



# **The Politics in Aspirations and transformation of the Agricultural Sector through Megaprojects in Cameroon**

**Ngochembo G. G. <sup>a\*</sup> and Lufung N. L. <sup>b</sup>**

<sup>a</sup> *Department of Agribusiness Technology in the College of Technology of the University of Bamenda, Cameroon.*

<sup>b</sup> *Agri. Dynamic Training and Research Institute, Ndop, Cameroon.*

## **Authors' contributions**

*This work was carried out in collaboration between both authors. Author NGG designed the study, conducted the interviews, and wrote the first draft of the manuscript. Author LNL managed the literature searches and supported in conducting the interviews and capturing key statements for the interviews. Both authors read and approved the final manuscript.*

## **Article Information**

DOI: 10.9734/JAERI/2023/v24i5555

## **Open Peer Review History:**

This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: <https://www.sdiarticle5.com/review-history/106318>

**Original Research Article**

**Received: 08/07/2023**

**Accepted: 13/09/2023**

**Published: 25/09/2023**

## **ABSTRACT**

Scholars have increasingly studied megaprojects owing to their transformational impact on society and businesses. However, more comprehensive empirical research on factors influencing the success or failure of mega-agricultural projects is needed. This study investigated critical factors affecting the success and failure of large-scale agricultural projects in Cameroon. Data were collected by interviewing experts involved (in) directly with the management of large-scale projects and consultants that offered services to such projects. The interview questions followed a semi-structured approach, where the respondent and the interviewer were allowed to add follow-up questions to clarify the predetermined questions on five project management categories identified

\*Corresponding author: E-mail: [Gaston.ngochembo@gmail.com](mailto:Gaston.ngochembo@gmail.com);

from the literature. The results indicated that large-scale agricultural projects' success depends on all 30 critical factors identified. Many critical success factors may be attributed to the sector's complexity. Critical factors are more likely to continue hindering large-scale agricultural project success. Therefore, achieving economic growth, food security, and poverty alleviation requires an alternative conception of mega projects. Novel methodologies are needed, and the suggestion is to focus on impact-driven components of such projects, such as the creation of seed farms, fertiliser plants, tractors and other machinery assembly units, which can assist in offering inputs and services to actors in the sector at a reduced rate as opposed to the current high cost of imported inputs and machinery.

*Keywords: Large-scale; projects; agriculture; management; Cameroon.*

## **1. INTRODUCTION**

The agenda to promote large-scale agricultural development projects began two decades ago to achieve rural development, food security and reduced food imports in Africa. This has been strongly promoted by the World Bank, African and Western Nations Governments, and supported by several bilateral donors, including The British Department for International Development, the United States Agency for International Development (USAID), and the International Fund for Agriculture (IFAD) etc. [1,2,3]. There were two intentions, one being that African governments would lease or sell land to foreign investors to bring about modern and efficient agricultural production, poverty reduction and increased food security. The second is that local agricultural development institutions will develop their capacities to produce more as they are fully aware of the local realities [4]. An important underlying assumption based on the intentions is that smallholder agricultural production is inefficient and outdated. Initially, the emphasis was largely on producing crops such as palm oil for biodiesel and sugar or maize for ethanol. Ultimately, the critical public debate on "food versus fuel" and other factors shifted towards food crop production [1,5]. Several donors, including the World Bank and IFAD, explored the possibilities of collaborating with African governments, investors and local agricultural development institutions to ensure that people in poverty would benefit as much as possible from large-scale agricultural projects. However, it is becoming widely recognised within the large community of researchers studying large-scale development projects in Africa that many of these projects never materialise (Engström and Hajdu, 2019). Some projects struggle for years to start, and some are intentionally and repeatedly delayed but unsuccessful [1,6,7]. Others that get off well never lead to the expected results regarding

economic growth, food security, and poverty eradication [8,6]. The trend of delayed or failed large-scale agricultural projects is becoming well-known; so far, studies have tried to understand this failure trend [1,2,5,9,10] (Hamann and Sneyd, 2021). More recently, the Agricultural Investment and Market Development Project (PIDMA), which the World Bank financed to the tune of US\$ 166.60 million and targeted cassava, maize and sorghum subsectors for 5 years witnessed a 22-month delay [11], while a 31-month delay was observed in the Agricultural Value Chain Development Project (PADFA), financed by IFAD at US\$ 26.29 million targeting rice and onion subsectors [8,12] in Cameroon. Such delays prohibit realising the expected economic growth, food security, and poverty eradication promises made to small-scale holders and the nation at large. Large-scale agricultural projects, as it seems, are implemented with experienced international institutions and experts, cutting economic development corridors into rural areas and pushing the frontiers of modernisation of the agricultural sector [13].

The Cameroon Vision 2035 plays an important role in this context, as it envisions transformation into a middle-income country. Cases from Cameroon are chosen to investigate the performance of large-scale agricultural projects in the context of rural development in general. The country is particularly important since it concentrates on mega agricultural projects. In line with an investor-friendly habit, the Cameroon government has attracted bilateral donors and has channelled funds to implement over 40 mega-agricultural projects while some are ongoing [4]. The resurrection of large-scale agricultural development is hard to understand in so far as megaprojects have long been criticised for notorious under-performance, delay and cost overrides, a phenomenon described as the megaprojects paradox' [9]. Against this

background, the question arises about explaining the renewed charisma for accepting large agricultural development projects, with often meagre economic growth, food security, and poverty eradication outcomes. The main objective of this research is to examine critical factors that significantly impact large-scale agricultural projects' success or failure, given the renewed interest in their acceptance. The paper contributes to the discussions on large-scale project development by highlighting an aspect that has attracted little attention. We propose to examine large-scale project development as part of politicians' aspirations, in which hope is produced and performed in public debates, negotiations, and project planning processes. This aspect was considered by Müller-Mahn et al. [13] in mega projects and is yet to be examined from the lens of large-scale agricultural projects.

## **2. LITERATURE REVIEW**

### **2.1 Dimensions of Large-Scale Project Success and Failure**

Large-scale or mega projects have been defined with reference to the project's capital cost; in this case, a project costing greater than one billion U.S. dollars is considered a large-scale or mega project [14]. Such projects may be viewed as substantial development plans of activities that are expensive, ambitious, and difficult to manage, with a tendency to fail to meet planned objectives [15]. The proportion of large-scale project delivery failure has been put as high as 66% in terms of overall on-time and too-budget delivery and terms of the utility of the megaproject once completed and in operation. The megaproject does not produce the intended societal benefits [16]. Mashegoana and Khatleli [17] estimated that 65% of megaprojects in South Africa have experienced a failure or delay in project delivery, while Abera [18] saw a 62% delay in projects sponsored by the Development Bank of Ethiopia. Project success and failure literature describes two significant components of project success: project success factor and project success criteria. While the former is circumstances that can influence the success (in)directly [19], the latter are the measures by which projects can be judged in terms of failure or success [20]. Irrespective of project motivation, project success is strongly linked to the vision of an organisation and its effectiveness, which is often evaluated over time. Five analytical criteria are commonly used to

provide a comprehensive yet simple picture of the status of a project. The criteria constitute the key analytical elements in the definitions of the term 'evaluation' adopted by the OECD and the European Commission, including effectiveness, efficiency, impact, relevance, and sustainability [21]. Based on these criteria, different dimensions of project success or failure have been examined in the literature, which also helps explain the renewed charisma for accepting large agricultural development projects.

The first is the political dimension in which the choices of large-scale projects are politically motivated by the political regimes and the state using top-down approaches to create an imagined future for citizens. State-led, top-down projects only work if they fit into local conditions. This argument is familiar and has attracted enormous attention from agricultural project scholars, especially those focusing on Africa [22,23,24,25,26]. Top-down approaches dominate large-scale agricultural project initiation and implementation and are often political [26]. It is suggested that many large-scale agricultural projects are initiated based on a strategic, politically convenient misrepresentation of initial costs and less attention to participatory processes involving the local communities as embedded in Hirschman's hiding hand principle [27]. This principle is about an unrealistic expectation that involves an overestimation of potential project impacts and exaggeration of project success, alongside an underestimation of project costs [25]. Flyvbjerg [28] describes this as a political uplifting whereby large-scale projects act as monuments to the supportive politician and provide political exposure, which may facilitate a politician's re-election chances (assuming the project is perceived or portrayed as a success). Scott [29] attributes the failure of mega projects developmental schemes to a combination of several elements stressing 'high modernism', which is a system of beliefs that depends on science and technology for the transformation of nature and the power of authoritarian states. Such projects must be more practical since they are driven by elite imaginations, ignoring local input, which is necessary and morally desirable to sustain them. Adenle et al. [30] argued that to sustain large-scale agricultural projects, actors must choose what crop, animal or technology to use, dependent on the containment of risks, rather than a survivalist strategy presented by the state. In one of the working papers of the African Development Bank that measures the

determinants of funds disbursement delays for large-scale projects, a strong correlation was made between the political regime and project delay that may likely lead to failure [31]. The same report pointed out that long gestation and delays at project start-up are prominent for agricultural sector projects and are a potential bottleneck for the Bank-funded operations. In Hannan and Sutherland [32] exploration of disagreement around urban megaprojects in Durban, South Africa, they criticised the project for frequent delays, lack of transparency, high economic risk, and accountability, and as 'elite playing fields. As a result, they attribute failure to conflicts between pro-poor and pro-growth orientations and between short- and long-term goals.

As long as political motivations remain primordial, designing large-scale projects is based on the aspirations of the leaders in power and the type of transformation they desire. Schindler et al. [25] discovered that large-scale projects are conceived based on an imagined future that can effectively transform different sectors and actors. Such an imagination is reported by Mišić and Radujković[33] that the conception of large-scale projects often overpowered the mindset of citizens longing for a true transformation of their environments. Müller-Mahn (2020) considered such large-scale projects as projects of aspiration as they portray dream environments that may be used by politicians in order to gain political positions irrespective of success or failure. Project conceptualisation that requires debate is less feasible in developing nations as it can easily lead to conflicts in the event that they touch on land rights [34,35]. Other conditions that large-scale project interference may lead to a crisis if protested include socio-cultural and ecological injustices, especially when political influence modifies the decision-making process [36,37].

The second dimension focuses on socioeconomic change that renders large-scale projects more vulnerable, especially when an estimated 40% of Cameroon's 27.2 million people live below the poverty line (of which 52% are women) recently, compared to 37.4% in 2014 [38]. Large-scale projects in Africa and Cameroon, in particular, started after independence, when national development followed visions of modernity and state-driven development to improve the socioeconomic landscape of national territories [29]. The implementations of such projects have been

problematic given that they are more ambitious and more pervasive, and they have the potential to reconfigure longstanding relationships that have animated social and economic systems [26]. The failure rate is high, supporting the increasing level of inequality in Cameroon [38].

Walsh and Walker [39], in their review of some socioeconomic variables influencing mega projects, discovered that time and cost considerations dominate popular press headlines. However, the enormity and complexity of many large-scale projects make it increasingly critical to give attention to and articulate other variables, including risk, culture, stakeholder and management aspects. Other scholars have pointed out some critical variables that significantly impact such a project's success or failure. Some of these variables included a wrong choice of concept, ignorance of project context and its features, including stakeholders' behaviour; less optimal monitoring and evaluations to identify and manage all risks; unreliable feasibility studies, resources mismanagement or miscalculation that can lead to cost overrun, more importance on bureaucracy and internal corporate mechanism, and corruption which is linked to leadership and organisational challenges [36,20,33,1,13]. The results of these variables investigated suggest that many issues, such as leadership and multi-cultural challenges, need more consideration, and it may become too late to control their impacts on the socioeconomic change expected from large-scale projects.

The third dimension focuses on the nature of the project. Salet et al. [40] claimed that the complexity of large-scale projects makes management and control complex. Reports from IFAD [8] and World Bank [11] revealed that large-scale agricultural projects implemented had several components, including rural road construction, warehouse construction, training of beneficiaries, provision of equipment and materials and marketing of local products. Such projects and other mega projects often follow specific standards and procedures, which are revealed in literature to influence performance positively [41]. Therefore, project owners must go through standardised procedures and other conditions to get their projects approved by multilateral donors (Ogunlana, 2010). The desire of owners to go through complex and challenging approval processes once for a huge project rather than several times for smaller ones may also have increased the number of large-scale

projects [34]. The project approval process has recently become time-consuming, and this determines the owner's choices of project scale, which often increases in components [33,37]. Ansar et al. [37] discovered that project owners turn to increase the size of projects under conditions of economies of scale. They argue that contrary to the owner's ambitious goals, the larger the project, the higher the risk and uncertainty level; they concluded that increasing project scales to benefit from the economic promise following standardised procedures is a recipe for failure. The nature of some large-scale project components requires complete state interventions (farm-to-market road construction), while others generally demand the participation of the private sector to actively provide expertise and funds as the state has gradually become less involved [15] except at the initiation stage of mega-agricultural projects which is still the responsibility of the state [31,11]. State involvement in the conception and signatory of project documents with other donors has been discovered to have a negative effect on success. Brunet [42] found that political and governance aspects, specifically governance frameworks, such as public policy, funding and investment, accountability of the public authorities engaged in megaprojects, conflict among different pressure groups, political rush, political interference and ethical issues are generally found to influence mega projects negatively. Even though large-scale agricultural projects today are in line with political agendas and are embedded in complex institutional settings and involve non-governmental and governmental institutions, the private sector and international funding agencies, resulting in a more decentralised and partially fuzzy governance structure required for success [43]. Exploratory factor analysis shows that five variables (coordination, design, training, monitoring, and institutional environment) correlate to project success, irrespective of the nature, according to Ika et al. [44]. They argued that the management and control of projects are vital variables determining project success from an operational perspective. However, Mišić and Radujković[33] suggested that no matter the nature of the project, focusing on the initial phases is even more important. Ashkanani and Franzoi [45] found that common success factors were a charismatic, highly professional project director; a clear vision, a solid political will; a sound financial setup from the start of the project based on a realistic agribusiness case, an independent and stable project delivery organisation; adequate procedures for legal

consents with fallback options; comprehensive and systematic stakeholder management with open communication; a stringent change management process will readily lead to success and in the end meet the promised of economic growth, food security, and poverty eradication. Each large-scale project faces characteristics of singularity; therefore, it is challenging to list the general success and failure factors that can apply to all large-scale projects without contextualising them. It is even more crucial to understand the perspective of success reported so far and raise awareness of the complexity of large-scale agricultural project delivery.

## **2.2 Perspectives on Success in a Large-Scale Agricultural Project in Cameroon**

Large-scale agricultural project success in Cameroon is based on the fundamental premise that any recommendations on improving such projects' performance must be based on real-life evidence and credible data from other megaproject performances compared. Credible publicly available sources included government and donor reports and direct stakeholder interviews.

### **2.2.1 Agricultural investment and market development project (PIDMA)**

The project is a partnership between the Cameroon government and the World Bank aiming to work closely with agricultural cooperatives to produce sufficient and quality cassava, maize and sorghum for agro-industries. The project aims to transform agriculture from subsistence and low-yielding cassava, maize and sorghum sub-sectors to high-yielding market-oriented and competitive value chains [11]. The project's final report revealed that it was approved on September 25, 2014, implemented the following year, and closed on July 31, 2021. The PIDMA had an overall budget of 170 million U.S. dollars, and US\$ 166.60 million was finally consumed [11]. It includes three components: (i) Support for the production, processing and marketing (focused on funding of sub-projects from producers' organisations, funding of essential public infrastructure sub-projects and supporting access to rural finance); (ii) Support to essential public services and technology transfer (focused on support to essential public services and improvement of agricultural technology transfer) (iii) Project Coordination and Management. The project outcomes and bank

performance were rated moderately satisfactory, given a 22-month delay, and the budget was partially exhausted [11]. Even though the project benefited producers and their organisations, farmers operating medium-sized family farms and processing enterprises, financial institutions, and large-scale agro-industry stakeholders, the targeted subsector (basins with significant agricultural potential) requires further investments to be transformed from subsistence and low-yielding crops to competitive, high-yielding, market-oriented value chains.

### **2.2.2 Agricultural Value Chain Development Project (PADFA)**

The project was developed within the framework of the Cameroon Government's emergency plan to fight rising food prices. It specifically aims to increase rice and onion production, improve the conservation, processing and marketing of these products, and build rice and onion producers' technical and organisational capabilities based on the economic national and international market potential. PADFA was approved on April 22, 2010; implementation started the following year for the cost of US\$ 24.29 million, with approximately US\$24.3 million used and the project was closed on December 31, 2017 [8]. Four regions were targeted: Extreme-North, North, North-West and West Regions. Just like PIDMA, the project had three components, which included (i) support to production, (ii) support to marketing and organisational development and (iii) project coordination and knowledge management with four expenditure categories: (i) civil works; (ii) equipment and small materials; (iii) service providers, studies, technical assistance and training; and (iv) salaries, allowances and operating costs (IFAD, 2018; Folefack et al., 2020). In this context, PADFA planned to support 1,190 groups of producers and reach nearly 24,000 producers, that is, 134,000 beneficiaries within the households and other operators in both subsectors [46]. The final report also revealed that the project effectively reached and surpassed its objectives in terms of the number of beneficiaries reached and the increment in productivity, assuring the program's extension to other areas of the country [8]. However, significant success or failure perspectives recognised in the report included, firstly, the project had a 31-month delay from the point of approval to closure, and there was haste in the execution of the works, raising the question of appropriation and sustainability. Secondly, the planning/scheduling of activities did not completely follow the production

calendar, which limited the view to sustainability. In addition, the sizing of the logistical support to provide to the beneficiaries in terms of equipment should be sized according to the production capacities of beneficiaries and their local realities. Finally, the accountability to beneficiaries raised more questions about the investment, making the project components less sustainable [12].

## **3. METHODOLOGY**

A qualitative interview was conducted with experts on large-scale agricultural projects and leaders of agricultural institutions that have benefited from PIDMA and PADFA projects to test the applicability of the theoretical findings presented above. These experts selected were those involved (in)directly with the management of the two large-scale projects, and consultants had at least offered services to large-scale agricultural projects. The interview gave a fruitful insight into the management process of such projects, with a particular focus on what variables drive success or failure. The interview was conducted face-to-face with 10 large-scale agricultural institution leaders and online via telephone with 10 consultants. The interviews were recorded and later transcribed to ensure only reliable and correct statements were used. The interview gave a fruitful insight into the management process of large-scale agricultural projects, focusing on five categories of factors that drive project success or failure. The categories suggested by the literature included;

The questions followed a semi-structured approach, where the respondent and the interviewer were allowed to add follow-up questions to clarify the predetermined questions. To start every category of factors of the interview, open questions were asked to obtain neutral answers before questions regarding specific aspects were asked to examine the literature review's identified factors. Questions were asked in several iterations to ensure that experts' agreement or disagreement on each factor was based on their comprehensive understanding of successful large-scale agricultural projects. (1) Do you agree that conceptualisation and execution strategies are a driving factor of successful agricultural project management? If so, please provide an example from your experiences in agricultural project management. If not, please explain why you disagree. Can you add another dimension to these factors? Please provide some examples. (2) Do some factors discussed in this list need to

be renamed? Please explain the reasons. (3) Can you give some suggestions on how to categorise these driving factors? To ensure the quality and reliability of interviews, the selection of interviewees considered the diversity of their backgrounds and professional expertise in large-scale agricultural projects. Key principles of ethical considerations identified by Easterby-Smith et al. (2018) were applied to protect the interest of the research participants and the integrity of the research results (accuracy and no bias).

#### **4. RESULTS AND DISCUSSION**

Participants had 12 and 32 years of experience minimum and maximum, respectively, in large-scale agricultural project management, and 18 years on average, while males were 70% and females 30%. Of the persons interviewed, 30% were senior consultants in large-scale agricultural projects, 10% were academic experts, 30% were presidents of large-scale farmer cooperatives, 10% were project managers, and 20% were Ministry of Agriculture and Rural Development experts. The background of the participants interviewed was well suited to provide crucial information on success and failure factors affecting large-scale agricultural projects.

Results of identified critical factors of agricultural projects' success or failure are shown in Table 2 under five categories, including conceptualisation and execution strategies, project planning and control, procurement management, organisational leadership and governance and political landscape, showing specific factors that drive or hinder success. All factors aligned with the selected categories were fine-tuned, and others not in line were integrated or excluded from the list. A total of 30 factors were eventually identified using an inductive approach to explore the driving factors of successful large-scale agricultural projects. Each identified factor was illustrated and explained with unique meanings, including the level of agreement by participants of the interview in constituting their level of agreement. All 30 factors identified were highly considered critical by at least 75% of interviewees. The following findings are a summary of statements from the interviewees.

##### **4.1 Conceptualisation and Execution Strategies**

Critical variables identified under conceptualisation and execution strategies were considered by

interviewees as interwoven in nature. Respondents considered project scope, baseline, strategic vision and participatory development as top-ranking success drivers in large-scale agricultural projects. This consideration is familiar; Merrow [16] suggested that project success depends on three scope dimensions (time, area and activities) and baseline as well as strategic vision.

*In pre-project planning, clarity in scope remains fundamental to success as it is often determined based on the current baseline of the subsector, strategic vision and participatory approach envisaged.*

*When a baseline is not established at the onset, project objectives are baseless and may not lead to any improvement in real terms.*

When the scope is too narrow or too broad, there are consequences for the project's success. The interview respondents generally believed that narrow scope means hasty implementation to catch up with time and limited impact on the subsector. In contrast, broad scope implies higher chances of resource misallocation or wrong usage during the off-season. In addition, a shared vision in large-scale agricultural projects mainly reflected the pursuit of long-term development of the sector [3]. The development of such a strategic vision is a participatory effort and communication between stakeholders with an understanding of the baseline, and this shared vision is a critical factor for project success, according to experts interviewed. There was agreement that stakeholders' lack of shared vision is a crucial reason for the stumpy economic growth, food security, and poverty eradication outcomes of large-scale agricultural projects. Some experts firmly pointed out that shared vision determined the development approach to implement such projects. Walsh and Walker [39] found that large-scale projects require participatory development approaches, which allow stakeholders to consider a range of possible traits, identify and evaluate adaptation and implementation options, and sequence them over time. According to experts, such approaches have assisted in determining the kind of participation in the project, emerging issues that are important to address, the relationship between stakeholders involved, gender dimensions and most importantly, reasons not to participate in the project.

**Table 1. Identified critical factors of large-scale agricultural project success from related literature**

<b>Category</b>	<b>Critical success and failure factors</b>	<b>References</b>
Conceptualisation and execution strategies	Scope, participatory development, optimal baseline, clear strategic vision	Merrow, [16]; Brüntrup et al., [3]; Folefack et al.,[12]; Walsh and Walker, [39]; Engström [1];
Project planning and control	Cost including taxes, schedule and time, stakeholder alignment, engagement and communications, market conditions, monitoring/review and lesson learned.	Mišić and Radujković, [33]; Mcmanus, [7]; Abylova and Salykova, [37]; Engström [1]; Ashkanani and Franzoi,[45].
Procurement management	Use of standardise procedure, time, process, policies, and mismanagement or miscalculation	Ika et al., [44]; Mišić and Radujković, [15]; Engström [1]; Ashkanani and Franzoi,[45]
Organisational leadership and governance	Organisation size, communication with stakeholders, top management support Organisational mode and structure, leadership style, culture, use of experts and training, project team cohesion, corruption, bureaucracy, contract management Post failure reviews	Mcmanus, [7]; Adenle et al., [30]; Engström [1]; Brunet, [42]; Müller-Mahn et al., [13] ; Ashkanani and Franzoi,[45].
Political landscape	Political influence, political aspiration and participation, instability, policy instrument	Flyvbjerg, [9]; Walsh and Walker, [39]; Engström [1]; Müller-Mahn et al., [13].



**Table 2. Critical factors influencing project success or failure**

<b>Category</b>	<b>Variable</b>	<b>Expert's agreement</b>
Conceptualisation and execution strategies	Scope	18 (90%)
	Optimal baseline	17 (85%)
	Clear strategic or shared vision	16 (80%)
Project planning and control	Participatory development	19 (95%)
	Cost including taxes	19 (95%)
	Schedule and time	19 (95%)
	Stakeholder alignment, engagement and communications	16 (80%)
	Risk and uncertainty	20 (100%)
Procurement management	Monitoring/Review and Lessons Learned	20 (100%)
	Use of standardise procedure	18 (90%)
	Time	19 (95%)
	Process	19 (95%)
Organisational leadership and governance	Policies and mismanagement or miscalculation	19 (95%)
	Organisation size	15 (75%)
	Communication with stakeholders	15 (75%)
	Top management support	19 (95%)
	Organisational mode	16 (80%)
	Organisational structure	16 (80%)
	Leadership style	15 (75%)
	Culture	15 (75%)
	Use of experts and training	15 (75%)
	Project team cohesion	15 (75%)
	Corruption	20 (100%)
	Post failure reviews	19 (95%)
	Bureaucracy	19 (95%)
Political landscape	Contract management	15 (75%)
	Political influence	20 (100%)
	Political aspiration and participation	19 (95%)
	Instability	20 (100%)
	Policy instrument	19 (95%)

## 4.2 Project Planning and Control

This category is essential for high success rates, especially in the agricultural sector with a high level of risk and uncertain environments. Effective planning processes with appropriate control tools should be employed in the early stages to deal with cost, complexities, uncertainties and scheduling to achieve the project objectives [15]. Various factors relating to project planning and control have been noted in megaprojects. First, cost, including tax considerations in the planning and control processes, has been argued to impact success. Experts examined cost from two angles: underestimation and overestimation of cost. Overestimation is generally observed in World Bank-sponsored projects compared to those sponsored by IFAD; therefore, the results achieved could have been more realistic if the estimates were more realistic. All experts interviewed were convinced that large-scale agriculture projects' success could have increased if taxes were reduced.

*A minimum of 12% of the total cost of services and equipment is paid as taxes, and about 31% of the cost of infrastructure and some equipment are paid as taxes. This is similar to interest on loans, which ranges from 8% to 24% per year paid to financial institutions, excluding 19.25% value added on the interest paid to the government.*

Nkamleu et al. [31] already pointed out that delays in the disbursement of agreed funds for large-scale projects of the World Bank remain critical factors that affect success. Therefore, in agriculture, cost is one of the most critical variables considered within project management. Some respondents revealed that cost overflow and little knowledge of the tax system affects newcomers in large-scale agricultural projects most, and they sometimes rely on the contractors for advice due to prior knowledge. Therefore, new methodologies must be developed to manage and execute mega projects to handle cost elements to improve the success rate.

Secondly, applicable standard planning and control are often excessively restricted and limited, in which changes in schedule and time are only sometimes suitable [7]. To respondents, schedules and timing make it difficult and inefficient to achieve reliable estimations, which sometimes means the project must be delayed to commence later in some cases next season,

increasing cost. Other challenges of schedules are time pointed out included, ability to adapt to changes, mitigate significant risks, and cope with uncertain events. These align with the discovery of Abylova and Salykova[37] that budget and schedule issues significantly impact the expected benefits and outcomes of mega projects. Engström [1] found that poor planning and lack of optimal control system lead to stalled or failed projects, which can have negative impacts on people living in poverty, not least small farmers living on or using the land leased by the investors even in large scale project that never happened. It was noted during the interviews that unrealistic time schedules imposed on contracts in an ever-changing environment for assignments to supply inputs (seed, fertilisers, agrochemicals, etc.) are another critical factor determining progress during a particular season or year. Any delay of a certain level means some actors have failed entirely, especially when inputs are imported, and the importation process takes time.

Thirdly, stakeholder alignment, engagement and communications simplify the methodologies and the project's overall planning and control process. It is common in large-scale projects to have more stakeholders who play critical roles in the project lifecycle (initiations, planning, execution and evaluation stages). Abylova and Salykova[37] suggested that optimal alignment, engagement and communication among them are essential for successful megaprojects because of the dynamism, complexity and uncertainty of the several relationships between stakeholders' communities. They further opined that understanding the requirements, needs, and objectives of all stakeholders involved in the project and optimally engaging them within the best environment using a two-way communication strategy can better contribute to the project's common goal. The respondents indicated that stakeholders in agricultural projects are often informed about the next megaproject but need to be aligned optimally at the different stages. A statement repeated by interviewees was that stakeholders are not involved in determining the budget nor in the approval of the budget; instead, the government determines the budget together with donors. In that way, the interest of other stakeholders needs to be considered, and the opportunity to present their interests is often not provided. The same has been reported by Ashkanani and Franzoi [45] in their research on an overview of megaproject management systems. They added that stakeholders' existing and sometimes

overlapping interests should be handled by balancing their interests through management and analysis methods, engagement initiatives and external influence (high political position or societal interest held by stakeholders), which often jeopardises the communication and synchronisation of people and resources.

*I think responding to all stakeholders' expectations and prioritising attention to their expectations would fill the gap in stakeholder alignment and engagement observed in agricultural projects.*

Respondents of the interview revealed that, in cases where stakeholders are optimally engaged, there is often the creation of community advisory groups and two-way communications in which responsibilities of stakeholders at all stages of the projects are fostered, including mutual trust and transparency.

*In large-scale agricultural projects that I have participated in, the government and donors often determine the pace of activities; they decide when to hasten or slow activities with little engagement of another party active in the field except for final evaluations. I think stakeholder alignment, engagement and communications eliminate conflict of interest, reduce disputes and create a collaborative environment where knowledge and information are exchanged.*

The fourth variable in the nexus of planning and control is evaluating risks and uncertainties, which is often poorly designed or evaluated in megaprojects [33,7,37]. Given the complexity of the agricultural sector in general, the identification, assessment and mitigation of risks and uncertainties are critical for large-scale projects' success. Ashkanani and Franzoi [45] suggested that risk management can assist in anticipating future consequences and timely support the mitigation or avoidance of risks before their occurrence. Common risks and uncertainties noted by experts included financial risks, new technologies, fluctuating market prices, regulatory regimes and unforeseen or unpredictable environmental conditions. These risks and uncertainties greatly influence project success. Respondents pointed out that certain financial risks have been transferred from donors and government to local project implementation stakeholders. This is observed in cost overruns, which come in cases where projects are delayed, and interest on loans keeps accumulating; it is

the local implementing stakeholders that pay for the cost of interest on loans, and this is typically ineffective, compromises the project's success, donors and government are less willing to accommodate such cost, and this usually jeopardises openness and collaboration among the project partners.

The last is monitoring/reviewing learned lessons and applications in new projects. The dynamic complexity and uncertainty of the connections between agricultural project component and stakeholder participation, review and lesson learned has been a concern. Participants of the interview recognised the tremendous efforts of donors in the review of large-scale projects to draw important lessons needed for subsequent projects. Yet, similar errors are made in every successive project. It was pointed out that reviewing project components for their performances and risk measures are unavoidable aspects of the project that may affect success. Engstrom [1] proposed close monitoring as a risk mitigation measure, which is never initiated by large donors who allow project activities in the hands of other stakeholders. More to that, the absence of close monitoring permits project team members to leave the project before completion, taking the history and knowledge with them, which impacts the overall performance of the megaproject. It is comfortable for interviewees to argue that lessons learned are only treated at the end of the final monitoring and evaluations and less incorporated in new large-scale projects, making review a critical factor for the success of new megaprojects.

### **4.3 Procurement Management**

Procurement management is critical for the overall success of large-scale agricultural projects as it leads to access and availability of inputs, equipment and materials needed for project implementation [45]. Most donors have well-defined procurement management plans with standardised procedures, processes and policies [11,8,44]. Megaproject failures are attributed to poor procurement processes and less friendly policies that can be costly. Interviewees argued that the open tender procurement policy in large-scale agricultural projects, where the cheapest bidder is selected to minimise cost, had facilitated the procurement of inputs, equipment and materials that are less compatible with the current landscape, which is somewhat more expensive in the long run.

*Partners have procured tractors whose spare parts are in China, and when there is a need for any replacement, they must first pay the shipping cost in addition to the cost of the part itself.*

Ashkanani and Franzoi [45] agreed that such an approach leads to the failure of megaprojects and proposed that the procurement process should be according to the type, area, scope, and size of the megaproject component in order to avoid a shortage of materials and resources, delays and cost overruns.

#### **4.4 Organisational Leadership and Governance**

Large-scale project success depends on the leadership and governance of the organisation involved in management. Many organisational and governance factors are critical in this regard; respondents of the interview strived to group critical variables into organisational (organisation size, organisational mode and structure, leadership style, top management support, communication with stakeholders, use of experts and training, project team cohesion positive culture), and governance (corruption, bureaucracy, contract management).

*I think large-scale, foreign-owned, highly mechanised agro-industrial institutions bring limited micro or macro-economic benefits to the local communities they are associated with. Most of them produce for export use technologies they promised to transfer, which have yet to be transferred.*

It was found that optimal local organisational structure and mode reduce megaproject complexities while enhancing performance as it allows top management support, training, communication with stakeholders, use of experts, project team cohesion and positive culture, which are required in uncertainty and risk mitigations [42]. Respondents highlighted these same variables as critical for success, especially top management support, stakeholder communication, use of experts, and project team cohesion.

*Top management support, especially from the government, is desirable, particularly the expectations of economic development, contribution to the import reduction, and increased farmers' revenue, therefore, poverty reduction.*

Some scholars concluded that project leadership is an essential dimension of project success due to its importance in organisational culture, work morale and project team learning. When leadership is less optimal, it often jeopardises the communication and synchronisation of people and resources. [47,13,48].

*I think the transformational leadership style can provide the capabilities required to survive large-scale projects by enhancing communication with stakeholders, fostering the use of experts and training of team members, and strengthening project team cohesion and positive culture, which are all critical for improved governance while increasing project performance.*

#### **4.5 Political Landscape**

The success of megaprojects has been linked to the political landscape, which has several factors that contributed to the failure, including political influence, political aspiration, political unrest, and policy instruments geared toward high modernism [29]. Respondents interviewed generally agreed that the political landscape factors compromise the large-scale agricultural projects' key elements (e.g. budget, schedule, scope), and a good number of actors are political incline, which increases the likelihood of political interference and current failure of projects to meet the promise of economic growth, food security, and poverty eradication outcomes.

Research respondents mostly linked the failure to political landscape factors, particularly for maize and rice projects in which billions are still invested in importation regardless of investment made in large-scale projects in both subsectors. Despite the failure to meet the promised increment in production volume, neither the government nor the donors have yet to re-examine the current political landscape in a bid to reduce failures. They also noted that the political aspiration of government officials warrants that they continue to line up dozens of mega projects in the agricultural sector subject to funding whilst facing political difficulties revolving around the management and governance of projects in the sector. In some cases, a number of megaprojects are deliberately delayed to serve other political purposes and at particular times. This notice is relatively common as Engstrom [1] reported a series of large-scale projects that never happened after being initiated and delayed as a deliberate strategy of the state to undermine development in coastal Kenya and thus

diminished its political relevance, irrespective of the political promise and the deception feeling among inhabitants of the region. Interviewees believed that the great promise of large-scale projects is a powerful tool that legitimises enormous external borrowing, notwithstanding the growing foreign debts. When donors approve projects, sometimes, there is a rush to push the financing through to show that the political regime is working towards its agricultural development goals.

*I think the unsatisfactory performance of megaprojects in agriculture is not unintentional, as it is part of the project logic, which is based on exaggerated promises, weak governance structures, and the absence of policy instruments needed to enforce available regulations.*

Some scholars have stated that successful megaproject experiences are derived from different aspects, including governance system, application of regulations, resource protection, absence of political inferences, and evaluation system. (Flyvbjerg, 2014; Engstrom 2020). It is, therefore, hard to select factors considered critical for the success or failure of large-scale agricultural projects. Any aspect, category or element within the megaproject context is of relative importance for success or failure, as politicians' aspirations dominate the conceptualisation and execution of such projects.

## **5. CONCLUSION**

Large-scale agricultural projects involve huge investments and significant implications at local and national levels. Experience has shown that such projects face challenges during implementation, and this leads to failure to achieve the promise of economic growth, food security, and poverty eradication outcomes. It has been argued that problems related to agricultural project management cycles contribute considerably to the over-arching problems faced in specific large-scale projects. Therefore, the various components and factors influencing such projects' success were investigated to identify critical factors causing failure. The findings identified five categories of factors influencing large-scale projects: conceptualisation and execution strategies, project planning and control, procurement management, and organisational leadership and governance. A total of 30 critical factors that affect project success were identified among these categories. This large number of critical

success factors may be attributed to the agricultural sectors' complexity and many stakeholders' involvement. Current critical factors are more likely to continue hindering large-scale agricultural projects' success rate. The use of large-scale agricultural projects to achieve the promise of economic growth, food security and poverty alleviation required alternative implementation approaches.

Novel methodologies must be developed to manage and execute large-scale agricultural projects to handle these challenges, and these may not necessarily be politically aspired. This can be done by addressing impact-driven components of such projects, which are sometimes integrated into large-scale projects. Some of the impact-driven components include the creation of seed farms, fertiliser plants, tractors and other machinery assembly units, which can assist in offering inputs and services to actors in the sector at a reduced rate as opposed to the current high cost of imported inputs and machinery. The study had some limitations. Without structured statistical data, the study was premised on the perception of experts expressed in an interview. Moreover, only site-related aspects of mega agricultural aspects were examined without touching on, for example, environmental factors. Irrespective of the limitations, the findings of the study contribute meaningfully to the field of study by identifying the main categories and critical factors that influence large-scale agricultural projects, as well as proposing a novel method for subsequent conceptualisation and execution of mega projects to minimise the adverse effects of critical factors and other risk in Cameroon.

## **CONSENT**

As per international standards or university standards, respondents' written consent has been collected and preserved by the author(s).

## **COMPETING INTERESTS**

The authors have declared that no competing interests exist.

## **REFERENCES**

1. Engström L. How can an Agricultural Investment that never Happened Affect People Living in Poverty? EBA Dissertation Brief 2020:01. January 2020. Expertgruppenförbiståndsanalys, Sverige.

2. Li C, Guo G. The Influence of Large-Scale Agricultural Land Management on the modernisation of Agricultural Product Circulation: Based on Field Investigation and Empirical Study. *Sustainability*. 2022;14:13967.
3. Brüntrup M, Absmayr T, Dylla J, Eckhard F, Remke K, Sternisko K. Large-scale agricultural investments and rural development in Tanzania: lessons learned, steering requirements and policy responses. In presentation at the “2016 World Bank Conference on Land and Poverty” The World Bank—Washington DC; 2016.
4. Numbu LP, Belyaeva ZS. The relationship between foreign direct investment and GDP in Cameroon (2000–2020). *R-Economy*. 2021;3,7(3):200-209.
5. Abesha N, Assefa E, Petrova MA. Large-scale agricultural investment in Ethiopia: Development, challenges and policy responses. *Land Use Policy*. 2022;117:106091.
6. Bertram N, Fuchs S, Mischke J, Palter R, Strube G, Woetzel J. Modular construction: From projects to products. *McKinsey & Company: Capital Projects and Infrastructure*. 2019;1:1-34.
7. Mcmanus T. Managing big projects : The lessons of experience'. *McKinsey Capital Projects and Infrastructure*; 2016. Accessed on August 23, 2023. Available:<http://www.mckinsey.com/industries/infrastructure/ourinsights/managing-big-projects-the-lessons-of-experience>.
8. International Fund for Agricultural Development; IFAD. PADFA - Rapport achèvement Rapport d'achèvement Rapport principal et appendices; 2018. Available:<https://www.ifad.org/en/-/document/padfa-rapport-achevement> Accessed on March 11, 2023.
9. Flyvbjerg B, Bruzelius N, Rothengatter W. Mega projects and risk. *Anatomy of ambition*. Cambridge: Cambridge University Press; 2003.
10. Engström L, Hajdu F. Conjuring ‘Win-World’ – Resilient Development Narratives in a Large-Scale Agro-Investment in Tanzania. *The Journal of Development Studies*. 2019;55:6:1201-1220.
11. World Bank. The Agriculture Investment and Market Development Project final report: 2022. Accessed on March 11 2023. Available:<https://projects.worldbank.org/en/projects-operations/project-detail/P143417>
12. Folefack AJJ, Tchoua LV, Muluh GA. Determinants of adoption of agri-environmental practices by maize producers organised in cooperatives in the Centre region of Cameroon. *International Journal of Biological and Chemical Sciences*. 2020;14(7):2434-2451.
13. Müller-Mahn D, Mkutu K, Kioko E. Megaprojects—mega failures? The politics of aspiration and the transformation of rural Kenya. *The European Journal of Development Research*. 2021;33:1069-1090.
14. Capka JR. Megaprojects -They Are A Different Breed. *Federal Highway Administration*; 2004.
15. Schindler S, Fadaee S, Brockington D. Contemporary megaprojects. *An Introduction. Environment and Society: Advances in Research*, 2019;10:1–8.
16. Merrow EW. *Industrial megaprojects: concepts, strategies, and practices for success*, Wiley, Chichester, UK; 2011.
17. Mashegoana G, Khatleli N. Mega construction projects in South Africa: Cultural complexity. In *Proceedings of the 11th Annual SACQSP International Conference*, Johannesburg, South Africa. September. 2019;16–17.
18. Abera K. Causes of project implementation delay: the case of projects financed by Development Bank of Ethiopia (Doctoral dissertation, St. Mary's University); 2023
19. Lim CS, Mohamed MZ. Criteria of project success: an exploratory re-examination. *International journal of project management*. 1999;17(4):243-248.
20. Cooke-Davies, T. The “real” success factors on projects. *International journal of project management*. 2002;20(3):185-190.
21. Magnussen OM, Samset K. Successful megaprojects: Ensuring quality at entry. *EURAM 2005 Responsible management in an uncertain world*. May 4-7<sup>th</sup> 2005.
22. Timmer CP. The Agricultural transformation. *Handbook of development economics*. 1988;1:275-331.
23. Pretty, J. Agricultural sustainability: Concepts, principles and evidence. *Philosophical Transactions of the Royal Society B: Biological Sciences*. 2008;363(1491):447-465.
24. Perkins DH. (). *Agricultural development in China*. Routledge. 2017;1368-1968
25. Ika LA. Beneficial or Detrimental Ignorance: The Straw Man Fallacy of

- Flyvbjerg's Test of Hirschman's Hiding Hand. *World Development*. 2018;103:369–382.
26. Harwood RR. A history of sustainable agriculture. In *Sustainable agricultural systems*(3-19). CRC Press; 2020.
  27. Flyvbjerg B. The Fallacy of Beneficial Ignorance: A Test of Hirschman's Hiding Hand. *World Development*. 2016;84:176–189.
  28. Flyvbjerg B. What you Should Know about Mega projects and Why: An Overview. *Project Management Journal*. 2014;45(2):6–19.
  29. Scott JC. Seeing like a state. How certain schemes to improve the human condition have failed. Yale University Press, New Haven and London; 1998.
  30. Adenle AA, Wedig K, Azadi H. Sustainable agriculture and food security in Africa: The role of innovative technologies and international organisations. *Technology in Society*. 2019;58:101143.
  31. Nkamleu GB, Tourino I, Edwin J. Always Late: Measures and Determinants of Disbursement Delays at the African Development Bank, Working Paper Series N 141, African Development Bank, Tunis, Tunisia; 2011.
  32. Hannan S, Sutherland C. Megaprojects and sustainability in Durban, South Africa: Convergent or divergent agendas? *Habitat International*. 2015;45:205-212.
  33. Mišić S, Radujković M. Critical drivers of megaprojects success and failure. *Procedia Engineering*. 2015;122:71-80.
  34. Merrow EW. Understanding the outcomes of megaprojects. A quantitative analysis of the civilian large-scale project. The RAND Corporation, Santa Monica; 1988.
  35. Ansar A, Flyvbjerg B, Budzier A, Lunn D. Big is fragile: An attempt at Theorizing Scale. In *The Oxford Handbook of megaproject management*, ed. B. Flyvbjerg, 60–95. Oxford: Oxford University Press; 2017.
  36. Kharbanda OP, Pinto JK. How To Fail In Project Management (Without Really Trying). *Business Orizon*. 1996;3:45-53.
  37. Abylova V, Salykova L. Critical success factors in project management: a comprehensive Review 1, 2. *PM World Journal*. 2019;8:1-13.
  38. Epo BN, Baye FM, Mwabu G, Etyang MN, Gachanja PM. The Nexus between Poverty, Inequality and Growth: A Case Study of Cameroon and Kenya. *Journal of African Economies*. 2023;32(2):113-146.
  39. Walsh A, Walker PA. Looking beyond time and cost influences in megaprojects. Presented at COBRA at ARES Conference April 2020, Sanibel Harbour Marriott Resort and Spa - Fort Myers, Florida, USA; 2020.
  40. Salet W, Bertolini L, Giezen M. Complexity and uncertainty: Problem or asset in decision-making of mega infrastructure projects? *International Journal of Urban and Regional Research*. 2013;37(6):1984–2000.
  41. Kutilla M, Jokela M, Fruttaldo S, Montanari R, Pallaro N. Project ownership and steering committee challenges in an international context. *Recent Advances in Economics, Management and Development*. Proceedings of the 2014. International Conference on Economics, Management and Development (EMD 2014) Interlaken, Switzerland. 2014;35:35-40.
  42. Brunet, M. Making sense of a governance framework for megaprojects: The challenge of finding equilibrium. *International Journal of Project Management*. 2021;39:406–416.
  43. Mosley J, Watson EE. Frontier transformations: development visions, spaces and processes in Northern Kenya and Southern Ethiopia. *Journal of Eastern African Studies*. 2016;10(3):452–475.
  44. Ika LA, Diallo A, Thuillier AD. Critical success factors for World Bank projects: An empirical investigation. *International Journal of Project Management*. 2012;30(1):105-116.
  45. Ashkanani S, Franzoi R. An overview of megaproject management systems. *Management Matters*. 2022;19(2):129-148.
  46. International Fund for Agricultural Development; IFAD President's Report – Commodity Value Chain Support Project: Commodity Value-Chain Development Support Project. 2010. Available: <https://www.ifad.org/en/web/operations/-/project/1100001439> Accessed on March 11, 2023.
  47. He Q, Xu J, Wang T, Chan AP. Identifying the driving factors of a successful megaproject construction management: Findings from three Chinese cases. *Frontiers of Engineering Management*. 2021;8(1):5-16.

48. Wang G, Wu P, Wu X, Zhang H, Guo Q, Cai Y. Mapping global research on Sustainability of megaproject management: A scientometric review. *Journal of Cleaner Production.* 2020;259:120831.

© 2023 Ngochembo and Lufung; This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

*Peer-review history:*

*The peer review history for this paper can be accessed here:  
<https://www.sdiarticle5.com/review-history/106318>*