Innovation Management and Overall Business Performance: Exploratory Study in Chadian Context in the Two Logones

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Abstract

Studies on innovation management, carried out so far, have clearly revealed its importance for the performance of companies. However, its control of overall performance combining organizational, social, economic, societal, and environmental dimensions remains little explored. Even research on its model combining integrated innovation projects, to explain the overall performance is few. To understand the relevance of conducting inclusive innovation projects, a study of companies in the agri-food sector was carried out. We have deployed the mixed methodology. Data production was conducted through 11 semi-structured interviews and 90 surveys per survey. The deconstruction approach of innovation management, from organizational innovation to environmental innovation, was used. The results showed that organizational innovation plays a decisive role in organizational, financial, and overall performance. De, technological and social innovations increase economic performance and contribute to the improvement of overall performance. On the other hand, societal and environmental innovations are less relevant for organizational and financial performance. However, they play a decisive role in the management of climate change and the reputation of the organization with society. But, above all, it is the combination of the four types of innovation that constitutes better actions for the overall performance of the company. The article is useful for researchers who will find renewed definitions of each configuration of innovation projects, performances, proven items, and that prove to be more relevant. While managers and consultants will find new performance factors to effectively improve and enhance the implementation of innovation projects. This article is part of resource theory and performance theory and suggests that there is a differentiated relational contingency to each of the factors.

Keywords: management, innovation, performance, overall performance, company

1. Introduction

All companies need to conquer market shares or new markets to grow and be sustainable. To achieve these objectives, innovation projects are proving to be the best trajectory, but also an imperative and, even, an obligation (Bertheau & Garel, 2015; Chassagnon & Haned, 2013; Cordellier1, 2011).

Indeed, although it varies according to nature and degree, innovation raises a lot of interest while generating various definitions (Bertheau & Garel, 2015; Celhay & Cusin, 2011; Cordellier1, 2011; McLaughlin & Kennedy, 2016). Perceived as methods *of optimizing productive efficiency*, *innovation projects* allow the company to continuously improve its practices in order to survive(Blindenbach-Driessen & Ende, 2010; Deschamps & Nelson, 2014). They are thus seen as a key lever for the company's overall performance and positioning in the competitive environment (Gaglio, 2011; Godet, Durance, & Mousli, 2010b). As a result, without innovation projects, the company's growth would be impossible (Cordellier1, 2011; Couret, 2011; Germain & Trébucq, 2004).

However, since innovation is synonymous with novelty, uncertainty and therefore risk, it requires a colossal investment and the right environment to grow (Godet, Durance, & Mousli, 2010a; Greenwood, 2003; Groff, 2009; Gu & Gera, 2004). This is how some research (Ahounhin & Su, 2018; DOHOU & BERLAND, 2010; Quairel, 2006) temper these links with overall performance, by not validating a direct relationship.

To be seen, the effects of innovation projects on the performance of the organization are therefore far from obvious and are not necessarily unanimous. Understanding innovation project management practices is important but measuring its effects on the overall performance of the company is also essential for a vision of a more development strategy. Therefore, it seems relevant to answer the following question: what is the explanatory power of innovation projects to the overall performance of the organization?

The objective of this research is therefore to propose a model for measuring the explanatory power of innovation projects on the overall performance of the organization. More specifically, this article has three objectives: (i) to present the portrait of the theoretical framework of innovation management practices and overall performance; (ii) measure the level of explanatory power of each type of innovation (organizational, technological, social, and societal) on the different facets of overall performance; (iii) validate the conceptual model and formulate implications.

2. Theoretical Framework of the Study

2.1 Innovation Management

The issue of innovation is at the heart of economic, social and societal development initiatives. It emerges with the origin of economic analysis, but remains unclear as to its impact on economic growth. Thus, facets of economic theories try to integrate this essential variable in the form of endogenous growth theory by trying to find rational explanations (Ayerbe, 2006; Barlatier, Giannopoulou, & Pénin, 2016; DOHOU & BERLAND, 2010). In this perspective, for some authors (Bertheau & Garel, 2015; Botton, Jobin, & Haithem, 2012; Gaglio, 2011), the concept of innovation is perceived, in the sociological sense, as the sustainable improvement of the overall economic efficiency of an organization. For other currents of thought (Capron & Quairel, 2006; Grimand, Derumez, & Schäfer, 2014; GRIMAND, VANDANGEON-DERUMEZ, & SCHÄFER, 2014; Noailles, 2011)is a global and sustainable value creation for society. This value is considered for the entire social body of the company (Prenantes Parts). On the other hand, the unpredictability of innovation success (Mignenan, 2021)which seems to be an acquired result of research, is a clear obstacle to determining its value for the organization and for society (Bloch & Morin-Delerme, 2011; Böhle, Bürgermeister, & Porschen, 2012; Mignenan, 2020). Highlighting the value of innovation seems relevant and credible.

In any case, however, there is no consensus among the authors (McLaughlin & Kennedy, 2016; Mignenan, 2021). According to the Schumpeterian perception, innovation is akin to a qualitative change that induces changes within the entity itself (Damanpour & Aravind, 2015; McLaughlin & Kennedy, 2016; Noailles, 2011). It is a creative erosion that revolutionizes from within the organizational, economic, social, societal and environmental structure by gradually eliminating the old elements and creating, continuously, the new most effective (Damanpour & Aravind, 2015; Dubouloz & Bocquet, 2013). While the (Damanpour & Aravind, 2015; Dubouloz & Bocquet, 2013; McLaughlin & Kennedy, 2016; Noailles, 2011)Oslo Manual (2005), inspired by the Schumpeterian current of thought, reveals that *"an innovation is the implementation of a new or significantly modified product or process, a new business technique or a new approach in company practices, workplace organization or external relations"* (2005 : 46). Noting the shortcomings in the Schumpeterian and OECD definitions, Meddeb (2010) proposes a definition according to which: *"innovation is the systematic application of knowledge from all scientific disciplines or creative imagination to some or all of the components of productive and commercial flows with a view to increasing added value"*. However, the results of recent work(Berger-Douce, 2014) have made it possible to understand that innovation must be managed in an integrated way and therefore considered in a transversal way in relation to all the key functions and activities of the company. This implies a kind of permanent tension between the main players, but also, a new approach to be deployed.

An examination of these different definitions reveals some limitations, in particular the value dimension of innovation. This leads us to propose, in the context of this article, a specific definition according to which, *"innovation is perceived as the opening of a new perspective and horizon through the systematic operationalization of new knowledge to deliver a good or service with economic and social values likely to meet a specific need of society, but also to increase economic, financial, social and societal performance."*

2.2 Innovation Projects

The literature reveals many approaches to innovation projects, the main ones being, among others: organizational, social, technological, societal/environmental innovation projects, etc. (Ayerbe, 2006; Celhay & Cusin, 2011; Mignenan, 2021).

Indeed, *organizational innovation projects* concern new planned and organized actions which aim to significantly change working methods, adopt a new model, or significantly strengthen the existing knowledge management

system, etc. (Chassagnon & Haned, 2013; Damanpour, Walker, & Avellaneda, 2009; Mignenan, 2021; Zaied, Louati, & Affes, 2015). On the other hand, *technological innovation projects consist of* introducing a new or significantly improved product (good or service) into the market, except for the simple resale of such a product (Ayerbe, 2006; Damanpour & Aravind, 2015; Dubouloz & Bocquet, 2013). While social and *societal/environmental innovation projects* focus on actions that generate new ideas to meet social and societal needs (GRIMAND, VANDANGEON-DERUMEZ, et al., 2014; Hillier, Moulaert, & Nussbaumer, 2004; Maurel & Tensaout, 2014) In other words, these are innovations that are for society and strengthen the capacity of the organization. (Berger-Douce, 2014). In addition, they encourage the development of new initiatives to address societal or environmental challenges (Ayerbe, 2006; Noailles, 2011; Roy, Robert, & Giuliani, 2013).

In light of the above, some authors(Bertheau & Garel, 2015; Cordellier1, 2011) suggest that each type of innovation project has different attributes, determinants and impacts on the dimensions of the organization's performance. Thus, by studying the adoption of three types of innovation projects (administrative, technological and marketing), several research projects (Deltour & Lethiais, 2014; DOHOU & BERLAND, 2010; Germain & Trébucq, 2004; Hillier et al., 2004; Maurel & Tensaout, 2014) highlight that the adoption of certain types of innovation projects, over time, leads to the construction of distinctive skills that positively influence the organizational, social and economic performance of the company.

Thus, managing innovation projects is not only applying driving techniques, practices, and know-how, but calls for the art of managing, therefore choosing, combining (Damanpour & Aravind, 2015; Maurel & Tensaout, 2014; Roy et al., 2013). This also questions the manager's posture and forces him to combine the universal approach of Taylorian culture (hard positivist, rationality) which considers the project from the angle of the ontology of being with social perception (constructivist, flexible) which perceives the project according to the ontology of becoming. He calls for a team that works in a network, by barycenter, for a shared leadership, which creates meaning and not gives it. For dominant currents of thought, hybridization of universal and contingent perspectives of project management, the overall performance of the company is satisfactory, thus encouraging the adoption of such a strategy (Ika, 2007, 2009; Ika & Hodgson, 2014).

2.3 Overall Business Performance

Originally understood on the strictly economic and financial level, performance today implies the concept of corporate "social responsibility" (Grimand, Derumez, et al., 2014; GRIMAND, VANDANGEON-DERUMEZ, et al., 2014; Mignenan, 2021; Noailles, 2011). This broader vision of performance refers to the notion of "overall performance", which aims to go beyond its segmented definition (Germain & Trébucq, 2004) In this perspective, some authors (Germain & Trébucq, 2004) define global performance as *the aggregation of economic, financial, social and societal/environmental performance*. Other authors (Bertheau & Garel, 2015; DOHOU & BERLAND, 2010) with a little broad vision think that the term "overall performance" is used to describe the financial, economic and organizational health of the company. In any case, this notion is, like innovation management, one of the major concerns of SMEs. As a result, the quest for global performance undeniably involves questioning the ability of organizations to combine creativity and innovation and the deployment of management practices. This leads us to mobilize the current of dynamic capacities in the continuity of the work of (Berger-Douce, 2014)

Beyond these assertions, the notion of "overall performance" implies the field of strategic management and is conceived, in the sense of several authors (Couret, 2011; DOHOU & BERLAND, 2010), in terms of the competitiveness of the company. More concretely, it is the balance between the three main dimensions mentioned above. This is why some authors (Capron & Quairel, 2006) suggest that classic financial tools, such as the financial balance sheet, show, in the current context of hyper-modernity, their limits. On the other hand, tools dedicated to overall performance must reconcile those that generate economic performance (rate of return, net present value, payback period, etc.), social success (staff well-being), environmental performance (respect and protection of the ecosystem) and societal performance (development of the territory and role of the company in society). (AFNOR, 2003; Berger-Douce, 2014; DOHOU & BERLAND, 2010; Grimand, Derumez, et al., 2014; GRIMAND, VANDANGEON-DERUMEZ, et al., 2014; ISO14001, 2017; Maurel & Tensaout, 2014; Mignenan, 2021; Noailles, 2011). Finally, approaching in the same vein, some authors(St-Pierre & Cadieux, 2011) propose to investigate the perception of the overall performance of organizations by broadening the spectrum to include indicators relating to the satisfaction of external stakeholders such as customers and suppliers, but also internal to better understand the reality of overall performance.

2.4 Innovation Project Management and Overall Performance

Innovation projects will be addressed according to their organizational (organizational innovation), technological (product/process innovation), social (social innovation) and societal and environmental aspects (societal and environmental innovation). While overall performance will be addressed through its organizational, economic/financial, and social as well as societal/environmental dimensions.

Indeed, the Management of Organizational Innovation Projects (ManINnovOrgProj.), also called "managerial or administrative innovation projects" corresponds to the application of new strategies, improved management practices (Mignenan, 2021)procedures, organizational structures such as total quality management, or Lean Management, in an organizational environment(Damanpour & Aravind, 2015) . Following this reasoning, the results of some work(Bertheau & Garel, 2015; Cordellier1, 2011; Mignenan, 2021) have established a positive and meaningful relationship between innovation project management practices and the organization's performance. This research reveals that organizational *innovation projects* positively influence the organizational performance of the company.

In addition, literature (Ayerbe, 2006; Bertheau & Garel, 2015; Mignenan, 2021) on the link between innovation and performance deals mainly with technological innovations. Recent empirical studies (Bertheau & Garel, 2015; Cordellier1, 2011; Noailles, 2011) demonstrate that technological innovation projects create sustainable competitive advantages. They also have a strong explanatory power for the growth of turnover and/or productivity. In addition, some work (DOHOU & BERLAND, 2010; Germain & Tr ébucq, 2004; Mignenan, 2021) point out that their impact on overall performance is even greater when coupled with organizational and social innovations.

Similarly, the link between economic and financial performance and innovation projects has been widely demonstrated, empirically, for technological innovations, notably through several studies (Ayerbe, 2006; Bertheau & Garel, 2015; Mignenan, 2021), but it remains relatively unexplored for organizational, social and societal innovation projects(Dubouloz & Bocquet, 2013)

Also, some research (Ayerbe, 2006; Bertheau & Garel, 2015; Cordellier1, 2011; Mignenan, 2021) show that, in the manufacturing industry, companies that prioritize innovation projects significantly improve their performance when the combination of these new initiatives is complete. Approaching in the same vein, other works (Berger-Douce, 2014; Chassagnon & Haned, 2013; Das & Joshi, 2012; Mignenan, 2021; Noailles, 2011) show that technological innovation projects are more economically advantageous than organizational and social innovation projects.

Agreed with several authors (Ayerbe, 2006; Berger-Douce, 2014; Bertheau & Garel, 2015; Deltour & Lethiais, 2014; Mignenan, 2021; Noailles, 2011), innovation projects, especially organizational ones, are considered a high-performance work model and therefore an important source of productivity gains and competitive advantages for companies. These authors highlighted the different configurations of innovation, including organizational, social, and technological to explain the overall performance of the organization. Another group of authors(Akrich, Callon, & Latour, 2009; Blindenbach-Driessen & Ende, 2010; Maurel & Tensaout, 2014) further emphasized the causal links between technological innovation and the organization's economic performance. Some works (Ayerbe, 2006; Berger-Douce, 2014; Bertheau & Garel, 2015; Damanpour et al., 2009; Deltour & Lethiais, 2014; Roy et al., 2013) highlighted the causal effect between social and societal innovation and company performance. In any case, the organization's efforts to innovate are seen as an investment to generate positive spin-offs (Garel & Rosier, 2008) From the same perspective as the previous ones, several studies postulate that the link between innovation and performance is often apprehended in a positive way (Bertheau & Garel, 2015; Maurel & Tensaout, 2014).

However, some work tempers these links, by not validating direct relationships (Bertheau & Garel, 2015; Maurel & Tensaout, 2014). In the same vein, for other authors (Bertheau & Garel, 2015; Das & Joshi, 2012), innovation and performance are linked in a curvilinear way: only a moderate innovation policy, neither too strong nor too weak, would be beneficial to the company.

Result of the exploration of the literature, it turns out relevant to propose, for purposes of synthesis, the figure 1 below who schematize the links (arrows) between the different constructs.

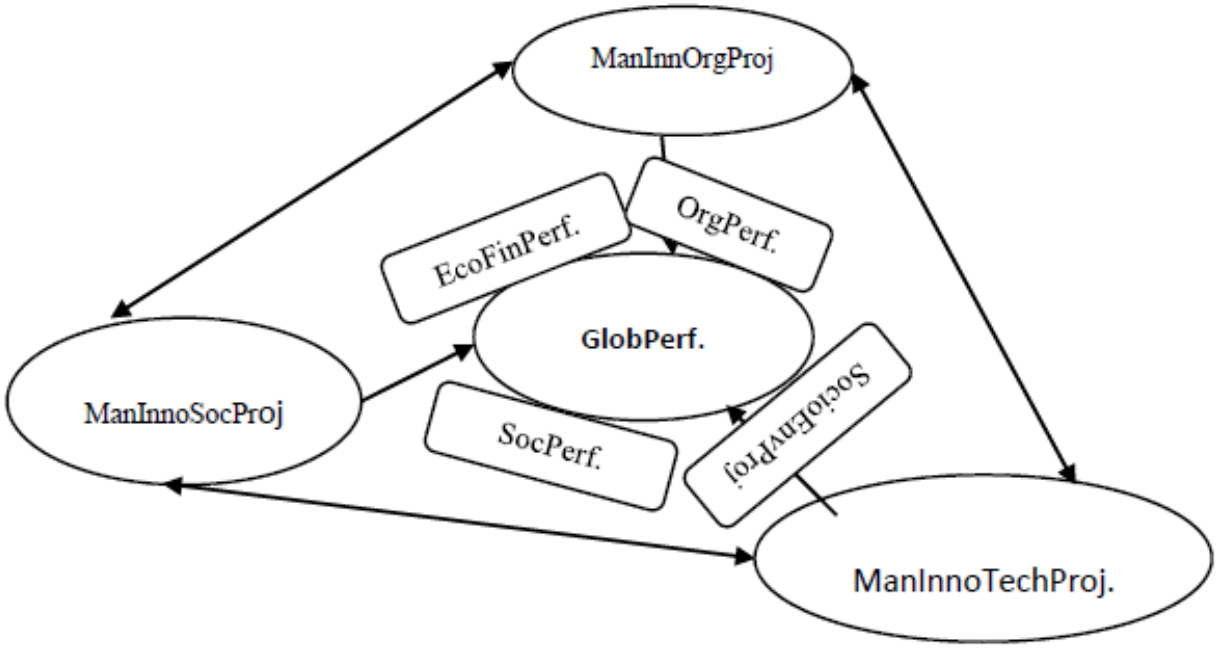

Figure 1. Relationship between innovation projects and overall performance

Source: Compiled data from the literature, 2021

Legend and rating: *Management of Social Innovation Projects (ManPrInnoSoc.), Management of technological Innovation Projects (ManPrInnoTech.), Management of Organizational Innovation Projects (ManInnOrgProj.) Economic performance (EcoPERF), Social performance (PerfSoc.), Societal/environmental performance (PerfEnv.), Overall performance (PerfGlob.).*

2.5 Limitations of Literature and Definition of Constructs

2.5.1 Substantial Boundaries

The literature explored has well demonstrated the explanatory power of innovations in the performance of companies. However, it ignores the explanatory power of combining different categories of innovation to explain overall performance of a multidisciplinary nature. It is this grey area that motivates our research and, therefore, this is what it will strive to answer.

2.5.2 Definition of Constructs

Figure 1 contains constructs that will be used in the development of the conceptual model. This sequence aims to illuminate these different constructs. This essential phase of delimitation of the contents of the different constructs of the conceptual model is based, at the same time, on literature (Brodhag, Gondran, & Delchet, 2004; Damanpour & Aravind, 2015; Mignenan, 2021) and the items of the SD21000 repository(AFNOR, 2003).

- **Management of Organizational Innovation Projects**

Organizational innovation is akin to the introduction of a new and improved method or technique into the company's management practices. The main purpose of organizational innovation is the organization of work, external relations (cooperation, alliance strategy, etc.), etc. It is related to the human aspects and focuses on the management style of the company. Also called "managerial or administrative innovation", it is, above all, defined as opposed to technological innovations since it does not contain physical elements (Ayerbe, 2006; Dubouloz & Bocquet, 2013; Mignenan, 2021). Its field covers work management practices, organizational methods, organizational development and therefore the culture of the company.

- **Management of Technological Innovation Projects**

Technological innovation project management is the process by which scientific and technical knowledge is combined to create or adopt a new or improved product. It is also perceived as a mix of knowledge whose purpose is

to deliver a product likely to satisfy the needs of the current market or predict those to come(Ayerbe, 2006; Mignenan, 2021).

- **Management of Social Innovation Projects**

The management of social innovation projects focuses on the application of practices to new solutions to new social problems or those poorly satisfied by the actions implemented by stakeholders. These projects concern both the product or service, as well as the mode of organization, distribution, in the different business lines of the company.

- **Management of Societal/Environmental Innovation Projects**

There are many instruments used by standardization bodies (ISO 14001: 2015 and 2017) to translate and communicate "environmental registration" (AFNOR, 2003; ISO14001, 2017). However, categorizing these management tools is not easy, as pointed out (Capron & Quairel, 2006) In order to decline the different facets of new environmental practices, we have mobilized those listed by (Brodhag et al., 2004) and(Chassagnon & Haned, 2013)supplemented by the operationalization proposed by the SD21000 standard (AFNOR, 2003; ISO14001, 2017). Thus, it is a question of scrutinizing the application of management practices to new environmental protection initiatives within agri-food companies, a field of maneuver for research.

- **Organizational Performance**

It is both multidimensional and contingent. It is multidimensional because "different action variables and criteria can be used to assess their relevance" (Ayerbe, 2006; Bertheau & Garel, 2015; Mignenan, 2021). Indeed, organizational performance corresponds to the results related to human resources management, especially in the main functions and activities.

- **Economic and financial Performance**

Literature (DOHOU & BERLAND, 2010; Maurel & Tensaout, 2014; Mignenan, 2021) on financial performance focuses on the creation of sustainable competitive advantages, revenue growth and/or productivity. In accordance with the items mobilized by the authors above, we retain as a definition, all the financial and accounting results of performance to facilitate comparisons based on profitability (Quairel, 2006; St-Pierre & Cadieux, 2011).

- **Social Performance**

It corresponds to the different degrees of satisfaction of the organization's staff. According to several authors (Cordellier1, 2011; Couret, 2011; Maurel & Tensaout, 2014; Mignenan, 2021), social performance is defined by the degree of satisfaction of the entire human capital of the company. According to the results of some work (Capron & Quairel, 2006; Couret, 2011; Maurel & Tensaout, 2014), she refers to equal treatment, good working conditions, respect for human rights and therefore a better social balance sheet.

- **Societal and environmental Performance**

It concerns the implementation of citizen projects for the preservation of the environment, in particular the transformation of industrial waste (AFNOR, 2003; ISO14001, 2017). This concept has been operationalized with the list of items proposed in the SD 21,000 repository (AFNOR, 2003; Grimand, Derumez, et al., 2014; GRIMAND, VANDANGEON-DERUMEZ, et al., 2014; ISO14001, 2017), supplemented by items proposed by some authors (Couret, 2011; Daudigeos & Valiorgue, 2010; Maurel & Tensaout, 2014).

- **Overall Performance of the Organization**

This construct is, by definition, multidimensional. Given its complexity, social, economic/financial, societal and environmental determinants (Capron & Quairel, 2006; Celhay & Cusin, 2011; Chassagnon & Haned, 2013) are, but also, its manifestations (reflective indicators) are assessed using the criteria mentioned by some authors (Celhay & Cusin, 2011; Chassagnon & Haned, 2013)namely (i) turnover growth (economic dimension), (ii) the search for knowledge exchange and absence of conflict (social dimension, (iii) respect for ethical values, (iv) pollution risk management, (v) participation in the general interest (societal dimension and environmental). These elements (formative and reflective indicators) were proposed to the experts to assess the societal practices chosen according to their hierarchy (Maurel & Tensaout, 2014) In the following lines, we will analyze the conceptual framework and research hypotheses.

2.6 Conceptual Framework and Research Hypotheses

2.6.1 Conceptual Model

The objective of this study is to estimate the effects of different categories of innovation projects on the overall performance of organizations. The overall performance measurement model shown in Figure 2 explains the interactions between innovation project management practices, performance dimensions and overall performance. This model may not be comprehensive in terms of the variables/indicators involved. It would require other structural relationships for the estimation of its parameters. In the case of overall performance, these relate to the management practices of innovation projects associated with the four dimensions of overall performance. They are called management of social, organizational, and technological innovation projects. These different managerial dimensions generate organizational, economic, social, societal, and environmental performance, considered as intermediate performances in relation to the overall performance objective.

The articulation of the various variables selected is based on the "Structure-Behavior-Performance (SCP)" paradigm (Celhay & Cusin, 2011; Chassagnon & Haned, 2013). Nevertheless, the conceptual model differs in some respects from the SCP model both in the content of the variables/indicators, but also in the articulation of the components of the SCP analysis.

For the meaning of the relationships between the different variables, stakeholder theory predicts, in accordance with the literature (Ayerbe, 2006; Berger-Douce, 2014; Bertheau & Garel, 2015; Das & Joshi, 2012; Deltour & Lethiais, 2014; Grimand, Derumez, et al., 2014; GRIMAND, VANDANGEON-DERUMEZ, et al., 2014; Maurel & Tensaout, 2014; Noailles, 2011; St-Pierre & Cadieux, 2011; Zaied, Louati, et al., 2015) a positive causal relationship between innovation project management practices and organizational performance. As for the resource-based approach, it predicts that management practices for organizational and social innovation projects (Ayerbe, 2006; Bertheau & Garel, 2015; Dubouloz & Bocquet, 2013; Hillier et al., 2004) positively and significantly influence organizational, economic/financial, and social performance. These two performances, combined with societal–environmental innovation project management practices, would explain overall performance, as suggested by CSR models (Grimand, Derumez, et al., 2014)

In view of this difference contributions, the conceptual model of overall performance is represented by the Figure 2.

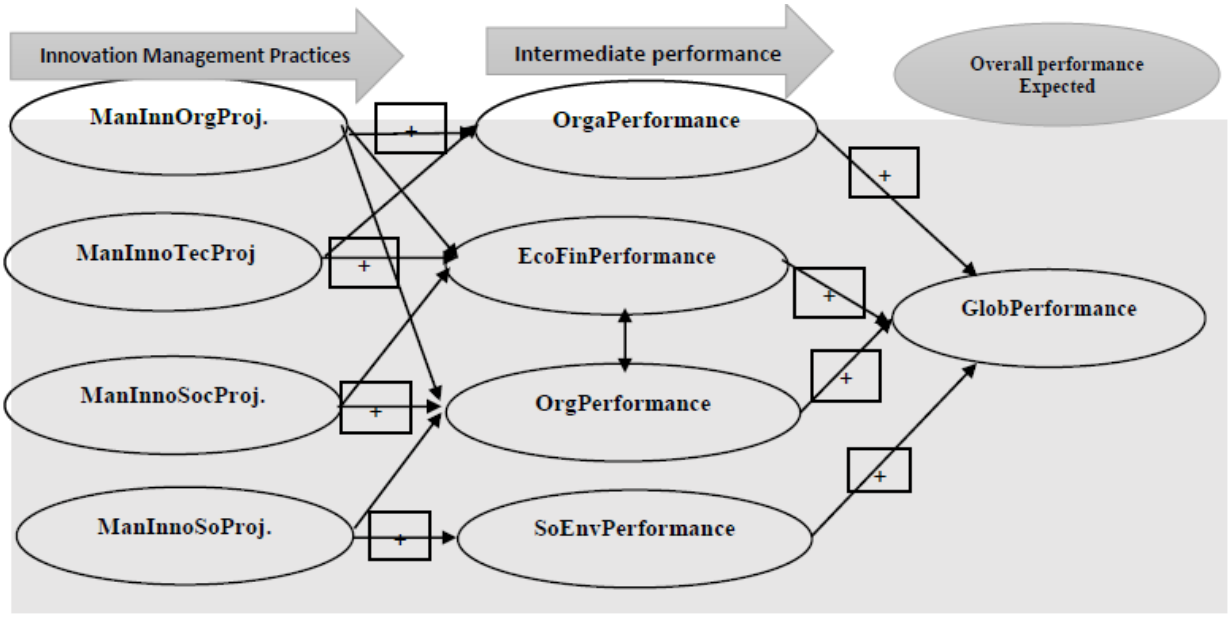

Figure 2. Conceptual model (author, 2021)

As shown in Figure 2, causal links are expressed by the direction of the arrows and the + signs that reveal the positive relationships between innovation project management (level 1: innovation project management);

intermediate performance (level 2: intermediate performance) and expected overall performance (level 3: expected overall performance). Considering this model, research hypotheses are suggested in the following sequences.

2.6.2 Research Hypotheses

Considering conceptualization, we suggest the General Hypothesis (HG) according to which *"innovation and the overall performance of the organization are multidimensional constructs*: the expected overall performance is generated simultaneously by organizational, economic/financial, social and societal performance- environmental and, indirectly, through the management practices of organizational, technological, social and societal environmental innovation projects.

Then, a postulate is stated according to which, the companies from (Chedotel & Pujol, 2012) (Chedotel & Pujol, 2012).

Finally, four hypotheses adjacent to the HG are stated to validate the sub models representative of the general determinism of this research.

Hypothesis 1: the management of organizational innovation produces economic, organizational, social and societal performance(F éix, Merminod, & Def éix, 2009; Mignenan, 2021).

Hypothesis 2: The management of technological innovation generates economic/financial and organizational performance (Ayerbe, 2006; DOHOU & BERLAND, 2010; Dubouloz & Bocquet, 2013; F éix et al., 2009; Mignenan, 2021).

Hypothesis 3: Social innovation management" generates organizational performance and economic/financial performance(Ayerbe, 2006; Brodhag et al., 2004; Capron & Quairel, 2006; Daudigeos & Valiorgue, 2010; Grimand, Derumez, et al., 2014; Maurel & Tensaout, 2014; Mignenan, 2021).

Hypothesis 4: the management of societal environmental innovation" increases environmental and societal organizational performance(Daudigeos & Valiorgue, 2010; Grimand, Derumez, et al., 2014).

The following section presents the methodological approach involved in the production of data, their analysis, and the verification of these hypotheses.

3. Methodological Path

3.1 Approach

Proponents of performance theory agree on its multidimensional nature, but also on its interdisciplinarity. Thus, proposing and testing a company performance model calls for the mobilization of a hybrid methodological framework. As a result, the mixed approach (Creswell, 2013)combining both qualitative and quantitative methods simultaneously, was advocated.

Indeed, initially, the literature review was deployed, because it is the method par excellence, not only to understand the different facets of overall performance by innovation management, but to identify the relevant variables that participate in it. We explored the articles and reports. These various consultations made it possible to: (i) draw a portrait of innovation management practices in the organizational environment and their influences on performance and (ii) understand the different theoretical currents around overall performance.

Next, we advocated semi-directive maintenance, widely recommended and used in the field of management science (Evrard et al., 2009) In this type of interview, respondents have a range of freedom to provide detailed and more complete information. As a result, 11 semi-directional, one-on-one, face-to-face and telephone interviews were conducted with each Chief of Staff who voluntarily agreed to take the questions. These 11 respondents come from three companies in the manufacturing sector. These were selected because of their commitment to the implementation of innovation projects within their companies. This commitment was fostered by the relevance of the theme under consideration.

The implementation of the interview is preceded by the construction of the semi-directive interview guide. This guide, acting as a real common thread, was built based on information generated from the literature. It is structured according to the following seven themes:

- ✓ Theme 1: Management of economic and technological innovation.
- ✓ Theme 2: Management of socio-organizational innovation
- ✓ Theme 3: Management of social and environmental innovation
- ✓ Theme 4: Socio-organizational performance

- ✓ Theme 5: Economic and financial performance
- ✓ Theme 6: Societal and environmental performance
- ✓ Theme 7: Overall Performance

It should also be noted that our interviewees graciously familiarized themselves with the six themes of the interview. This advantage favored reaching the saturation threshold after conducting the 11 interviews, mostly by convenience, in the city of Moundou (Chad) during the months of November to December 2019 with an average duration of 25 minutes per chief of staff. Table 1 presents the characteristics of interview respondents.

Table 1. Characteristics of interview respondents

Company information			**Interview information**				
Status	Sector	Medium size	Interview date/period	Average duration	Seniority in the position	Category	Number of interviewees
Limited liability company	Dairy products	51	November to December 2019 and January 2022	26 minutes	7-15	Chief of Staff	3
Public limited company	Oil, beverages	212		28 minutes	5-11	Sales and Marketing Director	6
							11

Source: Compiled interview guide data (author, 2022)

As for the analysis technique, we borrowed lexical analysis and thematic content. Table 2 shows how the two qualitative analysis techniques were deployed. Then, an analysis grid was developed according to the four themes from the interview guide initially developed for the need. This grid has been filled in according to the code of the interviewees and the units of analysis, which are subject to vertical and horizontal analyses, accompanied by a summary table.

Table 2. Analysis techniques

Nature of qualitative analysis	**Components**	**Relevance indicators**
Lexical	Words used; phrases emerged	Type and quality of vocabularies used. E.g.: frequency of word appearance, the average number of words per sentence, etc.
Thematic	Sentences, paragraphs, themes	Thematic breakdown e.g.: frequency of appearance of themes, frequency of association

Source: inspired by Evrard *et al.* 2005

The lexical analysis and thematic content made it possible to highlight new facets of innovation and performance management practices. Therefore, the results confirmed the dimensions of organizational, economic, social innovation management practices, etc. in the process of the company's overall performance. Similarly, lexical and content analysis helped identify words and themes frequently raised by managers to inform the construction of innovation projects in an organizational environment.

Thirdly, it is the explanatory phase based on the hypothetical-deductive approach. We previously formulated four research hypotheses based on the literature review and interviews. The choice of hypothetical-deductive reasoning is motivated by the immensity of knowledge on innovation management and performance, which is remarkably enriched by semi-directive interviews. The data was produced through face-to-face or online surveys (on a five-point Likert scale) from December 2019 to March 2021. The formulation of the items preceded the development of the questionnaire, which is composed mainly of the variables that emerge and the full reports commented by some specialists and professionals (marketing research firm, innovation, etc.) supplemented by the exploitation of the documentation from the literature. The questionnaire developed was pre-tested with six managers, responsible for marketing, sales, and IT. These respondents were selected based on criteria of expertise in innovation projects.

To determine the sample size, we followed the path recommended by Igalens and Roussel (1998), who suggest that the sample size is proportional to the number of items, 5 to 10 times more respondents than there are items describing the constructs under study. In total, 9 items were formulated to appreciate the built. Thus, we have 5 x 9 and 10 x 9, or between 45 and 90. We opted for the high bound, n= 90 respondents, considered as reporting units. The 90 respondents come from three companies (with at least 20 employees each) according to the National Agency for Investments and Exports (ANIE) of the manufacturing sector, selected from the ANIE database (Anie-Tchad, 2017) The questionnaire was sent to the entrepreneur. The persons who completed it were agents and/or heads of services. After two reminders, a total of 78 processed questionnaires were received; that is, about 87% used in the analysis. Table 3 presents the characteristics of the companies involved in this research.

Table 3. Characteristics of the sample

Status	**Sector**	**Size(N)**	**Sample**		
			Size (n)	**Hierarchical level**	**Experiment (in year)**
SARL	Cigarettes	80	10	Department Managers and Sales Agents	1 to 10
HIS	Alcoholic and carbonated beverage	350	50		1 to 30
	Huilerie-savonnerie	270	30		1 to 25
Total			**90**		

Source: Compilation (author, 2022)

3.2 Variables and Measures

The measures adopted in our research are based on previous qualitative and quantitative studies (Couret, 2011; Damanpour & Aravind, 2015; Deltour & Lethiais, 2014; DOHOU & BERLAND, 2010; Mignenan, 2021; Roy et al., 2013; Schier, 2014). We have adapted them to the context of Chadian companies.

3.2.1 Independent Variables

We borrowed indicators from the full report and those commonly used in the assessment and measurement of the variables organizational innovation, technological innovation, social innovation, societal and environmental innovation (Mignenan, 2021)

- ✓ For the Management of Economic-Technological Innovation, we have privileged: (i) value, (ii) practicability of the technology, (iii) utility and beneficiary services, (iv) quality/cost ratio. Indicators for these variables will be produced through surveys and interviews.
- ✓ About the management of socio-organizational innovation, we have selected the following five indicators: (i) reception and protection of employees in the workplace, (ii) internal communication (iii) investment in employee training, (iv) importance of internal promotion, (v) percentage of participation in meetings and their representativeness.
- ✓ For the management of societal/environmental innovation, we have opted for :(i) nature and scope of pollution reduction techniques, local development (ii) territorial economic development, communication with stakeholders (iii) relations with external structures and (iv) support for priority citizen and/or public initiatives.

3.2.2 Dependent Variable (Competitive Human Capital)

The indicators used, given their regularity in the literature, are

- Organizational performance measured by: (i) motivation, (ii) reduction of working, (iii) reduction of complaint rate, (iv) stress, etc.
- Economic and financial performance assessed by: (i) economic profitability measured by ROA (*Return On Assets*), (ii) financial profitability measured by ROE (*Return onEquity)* and (iii) commercial profitability via profit relative to turnover (DOHOU & BERLAND, 2010; Maurel & Tensaout, 2014).
- Social performance measured by: (i) high attendance at meetings (ii) supervision of the salary scale and (iii) presence of working conditions conducive to involvement.
- Environmental performance assessed by: (i) taking into account the societal impact attached to products/services), sustainable development; (ii) the presence of environmental action and transparency towards stakeholders; (iii) types of information to customers and (iv) level of cooperation with suppliers (AFNOR, 2003; ISO14001, 2017).

The studies explored used the five-point Likert scales (ranging from [1] strongly disagree to [5] strongly agree). The alpha reliability of the scale is 0.97%.

4. Results

To assess the importance of relationships between innovation projects, intermediate performance and expected overall performance, we carried out the qualitative analysis, Pearson correlational analysis and then verified the **hypotheses using the hypothesis.**

4.1 Qualitative Results

Qualitatively, we have highlighted the full reports initially generated. Table 4 below shows the main trends.

Table 4. Results of the Qualitative Analysis

Variables tested	**Verbatim**	**Emerging variables**
Management of socio-organizational innovation	✓ *I think the small teamwork of three employees in the sales department has produced good results.* ✓ *Our collaboration with the university is a very effective new initiative.* ✓ *We have set up an attendance book to track employees.* ✓ *Our model for welcoming new employees consists of a special integration and mentoring workshop.* ✓ *For the past two years, each employee in the sales and production departments has been entitled to additional training per year according to the choice of his schedule.* ✓ *We attach sustained importance to internal promotion, this has had an impact on the engagement of our employees,* ✓ *Each meeting saw the participation of one to two trade union representations or staff delegates.*	Collaborative management Servant Leadership
Management of technological innovation	✓ *We have created a website for online advertising, which has a considerable effect on notoriety.* ✓ *We acquired automatic production machines that increased production by 20%.*	e-technology
Management of societal and environmental innovation	✓ *We set up industrial waste collection rings and we proceed to the destruction of our obsolete equipment* ✓ *We grant garbage bins to boroughs as part of our social responsibility.* ✓ *We have sponsored more than five youth activities and associations in the city of Moundou.*	Circular economy
Socio-organizational performance	✓ *Our staff is motivated by new organizational initiatives* ✓ *The implementation of teamwork has contributed to the reduction of working hours,* ✓ *We affirm that the reduction in the rate of staff complaints is due to teamwork, the development of specifications, the improvement of internal means of communication.* ✓ *By working as a team, we have found that our employees are less stressed.*	None

Economic and financial performance	✓	*In the last two years, our sales have increased significantly thanks to online advertising, online surveys.*	None
	✓	*We found that loss rates in workshops are significantly reduced*	
	✓	*Data from our financial services indicates that investments in production equipment have been recovered.*	
Social performance	✓	*We have improved the percentage of our staff attendance at various meetings.*	None
	✓	*Our salaries are among the most competitive in the agri-food sector.*	
	✓	*Our occupational health and safety services are improved, thereby remarkably reducing the rate of action and promoting involvement.*	
Societal and environmental performance	✓	*Our company applies the environmental and legal rules of our sector of activity.*	None
	✓	*Our company is the subject of a score from an environmental rating agency*	
	✓	*We integrate the environmental and eco-design strategy into our production process.*	
	✓	*Our adopted supply and production chain are built on green cultivation.*	
Overall performance achieved	✓	*A fulfilled staff. Reduction of cases of litigation, strikes*	Priority to the social dimension
	✓	*Three and four employee citizens' initiatives (e.g., time for volunteering)*	
	✓	*Our company actively participates in citizen initiatives of the general interest of the community.*	

Source: Interview data, 2021

The results from the qualitative analysis of the semi-structured interviews confirm those of the literature, but also those obtained statistically. Thus, the qualitative study allowed us to deepen the determining roles played by management practices applied to different types of innovation projects on underperformance, which contribute to overall performance.

"If the notoriety of our products spreads to all regions, this is due to the integrated consideration of social, societal and environmental aspects of the process of sourcing, producing and marketing our products, for the last three years." (E1)

In addition, the qualitative analysis did not make it possible to identify original dimensions of the overall performance of the company generated by intermediate performance, which are generated by innovation project management practices:

"Whatever the quality of the new product, there is the dimension of consumer confidence in the company and, this involves management support, media, and non-media communication; in a context where social networks, associations of consumer advocates have become, more and more, powerful." (E3)

It should be emphasized that the interviews and therefore the qualitative analysis have the merit of having made it possible to generate and integrate new items into the pre-existing measurement scales. Considering the contradictions and limitations of qualitative analysis, it seems to us wise to recommend quantitative analysis, in complementary mode.

4.2 Quantitative Results

On the correlational level, we put forward the parameters in terms of mean and standard deviation (Ec.T.). Table 5 presents the results. Thus, in general, respondents perceive innovation projects as factors in the overall performance of their company. Indeed, they state that organizational innovation projects have generated strong organizational performance with an average of 4.8 out of 5 (*S.T.*= 1.87). Second, they report that technological innovation projects contribute strongly to economic/financial performance with an average of 4.5 out of 5 (*S.T.* = 1.63). The same is true for social innovation projects with a roughly equal average of 4.4 (*S.T.* = 1.53). Finally, they mention that their organization is implementing societal and environmental innovation projects that have made it possible to effectively manage climate change, with an average of 3.6 (*EcT*= 1.53). In short, respondents consider their organizations to be inclined to organizational and technological innovations. These results are certainly all positive, although the interviews reveal some divergent points of view, including some business leaders who are not very supportive of societal innovations. The results also reveal that respondents share their organizations' efforts to invest in technological innovations. Indeed, they highlight initiatives in software acquisition projects, additional training of technical services staff, sales, and sales departments, etc. as innovation projects with high added value. Table 5, developed for synthesis purposes, reports on the results.

Table 5. Means, Standard Deviation and Correlation

Variables	**Average (S.T)**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
1. Organizational innovation	4.8 (1.87)	1								
2. Social Innovation	4.4(1.53)	0,54**	1							
3. Technological Innovation	4.5 (1.63)		0,51**	1						
4. Societal & environmental innovation	3,6 (1,53)	0.45*	0,67**	0.43*	1					
5. Economic-Financial Perf.	3.2 (1.3)	0.41*	0,53**	0,66**	0.43*	1				
6. Organizational Performance	3.4(1.2)	0,62**	0,55**	0,54**	0.41*	0,33*	1			
7.Social performance	3.5(1.1)	0,66**	0,70**	0,53**	0.48*	0,45*	0,45*	1		
8. Perf. Societal & Environmental	3.1(0.53)	0.49*	0.43*	0.48*	0.26*	0,49*	0,47*	0,49*	1	
9. Overall performance	3.8(1.7)	0,49*	0,52*	0,51**	0,40*	0,76**	0,54**	0,78**	0,40*	1

The data in Table 5 allowed the standardized estimated parameters to be carried forward. Figure 3 below shows the main results.

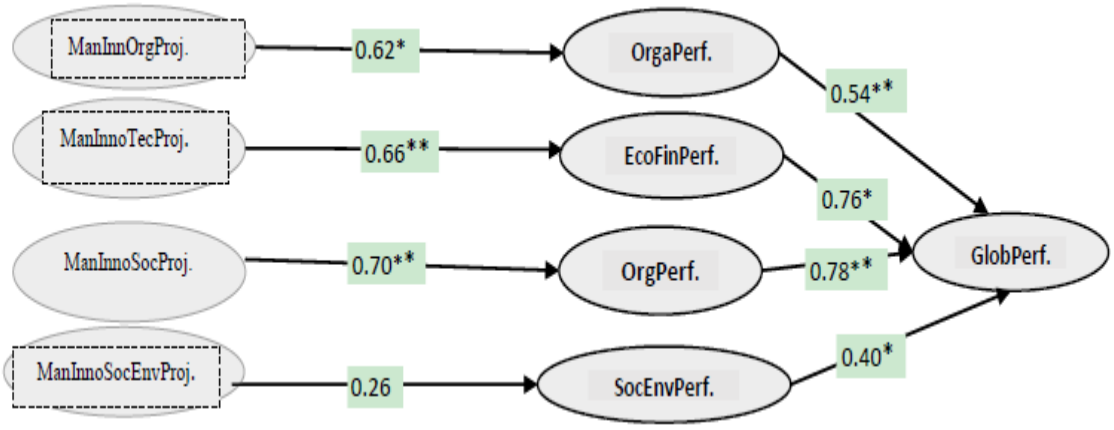

Figure 3. The main results

Legend: *5%, ** 10%

Management of Organizational Innovation Projects (ManInnOrgProj"); management of technological Innovation Project (ManInnoTecProj.); Social Innovation Project management (ManInnoSocProj.); management of society and environmental Innovation Project (ManInnoSoc-EnvProj); economic performance (EcoPerf.); environmental performance (EnvtPerf.); social performance (SocPerf.); Global Performance (GlobaPerf).

It appears that social performance is positively and more strongly associated (0.78) with overall performance than economic and financial performance (0.76) as well as organizational (0.54) and environmental (0.40) performance. This result is interesting and supports the idea of broadening the notion of economic and financial performance to consider the social aspects of performance. Nevertheless, the role of the societal and environmental dimension widely discussed in the literature is marginal and has little influence on economic and overall performance. Thus, its direct effect on overall performance is only 0.40. The contribution (0.76) of financial and economic performance to

overall performance is in line with the general trend from the literature. However, the contribution of organizational performance (0.54) to overall performance is more important than that from the literature. Finally, there are minor discrepancies between the percentages of contributions of each type of innovation project implemented by the companies studied and the data in the literature.

In conclusion, if each company invests effectively in innovation projects during every hour of its operating cycle, it would be strategically positioned in a competitive environment and would be one of the leading companies in its industry.

To test the four hypotheses, we borrowed step-by-step regression preceded by full reports. Indeed, the step-by-step regression method allows the verification of the variation in the coefficient of determination R2 of each explanatory variable added to the equation of the model (Alain, 2004). We analyzed the data using SPSS 23.0 software. Table 8 presents the results.

- **Hypothesis Testing: Influence of Innovation Projects on Overall Performance**

Table 6 illustrates, in a stable way, the explanatory power (variation of $R^2 = 0.50$) of innovation projects on the overall performance of companies in the agri-food sector. These results confirm and extend those of several studies (Couret, 2011; Damanpour & Aravind, 2015; Deltour & Lethiais, 2014; DOHOU & BERLAND, 2010; Roy et al., 2013; Schier, 2014) which assumed a positive effect of these innovation projects on economic and social performance. However, social, and societal innovation projects play a central role in social, societal and environmental performance. This result is interesting because it shows that social and societal innovation projects, related to CSR, are the result of societal social practices and that their role as a determinant of observed performance is far from decisive.

Table 6. Model Summary

					Edit statistics	
Model	R	R-two	Adjusted R-two	Standard error in estimation	Variation of R-two	GIS. Variation of F
1	0.712a	0.507	0.480	0.165	0.507	0.000

a. Predictors: (Constant), Societo-Env Innovation Project, Orga Innovation Project, Techno Innovation Project., Social Innovation Project

b. Dependent variable: Global performance.

Support should be given to the idea that organizations that integrate the project mode in particular, innovative cultures and practices at the technological, organizational, social, and environmental levels, see their overall performance improve. These relationships, tested on companies in the agro-food sector, confirm the previous theoretical elements (Theory of stakeholders, Performance Theories and Resource Theory) (Maurel & Tensaout, 2014; McLaughlin & Kennedy, 2016; Roy et al., 2013; Zaied, Affes, & Hikkerova, 2015; Zaied, Louati, et al., 2015) and highlight the impact of social innovation projects on environmental societal practices and their weakness in financial economic performance.

In the light of the above, it should be stated that this result argues for the combination of creativity and innovation, but above all for a global and integrated approach to innovation projects (organizational, technological, societal and environmental) of an organization in order to assess performance in its different dimensions (Cordellier1, 2011; Maurel & Tensaout, 2014; McLaughlin & Kennedy, 2016; St-Pierre & Cadieux, 2011). Nevertheless, discrepancies with some previous studies (Chassagnon & Haned, 2013; Damanpour et al., 2009; Daudigeos & Valiorgue, 2010; Deltour & Lethiais, 2014) showing a strong effect of societal environmental innovation projects and suggesting investments in CSR require explanations. Indeed, about the hypotheses relating to the positive influence of economic, social, and environmental performance on overall performance, the results of this study appear conclusive, except for the impact of environmental and societal innovation projects on overall performance where the relationship is weak. While the maneuvering ground mobilized for this study was favorable to the validation of the proposals, through a statistically significant link only at the threshold of 10%, we find the debates on the difficult relationships between CSR investments and economic and financial performance (Chassagnon & Haned, 2013; Damanpour et al., 2009; Daudigeos & Valiorgue, 2010; Deltour & Lethiais, 2014). In this perspective, an explanation may lie in the "long-term" horizon of the influence of environmental and societal innovation projects, which may be out of step

with the "short-termism" nature of the measure of economic and financial performance considered (profitability measure). This gap between our results and the promoters (McLaughlin & Kennedy, 2016; Zaied, Louati, et al., 2015) of a positive view of the link between "societal-environmental practices" and economic performance can also be explained by the contingency of this link (i.e. the history of the organization with its stakeholders), or be explained by opportunistic behaviors on the part of some respondents. The coefficients of the Standard Model shed light on causal links. The results are shown in table 7 below.

Table 7. Standard Model Coefficients

		Non-standardized coefficients		Standardized coefficients		
Model		b	Standard error	Beta	t	GIS.
1	(Constant)	2,865	0,0585		4,894	0,000
	Organizational Innovation Project	0,310	0,171	0,32	4,051	0,000
2	(Constant)	2,865	0,0585		4,894	0,000
	Technological innovation project	0,38	0,171	0,390	4,051	0,000
3	(Constant)	1,205	0,564		2,136	0,036
	Technological Innovation Project	0,41	0,142	0,410	4,144	, 0,000
	Social Innovation Project	,453	0,092	0,463	5,825	0,000
4	(Constant)	1,550	0,061		2,504	0,015
	Organizational Innovation Project	0,29	0,171	0,30	4,051	0,000
	Technological Innovation Project	0,31	0,041	0,32	4,183	0,000
	Social Innovation Project	0,33	0,092	0,34	5,850	0,000
	Societal and environmental innovation projects.	0,11	0,086	0,12	1,322	0,019

has. Dependent variable: Global performance

The data in Table 7 provide further explanations. Indeed, hypothesis 1, which predicts that *organizational innovation project management produces economic, organizational, social, and societal performance,* has been supported. The model of the organizational innovation project regression on intermediate performance, which explains the overall performance is adopted. As reveal, the beta coefficients (β = 0.30, bp 0.001) at model 4.

The words of some department heads support the said coefficient: *"the adoption of teamwork, the involvement of staff in the decision-making process and the policy of internal promotion have made it possible to motivate all staff." (E1, E2).*

Hypothesis 2 predicts that *technological innovation project management generates economic/financial and organizational performance*. Models 2.3 and 4, through beta coefficients (β = 0.39, bp 0.01; β = 0.41, bp 0.001 and β = 0.32, bp 0.05) indicate a positive and significant relationship between technological innovation projects and the three dimensions of performance, thus supporting hypothesis 2.

The qualitative results reinforce the beta coefficients: *"the acquisition of new production equipment; the installation of new means of communication has made it possible to increase production and enter new markets and to extend our reputation." (E3)*

Hypothesis 3, which postulates that *social innovation project management generates organizational performance and economic/financial performance*, is adopted. Indeed, models 3 and 4 show the regressions of *social innovation project measures on intermediate social performance which contributes to overall performance*. All beta coefficients

are significant and positive (β = 0.46, bp 0.001; β = 0.34, bp 0.01). Models 2, 3 and 4 in Table 4 show the regression equations for the three measures of overall performance. The qualitative results are in accordance with the coefficients:

> *"We have put in place a social policy that takes into account the right to further continuing education, group health insurance, health and safety at work and the valuation of salaries that have made it possible to retain our staff over the last three years." (E1, E2 and E3)*

Hypothesis 4 *suggests that "environmental societal innovation project management" increases environmental and organizational societal performance*. This hypothesis was also supported in view of the low but significant positive beta coefficient (β = 0.12, bp0.001). This result is not in line with the literature on corporate social responsibility.

While the words of some officials make it possible to realize that the three companies are developing, few concrete actions in terms of environmental protection. Similarly, they have not been the subject of certification of standards for the preservation of the ecosystem.

Based on the quantitative and qualitative results, Table 8 below shows the summaries of the results.

Table 8. Empirical validation of assumptions on structural relationships

Hypothesis tested	**Results**	
	Expected meaning of the relationship	**Acceptance of the hypothesis (a = 0.05)**
H1	Confirmed	Yes
H2	Confirmed	Yes
H3	Confirmed	Yes
H4	Confirmed	Yes (significant 0.1)

Source: summary of analyses carried out by the author, 2021

5. Discussion of Results

In the context of companies in the Agri-Food Sector, the results of our statistical analyses show that an integrated representation of organizational, technological, social, societal, and environmental innovation projects (model 4) has a better explanatory power than a segmented representation (model 1, 2 and 3). These quantitative results are corroborated by the words of some department heads during the interviews:

> *"Today, we can no longer be content to renew production equipment without thinking about the staff who do not work or neglect the environment; I'm not an innovation specialist, but I think if the staff thrives everything else will be easy..."*

This shows that companies that have only implemented technological innovation projects, organizational innovation projects or both do not necessarily achieve overall performance, because they ignore the complexity of the mechanisms of interaction between practices and the dimensions of overall performance.

The results obtained by models 1, 2, 3 and 4 are partially consistent with those of the literature (Ayerbe, 2006; Berger-Douce, 2014; Bertheau & Garel, 2015; Botton et al., 2012; Cordellier1, 2011; Couret, 2011; Das & Joshi, 2012; Deltour & Lethiais, 2014; DOHOU & BERLAND, 2010; Grimand, Derumez, et al., 2014; GRIMAND, VANDANGEON-DERUMEZ, et al., 2014; Maurel & Tensaout, 2014; Mignenan, 2021; Noailles, 2011; St-Pierre & Cadieux, 2011; Zaied, Louati, et al., 2015). The points of divergence mainly relate to environmental innovation projects considered by the literature (Grimand, Derumez, et al., 2014; GRIMAND, VANDANGEON-DERUMEZ, et al., 2014; ISO14001, 2017) as significant predictors of environmental performance.

Considering the three case studies, it appears that CSR and stakeholder theories are poorly supported by our empirical data (Daudigeos & Valiorgue, 2010; Grimand, Derumez, et al., 2014; Maurel & Tensaout, 2014; Quairel, 2006).

Based on these results, with or without the consideration of control variables, we can envisage theoretical and managerial implications and suggest avenues for research on the evaluation of overall performance.

6. Theoretical Implications

The proposed theoretical model reinforces the avenues for reflection on the overall performance generated by innovation projects and enriches the related knowledge. In addition, the results obtained confirm the multidimensional nature of the overall performance of organizations and using the model tested on the three companies in Chad, this research enriches the work on the importance of developing and implementing organizational, technological, social, societal, and environmental innovation projects.

In addition, the proposal of a model based on the theories of project management, CSR and stakeholders, has made it possible to generate an integrative and emerging model of overall performance, which highlights the interactions between innovation project management practices, intermediate performance and overall performance (see figure), very little documented. Thus, we confirm the main predictions of the theory Stakeholders, performance theory and the theory of resource dependence as well as the strong integrated explanatory power of the overall performance of innovation projects that consider the organizational, technological, social, societal, and environmental dimensions.

Specifically, our work has reinforced the reflection work of some authors(Ayerbe, 2006; Capron & Quairel, 2006; Chassagnon & Haned, 2013; DOHOU & BERLAND, 2010; Maurel & Tensaout, 2014; Mignenan, 2021) which qualify the impact of environmental innovation projects and therefore environmental performance. However, our results revealed the remarkable weight of social innovation projects on the relative performance and in achieving the expected overall performance.

Thus, the results indicate that it is also necessary to qualify certain predictions of TPP and CSR. Indeed, by observing the structural parameters of the proposed model, it appears that the social dimension has a greater impact on overall performance than the other three dimensions: organizational, economic, societal, and environmental. Although they are related, a prioritization of the effects of the four dimensions of overall performance within the sample can be envisaged. Similarly, if the theory of resource dependence appears to be validated in view of the positive relationships between innovation project management practices and intermediate performance, the results qualify the TPP: the links between environmental societal innovation projects and overall performance are weak (but statistically significant at the 10% threshold). It is, however, possible that a delay may be necessary between the identification of the data generated by the implementation of the innovation projects and the measurement of the effects on performance since the steps are recent in the agri-food sector companies studied and require time to produce a remarkable impact.

Finally, the validation of the proposed global performance measurement model calls for further theoretical and empirical work. For example, it would be interesting to examine the effects of overall performance on stakeholder behaviour, and to identify mechanisms of influence (i.e., reputation).

7. Practical Implications

For companies in the Agri-Food Sector, which are the breeding ground of the theoretical model, the results can encourage investors to create conditions and opportunities for innovation, at the same time, organizational, technological, social, and societal. Our results are instruments for awakening innovation project management practices and, ultimately, call for working for overall performance. Indeed, the SMEs in the agri-food sector studied, on their farm, are called upon to comply with the legal rules while continuing the search for economic, organizational, and social benefits. Thus, with the variables presented in the elaborated model, it is possible to identify key indicators to make a judgment. In any case, the three companies seek economic, organizational, and social performance by considering societal and environmental aspects to legitimize their actions. The variables retained in the model can be the key elements guiding the policy, vision, values and therefore the actions to be implemented.

In addition, one of the main lessons learned from this research is the relatively small contribution of environmental societal innovation projects to the overall performance of companies in the agri-food sector. Based on the results of the proposed model, it appears that these practices are more a consequence of the social practices of SMEs. Expectations in terms of economic and financial benefits then appear low and the question of a significant investment in CSR-type approaches to improve profitability is raised.

In addition, the proposed model can be used to develop good practices for the management of innovation projects within companies in the Agri-Food Sector. To appreciate the richness of this conceptualization, simulations were carried out summarized in Table 9 below. The construction of this table is based on the following process: first, the scores of the different variables of Model I were calculated without standardizing the parameters. This step is usual with linear regression, $Y = aX + b + e$ in which the parameter of an explanatory variable X is interpreted as the

causal effect of X on Y. Of course, this model is richer, because it makes it possible to estimate, at the same time, the direct effect, the indirect effect and therefore the total of one variable on another. In a second step, we calculated the size of the effect of each of the innovation project management practices on the different dimensions of overall performance.

Table 9. Size of Performance Effects of Innovation Projects

Innovation/ Performance	PerfOrg	PerfEFin	PerfSoc	PerfSLEnv	PerfGlob
PINNORG	6,5	3,3	4,1	1,7	5,4
PINNOTEC	4,3	5,4	-	-	8,5
PINNOSOC	7,3	2,3	3,7	-	4,3
PINNOSLENV	-	-	2,1	7,1	3,5

The interpretation of the coefficients in the table above is as follows: a 1% improvement in the quality of organizational innovation project management practices would produce an increase in the overall performance score of 5.4%, 1.7% for the societal and environmental performance score, 4.1% in social performance, 3.3% for financial and economic performance and 6.5% of organizational performance. In addition, this estimated model could make it possible to carry out regional and national comparative analyses between companies in the agri-food sector in Chad.

8. Research Avenues

The proposed model reveals a weak but statistically significant link between environmental societal innovation projects and economic and financial performance in the context of these three Chadian SMEs. This result can lead to several conceptual and methodological extensions. First, the validity of our constructs can be improved, especially the items of the overall performance whose Cronbach alpha is relatively low ($\alpha = 0.55$). Second, the impact of environmental societal innovation projects is dynamic and therefore requires work on longitudinal data. Finally, despite considering the interrelationships between innovation projects and performance, the proposed model remains relatively linear. However, the results show that an organization behaving like a "social and citizen enterprise" will see its overall performance increase, and this in a relatively general way on the sample considered. Therefore, let us enrich ourselves with research on the description of overall performance by proposing a stabilized model and a set of constructs for the concepts of organizational performance, economic performance, social performance, and overall performance.

9. Conclusion

This research proposed an emerging theoretical model to inform the understanding of the links between organizational, technological, social, societal, and environmental innovation projects and, indirectly, overall performance. Given the little divergent results obtained, the objective was to propose a model based on the method of structural equations to simultaneously test the relationships between the dimensions of overall performance with organizations favorable to the concept.

First, our results show that the use of "mixed" innovation projects, considering technological, organizational, social, and societal aspects, has a strong power to generate overall performance. Indeed, our results show that social performance alone explains 35% of overall performance against economic, organizational, and societal performance.

The resulting model leads to a certain hierarchy of the effects of the four dimensions of overall performance, which raises questions about the notion of integrated management of overall performance, particularly in the companies studied that were, a priori, favorable to the practices of integrated innovation projects. In addition, the results could be interpreted considering several limitations attached to our overall performance model, including the choice of variables/indicators to operationalize the practices of environmental societal innovation projects and overall performance.

Therefore, to increase the external validity of this performance measurement model and extend the research to other organizational contexts, further empirical studies are desirable. While the variables (items) used for the evaluation of overall performance still need improvement, they are a first step towards a measure for the estimation of this concept of an all-encompassing nature. Indeed, if the most used way is, for ease, to dissociate the dimensions of performance,

an integrative approach seems preferable to the juxtaposition of performance and therefore of innovation project, to assess the overall nature of the performance of an agri-food company. In this sense, the proposed variables can create a learning dynamic and expand the options for investment decisions.

In any case, in fact, no company has fears for its positioning and survival, regardless of the sector of activity it has chosen. If it conscientiously adopts the mode of innovation projects, it does not have to worry about the result. It can be sure to be among the leaders in its industry and have the largest market share compared to its most competitive competitors in the chosen sector.

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