed. Various development programs are designed and implemented, but poverty persists and underdevelopment remains. Under these conditions, it is logical to assume that the problem lies not only in the rationality of development planning but, especially, in the interactions between the actors involved in these projects. To verify this hypothesis, it is necessary to mobilize simple and practical methods to evaluate the performance of development projects from a strategic perspective. This is where the MACTOR method comes into play.

The strategic analysis of organizations began with Michel Crozier and Erhard Friedberg in 1977. In their bestseller, *The Actor and the System*, the human being is seen as a rational actor who reasons, thinks, and acts opportunistically to satisfy his needs. He sets goals and applies strategies and means to achieve them. Following Crozier, Godet (2007) develops a more operational and appropriate approach to understand the strategies of passive and active actors involved in development projects. This approach, known as the *MACTOR* method (Method ACTors, Objectives, Power relations), is the subject of this study. It is a cross-cutting method applicable to all social and economic situations in which social actors interact. In this case, the context studied is that of the development project. It is a development project in which several direct and indirect stakeholders are involved and in which several development actors interact, playing different, complementary, or contradictory roles.

This paper reflects on the application of the MACTOR method in the context of development projects in developing countries. The objective is to highlight the relationship between strategic behavioural analysis and the performance of development projects.

Specifically, the aim is to demonstrate that the MACTOR method remains a suitable framework for the strategic and cognitive-behavioural analysis of actors involved in development projects, and it has important consequences for the performance of these projects. The article is therefore of interest to several scientific fields, such as project management, economic psychology, and organizational psychosociology. It has a triptych structure, developing in the first part the applicability of the method in the context of development projects, stating in the second part the specificities of the method and proposing in the third part perspectives on the method.

Method

Data and data collection

This reflection was made possible through data mining and access to documentary sources on several sites, in particular the Cahier du Laboratoire d'Investigation en Prévision, Stratégie et Organisation (Lipsor). Exploitation of databases or electronic platforms dedicated to research was not excluded: Cairn.info; JSTOR; ScienceDirect; Society and Business Review; Academy of Management Journal; Systems Research; érudit.org; googlescholar.com; African Journals OnLine (ajol.info); semantic Scholar; emerald insight.com; Journal of Management Studies; Research in Organizational Behaviour; RIMHE: Revue Interdisciplinaire Management, Homme & Entreprise; sites highlighting published doctoral theses were visited, such as thèse.fr, etc.

Applicability in the strategic analysis of development projects.

A development project is a temporary economic initiative aimed at building infrastructure or correcting structural or social dysfunctions. In other words, a development project is a plan of action, an operational structure that mobilizes stakeholders to achieve development objectives. Thus, the development project is a work of strategic and operational planning. For its implementation, the project brings together different stakeholders and assigns them roles and performance objectives to be achieved. In addition to the project objectives, the co-actors have their own personal objectives, which are also discrete variables that affect the achievement of the project objectives.

Development projects involve various psychosocial and economic issues. The actors involved in projects play different roles, pursue specific objectives, and use financial, material, communicative, psychological resources, and means of action. The stakes involved in the implementation of development projects are very high. This gives rise to two types of interactions: on the one hand, conflictual interactions (antipathies, interpersonal, inter- and intra-group influences, threats, manipulations, etc.); and, on the other hand, interactions by accommodation (friendships, proximities, alliances, social ties, negotiations, etc.). These interactions will give rise to power relations between the actors involved in the achievement of the project's objectives. These actors, the main animators of the development project scenario, will influence in one way or another the achievement of the development objectives.

Specificities of the MACTOR method

Presentation of the method

The "actors' game" method was developed in 1989-1990 by François Bourse and Michel Godet. The MACTOR method (Method ACTors, Objectives, Power relations) proposes an approach for analysing the set of actors and a series of tools that make it possible to take into account the richness and complexity of the information to be processed, providing the

analyst with intermediate results that shed light on certain dimensions of the problem in question. In other words, it is a matter of describing a system by means of a matrix of actors linking all the constituent elements of this system. From this description, this method aims to estimate the power relations between the actors and to study their convergence and divergence, with respect to a certain number of issues and associated objectives. The use of the method also makes it possible to understand the alliances and conflicts of a stakeholder ecosystem and provides an analysis of the likely outcomes of the issues at stake (consensual/dissensual objectives). But it also, if necessary, provides an actor with a decision-making aid for the implementation of its policy in interactions where alliance plays and likely conflicts linked to the implementation of its policy abound (Godet, 2004; Godet, 2008; Godet and Durance, 2011).

The phases of the method

Peerboccus (2021) proposes an iteration in seven successive steps as opposed to Godet's (2007) five:

1 - Building the stakeholder strategy framework

This table is used to represent each stakeholder's goals, objectives, problems, and means of action.

2 - Identifying strategic issues and associated objectives

The actors in the system pursue multiple and varied projects. The combination of interactions reveals a number of strategic issues on which the actors will have convergent or divergent objectives.

3 - Positioning of each stakeholder in relation to strategic objectives

The aim is to describe the current attitude of each stakeholder towards each objective.

4 - Prioritize the objectives of each stakeholder

The method proposes to specify the number of strategic objectives on which the stakeholders, taken in pairs, converge or diverge.

5 - Analyse the structure of direct and indirect influences between actors and calculate power relations.

MACTOR tools, which make it possible to highlight certain dimensions of the problem, must disappear: only collective intelligence and plural knowledge of the system can help to formulate strategic recommendations.

6 - Integrate power relations in the analysis of convergences and divergences between actors.

New graphs of possible convergences and divergences between all the actors are obtained. The comparison between the series of graphs allows us to observe the deformation of potential alliances and conflicts, taking into account the hierarchies of objectives and the power relations between the actors.

7 - Formulate strategic recommendations and key issues for the future.

Through this phase, MACTOR contributes to the formulation of key issues and strategic recommendations.

The method includes the software of the same name for the quantitative analysis of the data collected in the matrices. Besson (2010) identifies as another strong point, the applicability and operability of the method in companies that game theory most of the time leads to theoretical models that are not very obvious to use in everyday life.

Limitations must also be taken into account. The program requires a high level of analysis by the users. Without this analysis, an overly mechanical use of the software would mask the real problems and lead to misunderstandings. MACTOR presupposes a consistent behaviour of each actor in relation to its objectives, which reality sometimes belies. The same is true for information gathering, which requires relevance and consistency. However, according to software designers, applications are still limited by mathematical constraints and often restrictive assumptions. As another limitation, Besson (2010) points out that the quality of the results obtained depends on the relevance of the data entered at the beginning. Elements on the strategy of other actors are not always easy to obtain, so it will be necessary to cross-check a lot of information. This method assumes that the behaviour of each actor is in line with its objectives, which in reality is not always the case.

Brief presentation of the actors of development projects in Africa

This article will reflect on the role that MACTOR can play in facilitating the analysis of interpersonal interactions in the specific context of PPD. MACTOR will facilitate a broad presentation of stakeholders. There are multiple stakeholders in the PPD domain. However, in many cases, these stakeholders are both external and internal to PPD. A brief description of the activities of each of them allows for a more precise consideration of their roles in the construction of the PPD. These external (strategic) and internal (operational) stakeholders will play a key role in achieving PPD outcomes.

External or strategic stakeholders for PPDs

Among the groups of external stakeholders identified, without being exhaustive, are the Technical and Financial Partners (TFP), key (strategic) stakeholders who accompany the State in the implementation of its development policy. They manage the State's authorizations, establish the management procedures for their projects and carry out monitoring and control and evaluation dissemination. In some cases, they provide technical assistance (TA). As such they are the main providers of international aid funds. They are also the main providers of international aid funds due to their historical links with the country.

Beneficiaries are the main targets, the object of much "greed", the *raison d'être* of the PDP. They are often consulted, but in most cases ignored. According to FAO (2005), the beneficiaries of a project are those who will benefit from its implementation, i.e. the public concerned. The literature identifies two types of beneficiaries, namely direct beneficiaries and indirect beneficiaries of specific and time-bound achievements of certain development objectives in principle within the logic of planned change.

Suppliers / Contractors of development projects are presented in the literature as legal entities or individuals that provide goods or services to the PPD (client). They are divided into several categories: wholesalers, service providers and subcontractors. The contractual relationships with the project are then established. The academic literature on the subject of management sheds light on the relationship between the supplier and the client.

Regulators: they will be so called because of their mission to ensure that project activities comply with or relate to current legislation. Their actions have a more or less important impact on the life of the PDP. Regulatory tools are represented by Laws, Decrees, Orders, etc. In addition, these strategic actors are mainly represented by the State through its regional missions extended to the PPD. The institutions of the Cameroonian State are the actors

who take the major strategic orientations and who finance them jointly or not according to the vision enacted.

Opinion makers (FOP) (international/media): this group of actors consists of the specialized agencies (e.g. Moody's and S&P) that rate Cameroon's sovereign debt, which seems inevitable. The national press agencies. In this regard, according to the *EcoMatin* website, the financial rating agency Moody's *Investor Services* considers that Cameroon's credit profile could deteriorate further due to corruption, socio-political crises, and the absence of alternation at the top of the State, which makes it difficult for the country to meet its commitments.

In addition, the analyses produced by the FOP have a definite influence on the dynamics of international aid, given the credit given to them by the PTDs. Governments are also aware of the impact that the opinions of these FOP can have on the management of international aid. Their opinions are decisive in the monitoring and evaluation of projects financed by international aid. Moreover, their positions on Cameroon should not be overlooked. They appear as major players. International agencies such as *Reuters* and *Agence France Presse (AFP)* and those covering issues related to official development aid.

Opponents are represented by those whose PDP activities are contrary to their ambitions. These include some NGOs, a large part of the local communities who show a lack of trust in the promoters and decision-makers who consider them traitors to the community. In most cases, a balance of power is created, and the performance of the PPD depends on the distribution of power between supporters and opponents. One of the particularities of this group of actors is that they are also recruited from within the project. Their combined actions make them chiaroscuro actors and the orchestrated and sometimes permanent conflict situation makes them actors in search of social support.

As it is not possible to name all the external actors for the purposes of this research, despite their importance in the study of actors' strategies, the study has chosen to limit itself for reasons of format to the actors most directly involved in the system that constitutes PPDs in Cameroon.

The internal or operational actors of the PPD

Diallo and Thuillier (2005) identify and describe seven main project actors or "stakeholders," excluding subcontractors, design offices, and experts.

First, the coordinator is appointed by the government, usually the technical supervisory authority. Each project is headed by a project manager called the Coordinator. This is most often a civil servant, although a private sector official in this position is an exception. He is surrounded by a team of national staff. He sometimes plays the role of project manager.

A technical assistance team made up of national and/or international experts is often attached, depending on the type of contract. It is the backbone of the whole and responsible for the operational (technical) aspects of the project. The Project Management Team (PMT) or Project Management Unit (PMU) reports directly to the Coordinator who manages it with authority. Depending on the size of the project or program, the PMU is composed, with some exceptions, of the following key staff: a Monitoring and Evaluation Officer (MEO); an Infrastructure Officer (Rinfra); an Administrative and Financial Officer (RAF); a Procurement Officer; a Training Officer (RFO); an Environment and Sustainable Development Officer (REDD); in the case of PPDs, a Technical Officer (TO); an Internal Auditor (IA).

The project manager, task manager, or back stopper follows the PTD. He/she is located at the headquarters of the multilateral institution financing the project. He/she oversees the implementation of the project and ensures that the Bank's procedures are respected by the national project management or coordination unit (CNC). The Task Manager has implicit power, which makes him/her the "cornerstone" of all SGPs in his/her portfolio. The latter definitely influences the dynamics of the project and the destinations of funds.

The line manager is usually a senior technical ministry official (supervisor); sometimes the minister himself or his representative, to whom the coordinator reports locally. Sometimes he/she acts as a liaison between the project and the technical supervisor.

The Steering Committee (COPIL) constitutes a sort of interface with the entire local institutional apparatus affected by the PPD. In other words, it is also the result of collaboration between the various administrations concerned. It is also often considered as the strategic body where the main orientations and budgetary constraints of the project are decided in a concerted manner, and where information and, above all, perspectives are updated and communicated. It is composed of designated representatives. In short, it is a decision-making structure, which is the relay of political will. It drives all stakeholders.

Results and discussion of the MACTOR method: brief illustrations

Jaziri and Chérif, (2005) reviewed the progress of the contractualization project of Tunisian universities using the MACTOR method. The latter shed light on the conditions of success or failure of this project through the analysis of the games of the actors of the university system. This tool enabled Akanni-Honvo, et al, (2000) to envisage a set of possible futures for the African continent. A medium-term approach to African economies and societies based on the construction of relevant and coherent scenarios integrating the determinant games of the actors. Gatete and Dabat (2014), in a comparative institutional approach, question the development of agrofuels in some West African countries. They observe a craze around the activity but which poorly conceals the absence of clear and consensual strategies on the part of the development institutions (actors, stakeholders) of the countries involved. Between the promotion of sport, economic stakes, and political interests, Ben Mahmoud and Massiera (2014), aided by Michel Godet's tool, note that the governance of sporting events is "*trapped*" in the complex systems of actors, stakeholders, and collective stakes. Abdelkefi (2019) highlights the interactions between the main actors in the seed sector, their objectives, and their degree of achievement. Toledo Rojas (2014), for his part, uses the "*stakeholder relationships*" table of the MACTOR method to represent the relationships between innovation stakeholders and their weight. This same tool allowed, in 2007, Angélique Tholoniati to map and strategically analyse the actors' games when she was interested in territorial economic intelligence. To answer the question on the dynamics of actors, CIRIDD (2017) uses MACTOR to model the relationships between the actors of a project, to measure the weight of local actors in the realization of the Algiers nature reserve. Larid's (2010) reflection is based not only on the omission of the analysis of the relationships between the different partners involved in the management of the Algerian coastal territory, but also on the diffuse role of the decentralized structures of the State. He points out that this method of approaching the relationships between actors could lose reliability when applied to a long-term project. Gansaonre, Sodore, and Ouédraogo (2020) use the MACTOR tool to reveal the conflictive and uncoordinated nature of interventions in the W Park and its periphery. They note that this situation impedes the achievement of certain conservation objectives and the emergence of local initiatives. Mouhoubi and Sassi Boudemagh (2017) also used it with the aim of determining the responsibility of the actors in the failure of the project. They conclude that lack of involvement and inadequate monitoring of the participation of all actors at various levels influenced the success of the project (Mouhoubi & Sassi Boudemagh, 2017, p. 207).

The study conducted by Bouayad, Belhaj and Oucherrou, (2021) highlights the role and weight of strategic variables in the governance of sectoral policies in Morocco and the factors likely to reinforce their convergence. Plottu (2005) wonders whether it is necessary to

harmonize the evaluation method in a democratic sense in order to bring public debate closer to rational decision-making. According to the author, this raises the problem of the choice of tools to facilitate decision-making. MACTOR is called upon to support stakeholder games in a participatory manner in relation to the issues and objectives of infrastructure projects. However, he recalls the advantages offered by this method. In particular, "the positioning of each stakeholder in relation to a set of associated objectives that can only facilitate the achievement of a negotiated solution." (Godet, 2004, pp. 80-85). Far from wanting to confront the logics of the stakeholders, the research proposes a paradigm for bringing public debate and rational decision-making closer together. Thus, participating in the evaluation of development projects would be an act of citizenship. Plottu and E. Plottu (2009, p. 43) would say that it is part of "the governance of public action and presupposes institutional conditions favourable to participation." Although this participatory approach does not seem to be the solution, it has the merit of mobilizing certain action verbs such as informing, motivating, and training in evaluation, for a consensual vision (B. Plottu & E. Plottu, 2009, p. 43).

Janin (2018) argues that we must think and act against hunger. His work warns of the danger of using Food and Nutrition Security (FNS) as a "power issue." (Janin, 2018, p. 1). Without taking sides, he reveals, based on the MACTOR method, that politics is perceived by FNS actors as a key to the failure of projects, but that its translation remains quite difficult (Janin, 2018, p. 4). In his research, Rakotobe (2018) identified three classes of stakeholders in the DomeTsip project. The author analyses the interaction of these stakeholders using MACTOR software to determine their positions and logics in the project area. He finds that each stakeholder uses the project objectives to his or her own advantage. To counteract this, he considered conducting a socioeconomic and ecological change study to facilitate decision-making and avoid altering the ecosystem. This method was used to identify key stakeholders in the context of security in northern and central Mali. It revealed the multiple facets of the actors involved in this conflict. It also allowed a better understanding of their influences on the evolution of the national, regional, or local security context and their interactions (O.P.H., 2018, p. 5).

Khattali, Sghaier, and Sandron (2018) convened the MACTOR method to understand stakeholder involvement in the local heritage conservation project. The study resulted in recommendations in the direction of consensus around the project purpose. A case study of twenty certified companies in the wilaya of Bejaia (Algeria) "addresses the games of alliances and power in the Quality Management System (QMS) by underlining the preponderant weight of each actor in the exercise of appropriation of the quality approach." (Meziani, 2018, pp. 133-134). Although there are divergences, the points of convergence remain sufficiently high to encourage the voluntary adhesion of the actors to the QMS.

Dockès et al. (2007) wanted to understand the changes underway and their consequences in a dynamic system such as agriculture. To do so, they borrowed from Michel Godet (2004) the MACTOR method and its software to answer the questions the authors wanted to ask themselves about the means of action or the power of the actors in relation to the different objectives and their respective positions (Dockès, et al., 2007, p. 14). After an iterative process, the authors estimate and position the farming profession in a liberal, controlled, and dynamic scenario, where the farmer is an important economic actor for the national economy. (Dockès, et al., 2007, p. 8). In 2015, Kanigui Yeo and Mohammed Benchekara studied localized agri-food systems (SYAL). The authors used the MACTOR and the *Attiéké* production system in Dabou to illustrate the trilogy between territory, agricultural activity, and agri-food products. In addition, to know and evaluate household accessibility to fish as a source of protein; Kakpo A. (2014) uses MACTOR to analyse the structure of influences and stakeholder positions in relation to objectives. In particular, he questioned the most prominent conflicting objectives and the stakes of cooperation versus competition.

Jaziri and Boussaffa (2011), in examining the medical tourism project in Tunisia, identified its specificities. This work follows that of Jaziri and Miralam (2019), where the authors had identified the possibilities for the development of health tourism based on the analysis of its interactions, conflicts, cooperation, strategies, and objectives. The article provides an overview of the stagnation of Tunisian health tourism. Following the analysis, the authors considered that with MACTOR the framework for constructing the health field is more elaborated (Jaziri & Miralam, 2019, p. 147). With this in mind, Jaziri and Alnahdi (2019) made the sustainability of this new industry a concern. However, the work of Jaziri and Bousaffa (2007) pointed out that this field remains undeveloped as a research topic. The degree of success of the project was studied by analysing the interaction of the actors of the Saharawi "tourism system" in Tunisia. Strategic issues were revealed, which actors have convergent or divergent objectives. This work thus laid the groundwork for understanding the behaviour of the actors who, as stakeholders, condition the success or failure of the tourism development project (Jaziri & Bousaffa, 2007). In 2010, the same researchers questioned the responsibility of tourism stakeholders in relation to sustainable development. Charfi, Ghédira, and Kammoun (2015) note that the MACTOR approach has contributed to highlight two public actors with their objectives associated with the development of the cities of Sousse and Sfax. In the field of territorial management, using the same tool, Diemer (2020) used the coronavirus (COVID 19) to propose a territorial evolution model.

In the search for a solution to improve the irrigation system in the locality of Nadhour (Tunisia), political interference affects the performance of the collective management of irrigation water and its exploitation in the irrigated perimeters (Bennasr & Bachta, 2018, p. 124). Governance was also the subject of the paper by Belfellah and Gassemi (2016). Their research led them to highlight a dual governance of the sector, composed of the administration represented by the ministry and the professional body. It is this interference that leads Kouassi (2018) to qualify the Ivorian state as an actor of disorder in the governance of protected areas. Taking the example of La Marahoué national park, the author places the State in the dock and, above all, confronts its responsibilities. Indeed, the author confirms the confusion and the turbulent game orchestrated by the representatives of the State, backed by its royal power, which seems to invade the governance of protected areas.

Conclusion

A reflection built around a methodological issue such as MACTOR shows that the understanding of interactions depends on an effective decision support tool in overall performance management. Therefore, it is clear that, although the consensus is yet to be built, empirically, MACTOR in its transversality contributes to the construction of these elements. Basically, each author, both academic and professional, testifies to the effectiveness of the tool and the perception of the results obtained. In the specific case of PPDs in Cameroon, the MACTOR method will be a relevant contribution to observe and understand the games of the actors (stakeholders), their strategies, and organization in the development action and their performance. Beyond that, it helps to understand how stakeholders can participate in the field of societal development. A tool that provides timely, accurate, and ready-to-use information. It is therefore interesting to see to what extent the research can contribute to the decartmentalization of stakeholder games, especially in development projects and programs in Africa.

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