



## Emphasizing Organizational Resilience: Influence of Environmental Uncertainty and Stress Management on Project Management and Organizational Success

SRAIDI Najla<sup>1</sup>, El Gharbaoui Bouteina<sup>2</sup>

<sup>1</sup> National School of Business & Management of Tangier, ABDELMALEK ESSAADI UNIVERSITY, ENCG Tanger, Morocco

<sup>2</sup> National School of Business and Management, ENCG.Moulay Ismail University, Meknes, Morocco

### ARTICLE INFO

#### Keywords:

Environmental Uncertainty, Stress Management, Project Management, Organizational Success, Organizational Resilience.

Received: Nov, 29, 2023

Accepted: Dec, 18, 2023

Published: Dec, 22, 2023

### ABSTRACT

An excellent project management strategy is essential for organizational success in the fiercely competitive and constantly changing food manufacturing industry. In this industry, project managers frequently deal with a great deal of environmental unpredictability, which can affect their stress levels and, in turn, their performance. This study employs quantitative analysis through SmartPLS 4.0 to investigate the relationship between environmental uncertainty, stress management, project manager performance, and overall organizational success in the context of the food manufacturing industry. A comprehensive survey was conducted within the food manufacturing sector, encompassing a population of project managers. A stratified random sampling approach yielded a sample size of 218 respondents, who provided data on environmental uncertainty, stress management practices, and self-reported performance as project managers. SmartPLS 4.0 was employed for data analysis, enabling structural equation modeling to examine the relationships between these variables. The quantitative analysis reveals significant correlations between environmental uncertainty and project manager stress levels within the food manufacturing industry. Importantly, stress management practices were found to act as a crucial mediator in this relationship. Project managers who effectively manage stress reported enhanced performance outcomes, contributing to organizational success. These findings underscore the significance of proactive stress management strategies in mitigating the adverse effects of environmental uncertainty.

### 1. INTRODUCTION

Organizations across industries extensively rely on project management in the modern corporate environment, which is characterised by constant change, globalization, and technology breakthroughs, to foster innovation, competitiveness, and strategic objectives. In this context, the role of project managers becomes pivotal as they are entrusted with the task of ensuring the successful execution of projects within the constraints of time, budget, and quality. However, the effective management of projects has

become increasingly challenging due to the prevalence of environmental uncertainty.

Environmental uncertainty refers to the unpredictability and complexity of external factors that can impact a project's objectives and outcomes. These factors may encompass economic fluctuations, regulatory changes, market shifts, technological disruptions, and unforeseen events, such as the COVID-19 pandemic (Chen et al., 2022). In the contemporary business landscape, environmental uncertainty has become a pervasive

and inescapable reality, affecting organizations across industries (Aljumah et al., 2022).

In the face of environmental uncertainty, project managers often find themselves operating in high-pressure environments (Varajão et al., 2017) The continuous need to adapt to changing circumstances, make critical decisions, and meet project deadlines can contribute to elevated stress levels. While some level of stress can be motivating, excessive or chronic stress can have detrimental effects on an individual's well-being and, by extension, their ability to perform effectively (Zubizarreta et al., 2021).

Moreover, stress management encompasses a range of strategies and practices aimed at mitigating and coping with stress. It involves developing resilience, adopting effective time management techniques, maintaining work-life balance, and seeking support when needed. Stress management is not only crucial for individual well-being but also holds potential implications for organizational success (Upson et al., 2007).

**Research Gap:** Despite the recognized importance of both environmental uncertainty and stress management in project management contexts, there is a notable research gap in understanding the relationship between these factors. How does environmental uncertainty impact project manager stress levels, and how, in turn, does stress management influence project manager performance and overall organizational success? This study aims to bridge this gap by conducting a quantitative analysis within the food manufacturing industry.

**Food Manufacturing Industry Context:** The choice of the food manufacturing industry as the research context is particularly pertinent. This sector operates in a highly dynamic and regulated environment, where product innovation, quality control, and time-to-market are paramount. Project managers in food manufacturing must navigate a landscape characterized by stringent safety and quality standards, shifting consumer preferences, supply chain disruptions, and ever-evolving market dynamics. Therefore, understanding the dynamics of environmental uncertainty, stress management, and their impact on performance and success in this industry is of utmost relevance.

**Research Objective:** The primary objective of this research is to investigate the influence of

environmental uncertainty and stress management on project manager performance and organizational success within the food manufacturing industry. The study employs quantitative analysis, utilizing SmartPLS 4.0 to explore the relationships between these variables comprehensively.

**Significance of the Study:** This research holds significant implications for both project management practitioners and organizational leaders. By gaining understandings into how environmental uncertainty and stress management affect project manager performance and organizational success, it provides guidance for enhancing project outcomes in challenging contexts. Furthermore, the findings contribute to the broader understanding of stress management strategies in professional settings and their potential to drive positive organizational outcomes.

In the subsequent sections of this study, we will investigate into the research methodology, present and analyze the empirical findings, and draw conclusions for effective project management in the face of environmental uncertainty within the food manufacturing industry.

## 2. THE CURRENT STATE OF THE ART

The project manager role in contemporary organizations has evolved into a critical function, as they are tasked with navigating increasingly complex and dynamic business environments. Environmental uncertainty, marked by unpredictable external factors, poses significant challenges to project management (El Khatib et al., 2020). Simultaneously, the well-being and performance of project managers are influenced by the stressors inherent in their roles. This research examines prior research to explore the relationship between environmental uncertainty, stress management, project management, and organizational success with moderating effect of organizational resilience (Fletcher, 2020).

### 2.1. Environmental Uncertainty and Project Management

Environmental uncertainty is a fundamental concept in organizational studies, recognized for its impact on strategic decision-making and organizational performance (Chen et al., 2022). Within the realm of project management, environmental uncertainty refers to the external

factors that influence project success, including economic conditions, market volatility, regulatory changes, and technological disruptions (Abdallah and Persson, 2014). Project managers must contend with these uncertainties while balancing competing project objectives.

Research has shown that high levels of environmental uncertainty can negatively affect project success. For example, in a study (Pires and Alves, 2022), they found that increased environmental uncertainty was associated with a higher likelihood of project failure. Project managers operating in uncertain environments may face challenges in predicting resource needs, managing stakeholder expectations, and adapting to unforeseen disruptions (Chen et al., 2022).

### **2.2. Stress Management in Project Management**

The project manager's role is inherently stressful due to the demand for timely and on-budget project delivery (Bennett, 1989). Stress among project managers can arise from various sources, including time pressure, scope changes (Bennett, 1989)(Grover et al., 1995; Meulenbroeks, 1998), resource constraints, and stakeholder conflicts. Prolonged exposure to stressors can lead to burnout, reduced job satisfaction, and impaired decision-making (Ghosh et al., 2012).

Effective stress management is crucial for mitigating these adverse effects. Stress management strategies encompass coping mechanisms, time management, and seeking social support. Research has demonstrated that project managers who employ stress management techniques are better equipped to handle the challenges of their roles (Jiang et al., 2019). Moreover, stress management has been associated with improved job satisfaction and overall well-

being.

### **2.3. Stress Management**

The relationship between environmental uncertainty and project manager performance can be facilitated by stress management practices. When project managers effectively manage stress, they are more likely to make informed decisions, maintain their focus, and exhibit greater resilience in the face of uncertainty (Bennett, 1989). Stress management can enhance job satisfaction, reduce turnover intentions, and contribute to improved job performance (Murphy, 1996).

### **2.4. Organizational Success**

The ultimate aim of project management is to contribute to organizational success. Successful project outcomes directly impact an organization's competitive advantage, profitability, and reputation (Altinkemer et al., 1998; Boulton et al., 1982). Therefore, understanding the factors that influence project manager performance and, by extension, project success, is of paramount importance for organizations (Jiang et al., 2019). The literature review herein underscores the involved relationship between environmental uncertainty, stress management, project manager performance, and organizational success (Borges and Janissek-Muniz, 2018; Ghosh et al., 2012). Environmental uncertainty poses significant challenges to project managers, while effective stress management can have the adverse effects of uncertainty, leading to improved performance (Flynn et al., 2016; Madi Odeh et al., 2021). Recognizing and addressing the stressors inherent in project management can have far-reaching implications for both individual well-being and organizational success.

### **2.5. Research Model**

The purpose of this study is to determine how environmental uncertainty and project management affect the stress management and organizational

success. This section gives an overview of the theoretical model, hypotheses, and constructions.

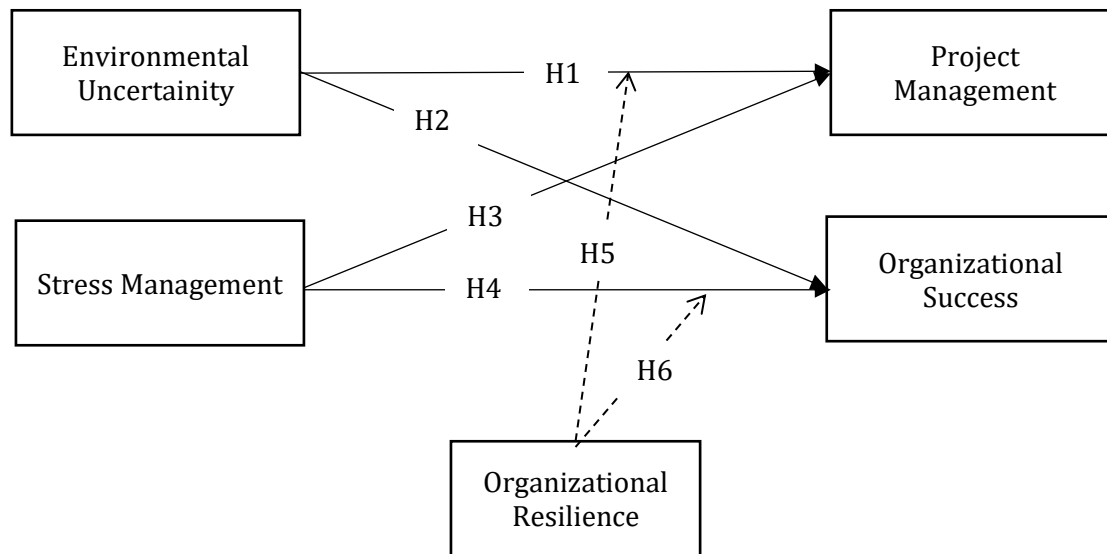


Figure (3)

*Hypothesis 1 (H1):* Environmental Uncertainty has positive effects on Project Management.

*Hypothesis 2 (H2):* Environmental Uncertainty has positive effects on Organizational Success.

*Hypothesis 3 (H3):* Stress Management Positively effects Project Management

*Hypothesis 4 (H4):* Stress Management positively effects Organizational Performance

*Hypothesis 5 (H5):* Organizational Resilience positively effects Project Management

*Hypothesis 6 (H6):* Organizational Resilience positively effects Organizational Success.

#### 4. EMPIRICAL STUDY AND RESULTS

A survey was conducted in order to empirically examine the study variables and their relationships based on the views of manufacturing industry employees. Our measuring model consists of a questionnaire with two sections: one asking about sample characteristics and the other asking about construct assessments. Respondents may select their responses on a five-point scale (1—Strongly Disagree to 5—Strongly Agree).

Using the SmartPLS 4.0, we analyse data using the two-step PLS/SEM approach. After presenting the data from the measurement model, this part provides the results of the structural model.

##### 4.1 Sample Characterization

Our data is made up of 218 respondents to our

questionnaire, which was sent using Google form. The characteristics of the respondents are elaborated as 47% of respondents are between the ages of 31 and 40, and approximately 88% of respondents are men. Small to large businesses in a range of big food manufacturing companies are among the respondents.

##### 4.2. Measurement Model Assessment

To determine if the constructions were reliable or not, we employ the PLS approach. The measurement model results are summarised in Table 1 for a variety of metrics, including outer loading, composite reliability, Cronbach's Alpha, and average variance extracted (AVE). The outside loading should be greater than 0.70, which is roughly the indication weight. Internal consistency in scale items is indicated by the composite reliability, which should be more than 0.70. Another measure of dependability is Cronbach's Alpha, which determines whether a study is internally consistent if it is more than 0.7. The constructs' convergent validity is indicated by the average variance extracted (AVE) indication, which must be greater than 0.5.

Table 1:

Construct	Items	Outer loadings	Composite Reliability	Chronbach's Alpha	AVE	Discriminant Validity
<b>Environmental Uncertainty</b>	EU1	0.906	0.982	0.852	0.690	Yes
	EU2	0.918				
	EU3	0.815				
	EU4	0.954				
<b>Project Manager Performance</b>	PMP1	0.911	0.934	0.882	0.554	Yes
	PMP2	0.876				
	PMP3	0.833				
	PMP4	0.909				
	PMP5	0.877				
<b>Stress Management</b>	SM1	0.814	0.856	0.941	0.611	Yes
	SM2	0.930				
	SM3	0.912				
	SM4	0.832				
<b>Organizational Success</b>	OS1	0.861	0.887	0.925	0.532	Yes
	OS2	0.959				
	OS3	0.830				
	OS4	0.765				
	OS5	0.815				
<b>Organizational Resilience</b>	OR1	0.971	0.911	0.867	0.711	Yes
	OR2	0.954				
	OR3	0.856				
	OR4	0.881				

In the Above table 1, due to the fact that all item loadings are more than 0.773, we can confirm the accuracy of all indicators. Because all of the constructs are over 0.841, our data analysis demonstrates that they are all consistent. Each AVE exceeds 0.708 and shows convergence validity. For every structure in our analysis, the Cronbach's Alpha reading is more than 0.830.

We employ a PLS and bootstrapping method with 5000 subsamples to evaluate the structural model's quality [89]. Our conclusions regarding the structural model are shown in Figure 2. The results of our hypothesis tests are shown in Table 2. These findings show that the justifications provided below for each of our proposed hypotheses are all true.

4.2. Structural Model Assessment

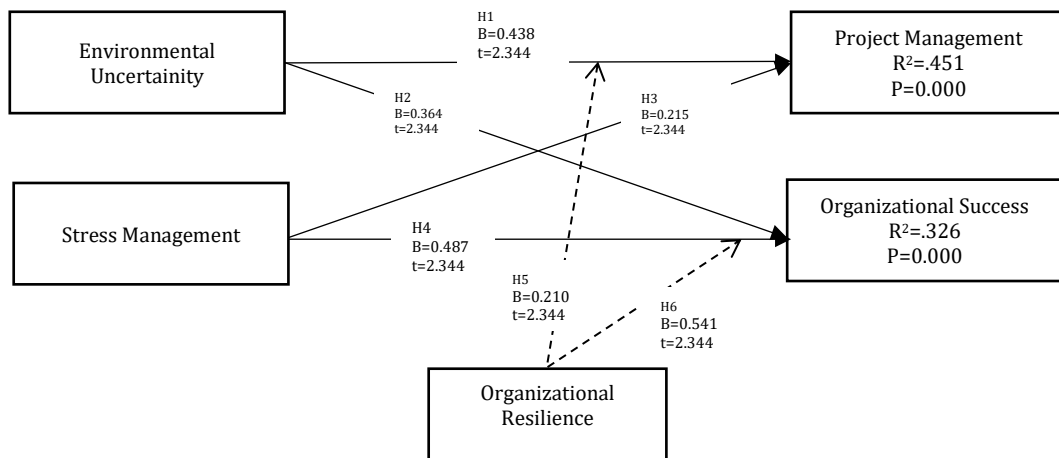


Figure 2: Organizational Success explained by Environmental nertainty and work stress at significant level  $P > 0.05$

Table 2: Hypothesis Testing Results

Hp	Independent	Dependent	Moderator	F2	P-value	Findings	Conclusion
H1	Environmental Uncertainty	Project Management	-	.301	0.000	Statistically Significant ( $\beta^{\wedge} = 0.438, p < 0.001$ )	Supported
H2	Environmental Uncertainty	Organizational Success	-	.273	0.000	Statistically Significant ( $\beta^{\wedge} = 0.364, p < 0.001$ )	Supported
H3	Stress Management	Project Management	-	.103	0.000	Statistically Significant ( $\beta^{\wedge} = 0.215, p < 0.001$ )	Supported
H4	Stress Management	Organizational Success	-	.098	0.000	Statistically Significant ( $\beta^{\wedge} = 0.487, p < 0.001$ )	Supported
H5	Environmental Uncertainty	Project Management	Organizational Resilience	.187	0.000	Statistically Significant ( $\beta^{\wedge} = 0.210, p < 0.001$ )	Supported with Medium Effect
H6	Stress Management	Organizational Success	Organizational Resilience	.298	0.000	Statistically Significant ( $\beta^{\wedge} = 0.541, p < 0.001$ )	Supported with large Effect

In the above table 2, we present the p-values and before elaborating on this area. Because environmental uncertainty accounts for 45.1 percent of the variation in Project Management ( $\beta = 0.438, p 0.001$ ), H1 is supported. Stress Management explains significant impact on project management ( $\beta = 0.364, p 0.001$ ), supporting H2 of the research. Stress Management accounts for 32.6% of the variation in Business Success, H3 is strongly supported ( $\beta = 0.215, p 0.001$ ). Stress management positively associates with organizational success ( $\beta = 0.487, p 0.001$ ) supporting H4. Providing strong evidence for H5, organizational resilience moderates the relationship between stress management and project management, magnifying the medium impact of environmental uncertainty on project management ( $\beta = 0.210, p 0.001$ ), hence H5 is supported with medium effect. In addition, organizational resilience moderates the relationship between stress management and project management, magnifying the favourable impact of stress management on project management. ( $\beta = 0.541, p 0.001$ ), which provides strong evidence for H6 with large moderating effect.

## 5. DISCUSSION

The research finds that higher levels of

environmental uncertainty are associated with decreased project management performance and reduced organizational success. This finding underscores the significant challenges organizations face when navigating uncertain external environments. It highlights the need for proactive strategies, such as scenario planning or flexible project management approaches, to mitigate the adverse effects of uncertainty.

Effective stress management practices are positively correlated with improved project management outcomes and higher organizational success rates. This result emphasizes the importance of prioritizing employee well-being and stress management programs within organizations. Implementing stress reduction strategies can lead to better project performance and overall success.

Organizational resilience moderates the relationship between environmental uncertainty and project management, strengthening the positive effect of resilience on project outcomes. This finding highlights the critical role of organizational resilience in mitigating the negative impact of environmental uncertainty. Organizations that invest in building resilience are better equipped to adapt to uncertain circumstances, ensuring more successful project outcomes.

Organizational resilience moderates the relationship between stress management and project management, amplifying the positive effect of stress management on project outcomes. Our findings emphasize that fostering resilience at the organizational level can enhance the effectiveness of stress management initiatives. Resilient organizations can better absorb the benefits of stress reduction efforts and translate them into improved project performance. This research has the potential to advance theory in several domains, including project management, stress management, and organizational resilience. It can contribute to the development of a more comprehensive framework that accounts for the complex interactions between these variables.

## 6. CONCLUSION

The research findings offer practical perceptions for organizations aiming to prosper in uncertain environments. These findings highlight the importance of strategic planning, stress management, and resilience-building initiatives in achieving project success and sustaining organizational competitiveness. Moreover, research findings provide insights for food manufacturing organizations seeking to enhance project management and organizational success while ensuring the safety and quality of their products.

- Practical Implications

Understanding the impact of environmental uncertainty and the effectiveness of stress management strategies can help organizations make informed decisions regarding resource allocation, risk mitigation, and employee well-being. Moreover, understanding the relationship between stress management and project success can guide project managers in developing coping mechanisms and resilience-building strategies and policymakers can use these insights to develop supportive policies and regulations that address stress management and resilience at the organizational level.

## REFERENCES

- Abdallah, L., Persson, M., 2014. The effects of environmental uncertainty conditions on organisational innovativeness and performance of SMEs . 1-51.
- Aljumah, A.I., Shahroor, H., Nuseir, M.T., El Refae, G.A., 2022. The effects of employee commitment and environment uncertainty on product quality: The mediating role of supply chain integration. *Uncertain Supply Chain Manag.* 10, 1379-1386.
- Altinkemer, K., Chaturvedi, A., Kondareddy, S., 1998. Business Process Reengineering and Organizational Performance: An Exploration of Issues. *Int. J. Inf. Manage.* 18, 381-392.
- Bennett, P., 1989. Stress management for wellness, *Journal of Psychosomatic Research.* Harcourt Brace College Publishers, Orlando, FL, US.
- Borges, N.M., Janissek-Muniz, R., 2018. Informal and individual practices of the environmental scanning in organizations, in: *Handbook of Research on Strategic Innovation Management for Improved Competitive Advantage.* IGI Global, pp. 55-67.
- Boulton, W.R., Lindsay, W.M., Franklin, S.G., Rue, L.W., 1982. Strategic planning: determining the impact of environmental characteristics and uncertainty. *Acad. Manage. J.* 25, 500-509.
- Chen, J., Shu, W., Wang, X., Sial, M.S., Sehleanu, M., Badulescu, D., 2022. The impact of environmental uncertainty on corporate innovation: Empirical evidence from an emerging economy. *Int. J. Environ. Res. Public Health* 19.
- El Khatib, M., Alabdooli, K., AlKaabi, A., Al Harmoodi, S., 2020. Sustainable Project Management: Trends and Alignment. *Theor. Econ. Lett.* 10, 1276-1291.
- Fletcher, F., 2020. Organizational Performance. *Solutions* 7, 329-354.
- Flynn, B.B., Koufteros, X., Lu, G., 2016. Flynn2016.Pdf. *J. Supply Chain Manag.* 52, 3-27.
- Ghosh, S., Amaya, L., Skibniewski, M.J., 2012. Identifying areas of knowledge governance for successful projects. *J. Civ. Eng. Manag.* 18, 495-504.
- Grover, V., Jeong, S.R., Kettinger, W.J., Teng, J.T.C., 1995. The implementation of business process reengineering. *J. Manag. Inf. Syst.* 12, 109-144.
- Jiang, Y., Ritchie, B.W., Verreynne, M.L., 2019. Building tourism organizational resilience to crises and disasters: A dynamic capabilities view. *Int. J. Tour. Res.* 21, 882-900.
- Madi Odeh, R.B.S., Obeidat, B.Y., Jaradat, M.O., Masa'deh, R., Alshurideh, M.T., 2021. The transformational leadership role in achieving organizational resilience through adaptive cultures: the case of Dubai service sector. *Int. J. Product. Perform. Manag.*
- Meulenbroeks, C., 1998. Creating a Competitive Advantage through Quality Delivery of Quality Business Solutions 7, 148-158.
- Murphy, L.R., 1996. Stress management in work settings: A critical review of the health effects. *Am. J. Heal. Promot.* 11, 112-135.
- Pires, R., Alves, M.C.G., 2022. The Impact of Environmental Uncertainty on Accounting Information Relevance and Performance: A Contingency Approach. *Economies* 10.
- Upson, J.W., KETCHEN, D.J., IRELAND, R.D., 2007. Managing Employee Stress: A Key to the Effectiveness of Strategic Supply Chain Management. *Organ. Dyn.* 36, 78-92.

- Varajão, J., Cruz-Cunha, M.M., da Glória Fraga, M., 2017. IT/IS Outsourcing in Large Companies – Motivations and Risks. *Procedia Comput. Sci.* 121, 1047–1061.
- Zubizarreta, M., Ganzarain, J., Cuadrado, J., Lizarralde, R., 2021. Evaluating disruptive innovation project management capabilities. *Sustain.* 13, 1–22.