

Organizational Project Management Maturity Effect on the Relationship Between Entrepreneurial Orientation and Organizational Performance in Egyptian Organizations

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Abstract This paper explores the effect of Organizational Project Management Maturity (OPMM) on the Relationship Between Entrepreneurial Orientation and Organizational Performance (EO-OP) in Egypt. The research foundation of this paper is the Resource-Based View (RBV) theory. Data was collected from senior managers from 244 Egyptian organizations and regression analysis, ANOVA testing and a series of moderated hierarchical multiple regression analysis were used to test the hypotheses. The results revealed that the relationship between EO and OP is much more dependent on the organizational context and environment and that OPMM has positive effect on OP and antecedent effect on EO.

Keywords: *entrepreneurial orientation, organizational project management maturity, organizational performance, resource-based view*

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1. Introduction

As local and International conditions and challenges are forcing both the government and the private sector to reduce the expenditures by applying strict economic strategies. The importance of optimizing Organizational Performance (OP) has been determined as necessity and crucial challenge and have significant impact on the business results of the organizations specially in developing countries [1].

There are so many researches in the field of strategic management tackled the necessity of organizational performance improvement from so many perspectives; Strategic management, Strategic Entrepreneurship, organizational design and structures and organizational behavior, Human resources management and organizational culture and other operational perspectives, with the aim of researching drivers and the factors affecting the improvement of organizational performance [2,3,4].

This research is based on the Resource-Based View (RBV) theory to investigate the dynamics in which EO influences OP. the researcher used a series of moderated hierarchical multiple regression analyses to test the hypotheses of the study. The main focus of this research is

examining the EO-OP relationship under moderating and/or antecedent effect of Organizational Project Management maturity "OPMM" in developing countries.

2. Literature Review

2.1. Definitions of Entrepreneurship & Entrepreneurs

Entrepreneurship, as defined by Onuoha [5], "is the practice of starting new organizations or revitalizing mature organizations, particularly new businesses generally in response to identified opportunities." Schumpeter [6] defined "entrepreneurs as individuals who exploit market opportunity through technical and/or organizational innovation". For Frank H. Knight [7] "entrepreneurship is about taking risk". Bolton and Thompson [8] have defined an entrepreneur as "a person who habitually creates and innovates to build something of recognized value around perceived opportunities". Hisrich [9] described that an entrepreneur is portrayed as "someone who demonstrates initiative and creative thinking, is able to organize social and economic mechanisms to turn resources and situations to practical account, and accepts risk and failure". Thomas and

Mueller [10,11] claimed that there is a crucial need for more research of entrepreneurship within the context of international markets to study the factors and characteristics which may promote entrepreneurial activity in different regions and various countries.

2.2. Entrepreneurial Orientation “EO” as Strategic Posture

The concept of strategic posture has been proposed by various studies to describe and operationalize this concept in different contexts. Miles and Snow [12] claimed that strategic posture as recurring patterns of strategic behavior which enable the organization of strategic alignment with its environment. Different postures are classified according to a particular strategy and organization characteristics like structure, culture, and business processes. Like Miles and Snow [12], Mintzberg [13] proposed that different organizations can be classified according to their strategic posture. He explained various criteria which relevant to different “strategy-making modes” Both studies proposed the strategic posture concept as the relationships between the organization and the environment which offered an important platform for analyzing firm-level behavior [14].

According to Covin and Slevin [15], introduced the concept of strategic posture as the degree of entrepreneurial orientation of the firm. He claimed that the firms that operationalized a strategy characterized by high levels of risk-taking, innovation, and proactive behavior embrace entrepreneurial strategic postures (i.e., entrepreneurial orientation). On contrast firms which embrace low levels of these behaviors have conservative strategic postures (i.e., conservative orientation). These three components of strategic posture considered by Miller [16] the main components of the unidimensional strategic orientation.

EO introduced in the current study as that strategic posture taken by organization with high levels of risk-taking and proactivity and while depending on R&D endeavors for product innovation [16]. Accordingly, entrepreneurship is viewed as a characteristic of organizations that can be measured by examining a firm's behavior [15].

2.3. The Importance of Entrepreneurial Orientation

Burgelman [17] encouraged organizations to develop a well formulated strategy characterized by diversity and order that guarantee sustainable competitive advantage in order to survive. While structure and planning provide order, entrepreneurial activity provides the required diversity. Entrepreneurial orientation promotes the proactive opportunity-seeking and problem-solving capabilities which enable the organizations entering new markets and focus more on internal development. moreover, entrepreneurial activity improves and sustain corporate capabilities which provide better positioning and differentiation over competitors [18]. According to Covin and Slevin [14], entrepreneurial activity encourages general economic growth and individual firm performance.

As such, entrepreneurial activity is one of the most important elements for attaining a competitive advantage and better financial business value. Many of the fastest growing and most profitable businesses in recent years (e.g., Cellular One, Lotus Development) were founded on the vision of an entrepreneur and continue to be managed in the entrepreneurial mode [15]. For years researchers have identified firms that have been able to sustain high levels of performance with an entrepreneurial management style (e.g., Sony, 3M, and Hewlett-Packard) [19,20].

2.4. Evolution of Project Management as Organizational capability

Since its modern evolution around the 1950's researchers perceived project management as individual capability [21,22,23,24], and there are many guidelines for certifications and competency assessment credentials like PMP® from PMI and PRINCE2® from APM to demonstrate the individual's capability/competency. Moreover, research by Kathawala, Elmunti, and Toepp [25]; Barber [26] and further research by Milosevic and Patanakul [27] confirmed that organizations with standardized project management methodologies and processes as opposed to individual skill sets experience enhanced overall organizational performance and business results as results of high rate of successful projects delivery.

L. H. Crawford [28] also suggested that project management skills are shifting from an individual capability to an organizational competency through various organizational project management maturity models.

Cooke-Davies, Crawford and Lechler [29] suggested that individual project management capabilities evolved into organizational project management maturity and this evolution involved turning project management capabilities from an individual skill to an organizational based competency and standardized procedures. Various organizational project management maturity models were developed to benchmark the level of organizational project management maturity,

2.5. Maturity: Concept and Definition

Maturity is defined by many researchers differently in a consistence manner as presented here under:

“Maturity is the extent to which a specific process is explicitly defined, managed, measured, controlled, and effective. Maturity implies a potential for growth in capability and indicates both the richness of an organization's (Project Management) process and the consistency with which it is applied in projects throughout the organization.” [30].

Organizational Maturity is “the extent to which an organization has explicitly and consistently deployed processes that are documented, managed, measured, controlled, and continually improved.” [(CMMI Product Team, 2002, p. 582) cited by [31].

“The degree to which an organization practices project management measured by the ability of an organization to

successfully initiate, plan, execute, monitor and control individual projects.” (Project Management Institute (PMI, 2003).

The common pattern in the above illustrated definitions is the existence of standardized and defined processes and repeated practices with measurement and continuous improvement. Paulk et al, [30] claimed that the more increase in organization’s maturity, the efficiency and effectiveness of an organization’s processes and accordingly the more better business results achieved. “Maturity in project management is a never-ending journey, with a never-ending cycle of bench- marking and continuous improvement [32].

2.6. Organizational Project Management Maturity “OPMM” and Maturity Models

Project management methodologies and standardized processes have been utilized by the majority of organizations as the best way to develop and deliver new or improved products, services, and organizational process changes [33]. Researchers and practitioners exerted sincere efforts looking for ways to enhance organization’s capability to enable the organizations of benefit realization and maximizing business value relaying on project management. The development of OPM capability can be achieved by many ways (training, mentoring, benchmarking, the use of new tools and techniques and use of maturity model, etc).

Project Management Maturity models are the main element that enable organizations of improving their Project Management capability [33,34,35]. Usually, maturity models help an organization to identify the gapes in its methodologies, processes and team capabilities and training requirements and how to bridge the gaps. it helps the organization measure the degree of maturity in each management domains by benchmarking organization’s practices to standard and best practices of its peers in the industry or best practice in the industry in general [36]. Ultimately, maturity models play a key role in continuous improvement and achieving organizational excellence.

2.7. Maturity Assessment Process

Maturity assessment normally conducted by internal staff from the organization as self-assessment or by an external assessment vendor or in two layers of assessment by utilizing both [37,38].

OPM maturity assessments are conducted through two main assessment processes: audit and self- assessment. Audits gather and benchmark data versus a reference standard, determining the compliance degree to certain criteria have been satisfied, while self-assessments are structured in order to assess the gaps in organization’s management system and the team’s OPM capabilities to propose opportunities for improvement on a number of domains. Audits are primarily designed to check for compliance with specific requirements, while self-assessments are mainly focusing internally on improvement [39].

2.8. Organizational Performance “OP”

Venkatraman and Ramanujam [40] propose that the key role that OP plays in strategic management impose the need for a more research of its conceptualization and measurement. According to Venkatraman and Ramanujam, the significance of OP to strategic management is represented by three areas: theoretical, empirical, and managerial. In theoretical terms, the construct of OP is considered central to strategic management as the majority of strategic management theories either directly or indirectly accentuate performance implications. In empirical terms, the concept of OP is used in the bulk of strategy research to analyze various strategy content and process issues.

Richard, Devinney, Yip, and Johnson [1] observed that OP is among the most essential concepts in management research and is considered the main research focus in strategic management and hence, OP is the dependent variable in this research.

Venkatraman and Ramanujam noted that in managerial terms, the significance of OP is explicitly observed in several instructions given for performance improvement. Consequently, Richard et al. claimed that OP is the main test of all strategy.

OP literature also has shown disagreement among researchers on what constitutes OP [40,41]. Ford and Schellenberg [41] claimed that these disagreements are mainly focused on methodology of measurement or differences in the concepts of performance. Regardless of the existing disagreements, Ford and Schellenberg proposed three main perceptions of OP. The first is Etzioni’s [42] goal approach that suggests that all organizations seek to achieve business goal. The goal approach defines performance mainly in term of goal achievement [42]. The second perspective provided by Yutchman and Seasore [43] the system resource approach, which is focused on the interaction between the organization and its environment and defines OP in reference to the organization’s capability to acquire scarce and valuable resources. The third perspective is process approach [44], which defines OP in reference to the behavior of organization stakeholders. Venkatraman and Ramanujam [40], combines these three organization conceptual viewpoints by considering OP measurement as a multiple hierarchical concept. Therefore the researcher adopted a multidimensional concept of OP by integrating all three theoretical concepts.

Haber and Reichel [45] noticed that previous studies have used several objective measures of OP such as revenue, cash flow, return on assets, and return on equity. However, researchers have asserted that such objective measures of OP may be important but are not inclusive in measuring the overall OP [46,47].

Venkatraman and Ramanujam [40] claimed that subjective measures of OP are aligned with objective measures, which enhance their reliability and validity as a measure of OP. This result is very important point and justify why the researcher used subjective measures to evaluate OP. Subjective nonfinancial measures of OP encompass indicators like perceived market share,

perceived sales growth, customer satisfaction, loyalty, brand equity, change in employees, net profit margin, and gross profit margin [45,46].

3. Research Model

3.1. Theory and Variables

In the current study, I examine the relationship between EO and OP as moderated by Organizational Project Management maturity “OPMM” and/or antecedent role of OPMM in developing countries; Egypt. Previous researchers recommended that organizational size and age might have significant influence on EO dimensions and performance [14,48]. Therefore, both organizational size and age were added as control variables in the study.

3.2. Relation among Variables

Entrepreneurship plays vital role in determining the strategic actions and orientation of the individual organizations seeking to improve its organizational performance, survival and fostering general economic development in different countries. Entrepreneurship has been well documented in previous researches [14,31,49,50]. Scholars exerted a great effort in development of the definition and the construct of entrepreneurial orientation (EO) as a strategic posture and introduced a substantial contribution in understanding and scrutinizing the construct of entrepreneurial orientation (EO) via the nomological network analysis within researches in which it is embodied [4], prior researches on the effect and contribution of EO to organizational performance (OP) provided inconsistent results [3,51,52]. moreover, the significance of the relation between EO-OP still questionable [53].

Resource-Based View theories of strategy (RBV) asserts that firms with valuable, rare, and inimitable resources (including non-substitutability) have the potential of achieving superior performance [54]. The business results and outcome of the firm depend on the firm’s resources [54]. Resources can be categorized into knowledge-based and property-based resources [55]. Property-based resources depicted in form of tangible input resources, while knowledge-based resources are means to utilize these tangible input resources [56]. OPM provide the firm with efficient approach on how to exploit tangible resources and integrate Knowledge-based resources to achieve sustainable competitive advantage, because they are inherently difficult to imitate, thus facilitating sustainable differentiation [57]. OPM as knowledge-based resources play an important role in the firm’s ability to be entrepreneurial [58], and improve performance [57].

Entrepreneurship researchers exerted efforts trying to explain OP by studying the interrelation to an organization’s entrepreneurial orientation (EO). Given the significance of entrepreneurship to organizational performance [59], EO could be remarkable measure for the actions and strategic posture of the organization that enhances the organizational performance via best utilization of both organization’s knowledge-based and

non-knowledge-based resources to discover and exploit opportunities and creating sustainable competitive advantage for the organization leads to superior organizational performance. where EO can be reflected on part of the managerial decisions and strategic actions that allow organizations achieving superior performance over its competitor where EO enables the organization of taking the appropriate proactive actions relevant to early triggers from its internal and external environments [60].

Researchers empirically studied the independent effect of EO on OP [61] and its constructs relationship with the external environment factors [15] meanwhile, other researchers have ignored Lumpkin and Dess’s [60] recommendations and the needs of for further research to study the internal organizational characteristics and attributes within the organization which may moderate and/or mediate the EO-OP interrelationship. Therefore, it appears that EO research has focused on studying how the firm is organized (‘O’) to exploit entrepreneurial endeavors, without regards for the internal resources and characteristics of the organization (i.e., ‘VRI’). This gives the scholars chance to study the EO-OP interrelation under moderation of some internal attributes of the organizations.

So many recent researches realized and proved the value of project management approaches, methodologies and concepts, and the significant return of its application, the value project management goes beyond improvement of organizational performance, as proved by the biggest research ever done on the value of project management, by the Project Management Institute “www.pmi.org” published in 2008, the study (and now the book) called “Researching the Value of Project Management”.

3.3. Research Questions

An entrepreneurial orientation is posited as affecting, and being affected by, multiple organizational system elements. Certain internal, external, and strategic variables may prompt or inhibit EO and its relationship with performance [14,15,62,63]. Management must create, to the extent possible, an organizational context that assists in developing and/or sustaining EO. This supportive context should emphasis on the organizational factors that enables the benefits realization of entrepreneurship (i.e., risk-taking, innovativeness, and proactiveness), adaptability, growth, and external support. The need to examine the potentially significant impact of an organizational internal factors on EO and firm performance has been identified in the literature [14,61,63]. However, no studies have empirically examined effect of Organizational Project Management Maturity “OPMM” as one of the emerging management trends. Also, additional research is required to better understand the impact of EO on various performance outcomes [60,63]. The present study addresses gaps in previous research by examining four research questions.

In the current study, researcher examined the relationship between EO and OP as moderated by organizational project management maturity (OPMM) aiming to find quantifiable answers for the following research questions:

- (a) Does EO positively influence OP?
- (b) Does OPMM positively influence OP?

- (b) Does OPMM moderate the relationship between EO and OP?
- (c) Does OPMM have an antecedent effect on EO?

3.4. Research Model, Hypotheses & Sub-Hypotheses

From the preceding discussion, the hypothesized causal relationships are illustrated in the research model shown in Figure 1. The main theme of this model is that understanding the relationship between Entrepreneurial Orientation “OE” and Organizational Project Management Maturity “OPMM” can lead to a better understanding of the relationship between Entrepreneurial Orientation “OE” and Organizational Performance “OP”. In this

study, I tested the main/direct effect of EO on OP under moderating effect (EO X OPMM) affects OP. also I tested the antecedent effect of OPMM on EO and the direct effect of OPMM on OP. the tested relations between variables lead to the following main hypotheses:

- H1: Entrepreneurial Orientation “OE” has a direct positive effect on Organizational Performance “OP”.
- H2: Organizational Project Management Maturity “OPMM” has a direct and positive effect on Organizational Performance “OP”.
- H3: Organizational Project Management Maturity “OPMM” moderates the relation between Entrepreneurial Orientation “OE” and Organizational Performance “OP”.
- H4: “OPMM” has antecedent effect on “EO”.

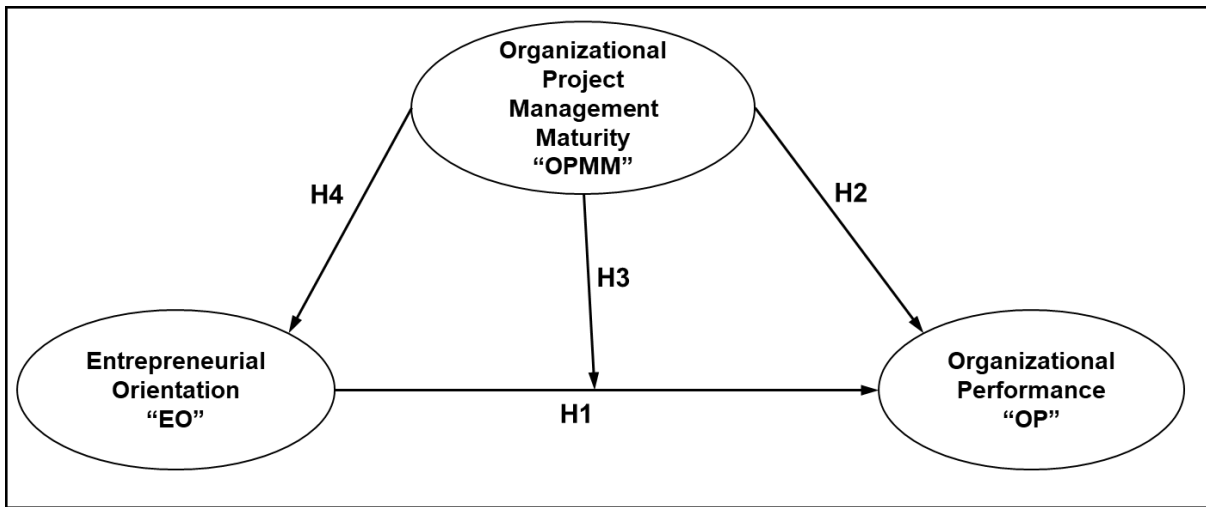


Figure 1. Research Model and Main Hypotheses

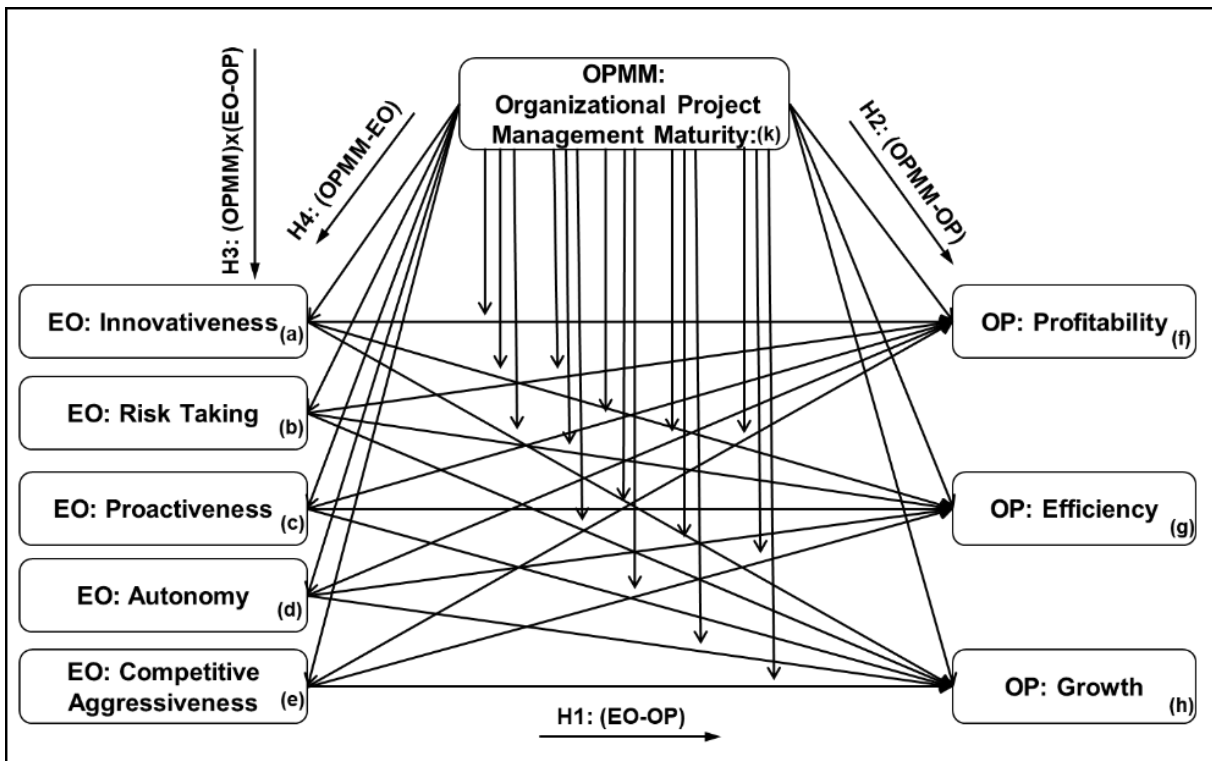


Figure 2. Research Model and Sub-Hypotheses

The theoretical rationale behind the model is that EO as defined by Lumpkin and Dess [60] represents an organization's strategic posture that captures its senior managers' distinct entrepreneurial characteristics related to decision-making styles, procedures, and practices. Studies have indicated that OPMM enhances OP meanwhile when EO concept is applied in the context of OPMM, it reflects how an organization is structured to identify and exploit opportunities [49,52,64,65,66,67]. According to the RBV approach proposed by Barney [54], how an organization is structured to combine with its resources can improve the positive relationship between resources and OP. W. M. Cohen and Levinthal [68] proposed that organizations that possess substantial knowledge-based resources are better equipped in terms of recognizing opportunities, correctly evaluating the value of those opportunities, and extracting that value from them. This chain of events culminates in the improvement of OP. The hypothesized causal relationships are displayed in Figure 1 for main hypotheses and Figure 2 for sub-hypotheses.

In highlight of the research main hypotheses, researcher investigated the direct effect by testing the direct relationship between EO and OP. Because in the hypothesis for the direct effect researcher propose a positive relationship between EO and OP, taking into consideration the five dimensions of EO and three dimensions of OP, this hypothesis results in 15 sub-hypotheses. these sub-hypotheses organized in terms of the dimensions of the dependent variable OP.

Sub-hypotheses related to H1: EO-OP, profitability follow:

- H 1^{af}: Innovativeness is positively related to profitability.
- H 1^{bf}: Risk taking is positively related to profitability.
- H 1^{cf}: Proactiveness is positively related to profitability.
- H 1^{df}: Autonomy is positively related to profitability.
- H 1^{ef}: Competitive aggressiveness is positively related to profitability.

Sub-hypotheses related to H1: EO-OP, efficiency follow:

- H 1^{ag}: Innovativeness is positively related to efficiency.
- H 1^{bg}: Risk taking is positively related to efficiency.
- H 1^{cg}: Proactiveness is positively related to efficiency.
- H 1^{dg}: Autonomy is positively related to efficiency.
- H 1^{eg}: Competitive aggressiveness is positively related to efficiency.

Sub-hypotheses related to H1: EO-OP, growth follow:

- H 1^{ah}: Innovativeness is positively related to growth.
- H 1^{bh}: Risk taking is positively related to growth.
- H 1^{ch}: Proactiveness is positively related to growth.
- H 1^{dh}: Autonomy is positively related to growth.
- H 1^{eh}: Competitive aggressiveness is positively related to growth.

Also, researcher investigated the direct effect by testing the direct relationship between OPMM and OP. Because in the hypothesis for the direct effect researcher propose a positive relationship between OPMM and three dimensions of OP, this hypothesis results in 3 sub-hypotheses. these sub-hypotheses organized in terms of the dimensions of the dependent variable OP.

Sub-hypotheses related to H2: OPMM-OP:

- H 2^{kf}: Organizational Project Management Maturity is positively related to profitability.

H 2^{kg}: Organizational Project Management Maturity is positively related to profitability.

H 2^{kh}: Organizational Project Management Maturity is positively related to profitability.

Researcher tested the moderating effect by examining the interaction term between EO and OPMM and then assess its effect on OP. This is represented by the hypothesis that OPMM moderates the relationship between EO and OP. researcher divided this hypothesis into 15 sub-hypotheses to reflect the various dimensions of the concepts under study, which were organized in terms of the dimensions of the dependent variable.

Sub-hypotheses related to H3: OPMM X EO-OP, profitability follow:

H 3^{k x (a-f)}: OPMM moderates the relation between innovativeness and profitability.

H 3^{k x (b-f)}: OPMM moderates the relation between risk taking is positively related to profitability.

H 3^{k x (c-f)}: OPMM moderates the relation between proactiveness and profitability.

H 3^{k x (d-f)}: OPMM moderates the relation between autonomy and profitability.

H 3^{k x (e-f)}: OPMM moderates the relation between competitive aggressiveness and profitability.

Sub-hypotheses related to H3: OPMM X EO-OP, efficiency follow:

H 3^{k x (a-g)}: OPMM moderates the relation between innovativeness and efficiency.

H 3^{k x (b-g)}: OPMM moderates the relation between risk taking and efficiency.

H 3^{k x (c-g)}: OPMM moderates the relation between proactiveness and efficiency.

H 3^{k x (d-g)}: OPMM moderates the relation between autonomy and efficiency.

H 3^{k x (e-g)}: OPMM moderates the relation between competitive aggressiveness and efficiency.

Sub-hypotheses related to H3: OPMM X EO-OP, growth follow:

H 3^{k x (a-h)}: OPMM moderates the relation between innovativeness and growth.

H 3^{k x (a-h)}: OPMM moderates the relation between risk taking and growth.

H 3^{k x (a-h)}: OPMM moderates the relation between proactiveness and growth.

H 3^{k x (a-h)}: OPMM moderates the relation between autonomy and growth.

H 3^{k x (a-h)}: OPMM moderates the relation between competitive aggressiveness and growth.

Also, researcher investigated the antecedent of OPMM effect by testing the direct relationship between OPMM and EO. Because in the hypothesis for the antecedent effect researcher proposed a positive relationship between OPMM and five dimensions of EO, this hypothesis results in 5 sub-hypotheses. these sub-hypotheses organized in terms of the dimensions of the independent variable EO.

Sub-hypotheses related to H4: OPMM-EO, antecedent follow:

H 4^{ka}: Organizational Project Management Maturity is positively related to innovativeness.

H 4^{kb}: Organizational Project Management Maturity is positively related to risk taking.

H 4^{kc}: Organizational Project Management Maturity is positively related to proactiveness.

H 4^{kd}: Organizational Project Management Maturity is positively related to autonomy.
 H 4^{ke}: Organizational Project Management Maturity is positively related to competitive aggressiveness.

4. Research Methodology

4.1. Research Strategy

Researcher tested the research hypotheses using regression analysis, ANOVA testing and moderated hierarchical multiple regression to analyze the distinct contribution of each independent variable on the variance in the model aiming to test the hypotheses and sub hypotheses. also, Researcher tested the multiple regression assumptions and the potential effect of common method variance. To minimize and measure the degree of common method bias, Researcher performed a factor analysis on all of the items involved in the study using KMO measure of sampling adequacy and the Bartlett’s test of sphericity.

4.2. Population and Sample

The population of the study included data collected from senior managers from 244 Egyptian organizations representing the sample of this study. The sample structure and participating industries in the sample were diversified and representing the main sectors leading the economy in Egypt as per Table 1 and Figure 3. Accordingly, Researcher obtained data required to test the hypotheses from a survey of 244 organizations as represented by their senior managers that Researcher selected from a broad range of Egyptian industries deemed to operate under highly challenging and competitive

market conditions. Researcher used the sample size of 244 participants following Hair et al.’s (2014) recommendation to use 15-20 participants for each independent variable, because Researcher used five independent variables (the five dimensions of EO), two control variables, one moderator variables, and 5 interaction terms (all adding to 13 independent variables). Therefore, 15-20 participants multiplied by 13 independent variables gave the range of 195-260 participants. The 244 participants were within the range stated and provided adequate sample size. Researcher requested each manager to assess the operation of his or her organization or strategic business unit on a 7-point Likert-type scale. Following Miller (1983).

Table 1. Sample Structure / Participant Industries/sectors

Industries/sectors	Frequency	Percent %
Construction	70	28.7
Engineering / Consulting	58	23.8
Oil & Gas	48	19.7
Software & IT	12	4.9
Telecommunications	12	4.9
Utilities	8	3.3
Manufacturing	6	2.5
Energy	5	2
Banking and finance	4	1.6
Distribution	4	1.6
Education	4	1.6
Health care	3	1.2
Real estate	3	1.2
Investment	2	0.8
Retailing	2	0.8
Hospitality and tourism	1	0.4
Training	1	0.4
Transportation	1	0.4
Total	244	100

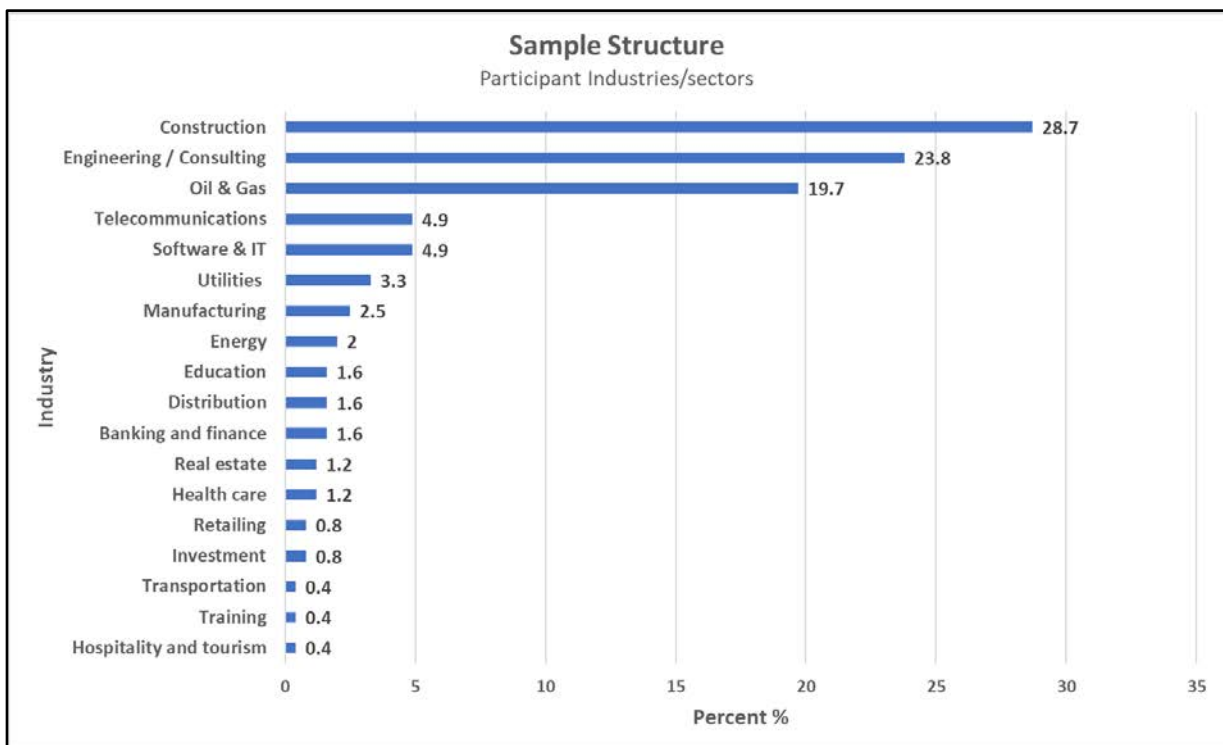


Figure 3. Sample Structure / Participant Industries/sectors

4.3. Participants Procedure

Because the level of analysis for the current study was the organization, participants were Egyptian organizations with nationwide presence. Researcher selected these types of organizations in order to represent the geographic, economic, and demographic varieties in Egypt. Researcher collected data using the key informant approach, which is accepted as a methodologically appropriate way of collecting data and is aligned with previous research [3,52,69]. The key informant approach is exemplified by the use of a single or few special individuals who are thoroughly questioned; reliance is placed on their responses [70].

Hughes, Hughes, et al., [69] recommended the key informant method as a suitable approach to collect data for a quantitative study. According to Hughes, Hughes, et al., key informants such as senior managers usually have responsibility of overall activities of the organization and play a key role in shaping organizational strategies. Consequently, senior managers of organizations considered the main source about the strategic direction of the organization. Meanwhile, senior managers of organizations considered the main source of information on practices, processes, and results of the organization [69].

Researcher contacted organizations by telephone, email, and physical visits to describe the purpose of the study, identify key informants, and request them to participate in the study. This first contact was usually with the human resources division. This was followed by a formal request letter (or email) to the top management of each organization, usually the chief executive officer, requesting approval to conduct the study. In the request letter, Researcher reaffirmed the purpose of the study and ethical issues such as the anonymous and voluntary nature of the study. Then researcher sent a survey package that included a cover letter to all participants explaining the purpose of the study, ethical issues such as the anonymous and voluntary nature of the study, and a questionnaire. Data collection covered a period of 12 weeks.

4.4. Research Variables and Methods of Measuring

In the current study, Researcher used existing survey instruments that have been validated in previous studies for the three variables EO, OPMM and OP. Lyon et al. [71] observed that management perceptions of organization-level variables such as strategy, structure, decision making processes, and OP are usually employed in entrepreneurship research. According to Lyon et al., such perceptions can be acquired from interviews or surveys that use questionnaires. Thus, Researcher measured all the constructs of this study by requesting senior managers' subjective assessments of the concepts under examination through survey questionnaires. All items for the concepts measured on 7-point Likert-type scales with scores ranging from 1 (Strongly Disagree) to 7 (Strongly Agree).

Researcher used EO as the independent variable. Based on past research [51,60,72,73,74] and measured EO with five dimensions: innovativeness, risk taking, proactiveness, competitive aggressiveness, and autonomy. Researcher

adopted Covin and Slevin's [15] measures for the first three dimensions of innovativeness, risk taking, and proactiveness; Lumpkin and Dess' [75] measure for competitive aggressiveness; and Lumpkin, Cogliser, et al.'s [76] measure for autonomy. Li et al. [51] showed that the reliability of these scales exceeds the minimum standard requirement of 0.70 recommended by Nunnally and Bernstein [77].

Based on literature review and recent study by Garry Huang, 2107. Researcher used the same previously validated instrument to measure OPMM variable by self-assessment questionnaire that required the participants to complete. This instrument was the Portfolio, Program, Project Management Maturity Model (P3M3®) self-assessment tool with the emphasis around project management maturity. This tool was developed by the United Kingdom Office of Government Commerce. which consists of nine questions to measure nine aspects/dimensions of organizational project management maturity (Standardization of Organization Processes & Procedures, Management control, Benefits management, Financial management, Stakeholder management, Risk management, Organizational governance, Resource management, Project Management recognition and integration).

Researcher used OP as the dependent variable as represented by its three dimensions of profitability, efficiency, and growth. Venkatraman and Ramanujam [40] suggested that examining the complexity of OP entails the application of multiple measures. Consistent with previous literature [40,46,51], Following Li et al. [51], Researcher measured OP by using multiple measures. OP measures is based on the work of Murphy et al. [46], who proposed the use of self-reported measures of the following three dimensions of OP (profitability, efficiency, and growth).

Consequently, Researcher requested participants to indicate the degree of their organization's comparative performance in relation to profitability (return on sales, net profit margin, and gross profit margin), growth (sales growth rate, market share growth, and employment growth), and efficiency (return on investment, return on equity, and return on assets) over the previous 3 years compared with their main competitors [46,51]. Li et al. found the reliability of this multi-item scale to be above the minimum standard recommended Cronbach's alpha of 0.70 [77].

Researcher used organizational size and age as control variables. Where previous studies suggested that organizational size and age might wield considerable impact on innovativeness, and performance [48]. Researcher measured organizational size by the natural logarithms of the number of full-time employees in each organization and organizational age by the natural logarithms of the number of years passed since the establishment of the organization [78]. Information on organizational size and age collected by using the organizational characteristics questionnaire.

4.5. Data Analysis Procedure

As pointed out earlier, because researcher suggested that the relationships between the independent variable

EO, OPMM and dependent variable OP are contingent upon the moderator variable OPMM, then moderated hierarchical multiple regression analysis was a suitable method for testing the hypothesized contingency relationships because it permits interaction terms to be analyzed [13]. Accordingly, Researcher tested the study's hypotheses by using regression analysis, ANOVA testing to examine hypotheses H1, H2 H4 and moderated hierarchical multiple regression analysis to examine hypothesis H4. Researcher performed the statistical analysis using SPSS Version 22.0 to analyze data. This study had two levels of analysis high-level and detailed. In moderated hierarchical multiple regression analysis this study performed the analysis on three models: model 1 (independent variables is the two controlling variables organizational size and organizational age and dependent variable is OP), model 2 (independent variables are the two controlling variables organizational size, organizational age and EO plus the dependent variable is OP) and model 3 (independent variables are the two controlling variables organizational size, organizational age, EO and the moderating variable OPMM plus the dependent variable is OP).

Podsakoff et al. [79] explained that the use of self-report survey information from single participants introduces the possibility of common method variance. Where the current study employed a single-survey instrument to gather data for the dependent and independent variables from a single participant, there is a possibility of the presence of common method variance. However, Podsakoff et al. [79] suggested procedures to minimize and assess the extent of common method bias. Therefore, researcher conducted a Harman's single-factor test on all of the items involved in the study [79].

5. Data Analysis and Results of Hypotheses Testing

The researcher has tested the research hypotheses and sub-hypotheses using regression analysis, ANOVA testing and moderated hierarchical multiple regression to analyze the distinct contribution of each independent variable on the variance in the model aiming to test the hypotheses and sub hypotheses. also, the researcher tested the

multiple regression assumptions and the potential effect of common method variance. To minimize and measure the degree of common method bias, the researcher performed a factor analysis on all of the items involved in the study using KMO measure of sampling adequacy and the Bartlett's test of sphericity.

5.1. Reliability Test for questionnaires of the three variables (EO, OPMM, and OP)

The overall Reliability Statistics for the three questionnaires measuring the three variables EO, OPMM and OP are reliable instrument in general to measure this variable. where the overall Cronbach's Alpha are 0.885, 0.883 and 0.949 which are greater than the minimum standard recommended Cronbach's alpha of .70 [77]. Also, Reliability Statistics for all questions within the three questionnaires are reliable. Where Cronbach's Alpha values are greater than the minimum standard recommended Cronbach's alpha of .70 [77]. So that, all questionnaire's questions are reliable to measure these variables and no need to element any question from these questionnaires.

5.2. High Level Correlation Analysis (two controlling variables Or. Age, Org. size, EO, OPMM and OP)

The below Table 2 shows the results of correlation analysis of the high-level variables (EO, OPMM, OP and the two controlling variables (Org. Age & Org. size). Where this research found a positive small correlation "0.128" between the controlling variable Org. Age and the OPMM and negative small correlation "-0.128" with the OP variable and no correlation with EO variable. Also, the other controlling variable Org. Size have a positive small correlation "0.207" OPMM variable and negative small correlation "-0.127" with the OP variable and no correlation with EO variable. The independent variable OPMM have medium positive correlation with the other independent variable EO "0.465" and small positive correlation "0.383" with the dependent variable OP. also, the independent variable EO have medium positive correlation "0.516" with the dependent variable OP.

Table 2. Correlations Matrix High Level Variables

		Org. Age (Log)	Org. Size (Log)	OPMM	EO	OP
Org. Age (Log)	Pearson Correlation	1	.370**	.128*	-.004	-.128*
	Sig. (2-tailed)		.000	.046	.948	.045
Org. Size (Log)	Pearson Correlation	.370**	1	.207**	-.064	-.127*
	Sig. (2-tailed)	.000		.001	.320	.047
OPMM	Pearson Correlation	.128*	.207**	1	.465**	.383**
	Sig. (2-tailed)	.046	.001		.000	.000
EO	Pearson Correlation	-.004	-.064	.465**	1	.516**
	Sig. (2-tailed)	.948	.320	.000		.000
OP	Pearson Correlation	-.128*	-.127*	.383**	.516**	1
	Sig. (2-tailed)	.045	.047	.000	.000	

** . Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

5.3. Testing Assumptions of Multiple Regression

One of the basic assumptions of multiple regression is the use of adequate sample size. Hair et al. [80] suggested that the adequate sample size would be calculated based on a method of thumb recommend quantity of 15-20 observations per independent variable. This gives a range of 195-260 participants for the current study. Hence, the sample of 244 organizations participate in this study. So that, the sample size is adequate.

To check the problem of multicollinearity, correlation analysis has been performed for all variables. The results indicated the absence of independent variables that were extremely correlated (no independent variables had $r = 0.7$ and above). Therefore, there was no problem of multicollinearity in this study.

To examine the presence of outliers, the Cook's distances computed (CD; [81]) and generated residual plots through SPSS examined [82,83]. The CD was very small values "0.032" less than 1.00 which indicated the absence of significant influence as an outlier.

The residual value for the dependent variable OP lies within the ± 3.3 limit, which indicates the absence of outliers [82,83].

The analysis of normal probability plots (P-Ps) of the regression standardized residuals showed that there were no major deviations from normality [83].

5.4. Assessment of Sample Adequacy and Common Method Bias

The results of performed tests to confirm the adequacy

of sample size and to perform factor analysis aiming to check existence or not of the common method bias shows that there is no presence of Common Method Bias in this study and the sample size is adequate. where the KMO index was 0.845, This result is greater than the minimum recommended value of 0.60 for a good factor analysis. Bartlett's test of sphericity was significant ($p = .000 < .05$), which conclude that sample size of 244 and the collected data to perform this study are suitable for factor analysis.

The results of single factor analysis shows that the total variance explained where only three factors had eigenvalues > 1 these three factors represent a cumulative percentage of variance explained of approximately 68.407 %. The first factor explained for approximately 42.195 % of the total variance, while the second and third factors explained for approximately 14.825 % and 11.387 % of the total variance. And Hence, these results clearly show that there is no single factor explained for most of the total variance.

5.5. Results of High Level and Detailed Analysis of the Research Hypotheses

The output from SPSS for the regression analysis, moderated hierarchical regression analysis and ANOVA testing shown hereafter in Table 3 and Table 4 where based on the P values < 0.05 , hypotheses H1: (Direct Effect EO-OP), H2: (Direct Effect OPMM-OP) and H4 (Antecedent Effect OPMM - EO) were accepted. While P Value > 0.05 Hypothesis. H3 (Moderating effect of OPMM X EO-OP) were rejected.

Table 3. Results of High level and Detailed analysis of the research Hypotheses

Hypothesis	R2	β	P Value	Interpretation
High level analysis of main Hypotheses (H1, H2, H3 and H4):				
H1: Entrepreneurial Orientation "OE" has a direct positive effect on Organizational Performance "OP"	0.266	0.516	0	Independent variable EO have a significant contribution to the prediction of dependent variable OP H1: is supported.
H2: Organizational Project Management Maturity "OPMM" has a direct and positive effect on Organizational Performance "OP"	0.143	0.383	0	Independent variable OPMM have a significant contribution to the prediction of dependent variable OP H2: is supported.
H3: Organizational Project Management Maturity "OPMM" moderates the relation between Entrepreneurial Orientation "OE" and Organizational Performance "OP"	$\Delta R2: 0$	$\Delta \beta: -.003$	0.959	Results from moderated hierarchal regression analysis shows that; R Square Change equal zero, change in standardized coefficient Beta is -.003 and P value is 0.959. H3: moderating hypothesis and its sub hypotheses are not supported.
H4: Organizational Project Management Maturity "OPMM" has antecedent effect on "EO"	0.175	0.435	0	Independent variable OPMM have a significant contribution to the prediction of dependent variable EO H4: is supported.

Table 4. Results of Detailed analysis of the research sub-hypotheses

Hypothesis	R ²	β	P Value	Interpretation
Sub-hypotheses related to H1: EO-OP, (Profitability dimension):				
H 1 ^{af} : Innovativeness is positively related to profitability is supported.	0.283	0.154	0.033	Hence P Value < 0.05 H 1 ^{af} : is supported.
H 1 ^{bf} : Risk taking is positively related to profitability is not supported.		-0.012	0.85	Hence P Value > 0.05 H 1 ^{bf} : is not supported.
H 1 ^{cf} : Proactiveness is positively related to profitability is supported.		0.339	0	Hence P Value < 0.05 H 1 ^{cf} : is supported.
H 1 ^{df} : Autonomy is positively related to profitability is supported.		0.284	0	Hence P Value < 0.05 H 1 ^{df} : is supported.

Hypothesis	R ²	β	P Value	Interpretation
H 1 ^{ef} : Competitive aggressiveness is positively related to profitability is supported.		-0.166	0.042	Hence P Value < 0.05 H 1 ^{ef} : is supported.
Sub-hypotheses related to H1: EO-OP, (Efficiency dimension):				
H 1 ^{eg} : Innovativeness is positively related to efficiency is supported.		0.145	0.051	Hence P Value < 0.05 H 1 ^{eg} : is supported.
H 1 ^{bg} : Risk taking is positively related to efficiency is not supported.		-0.074	0.260	Hence P Value > 0.05 H 1 ^{bg} : is not supported.
H 1 ^{cg} : Proactiveness is positively related to efficiency is supported.	0.236	0.268	0.002	Hence P Value < 0.05 H 1 ^{cg} : is supported.
H 1 ^{dg} : Autonomy is positively related to efficiency is supported.		0.264	0.001	Hence P Value < 0.05 H 1 ^{dg} : is supported.
H 1 ^{eg} : Competitive aggressiveness is positively related to efficiency is not supported.		-0.061	.470	Hence P Value > 0.05 H 1 ^{eg} : is not supported.
Sub-hypotheses related to H1: EO-OP, (Growth dimension):				
H 1 ^{ah} : Innovativeness is positively related to growth is supported.		0.193	0.008	Hence P Value < 0.05 H 1 ^{ah} : is supported.
H 1 ^{bh} : Risk taking is positively related to growth is not supported.		0.027	0.674	Hence P Value > 0.05 H 1 ^{bh} : is not supported.
H 1 ^{ch} : Proactiveness is positively related to growth is supported.	0.284	0.320	0	Hence P Value < 0.05 H 1 ^{ch} : is supported.
H 1 ^{dh} : Autonomy is positively related to growth is supported.		0.190	0.013	Hence P Value < 0.05 H 1 ^{dh} : is supported.
H 1 ^{eh} : Competitive aggressiveness is positively related to growth is not supported.		-0.090	0.267	Hence P Value > 0.05 H 1 ^{eh} : is not supported.
Detailed analysis of sub hypotheses: Direct Effect H2 OPMM-OP				
Sub-hypotheses related to H2: OPMM-OP:				
H 2 ^{kf} : Organizational Project Management Maturity is positively related to Profitability is supported.	0.145	0.385	0	Hence P Value < 0.05 H 2 ^{kf} : is supported.
H 2 ^{kg} : Organizational Project Management Maturity is positively related to Efficiency is supported.	0.105	0.329	0	Hence P Value < 0.05 H 2 ^{kg} : is supported.
H 2 ^{kh} : Organizational Project Management Maturity is positively related to Growth is supported.	0.121	0.353	0	Hence P Value < 0.05 H 2 ^{kh} : is supported.
Detailed analysis of sub hypotheses: Antecedent Effect H4 OPMM - EO				
Sub-hypotheses related to H4: OPMM-EO, antecedent effect:				
H 4 ^{ka} : Organizational Project Management Maturity is positively related to innovativeness is supported is supported.	0.175	0.423	0	Hence P Value < 0.05 H 4 ^{ka} : is supported.
H 4 ^{kb} : Organizational Project Management Maturity is positively related to risk taking is supported.	0.036	0.200	0.002	Hence P Value < 0.05 H 4 ^{kb} : is supported.
H 4 ^{kc} : Organizational Project Management Maturity is positively related to proactiveness is supported.	0.167	0.412	0	Hence P Value < 0.05 H 4 ^{kc} : is supported.
H 4 ^{kd} : Organizational Project Management Maturity is positively related to autonomy is supported.	0.176	0.424	0	Hence P Value < 0.05 H 4 ^{kd} : is supported.
H 4 ^{ke} : Organizational Project Management Maturity is positively related to competitive aggressiveness is supported.	0.131	0.366	0	Hence P Value < 0.05 H 4 ^{ke} : is supported.

6. Findings

The findings of this study revealed that the relation between the independent variables (EO and OPMM) and dependent variable (OP) depends on the unique circumstances (the environmental and organizational context), where the results of this research for Egyptian organizations showed that there is a significant effect of independent variable EO on the dependent variable OP, there is a direct effect of the independent variable OPMM on the dependent variable OP and there is an antecedent effect of OPMM on the EO while no evidence that OPMM has any moderating effect on the EO-OP relation. The findings of this study confirm the suggestions by Lumpkin and Dess [60] that the impact of EO dimensions of innovativeness, risk taking, proactiveness, autonomy, and competitive aggressiveness vary independently, depending on the environmental and organizational context, and that adopted entrepreneurial strategy by the organizations and relevant entrepreneurial actions may occasionally result in desirable outcome on one or more organizational performance dimensions and undesirable results on other different organizational performance

dimensions. Accordingly, each EO dimension, within certain organizational context and characteristics, may be used to enhance the OP, or may not be used because of its disadvantages to OP.

7. Conclusion

In conclusion, based on the results of the performed analysis in this research, There are no evidence to support the generally held belief that EO is universally beneficial for OP in Egyptian organizations, which is consistent to findings revealed from other previous studies [53,61,62,66,73,74,75,84,85]. And although, I did not find any evidence to support the moderating effect of OPMM on the EO-OP relationship, I found significant evidence that support the antecedent effect of OPMM on EO.

8. Recommendations

Based on the finding of this research senior managers in Egyptian organizations are encouraged to enhance the

performance of their organizations by improving their organizational capabilities. This could be achieved by increasing the level of OPMM. This can act as a business enabler for the senior managers of organizations in developing countries like Egypt to stimulate their EO and to adopt entrepreneurial strategies to increase business survival.

Moreover, senior managers in Egyptian organizations can emphasize more on improving and increasing organizational proactiveness and empower their employees to foster autonomy to improve Organizational Performance "OP". In contrast, Managers should be more cautious while taking aggressive business decisions regarding competition especially in new markets considering the different circumstances and the drawbacks in Organizational Performance "OP" rather than improvement. and also regarding the risk-taking decisions, where in some circumstances it may have drawbacks on the Organizational Performance "OP" rather than improvement.

Similarly, Senior managers should emphasize more on improving organizational competencies and capabilities in term of Organizational Project Management Maturity "OPMM" which is expected to enable the organization of better utilization of its resources while implementing the entrepreneurial strategies and harvesting its benefits to OP improvement.

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